CITY COUNCIL REGULAR MEETING AGENDA

REGULAR COUNCIL MEETING
TUESDAY
MARCH 21, 2023

COUNCIL CHAMBERS
211 WEST ASPEN AVENUE
3:00 P.M.

All City Council Meetings are live streamed on the city's website (https://www.flagstaff.az.gov/1461/Streaming-City-Council-Meetings)

PUBLIC COMMENT

Verbal public comments may be given through a virtual public comment platform or in-person

If you want to provide a verbal comment during the Council Meeting, use the link below to join the virtual public comment room.

VIRTUAL PUBLIC COMMENT WAITING ROOM

Written comments may be submitted to publiccomment@flagstaffaz.gov. All comments submitted via email will be considered written comments and will be documented into the record as such.

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1. CALL TO ORDER

NOTICE OF OPTION TO RECESS INTO EXECUTIVE SESSION

Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the City Council and to the general public that, at this regular meeting, the City Council may vote to go into executive session, which will not be open to the public, for legal advice and discussion with the City's attorneys for legal advice on any item listed on the following agenda, pursuant to A.R.S. §38-431.03(A)(3).

2. ROLL CALL

NOTE: One or more Councilmembers may be in attendance through other technological means.

MAYOR DAGGETT
VICE MAYOR ASLAN
COUNCILMEMBER HARRIS
COUNCILMEMBER HOUSE
COUNCILMEMBER MATTHEWS
COUNCILMEMBER MCCARTHY
COUNCILMEMBER SWEET

3. PLEDGE OF ALLEGIANCE, MISSION STATEMENT, AND LAND ACKNOWLEDGEMENT

MISSION STATEMENT

The mission of the City of Flagstaff is to protect and enhance the quality of life for all.

LAND ACKNOWLEDGEMENT

The Flagstaff City Council humbly acknowledges the ancestral homelands of this area's Indigenous nations and original stewards. These lands, still inhabited by Native descendants, border mountains sacred to Indigenous peoples. We honor them, their legacies, their traditions, and their continued contributions. We celebrate their past, present, and future generations who will forever know this place as home.

4. APPROVAL OF MINUTES FROM PREVIOUS MEETINGS

A. **Consideration and Approval of Minutes**: City Council Regular Meeting of February 1, 2022, Regular Meeting of February 15, 2022, Regular Meeting of February 14, 2023, Special Meeting (Executive Session) of March 6, 2023, Special Meeting (Executive Session) of March 7, 2023, and Special Meeting (Executive Session) of March 14, 2023.

STAFF RECOMMENDED ACTION:

Approve the minutes of the City Council Regular Meeting of February 1, 2022, Regular Meeting of February 15, 2022, Regular Meeting of February 14, 2023, Special Meeting (Executive Session) of March 6, 2023, Special Meeting (Executive Session) of March 7, 2023, and Special Meeting (Executive Session) of March 14, 2023.

5. PUBLIC PARTICIPATION

Public Participation enables the public to address the Council about an item that is not on the agenda. Comments relating to items that are on the agenda will be taken at the time that the item is discussed. If you wish to address the Council at tonight's meeting, please complete a comment card and submit it to the recording clerk as soon as possible. Your name will be called when it is your turn to speak. You may address the Council up to three times throughout the meeting, including comments made during Public Participation. Please limit your remarks to three minutes per item to allow everyone an opportunity to speak. At the discretion of the Chair, ten or more persons present at the meeting and wishing to speak may appoint a representative who may have no more than fifteen minutes to speak.

6. COUNCIL LIAISON REPORTS

7. APPOINTMENTS

Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the City Council and to the general public that the City Council may vote to go into executive session, which will not be open to the public, for the purpose of discussing or considering employment, assignment, appointment, promotion, demotion, dismissal, salaries, disciplining or resignation of a public officer, appointee, or employee of any public body...., pursuant to A.R.S. §38-431.03(A)(1).

A. **Consideration of Appointments:** Tourism Commission.

STAFF RECOMMENDED ACTION:

Make one appointment to a term expiring January 2025.

B. **Consideration of Appointments:** Heritage Preservation Commission.

STAFF RECOMMENDED ACTION:

Make one AT-LARGE appointment to a term expiring December 2025.

C. **Consideration of Appointments:** Indigenous Commission

STAFF RECOMMENDED ACTION:

Make two appointments to terms expiring in December 2025.

8. CONSENT ITEMS

All matters under Consent Agenda are considered by the City Council to be routine and will be enacted by one motion approving the recommendations listed on the agenda. Unless otherwise indicated, expenditures approved by Council are budgeted items.

A. **Consideration and Approval of License Agreement:** Enterprise License Agreement with Azteca Systems, LLC in the amount of $147,836.25, plus additional fees, for the Cityworks Software.

STAFF RECOMMENDED ACTION:

1. Approve the Enterprise License Agreement with Azteca Systems, LLC in the amount of $147,836.25, plus additional fees, for the Cityworks Software; and
2. Authorize the City Manager to execute all necessary documents.

B. **Consideration and Approval of Contract:** Emergency Operations Plan Development Contract between the City of Flagstaff and Emergency Management Partners, LLC (EM Partners)

STAFF RECOMMENDED ACTION:

1. Approve the contract with EM Partner to develop a City Emergency Operations Plan (EOP) in the amount of $71,348.50.
2. Authorize the City Manager to execute all necessary documents.

C. **Consideration and Approval of Grant Agreement:** Grant Agreement between the City of Flagstaff and AZ Department of Transportation for Airport Land Protection (Safety Areas) Acquire.

STAFF RECOMMENDED ACTION:

Approve the Grant Agreement for grant funds in the amount of $1,800,000 with a match of $200,000 for a total project cost of $2,000,000.

D. **Consideration and Approval of Ratification:** Letter of Support for the National League of Cities to encourage Congress to improve rail safety in the U.S.

STAFF RECOMMENDED ACTION:

Approve ratification of letter of support.

E. **Consideration and Approval of Contract:** Artist Services Contract with Haddad/Drugan LLC for $530,451 for two artworks for the Downtown Connection Center. Art Glass Fabrication & Delivery; and Southside Grove Sculpture Fabrication, Delivery & Installation.

STAFF RECOMMENDED ACTION:

1. Approve artist services contract for the Art Glass and the Southside Grove Sculpture at the Downtown Connection Center (DCC) with Haddad|Drugan LLC for $530,451.
2. Authorize the City Manager to execute all necessary documents.

F. **Consideration and Approval of Contract:** Approve a Cooperative Purchase Contract with Drake Equipment in the amount of $146,238.48, plus additional fees, for the purchase and installation of utility equipment on two water service trucks.

STAFF RECOMMENDED ACTION:

1. Approve the Cooperative Purchase Contract from Drake Equipment in the amount of $146,238.48, plus additional fees, for the purchase and installation of utility equipment on two water service trucks; and
2. Authorize the City Manager to execute all necessary documents.

G. **Consideration and Approval of Contract:** Approve a Cooperative Purchase Contract with Balar Equipment in the amount of $329,050.56, plus applicable fees, for a Solid Waste collection truck.

STAFF RECOMMENDED ACTION:

1. Approve a Cooperative Purchase Contract with Balar Equipment in the amount of $329,050.56, plus applicable fees, for a Solid Waste collection truck; and
2. Authorize the City manager to execute the necessary documents.

H. **Consideration and Approval of Grant Agreement:** Grant agreement between the U.S. Department of Housing and Urban Development and the City of Flagstaff for the Flagstaff Home Energy Retrofit Program for low-income and vulnerable families.

STAFF RECOMMENDED ACTION:

Approve the U.S. Department of Housing and Urban Development grant for FY2022 Economic Development Initiative, Community Project Funding Grant (B-22-CP-AZ-0018), in the amount of $750,000 for the Flagstaff Home Energy Retrofit Program for low-income and vulnerable families.

I. **Consideration and Approval of Contract:** Cooperative Purchase Contract with Motorola Solutions, Inc. in the amount of $2,111,544.29 for radio equipment, setup, accessories, and service for numerous City departments.

STAFF RECOMMENDED ACTION:

1. Approve the Cooperative Purchase Contract with Motorola Solutions, Inc. in the amount of $2,111,544.29 for radio equipment, setup, accessories, and service for numerous City departments in need of radio replacements; and
2. Authorize the City Manager to execute all necessary documents.

J. **Consideration and Approval of Council Meeting Schedule Adjustments:** Reschedule the July 4, 2023 Council Meeting to July 3, 2023; Reschedule the August 29, 2023 meeting to August 28, 2023; Cancel the meeting of December 26, 2023 and January 2, 2024.

STAFF RECOMMENDED ACTION:

1. Reschedule the July 4, 2023 Council Meeting to July 3, 2023
2. Reschedule the August 29, 2023 meeting to August 28, 2023
3. Cancel the meetings of December 26, 2023 and January 2, 2024

9. ROUTINE ITEMS

A. **Consideration and Approval of Contract:** An Energy Efficiency Services Job Order Contract with NORESCO, LLC; and Construction Work Order No. 1 with NORESCO, LLC, in an amount not to exceed $4,423,547, for Phase One of Project Implementation.

STAFF RECOMMENDED ACTION:

1. Award an Energy Efficiency Services Job Order Contract with NORESCO, LLC;
2. Award Construction Work Order No. 1 with NORESCO, LLC, in an amount not to exceed $4,423,547, for Phase One of Project Implementation; and
3. Authorize the City Manager to execute all necessary documents.

B. **Consideration and approval of Preliminary Plat:** A request by Presidio Tract M, LLC for approval of the Preliminary Plat for Miramonte at Presidio in the Pines VI Condominiums (City of Flagstaff project number PZ-19-00204-05), a 39-unit multi-family residential condominium subdivision. The 2.77-acre site is located at 2950 W. Presidio Dr. in the Highway Commercial (HC) zone with a Resource Protection Overlay (RPO). The site will develop as a Planned Residential Development (PRD) under the T4N.2 (Transect) Zone standards.

STAFF RECOMMENDED ACTION:

Approve the Preliminary Plat in accordance with the findings presented in this report and the Planning and Zoning Commission recommendation of approval (5-0 vote on February 8, 2023).

10. PUBLIC HEARING ITEMS

A. **Public Hearing and Consideration and Adoption of Ordinance No. 2023-06:** An ordinance of the City Council of the City of Flagstaff, amending the Flagstaff Zoning Map to rezone approximately 17.02 acres of real property generally located at 2950 East Butler Avenue, from the Rural Residential (RR) and Medium-Density Residential (MR) zones with a Resource Protection Overlay (RPO) to the Highway Commercial (HC) zone with an RPO, providing for severability, authority for clerical corrections, and establishing an effective date.

STAFF RECOMMENDED ACTION:

At the March 21, 2023, Council Meeting:

1. Hold the Public Hearing
2. Read Ordinance No. 2023-06 by title only for the first time
3. City Clerk reads Ordinance No. 2023-06 by title only (if approved above)

At the April 4, 2023, Council meeting:

4. Read Ordinance No. 2023-06 by title only for the final time
5. City Clerk reads Ordinance No. 2023-06 by title only (if approved above)
6. Adopt Ordinance No. 2023-06

11. REGULAR AGENDA

A. **Consideration and Adoption of Resolution No. 2023-13:** A resolution authorizing the City of Flagstaff to loan one-hundred thousand dollars ($100,000) to Foundation for Senior Living, or its successor, as gap financing for a Low-Income Housing Tax Credit application under the Arizona Department of Housing's 2022-2023 Qualified Allocation Plan

STAFF RECOMMENDED ACTION:

1) Read Resolution No. 2023-13 by title only
2) City Clerk reads Resolution No. 2023-13 by title only (if approved above)
3) Adopt Resolution No. 2023-13

B. **Consideration and Adoption of Resolution No. 2023-15:** A resolution approving the First Amendment to the Intergovernmental Agreement between the Northern Arizona Intergovernmental Public Transportation Authority (Mountain Line) and the City of Flagstaff for the Downtown Connection Center (DCC).

STAFF RECOMMENDED ACTION:

1) Read Resolution No. 2023-15 by title only
2) City Clerk reads Resolution No. 2023-15 by title only (if approved above)
3) Adopt Resolution No. 2023-15

12. PUBLIC PARTICIPATION

13. INFORMATIONAL ITEMS TO/FROM MAYOR, COUNCIL, AND STAFF, AND FUTURE AGENDA ITEM REQUESTS

14. ADJOURNMENT

CERTIFICATE OF POSTING OF NOTICE

The undersigned hereby certifies that a copy of the foregoing notice was duly posted at Flagstaff City Hall on _____, at _____ a.m./p.m. in accordance with the statement filed by the City Council with the City Clerk.

Dated this _____ day of _____, 2023.

_____
Stacy Saltzburg, MMC, City Clerk

4. A.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Stacy Saltzburg, City Clerk
Date:	03/15/2023
Meeting Date:	03/21/2023

TITLE:

Consideration and Approval of Minutes: City Council Regular Meeting of February 1, 2022, Regular Meeting of February 15, 2022, Regular Meeting of February 14, 2023, Special Meeting (Executive Session) of March 6, 2023, Special Meeting (Executive Session) of March 7, 2023, and Special Meeting (Executive Session) of March 14, 2023.

STAFF RECOMMENDED ACTION:

Approve the minutes of the City Council Regular Meeting of February 1, 2022, Regular Meeting of February 15, 2022, Regular Meeting of February 14, 2023, Special Meeting (Executive Session) of March 6, 2023, Special Meeting (Executive Session) of March 7, 2023, and Special Meeting (Executive Session) of March 14, 2023.

Executive Summary:

Minutes of City Council meetings are a requirement of Arizona Revised Statutes and, additionally, provide a method of informing the public of discussions and actions being taken by the City Council.

Financial Impact:

None

Policy Impact:

None

Connection to PBB Key Community Priorities/Objectives & Regional Plan:

Priority Based Budget Key Community Priorities and Objectives
Effective Governance

Previous Council Decision on This:

None

Attachments:

02.01.2022.CCRM
02.15.2022.CCRM
02.14.2023.CCSMWS
03.06.2023.CCSMES

03.07.2023.CCSMES
03.14.2023.CCSMES

CITY COUNCIL REGULAR MEETING
TUESDAY, FEBRUARY 1, 2022
CITY HALL COUNCIL CHAMBERS
211 WEST ASPEN
3:00 P.M.

MINUTES

1. CALL TO ORDER

Mayor Deasy called the meeting of the Flagstaff City Council held February 1, 2022, to order at 3:02 p.m.

NOTICE OF OPTION TO RECESS INTO EXECUTIVE SESSION

Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the City Council and to the general public that, at this regular meeting, the City Council may vote to go into executive session, which will not be open to the public, for legal advice and discussion with the City's attorneys for legal advice on any item listed on the following agenda, pursuant to A.R.S. §38-431.03(A)(3).

2. ROLL CALL

NOTE: One or more Councilmembers may be in attendance telephonically or by other technological means.

PRESENT: ABSENT:

MAYOR DEASY (virtually)
VICE MAYOR DAGGETT (virtually)
COUNCILMEMBER ASLAN (virtually)
COUNCILMEMBER MCCARTHY (virtually)
COUNCILMEMBER SALAS (virtually)
COUNCILMEMBER SHIMONI (virtually)
COUNCILMEMBER SWEET (virtually)

Others present: City Manager Greg Clifton; City Attorney Sterling Solomon.

3. PLEDGE OF ALLEGIANCE, MISSION STATEMENT, AND LAND ACKNOWLEDGEMENT

The Council and audience recited the pledge of allegiance, Councilmember Shimoni read the Mission Statement of the City of Flagstaff, and Councilmember Sweet read the Land Acknowledgement.

MISSION STATEMENT

The mission of the City of Flagstaff is to protect and enhance the quality of life for all.

LAND ACKNOWLEDGEMENT

The Flagstaff City Council humbly acknowledges the ancestral homelands of this area's Indigenous nations and original stewards. These lands, still inhabited by Native descendants, border mountains sacred to Indigenous peoples. We honor them, their legacies, their traditions, and their continued contributions. We celebrate their past, present, and future generations who will forever know this place as home.

4. PUBLIC PARTICIPATION

Public Participation enables the public to address the Council about an item that is not on the agenda. Comments relating to items that are on the agenda will be taken at the time that the item is discussed. If you wish to address the Council at tonight's meeting, please complete a comment card and submit it to the recording clerk as soon as possible. Your name will be called when it is your turn to speak. You may address the Council up to three times throughout the meeting, including comments made during Public Participation. Please limit your remarks to three minutes per item to allow everyone an opportunity to speak. At the discretion of the Chair, ten or more persons present at the meeting and wishing to speak may appoint a representative who may have no more than fifteen minutes to speak.

None

5. PROCLAMATIONS AND RECOGNITIONS

A. Proclamation: Black History Month

Mayor Deasy read and presented the Black History Month proclamation to DeAnn Wegwert with the Commission on Diversity Awareness.

6. CITY MANAGER REPORT

A. City Manager Report

Mr. Clifton provided a brief PowerPoint highlighting the December 2021 Employee Work Anniversaries.

EMPLOYEE WORK ANNIVERSARIES
FIVE YEAR ANNIVERSARIES
TWENTY YEAR ANNIVERSARIES
25 YEARS PLUS!!

Mr. Clifton briefly reviewed his report.

Economic Vitality Director Heidi Hansen briefly reviewed the Economic Vitality December and Annual reports.

Community Development Director Dan Folke briefly reviewed the Community Development Annual report.

i. Use of Council Chambers for ADOT Transportation Board Meeting

Council discussed the request from ADOT and agreed to allow them to utilize the chambers for their meeting. The Council also requested that Council Meetings return to a hybrid setting starting February 22, 2022.

7. COVID-19 UPDATES

A. COVID-19 Update

Senior Deputy City Manager Shannon Anderson provided a PowerPoint presentation that covered the following:

AGENDA
SHARING CCHHS INFORMATION
CCHHS: COVID-19 WEEKLY CASES
CCHHS: HOSPITAL ADMISSIONS
CCHHS: COVID-19 RELATED DEATHS
CCHHS: COMMUNITY TRANSMISSION
CCHHS: COMMUNITY VACCINATION
CCHHS: VARIANTS
NAH: HOSPITAL CENSUS

Coordinator for Indigenous Initiatives Rose Toehe continued the presentation.

INDIGENOUS NATIONS DATA
NAVAJO NATION
HOPI TRIBE

Mayor Deasy asked for data regarding those who are hospitalized and are vaccinated versus those who are not vaccinated. Ms. Anderson stated that she would check to see if that data is available.

Council briefly discussed when it would be appropriate to return to a hybrid meeting setting. They agreed that February 22, 2022 is the most appropriate time to return to hybrid.

8. COUNCIL LIAISON REPORTS

Vice Mayor Daggett reported that the Housing Commission unanimously approved the 10-Year Housing Plan and it is scheduled to be presented to Council on February 15, 2022.

Councilmember Aslan reported that he attended the Sustainability Commission meeting last week where they discussed protocols and logistics for the commission. They also discussed the possibility of developing a new sustainable building incentive. It would be a series of proposed amendments to make it more effective and in line with the Carbon Neutrality Plan and provide developers with an increased residential density bonus in exchange for a whole package of sustainable building practices.

Councilmember McCarthy reported that MetroPlan is meeting that week to discuss the recent survey results for the Flagstaff and FMPO area. He encouraged Council and the public to review the results.

Councilmember Salas reported that she will be attending the State House Transportation Hearing on HB2396 which concerns a one time allocation of $50 million to fund specific projects in rural and Greater Arizona. The Lone Tree Overpass project is listed as number nine on the list of projects.

Councilmember Shimoni reported that he attended a COVID operation briefing. He also reported that there is a special Indigenous Commission meeting that week along with meetings of the Beautification and Public Art Commission and Transportation Commission.

Councilmember Sweet reported that she met with Business Retention and Expansion Manager John Saltonstall to discuss the new priorities of the Northern Arizona Council of Governments (NACOG). She also reported that she plans to attend the Beautification and Public Art Commission in a couple of weeks.

Mayor Deasy reported that he attended the Commission on Inclusion and Adaptive Living where they discussed the Library accessibility ramp and concerns about mobility limitations within the Museum Flood area.

9. APPOINTMENTS

Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the City Council and to the general public that the City Council may vote to go into executive session, which will not be open to the public, for the purpose of discussing or considering employment, assignment, appointment, promotion, demotion, dismissal, salaries, disciplining or resignation of a public officer, appointee, or employee of any public body...., pursuant to A.R.S. §38-431.03(A)(1).

A. **Consideration of Appointments:** Planning and Zoning Commission.

Moved by Vice Mayor Becky Daggett, **seconded by** Councilmember Jim McCarthy to appoint Carole Mandino to a term expiring December 2024.

Vote: 7 - 0 - Unanimously

Moved by Councilmember Regina Salas, **seconded by** Vice Mayor Becky Daggett to appoint Bob Harris III to a term expiring December 2024.

Vote: 7 - 0 - Unanimously

Moved by Mayor Paul Deasy, **seconded by** Councilmember Jim McCarthy to appoint Mary Norton to a term expiring December 2024.

Vote: 7 - 0 - Unanimously

B. **Consideration of Appointments:** Housing Commission

Moved by Councilmember Miranda Sweet, **seconded by** Councilmember Adam Shimoni to appoint Jacquie Kellogg to a Building and Real Estate Professional seat to a term expiring September 2022.

Vote: 7 - 0 - Unanimously

10. LIQUOR LICENSE PUBLIC HEARINGS

A. **Consideration and Action on Liquor License Application:** Michael Joseph Basha, "Bashas #18," 2700 Woodlands Village Blvd., and "Bashas' #67," 1000 N. Humphreys Blvd. #112, Series 09 (liquor store - all spirituous liquor), Owner Transfers.

Mayor Deasy opened the public hearing.

Lieutenant Ryan Turley introduced the item and noted no items of concern.

There being no public comment, Mayor Deasy closed the public hearing

Moved by Mayor Paul Deasy, **seconded by** Councilmember Miranda Sweet to forward the application to the State with a recommendation of approval.

Vote: 7 - 0 - Unanimously

A break was held from 4:55 p.m. through 5:11 p.m.

11. CONSENT ITEMS

All matters under Consent Agenda are considered by the City Council to be routine and will be enacted by one motion approving the recommendations listed on the agenda. Unless otherwise indicated, expenditures approved by Council are budgeted items.

Moved by Mayor Paul Deasy, **seconded by** Councilmember Jim McCarthy to approve the Consent Agenda as presented.

Vote: 7 - 0 - Unanimously

A. **Consideration and Approval of Letter of Support:** to the FAA for the FY22 Airport Improvement Program for the construction of a Snow Removal Equipment Building.
Approve the Letter of Support

B. **Consideration and Approval of Letters of Support:** for Mountain Line Appropriations Bill
Approve the Letters of Support

C. **Consideration of Ratification of Contract:** City Council Ratification of the Professional Services Contract No. 2022-66 between the City of Flagstaff and Flagstaff Shelter Services in the amount of $50,000, to provide Emergency Homeless Services.

Consideration of Ratification of Grant Agreement: City Council Ratification of the Grant Agreement No. CL6321A between the City of Flagstaff and Flagstaff Shelter Services for the Emergency Homeless Services Project utilizing $100,000 of the American Rescue Plan Act Coronavirus Local Fiscal Recovery Funds.

1. Ratify the Professional Services Contract No. 2022-66 between the City of Flagstaff and Flagstaff Shelter Services in the amount of $50,000, to provide Emergency Homeless Services; and
2. Ratify the Grant Agreement No. CL6321A, between the City of Flagstaff and Flagstaff Shelter Services for the Emergency Homeless Services Project utilizing $100,000 of American Rescue Plan Act Coronavirus Local Fiscal Recovery Funds.

12. ROUTINE ITEMS

A. **Consideration and Adoption of Ordinance No. 2022-01:** An Ordinance of the City Council of the City of Flagstaff, extending and increasing the corporate limits of the City of Flagstaff pursuant to the provisions of Title 9, Chapter 4, Arizona Revised Statutes, by annexing approximately 10.05 acres of land located at 7000 North Highway 89, which certain land is contiguous to the existing corporate limits of the City of Flagstaff, and establishing city zoning for said land as Highway Commercial (HC) with a Resource Protection Overlay (RPO); providing for severability, authority for clerical corrections, and establishing an effective date. ***(Flagstaff Rehab Campus Annexation: Project Number PZ-20-00164-03).***

Councilmember Shimoni stated that he would like to have a Development Agreement drafted as part of the annexation to be included with the second read of the ordinance.

Moved by Councilmember Adam Shimoni, **seconded by** Mayor Paul Deasy to postpone the second read for 11 weeks and direct staff in the interim to draft a Development Agreement for consideration upon its return.

Vote: 5 - 2

NAY: Councilmember Jim McCarthy
Councilmember Regina Salas

B. **Consideration, and Adoption of Ordinance No. 2022-02:** An Ordinance of the City Council of the City of Flagstaff, amending the Flagstaff Zoning Map to rezone approximately 1.09 acres of real property generally located at 7000 North Highway 89, a portion of APN 301-50-005G, from the Highway Commercial (HC) zone with a Resource Protection Overlay (RPO) to the Rural Residential (RR) with a Resource Protection Overlay (RPO) with conditions, providing for severability, authority for clerical corrections, and establishing an effective date. ***(Flagstaff Rehab Campus Concept Zoning Map Amendment: Project Number PZ-20-00164-04).***

Moved by Councilmember Adam Shimoni, **seconded by** Mayor Paul Deasy to postpone the second read for 11 weeks and direct staff in the interim to draft a Development Agreement for consideration upon its return.

Vote: 5 - 2

NAY: Councilmember Jim McCarthy
Councilmember Regina Salas

C. **Consideration and Approval of Preliminary Plat:** PZ-20-00216-02, Ben Fimbrez requests Preliminary Plat approval for Fimbrez Estates located at 1300 W Lower Coconino Avenue, a six-lot, single-family subdivision on 10.04 acres in the Estate Residential (ER) Zone within the Resource Protection Overlay (RPO).

Senior Planner Tiffany Antol provided a PowerPoint presentation that covered the following:

FIMBREZ ESTATES
REQUEST OVERVIEW
VICINITY MAP

FIMBREZ ESTATES – BACKGROUND
FIMBREZ ESTATES PRELIMINARY PLAT
REQUIRED FINDING #1: ZONING CODE (TITLE 10)
MEETS ESTATE RESIDENTIAL (ER) ZONE STANDARDS
MEETS RESOURCE PROTECTION STANDARDS
RESOURCE PROTECTION PLAN
MEETS OTHER RELEVANT STANDARDS
REQUIRED FINDING #2: ENGINEERING STANDARDS (TITLE 13)
MEETS ENGINEERING STANDARDS
REQUIRED FINDING #3: SUBDIVISION STANDARDS (TITLE 11)
MEETS SUBDIVISION AND LAND SPLIT REGULATIONS (CHAPTER 11-20)
FINDINGS AND RECOMMENDATION

Councilmember McCarthy indicated that signs in the area indicate that there is no public access to the road; he asked if the public would be able to access the road. Ms. Antol stated that the public would have access to the road and that currently, there is public access on the road through the Flag Mesa Subdivision and it will be continued through this subdivision as well. She noted that staff will work with the applicant and neighborhood to correct the sign issues in advance of the second read.

Moved by Mayor Paul Deasy, **seconded by** Councilmember Adam Shimoni to approve the Preliminary Plat in accordance with the findings with the following conditions: That a minimum front setback of 15 feet be required for front-loaded garages and a minimum of 10 feet be required for side-loaded garages and provide dedication language for a public trail or FUTS on Tract A with the Final Plat.

Vote: 7 - 0 - Unanimously

13. DISCUSSION ITEMS

A. Museum Flood Project Updates

Interim Water Services Director Andy Bertelsen, Public Works Streets Director Sam Beckett, Public Works Director Scott Overton, Stormwater Manager Ed Schenk, Public Affairs Director Sarah Langley, and Coconino County Deputy Manager Lucinda Andreani provided a PowerPoint presentation that covered the following:

AGENDA
SIREN SYSTEM
FEASIBILITY STUDY
SEDIMENT STUDIES
PARK WAY SEDIMENT BASINS
KILLIP DETENTION BASIN
COMMUNICATIONS UPDATE

Dawn Rodriguez addressed Council with comments and concerns about flooding on Dortha.

Vice Mayor Daggett asked about the communication and volunteer plan for removing old sandbags and replacing them with new ones. Mr. Overton stated that internal discussions about outreach and process have started. Things will look similar to what has been done in prior years.

Vice Mayor Daggett asked if the City and Flood Control District will be helping to remove and replace sandbags. Ms. Andreani stated that the Arizona Conservation Corp and other

volunteers have been utilized to assist those who have physical challenges. For those who are able bodied, supplies and dumpsters have been provided for use.

Councilmember Shimoni offered that it would be beneficial to engage with university and high school athletes, Greek life, and others to try and increase the volunteer participation. Ms. Langley stated that they are working with the Neighborhood Liaison to link students up with volunteer opportunities.

Mayor Deasy stated that he would like to set a timeline for operations to begin the first week of April. The flood season will be here before we know it and there needs to be enough time for everyone to prepare. He also noted concerns about loose sand and gravel flowing downstream and causing further issues.

14. FUTURE AGENDA ITEM REQUESTS

After discussion and upon agreement by three members of the Council, an item will be moved to a regularly-scheduled Council meeting.

A. **Future Agenda Item Request (F.A.I.R.):** A request by Mayor Deasy to place on a future agenda a discussion regarding the development of a rainbow-colored pedestrian crosswalk

Mayor Deasy stated that similar projects are occurring in many other cities and he would like to see Flagstaff show its support and encouragement for inclusivity within the community. He suggested the crosswalk between Wheeler Park and City Hall but indicated that other areas might be better suited.

Council expressed support to move forward with the request and future discussion.

B. **Future Agenda Item Request (F.A.I.R.):** A request by Councilmember Aslan to place on a future agenda a discussion regarding the development of a Councilmember Evaluation Process.

Councilmember Aslan stated that he would like to have a voluntary process or procedure for Council to receive anonymous feedback to use for their professional development. He indicated that he appreciates constructive feedback and a better awareness about how he is perceived. There are systems in place for Council to evaluate the City Manager and City Attorney and he would appreciate professional feedback from others to become a better public servant.

Mayor Deasy expressed concern about the staff resources required to implement such a program. He believes that performance should be evaluated by one’s supervisor and for Council that is the public at large and they have the opportunity to do that at each election. This type of process would put staff in an awkward position and he does not see value in the use of public resources.

The requisite number of Councilmembers expressed support for a future discussion.

15. PUBLIC PARTICIPATION

None

16. INFORMATIONAL ITEMS TO/FROM MAYOR, COUNCIL, AND STAFF, AND FUTURE AGENDA ITEM REQUESTS

Councilmember Shimoni noted the upcoming Budget Retreat that week on Thursday and Friday. He also reported that he will be participating in a conference about alternate response models throughout the country.

Councilmember Salas requested a FAIR item to consider hazard pay across the board and continuing with premium pay for law enforcement.

Councilmember Aslan reported that Theatrikos is having its 50th Anniversary this year. He recommended that people consider attending one of their shows.

Vice Mayor Daggett offered her congratulations to Theatrikos. She also congratulated the Coconino Coalition for Children and Youth who is also celebrating their 50th Anniversary. She announced that the application period for the Flinn Brown Fellowship is open now and will be accepting applications through February 28, 2022.

Mayor Deasy reported that another N95 mask event will be held on Sunday at the downtown library. He thanked Northern Arizona Healthcare for donating 15,000 masks to the community.

17. ADJOURNMENT

The Regular Meeting of the Flagstaff City Council held February 1, 2022, adjourned at 6:58 p.m.

_____
MAYOR

ATTEST:

_____
CITY CLERK

CERTIFICATION

I, STACY SALTZBURG, do hereby certify that I am the City Clerk of the City of Flagstaff, County of Coconino, State of Arizona, and that the above Minutes are a true and correct summary of the Meeting of the Council of the City of Flagstaff held on February 1, 2022. I further certify that the Meeting was duly called and held and that a quorum was present.

DATED this 21st day of March, 2023.

_____
CITY CLERK

CITY COUNCIL REGULAR MEETING
TUESDAY, FEBRUARY 15, 2022
CITY HALL COUNCIL CHAMBERS
211 WEST ASPEN
3:00 P.M.

MINUTES

1. CALL TO ORDER

Mayor Deasy called the meeting of the Flagstaff City Council held February 15, 2022, to order at 3:01 p.m.

NOTICE OF OPTION TO RECESS INTO EXECUTIVE SESSION

Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the City Council and to the general public that, at this regular meeting, the City Council may vote to go into executive session, which will not be open to the public, for legal advice and discussion with the City's attorneys for legal advice on any item listed on the following agenda, pursuant to A.R.S. §38-431.03(A)(3).

2. ROLL CALL

NOTE: One or more Councilmembers may be in attendance telephonically or by other technological means.

PRESENT: ABSENT:

MAYOR DEASY (virtually)
VICE MAYOR DAGGETT (virtually)
COUNCILMEMBER ASLAN (virtually)
COUNCILMEMBER MCCARTHY (virtually)
COUNCILMEMBER SALAS (virtually)
COUNCILMEMBER SHIMONI (virtually)
COUNCILMEMBER SWEET (virtually)

Others present: City Manager Greg Clifton; City Attorney Sterling Solomon.

3. PLEDGE OF ALLEGIANCE, MISSION STATEMENT, AND LAND ACKNOWLEDGEMENT

The Council and audience recited the pledge of allegiance, Councilmember Shimoni read the Mission Statement of the City of Flagstaff, and Councilmember Salas read the Land Acknowledgement.

MISSION STATEMENT

The mission of the City of Flagstaff is to protect and enhance the quality of life for all.

LAND ACKNOWLEDGEMENT

The Flagstaff City Council humbly acknowledges the ancestral homelands of this area's Indigenous nations and original stewards. These lands, still inhabited by Native descendants, border mountains sacred to Indigenous peoples. We honor them, their legacies, their traditions, and their continued contributions. We celebrate their past, present, and future generations who will forever know this place as home.

4. PUBLIC PARTICIPATION

Public Participation enables the public to address the Council about an item that is not on the agenda. Comments relating to items that are on the agenda will be taken at the time that the item is discussed. If you wish to address the Council at tonight's meeting, please complete a comment card and submit it to the recording clerk as soon as possible. Your name will be called when it is your turn to speak. You may address the Council up to three times throughout the meeting, including comments made during Public Participation. Please limit your remarks to three minutes per item to allow everyone an opportunity to speak. At the discretion of the Chair, ten or more persons present at the meeting and wishing to speak may appoint a representative who may have no more than fifteen minutes to speak.

Dawn Rodriguez addressed Council with concerns related to Museum Fire flooding.

5. PROCLAMATIONS AND RECOGNITIONS

A. Recognition: Fire Station 1B Shift Crew Unit Commendation and Citizen Heroism Award

Fire Chief Mark Gaillard presented Fire Station 1B Shift Crew with a Unit Commendation and Geordie Beck with a Citizen Heroism Award for their life saving efforts during an incident at a local athletic club.

Council expressed their gratitude to all those who were involved in the incident.

6. CITY MANAGER REPORT

A. City Manager Report

Mr. Clifton briefly reviewed his report.

Water Services Management Analyst Lisa Deem briefly reviewed the Water Services monthly report.

Sustainability Director Nicole Antonopoulos briefly reviewed the Sustainability monthly report.

7. COVID-19 UPDATES

A. COVID-19 Update

Senior Deputy City Manager Shannon Anderson provided a PowerPoint presentation that covered the following:

AGENDA
CCHHS: COVID-19 WEEKLY CASES

CCHHS: HOSPITAL ADMISSIONS
CCHHS: COVID-19 RELATED DEATHS
CCHHS: COMMUNITY TRANSMISSION
CCHHS: COMMUNITY VACCINATION
CCHHS: VARIANTS
NAH: HOSPITAL CENSUS

Coordinator for Indigenous Initiatives Rose Toehe continued the presentation.

INDIGENOUS NATIONS DATA
NAVAJO NATION
HOPI TRIBE

Ms. Anderson concluded the presentation.

COUNCIL MEETING FORMAT

Council briefly discussed the decline in COVID cases and they gave direction to return to in-person meetings with a hybrid option to attend.

8. COUNCIL LIAISON REPORTS

Mayor re-ordered the agenda and took Items 9A, B, C, and D before Item 8.

Vice Mayor Daggett reported that the 10-Year Housing Plan will be presented later in the agenda. She also reported that the Northern Arizona Municipal Water Association is working to track and weigh in on a number of bills related to water.

Councilmember Aslan reported that he helped chair a meeting for a new working group called the Rural Groundwater Working Group. It is people from around the state who are very concerned about the use of groundwater. The meeting focused on taking a deeper dive into bills that were introduced and the impacts they could have if passed.

Councilmember Salas reported that the State Transportation Board meeting is coming up later in the week. It is being hosted by MetroPlan and the City of Flagstaff.

Councilmember Shimoni reported that the CJCC Executive Committee met last week and discussed the hiring process for their new coordinator. They also discussed the felony case backlog and how to better function as a judicial system.

Councilmember Sweet reported that the Beautification and Public Art Commission has an open vacancy; she thanked Jeremy Slater for his service on the commission and is excited to see who applies and is appointed to the commission next. The commission discussed their 2023 work plan which included the airport, Aspen bike and ped niche downtown next to Pay and Take, the Fourth Street and Lockett Roundabout project and the Downtown Connection Center. She also reported that she will be attending the Mountain Line Board Meeting and the Water Commission meeting later in the week.

9. APPOINTMENTS

Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the City Council and to the general public that the City Council may vote to go into executive session, which will not be open to the public, for the purpose of discussing or considering employment, assignment, appointment, promotion, demotion, dismissal, salaries, disciplining or resignation of a public officer, appointee, or employee of any public body...., pursuant to A.R.S. §38-431.03(A)(1).

A. Consideration of Appointments: Indigenous Commission

Moved by Councilmember Regina Salas, **seconded by** Councilmember Adam Shimoni to appoint Fawn Toya to a term expiring December 2024.

Vote: 7 - 0 - Unanimously

Moved by Councilmember Austin Aslan, **seconded by** Mayor Paul Deasy to appoint Darrell Marks to a term expiring December 2024.

Vote: 7 - 0 - Unanimously

B. Consideration of Appointments: Board of Adjustment.

Moved by Mayor Paul Deasy, **seconded by** Councilmember Regina Salas to appoint Diane Lorden to a term expiring May 2024.

Council briefly discussed concerns about two of the four applicants being employed with the same employer. There were concerns about conflict of interest or an appearance of stacking the applicant pool.

Vote: 7 - 0 - Unanimously

Moved by Councilmember Regina Salas, **seconded by** Councilmember Jim McCarthy to appoint Art Babbott to a term expiring May 2024.

Vote: 7 - 0 - Unanimously

Moved by Councilmember Austin Aslan, **seconded by** Mayor Paul Deasy to appoint Debra Lewis to a term expiring May 2024.

Vote: 7 - 0 - Unanimously

C. Consideration of Appointments: Transportation Commission.

Moved by Councilmember Austin Aslan, **seconded by** Councilmember Adam Shimoni to appoint Brandon Cruickshank to a term expiring July 2024.

Vote: 7 - 0 - Unanimously

Moved by Councilmember Miranda Sweet, **seconded by** Councilmember Adam Shimoni to appoint Joe Koenig to a term expiring July 2024.

Vote: 7 - 0 - Unanimously

Moved by Councilmember Regina Salas, **seconded by** Councilmember Adam Shimoni to appoint Jonathan Hansen to a term expiring July 2023.

Vote: 7 - 0 - Unanimously

D. **Consideration of Appointments:** Commission on Diversity Awareness.

Moved by Vice Mayor Becky Daggett, **seconded by** Councilmember Adam Shimoni to reappoint Jean Toner to a term expiring September 2024.

Vote: 7 - 0 - Unanimously

Moved by Councilmember Miranda Sweet, **seconded by** Mayor Paul Deasy to appoint Marcela Pino to a term expiring September 2024.

Vote: 7 - 0 - Unanimously

10. CONSENT ITEMS

All matters under Consent Agenda are considered by the City Council to be routine and will be enacted by one motion approving the recommendations listed on the agenda. Unless otherwise indicated, expenditures approved by Council are budgeted items.

Moved by Councilmember Jim McCarthy, **seconded by** Mayor Paul Deasy to approve the Consent Agenda as presented.

Vote: 7 - 0 - Unanimously

A. **Consideration and Approval of Contract:** Approve the Cooperative Purchase Contract with PFVT Motors, LLC dba Peoria Ford for the purchase of one (1) fully electric 2022 Ford F-150 Lightning pickup in the amount of $63,372.14.

1. Approve the Cooperative Purchase Contract with PFVT Motors, LLC dba Peoria Ford for the purchase of one (1) fully electric Ford F-150 Lightning pickup in the amount of $63,372.14; and
2. Authorize the City Manager to execute the necessary documents

B. **Consideration and Approval of Contract:** Approve the Cooperative Purchase Contract with Empire Southwest, LLC for the purchase of one (1) CAT 938M Wheel Loader in the amount of $289,900.87.

1. Approve the Cooperative Purchase Contract with Empire Southwest, LLC for the purchase of one (1) CAT 938M Wheel Loader in the amount of $289,900.87; and
2. Authorize the City Manager to execute the necessary documents.

C. **Consideration and Approval of Contract:** Approve the Cooperative Purchase Contract with PFVT Motors, LLC dba Peoria Ford for the purchase of one (1) fully electric 2022 Ford F-150 Lightning pickup in the amount of $63,372.14.

1. Approve the Cooperative Purchase Contract with PFVT Motors, LLC dba Peoria Ford for the purchase of one (1) fully electric Ford F-150 Lightning pickup $63,372.14; and
2. Authorize the City Manager to execute the necessary documents

D. **Consideration and Approval of Contract:** Approval of the Cooperative Purchase Contract with Interim Public Management, LLC, for professional level consulting in an annual amount not to exceed $300,000 in any fiscal year.

1. Approve the Cooperative Purchase Contract with Interim Public Management, LLC for professional level consulting in an annual amount not to exceed $300,000 in any fiscal year; and
2. Authorize the City Manager to execute the necessary documents

E. **Consideration and Approval of Grant Agreement:** FY 2022 State Grant-In-Aid Construction Agreement between the City of Flagstaff and the Arizona State Library, Archives and Public Records for the Grand Canyon Library Renovation

Approve the State Grant-In-Aid (SGIA) Construction Grant Agreement for FY 2022 for grant funds in the amount of $50,000 with a City match of $50,000.

11. ROUTINE ITEMS

A. **Consideration and Approval of Contract:** Cooperative Purchase Contract with Municipal Emergency Services, Inc. for the purchase of specialized fire and safety equipment not to exceed $200,000 per budget year.

Deputy Fire Chief Mark Wilson noted that Items 11A and 11B are administrative requests that allow the Fire Department to purchase equipment through cooperative purchase agreements. Much of the equipment supports the Fire Academy.

Moved by Mayor Paul Deasy, **seconded by** Councilmember Miranda Sweet to approve the Cooperative Purchase Contract with Municipal Emergency Services, Inc. for the purchase of specialized fire and safety equipment not to exceed $200,000 per budget year and authorize the City Manager to execute all necessary documents.

Vote: 7 - 0 - Unanimously

B. **Consideration and Approval of Contract:** Cooperative Purchase Contract with LN Curtis & Sons for the purchase of specialized fire and safety equipment not to exceed $200,000 per budget year.

Moved by Mayor Paul Deasy, **seconded by** Vice Mayor Becky Daggett to approve the Cooperative Purchase Contract with LN Curtis & Sons for the purchase of specialized fire and safety equipment not to exceed $200,000 per budget year and authorize the City Manager to execute all necessary documents.

Vote: 7 - 0 - Unanimously

12. PUBLIC HEARING ITEMS

A. **Public Hearing, Consideration, and Adoption of Ordinance No. 2022-03:** An Ordinance of the City Council of the City of Flagstaff, amending the Flagstaff Zoning Map to rezone approximately 299.68 acres of real property generally located at 1900 North Gemini Drive, APN 101-37-002J, 107-01-001F, 107-01-001G, 101-37-001E, 101-37-002H, 101-28-007E, 107-01-001B, and 101-28-007C, and a portion of APN 110-08-001G and 109-02-001S, from the Rural Residential (RR), Public Facility (PF), and Research and Development (RD) zones with a Resource Protection Overlay (RPO) to the Public Open Space (POS) zone with a Resource Protection Overlay (RPO), providing for severability, authority for clerical corrections, and establishing an effective date. ***(McMillan Mesa Natural Area Concept Zoning Map***

Amendment: PZ-20-00063).

Mayor Deasy opened the public hearing.

Senior Planner Genevieve Pearthree provided a PowerPoint presentation that covered the following:

MCMILLAN MESA NATURAL AREA CONCEPT ZONING MAP AMENDMENT
REQUEST OVERVIEW
PROPERTY LOCATION
HISTORY AND PURPOSE
ZONING MAP AMENDMENT DETAILS
TYPES OF ZONING MAP AMENDMENTS
CITIZEN PARTICIPATION
ZONING MAP AMENDMENT FINDINGS
FINDING FOR APPROVAL #1: FLAGSTAFF REGIONAL PLAN 2030
REGIONAL PLAN 2030 GOALS AND POLICIES THAT SUPPORT REZONING
REGIONAL PLAN 2030 GOALS AND POLICIES THAT DO NOT SUPPORT REZONING
MCMILLAN MESA VILLAGE SPECIFIC PLAN
FINDING #2: COMMUNITY BENEFIT
FINDING #3: ADEQUACY OF SITE
STAFF RECOMMENDATION

Tyler Denham addressed Council in support of the rezone. While he primarily advocates for urban density on housing affordability grounds, he also supports it because it frees up more land for community amenities such as the McMillan Mesa area.

Tyler Denham also submitted a written comment in support of the rezone.

Councilmember Salas asked if there are adequate staff resources to protect the area. Open Space Manager Robert Wallace stated that staff have been managing the property since the passing of Proposition 403 and they will continue to work with the Budget Team to increase the base budget to better manage all open space properties.

Council offered words of appreciation to staff for their work on the project and the management of the area.

There being no further comment, Mayor Deasy closed the public hearing.

Moved by Councilmember Jim McCarthy, **seconded by** Mayor Paul Deasy to read Ordinance No. 2022-03 by title only for the first time.

Vote: 7 - 0 - Unanimously

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF FLAGSTAFF, AMENDING THE FLAGSTAFF ZONING MAP TO REZONE APPROXIMATELY 299.68 ACRES OF REAL PROPERTY GENERALLY LOCATED AT 1900 NORTH GEMINI DRIVE, APN 101-37-002J, 107-01-001F, 107-01-001G, 101-37-001E, 101-37-002H, 101-28-007E, 107-01-001B, AND 101-28-007C, AND A PORTION OF APN 110-08-001G AND 109-02-001S, FROM THE RURAL RESIDENTIAL (RR), PUBLIC FACILITY (PF), AND RESEARCH AND DEVELOPMENT (RD) ZONES WITH A RESOURCE PROTECTION OVERLAY (RPO) TO THE PUBLIC OPEN SPACE (POS) ZONE WITH A RESOURCE PROTECTION OVERLAY (RPO), PROVIDING FOR SEVERABILITY, AUTHORITY FOR CLERICAL CORRECTIONS, AND ESTABLISHING AN EFFECTIVE DATE

A break was held from 4:46 p.m. through 5:01 p.m.

B. **Consideration and Adoption of Resolution No. 2022-05 and Ordinance No. 2022-04:** A Resolution of the City Council of the City of Flagstaff, Coconino County, Arizona, declaring as a public record that certain documents filed with the City Clerk and entitled "PZ-21-00282 Updates to Zoning Code - Residential Sustainable Building Standards" and an Ordinance of the City Council of the City of Flagstaff, Coconino County, Arizona, amending the Flagstaff City Code, Title 10, Flagstaff Zoning Code, to modify the existing Residential Sustainable Building Standards.

Mayor Deasy opened the public hearing.

Sustainability Manager Jenny Niemann provided a PowerPoint presentation that covered the following:

AMENDMENT TO ZONING CODE SECTION 10-30.070 RESIDENTIAL SUSTAINABLE BUILDING STANDARDS
RESIDENTIAL SUSTAINABLE BUILDING STANDARDS
CURRENT INCENTIVE
MOTIVATION FOR CHANGE
CITY'S PROPOSED ZONING CODE TEXT AMENDMENT
OVERVIEW OF PROPOSED AMENDMENT: PURPOSE 10-30.70.010
OVERVIEW OF PROPOSED AMENDMENT: DENSITY BONUS (SECTION 10-30.70.030)
OVERVIEW OF PROPOSED AMENDMENT: MINIMUM STANDARDS (SECTION 10-30.70.040)
OVERVIEW OF PROPOSED AMENDMENT: RESIDENTIAL SUSTAINABLE BUILDING AGREEMENT (SECTION 10-30.70.050)
OVERVIEW OF PROPOSED AMENDMENT: DEFINITIONS "E" (SECTION 10-80.20.050)
CARBON NEUTRALITY PLAN ALIGNMENT

Senior Planner Tiffany Antol continued the presentation.

STAFF RECOMMENDATION

The following individuals addressed Council concerning the proposed amendments to the Residential Building Standards:

- Mary Norton
- Tyler Denham

The following comments were received:

- Why would new sustainable building code standards give options to lower the energy efficiency ratings by deleting the high level of energy efficiency resulting from a HERS 50 rating?
- Some of the options are lower levels of energy efficiency than builders are already building at.
- Consider the ramifications of the generous twenty five percent density increase bonus that will be exempt from triggering high occupancy housing.
- This will lower guardrails that have already been put into place.
- Prop 207 waivers should not be allowed to be considered with this bonus.
- Concerned about what a development would look like after using the density bonus and double dipping with affordable housing incentives.

- The amendments are too loosely defined providing too many loopholes.
- The trade off of an electric building that might not be held to the highest standards of energy efficiency will not be well received.
- More work and detailing on sections two and three are needed before this moves forward.
- The density bonus should be more generous; greater urban density is more environmentally sustainable.
- If the size of the incentive is not balance to the cost, no one will use the incentive.
- If the 25% density bonus increases the parking requirement for the development, that would undercut the incentive for the density bonus due to cost.

Councilmember Aslan stated that periodically checking in on the incentive policy will be good to determine if it is working.

Vice Mayor Daggett asked about the impact to the High Occupancy Housing (HOH) policy. Ms. Antol stated that when the original incentive was developed it did not contemplate HOH. HOH sets density standards before a Conditional Use Permit and there are several areas where density limitations are set. The incentive bonus density is not applied to the maximum caps and it has been clarified that it will not count against a project in becoming an HOH if the incentive is used.

Vice Mayor Daggett asked if it would make sense to break out residential from multi-family projects for the incentive. Ms. Antol stated that to date, the only projects that have used the incentive are multi-family developments. Developers have a harder time using the bonus density with single-family residential. The hope is that it can change in the future and they are also looking at ways to potentially apply the incentive to commercial developments.

Councilmember McCarthy suggested a number of clerical revisions and provided staff a report that documented them.

Mayor Deasy asked the purpose for exempting gas fireplaces outside. Ms. Niemann stated that the outdoor fireplaces are generally in common and shared use areas and developers shared that it is an amenity that they would like to maintain. For those there is a certification based on non-significant emission output.

Mayor Deasy noted his support for more electric vehicle charging stations.

Councilmember Sweet stated that she would like to see the word “incentive” added to the title. She also stated that regular check ins will be crucial to make sure the incentive is having the desired effect and to tweak as needed. She asked if solar should be included within the incentive. Ms. Niemann stated that solar was not included because they are keeping with the original structure of the incentive. There are elements that will require solar to meet certain standards and this would allow for flexibility within the developments.

Councilmember McCarthy asked if there was anything in the incentive that would allow someone to use gas to heat a swimming pool. Ms. Niemann explained that right now it does allow other uses that do not result in a significant increase of carbon emissions. It would depend on the actual output and other options that might be available.

Vice Mayor Daggett stated that student housing was the impetus for the HOH plan and the public was concerned about the bedroom to bathroom ratios. She asked if a developer could build something considered student housing with the incentive with the bathroom to bedroom ratios. Ms. Antol stated that if a project under existing zoning allows for 50 units, the bonus would add 13 units and those would not go toward determining if a project is HOH, only the

original 50 units. HOH could also be triggered if the development reaches a certain number of units or bedrooms per acre.

Vice Mayor Daggett asked if the policy had been considered by the Housing and Sustainability Commissions. Ms. Antol stated that the Sustainability Commission reviewed and voted unanimously in favor, the policy was not presented to the Housing Commission.

Mayor Deasy asked about enforcement and follow-up on the obligations. Ms. Niemann stated that the developer will be required to file reports on how they are complying and staff will then verify internally at each stage of the development review process. Enforcement expectations and penalties will be included in the development agreement. Ms. Antol stated that a permit tracking system is in place to track all the requirements of development agreements. There is also the zoning code enforcement process where charges and fines can be brought against a developer for lack of compliance.

Council agreed to increasing the number of additional electric vehicle charging stations.

There being no further comments, Mayor Deasy closed the public hearing.

Moved by Councilmember Jim McCarthy, **seconded by** Councilmember Miranda Sweet to read Resolution No. 2022-05 by title only for the first time and include the title change and increase the number of electric vehicle charging stations.

Vote: 7 - 0 - Unanimously

A RESOLUTION OF THE FLAGSTAFF CITY COUNCIL DECLARING AS A PUBLIC RECORD THAT CERTAIN DOCUMENT FILED WITH THE CITY CLERK AND ENTITLED "PZ-21-00282 UPDATES TO ZONING CODE – RESIDENTIAL SUSTAINABLE BUILDING STANDARDS" as amended.

Moved by Mayor Paul Deasy, **seconded by** Councilmember Miranda Sweet to read Ordinance No. 2022-04 by title only for the first time.

Vote: 7 - 0 - Unanimously

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF FLAGSTAFF, AMENDING THE FLAGSTAFF CITY CODE, TITLE 10, FLAGSTAFF ZONING CODE, BY ADOPTING BY REFERENCE THAT CERTAIN DOCUMENT ENTITLED "PZ-21-00282 UPDATES TO ZONING CODE – RESIDENTIAL SUSTAINABLE BUILDING STANDARDS"; PROVIDING FOR PENALTIES, REPEAL OF CONFLICTING ORDINANCES, SEVERABILITY, AND ESTABLISHING AN EFFECTIVE DATE

13. REGULAR AGENDA

A. Consideration and Adoption of Resolution No. 2022-04: A resolution approving an Intergovernmental Agreement between the Town of Tusayan and the City of Flagstaff for Grand Canyon Community Library services.

City and County Library Director Jared Tolman provided a PowerPoint presentation that covered the following:

CITY OF TUSAYAN AND CITY OF FLAGSTAFF LIBRARY SERVICE IGA

Moved by Mayor Paul Deasy, **seconded by** Councilmember Regina Salas to read Resolution No. 2022-04 by title only for the first time.

Vote: 7 - 0 - Unanimously

A RESOLUTION OF THE FLAGSTAFF CITY COUNCIL APPROVING AN INTERGOVERNMENTAL AGREEMENT BETWEEN THE TOWN OF TUSAYAN AND THE CITY OF FLAGSTAFF FOR GRAND CANYON COMMUNITY LIBRARY SERVICES

Moved by Mayor Paul Deasy, **seconded by** Councilmember Regina Salas to adopt Resolution No. 2022-04.

Vote: 7 - 0 - Unanimously

B. **Consideration Resolution No. 2022-06:** A resolution of the Flagstaff City Council of the City of Flagstaff, Arizona, a Municipal Corporation of Arizona, to authorize the application for Clean Water State Revolving Fund Loan from the Water Infrastructure Finance Authority of Arizona.

Management Services Director Rick Tadder addressed Council stating that the resolution is required to authorize the submittal of a loan application to the Water Infrastructure Finance Authority (WIFA) of Arizona. The city is requesting a loan from the Clean Water State Revolving Fund to support our Stormwater Fund for an amount not to exceed $20 Million. This will primarily fund work related to the Rio de Flag project. The resolution does not authorize the final issuing of the loan, just the application, and staff will return in the coming months to seek Council approval of an Ordinance to authorize the debt with WIFA of Arizona.

Moved by Mayor Paul Deasy, **seconded by** Councilmember Jim McCarthy to read Resolution No. 2022-06 by title only for the first time.

Vote: 7 - 0 - Unanimously

A RESOLUTION OF THE FLAGSTAFF CITY COUNCIL, OF THE CITY OF FLAGSTAFF, ARIZONA, A MUNICIPAL CORPORATION OF ARIZONA, TO AUTHORIZE THE APPLICATION FOR A CLEAN WATER STATE REVOLVING FUND LOAN FROM THE WATER INFRASTRUCTURE FINANCE AUTHORITY OF ARIZONA

Moved by Mayor Paul Deasy, **seconded by** Councilmember Austin Aslan to adopt Resolution No. 2022-06.

Vote: 7 - 0 - Unanimously

C. **Consideration and Adoption of Resolution No. 2022-07:** A resolution to adopt amendments to the Enforcement Response Plan (ERP) that covers the Pretreatment, Stormwater and Cross Connection programs.

City Attorney Sterling Solomon addressed Council sating that the resolution would adopt amendments to the Enforcement Response Plan. Currently, backflow device tests are required yearly however, there is no requirement to provide the test data back to the city to ensure the proper testing has been done. The amendments will require the testers to submit data to the city within five days of the test. There are a few other minor amendments that are primarily house keeping and clarifications.

Moved by Mayor Paul Deasy, **seconded by** Vice Mayor Becky Daggett to read Resolution No. 2022-07 by title only for the first time.

Vote: 7 - 0 - Unanimously

A RESOLUTION OF THE FLAGSTAFF CITY COUNCIL, ADOPTING AN AMENDMENT TO THE FLAGSTAFF WATER SERVICES ENFORCEMENT RESPONSE FOR THE CITY OF FLAGSTAFF

Moved by Mayor Paul Deasy, **seconded by** Vice Mayor Becky Daggett to adopt Resolution No. 2022-07.

Vote: 7 - 0 - Unanimously

D. **Consideration and Approval of Contract:** Agreement for Option to Lease City-owned real estate located at 1700 East Sixth Avenue for the purpose of developing permanently affordable housing.

Real Estate Manager Bryce Doty provided a PowerPoint presentation that covered the following:

LEASE OPTION AGREEMENT ON 1700 E SIXTH AVE
VICINITY MAP
OPTION TO LEASE
SITE PLAN APPROVAL

The following individuals addressed Council with comments about the contract:

- Devonna McLaughlin
- Deb Harris
- Khara House
- Maria D. Castillo-Rincon

The following comments were received:

- Affordable units are desperately needed in the community.
- There are concerns about placing more housing of this type in the Sunnyside area.
- Affordable housing and work force housing need to be integrated and spread across all parts of the city.
- Council needs to commit to diverse housing types throughout the city.
- This is the least controversial piece of land the city has available now, so move forward.
- This will help 11 families right now.

Written comments in support of the contract were submitted by the following:

- Sandi Flores
- Maria De Los Angeles Castillo-Rincon
- Missy Ivey
- Rory Pedersen

Councilmember McCarthy noted his agreement with some of the speakers that affordable housing is needed throughout the entire city. He stated that there is a group ready and willing to bring the project forward and he is in full support.

Vice Mayor Daggett asked staff to speak to the concerns expressed about the location of the project. Housing Director Sarah Darr stated that the goal has always been to make sure

housing is spread out across the community. The parcel being discussed was specifically purchased more than 20 years ago for the purpose of affordable housing. Staff is working to develop housing further east at Fanning and Lockett, the piece out by Shultz Pass, and they have been in pursuit of other land in the community.

Vice Mayor Daggett suggested that staff provide an update at a later meeting about what steps are being taken to include affordable housing in all areas of the community.

Moved by Councilmember Jim McCarthy, **seconded by** Mayor Paul Deasy to approve the lease option agreement with Housing Solutions of Northern Arizona.

Vote: 7 - 0 - Unanimously

A break was held from 7:05 p.m. through 7:20 p.m.

E. **Consideration and Adoption of Resolution No. 2022-03:** A resolution adopting Flagstaff's 10-Year Housing Plan.

Housing Project Manager Leah Bloom and Housing Director Sarah Darr provided a PowerPoint presentation that covered the following:

10-YEAR HOUSING PLAN
TOPICS OF DISCUSSION
HOUSING EMERGENCY DECLARATION
HOUSING IS INTERCONNECTED
FLAGSTAFF'S HOUSING SURVEY
PUBLIC PARTICIPATION FROM THE BEGINNING
INCLUSIVE PUBLIC PARTICIPATION
COMPLETE PUBLIC PARTICIPATION
LOCAL DATA
WHAT CAN FLAGSTAFF FAMILIES AFFORD?
FLAGSTAFF'S HOUSING SURVEY
TOTAL HOUSING NEED
BASIC HOUSING CONTINUUM
GOAL
POLICY INITIATIVES & STRATEGIES
CREATE
CONNECT
PRESERVE
PROTECT
WRITTEN COMMENTS
PUBLIC COMMENT TOPICS
LANGUAGE AND CONTENT UPDATES
NEW SECTIONS ADDED INTO FINAL PLAN
IMPLEMENTATION
CONSIDERATION OF APPROVAL

Councilmember Shimoni expressed excitement about the plan. He stated that there was no mention of transitional housing in the plan, he asked if that is something that could be included. Ms. Darr stated that no specific housing type is called out in the plan, it is a greater goal of housing collectively. This was done purposefully because they did not want to omit something or hinder the imagination of what might be possible in the future.

Councilmember Aslan stated that this is a good plan and he is very ready to move it forward. He stated that the city cannot build its way into housing affordability and he feels that those issues are addressed in the plan. There is a lot of talk about keeping people in Flagstaff but there will continue to be growth and it is important to focus on the equity for people to move into town. It is both a social and environmental justice concern.

The following individuals addressed Council in support of the 10-Year Housing Plan:

- Brendan O'Brien
- Devonna McLaughlin
- Tyler Denham
- Khara House
- Michele James
- Ross Schafer-Altenbaugh
- Heather Marcy

The following comments were received:

- The plan is wide ranging and good at diagnosing why the issues of housing exist.
- The plan should identify ways to respond to changing legislation regarding short term rentals or taxes on second homes.
- The work of the Housing Commission and staff is greatly appreciated.
- Housing is desperately needed in Flagstaff.
- The next step is to enact the plan and keep it moving forward by supporting the policies.
- Please support the plan and its adoption.
- The plan is a good step forward in identifying actionable items to move the city forward.
- The situation is critical and the time to act is now.
- This will be a living document that will grow and change as the community needs.
- As the gap between increasing housing costs and stagnant wages widens, more will become homeless.
- Supportive of the recommended ballot measure for a housing bond.
- The plan focuses on serving a broad ranges of income levels.
- The issues outlined in the narrative of the plan are not yet linked to a specific strategy or initiative; suggest linking that text directly to the policy initiatives and strategies tables throughout the plan.
- The strategies in the plan are interrelated and connected and prioritization of implementation and planned strategies is important to ensure timely implementation.
- The Council needs to clarify how they will ensure implementation of the plan's initiatives and strategies.
- Appreciate the stringent annual evaluation and reporting elements are included within the plan.

Written comments in support of the 10-Year Housing Plan were submitted by the following:

- Melinda Deboer-Ayrey
- Dan and Jessica Kitterman
- Heather Marcy
- Jason Kordosky

Council expressed their appreciation for the community, Housing Commission, and staff for all the work that went into developing the plan.

Councilmember McCarthy indicated that there are parts of the plan that he does not like and other parts that are wonderful. He would not support increasing sales taxes to support the initiatives of the plan and he is concerned about taking industrial land for housing. He expressed support for encouraging accessory dwelling units and pre-approved plans.

Councilmember Salas stated that she would like to have frequent updates on the plan. Ms. Darr stated that the intention is to have regular updates to the Housing Commission on progress and sharing those updates with Council as well. She indicated that a formal, fully published report will be provided annually.

Councilmember Sweet offered that she would like to see continued efforts to collaborate with community partners. There is so much that is being done within the community and reporting on all those efforts will be helpful in moving the plan forward.

Vice Mayor Daggett stated that she would like to see an effort to bring Housing to the leadership table so they can be involved in all community discussions.

Moved by Vice Mayor Becky Daggett, **seconded by** Mayor Paul Deasy to read Resolution No. 2022-03 by title only.

Vote: 7 - 0 - Unanimously

A RESOLUTION OF THE FLAGSTAFF CITY COUNCIL, ADOPTING THE CITY OF FLAGSTAFF'S 10 – YEAR HOUSING PLAN

Moved by Councilmember Jim McCarthy, **seconded by** Councilmember Miranda Sweet to adopt Resolution No. 2022-03.

Vote: 7 - 0 - Unanimously

14. FUTURE AGENDA ITEM REQUESTS

After discussion and upon agreement by three members of the Council, an item will be moved to a regularly-scheduled Council meeting.

A. **Future Agenda Item Request (F.A.I.R.):** A request by Mayor Deasy to place on a future agenda a discussion regarding a housing program for elderly citizens to have an assistive roommate in exchange for rent.

Mayor Deasy stated that there are many elderly people who own their homes who are close to going into assistive living but not there yet and could benefit from having a community member live with them and provide them with varying levels of support such as housekeeping, yard, work, shopping, transportation, and the like in exchange for rent. It could be a great way to connect housing resources to those who need it.

Councilmember Aslan stated that he appreciates the idea but would like more information about liability issues and who would manage the program.

Councilmember Shimoni stated that he is concerned about the workload on staff to develop, implement, and manage such a plan. This may be a project more appropriately administered by a community non-profit agency.

The requisite number of Councilmembers supported moving the item forward to a future agenda for discussion.

B. **Future Agenda Item Request (F.A.I.R.):** A request by Vice Mayor Daggett to place on a future agenda a discussion regarding an ordinance to protect renters from income source discrimination.

Vice Mayor Daggett stated that she would like for the Council to discuss a possible ordinance that would protect renters from income source discrimination. She would like to understand the legalities associated with such an ordinance.

The requisite number of Councilmembers supported moving the item forward to a future agenda for discussion.

15. PUBLIC PARTICIPATION

None

16. INFORMATIONAL ITEMS TO/FROM MAYOR, COUNCIL, AND STAFF, AND FUTURE AGENDA ITEM REQUESTS

Councilmember Sweet reminded the Council and public about the I Heart Pluto events that are happening all week. She also stated that she would be attending A Night of Discovery at the Orpheum as well as the Athena Awards. She offered congratulations to all those who were nominated for the Athena Award.

Councilmember Shimoni reported that the Mountain Line Board meeting will be happening on Wednesday and can be viewed on their YouTube live stream.

Councilmember Salas reported that she would be participating in some of the I Heart Pluto events. She also noted that Arizona Beer Week is coming up the next week.

Councilmember McCarthy reported that the Arizona State Transportation Board will be meeting in Flagstaff on Friday.

Vice Mayor Daggett stated that there are a number of events happening around town for Black History Month. The Lived Black Experience has a lot of great discussions coming up and she encouraged everyone to search Black History Month NAU to see the different events coming up on campus.

Mayor Deasy also mentioned the I Heart Pluto events, the Athena Awards, and the ADOT Board Meeting. He noted that he is looking forward to discussion with policy makers, services providers, and recipients of mental health services.

17. ADJOURNMENT

The Regular Meeting of the Flagstaff City Council held February 15, 2022, adjourned at 9:11 p.m.

_____

MAYOR

ATTEST:

_____
CITY CLERK

CERTIFICATION

I, STACY SALTZBURG, do hereby certify that I am the City Clerk of the City of Flagstaff, County of Coconino, State of Arizona, and that the above Minutes are a true and correct summary of the Meeting of the Council of the City of Flagstaff held on February 15, 2022. I further certify that the Meeting was duly called and held and that a quorum was present.

DATED this 21st day of March, 2023.

_____
CITY CLERK

CITY COUNCIL COMBINED SPECIAL MEETING/WORK SESSION
TUESDAY, FEBRURY 14, 2023
CITY HALL COUNCIL CHAMBERS
211 WEST ASPEN
3:00 P.M.

MINUTES

1. Call to Order

Mayor Daggett called the Special Meeting of the Flagstaff City Council held February 14, 2023, to order at 3:08 p.m.

NOTICE OF OPTION TO RECESS INTO EXECUTIVE SESSION

Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the City Council and to the general public that, at this work session, the City Council may vote to go into executive session, which will not be open to the public, for legal advice and discussion with the City's attorneys for legal advice on any item listed on the following agenda, pursuant to A.R.S. §38-431.03(A)(3).

2. ROLL CALL

NOTE: One or more Councilmembers may be in attendance telephonically or by other technological means.

PRESENT: ABSENT:

MAYOR DAGGETT
VICE MAYOR ASLAN (virtually)
COUNCILMEMBER HARRIS (virtually)
COUNCILMEMBER HOUSE
COUNCILMEMBER MATTHEWS (virtually)
COUNCILMEMBER MCCARTHY (virtually)
COUNCILMEMBER SWEET

Others present: City Manager Greg Clifton; City Attorney Sterling Solomon.

3. Pledge of Allegiance, Mission Statement, and Land Acknowledgement

The Council and audience recited the pledge of allegiance, Councilmember Sweet read the Mission Statement of the City of Flagstaff, and Councilmember House read the Land Acknowledgement.

MISSION STATEMENT

The mission of the City of Flagstaff is to protect and enhance the quality of life for all.

LAND ACKNOWLEDGEMENT

The Flagstaff City Council humbly acknowledges the ancestral homelands of this area's Indigenous nations and original stewards. These lands, still inhabited by Native descendants, border mountains sacred to Indigenous peoples. We honor them, their legacies, their traditions, and their continued contributions. We celebrate their past, present, and future generations who will forever know this place as home.

4. **Consideration and Adoption of Ordinance No. 2023-03:** An ordinance of the City Council of the City of Flagstaff, amending the Flagstaff City Code, Title 12, Floodplains, Chapter 12-02, Stormwater Management Utility, by amending Section 12-02-002-0003, Schedule of Stormwater Management Utility Service Charges and Fees; providing for repeal of conflicting ordinances, severability, penalties, authority for clerical corrections, and establishing an effective date

Mayor Daggett opened the public hearing.

Stormwater Manager Ed Schenk, Consultant Sanja Gaur, and Management Services Director Rick Tadder provided a PowerPoint presentation that covered the following:

STORMWATER RATE ADOPTION AND PUBLIC HEARING
AGENDA
JANUARY SUMMARY OF SCENARIOS
UPDATES SINCE JANUARY
EXTERNAL RESOURCE VS RATE FUNDING
FINANCIAL PLANNING
FINANCIAL PLANNING 101
STORMWATER RATE ASSESSMENT
STORMWATER ERU
CAPITAL PLAN SCENARIOS
SCENARIO 1: MINIMAL CIP
SCENARIO 2: CIP WITH FUTURE GRANTS
SCENARIO 3: CIP WITH RATES
REVISED SUMMARY OF SCENARIOS
RATE IMPACT
FUTURE IMPACT ON RATES
RATE TIMELINE 2023

Vice Mayor Aslan asked why there is concern about a sunset clause. Mr. Tadder stated that there needs to be ongoing revenue to support debt repayment and a sunset would show that revenues drop off and are not keeping up with the debt repayment. This could impact the City's bond ratings. Mr. Schenk added that it is difficult to define what services end at the sunset period. A rate adjustment is the best course of action because it considers the totality of the utility and can be adjusted up or down in a more nuanced way.

Councilmember Matthews asked how the development of the stormwater utility was impacted by the Coconino County Flood Control District. Mr. Schenk stated that stormwater became a utility in 2003, at the time there was minimal coverage from the Flood Control District and some of that coverage went away when the utility took on the Capital Improvement Projects. In 2018 the Flood Control District started taxing city residents through property taxes. The Flood Control District has assisted with sandbags and flood modeling resulting from recent fires.

Councilmember House asked if there were any triggers in place to consider the rate annually. Mr. Tadder explained that triggers would have the same type of impact as a sunset rate. It puts things in a tough position when adjusting the rate each year. Rates are considered every three

years or so and the budget process also includes an annual review of the five-year plans and the health of all funds.

Jeff Wheless addressed Council and expressed appreciation to staff for providing additional scenarios for consideration. He also expressed appreciation for the inclusion of projects to help address the issues along Highway 180. He suggested deferring maintenance in fleet and other areas to generate more capacity within the general fund to help offset the rate increase.

Councilmember McCarthy stated that he is not supportive of taking money from the general fund to pay for flood control. The enterprise fund should pay back the general fund expenditures and there is some risk with relying on outside sources. He indicated his support for Scenario 3.

Councilmember Matthews stated that she is supportive of Scenario 1. A rate increase was done in 2018 and it would make sense to do another adjustment in two or three years. This would leave the business community less nervous.

Councilmember Harris asked for staff's recommendation. Mr. Schenk stated that he prefers flexibility because there are so many uncertainties. The scenario that provides the most flexibility is the most pessimistic one. Adjusting the rate down is significantly easier than adjusting the rate up.

Vice Mayor Aslan expressed his support for Scenario 3 but that he could settle with Scenario 2. There are concerns from the business community but it is also important to consider what needs to be done for the community. The interest of those who are affected by flooding issues need to be top of mind. Maximizing flexibility is a good approach especially when grant funding is not guaranteed.

Joe Galli on behalf of the Greater Flagstaff Chamber of Commerce addressed Council and expressed appreciation for the continued work of staff in providing additional options. There are significant needs and the Chamber wants to help the city pursue additional solutions to meet those needs.

Councilmember Sweet stated that she supports Scenario 2 and feels that it is a stable way to go to address all the concerns of the community.

There being no further public comment, Mayor Daggett closed the public hearing.

Moved by Vice Mayor Austin Aslan, **seconded by** Mayor Becky Daggett to read Ordinance No. 2023-03 by title only for the first time with Scenario 3.

Vote: 5 - 2

NAY: Councilmember Lori Matthews
Councilmember Miranda Sweet

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF FLAGSTAFF, AMENDING THE FLAGSTAFF CITY CODE, TITLE 12, FLOODPLAINS, CHAPTER 12-02, STORMWATER MANAGEMENT UTILITY, BY AMENDING SECTION 12-02-002-003 SCHEDULE OF STORMWATER MANAGEMENT UTILITY SERVICE CHARGES AND FEES; PROVIDING FOR REPEAL OF CONFLICTING OF ORDINANCES, SEVERABILITY, PENALTIES, AUTHORITY FOR CLERICAL CORRECTIONS, AND ESTABLISHING AN EFFECTIVE DATE

5. Adjournment

The Special Meeting of the Flagstaff City Council held February 14, 2023, adjourned at 4:28 p.m.

WORK SESSION

1. Call to Order

Mayor Daggett called the Work Session of the Flagstaff City Council held February 14, 2023, to order at 4:28 p.m.

NOTICE OF OPTION TO RECESS INTO EXECUTIVE SESSION

Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the City Council and to the general public that, at this work session, the City Council may vote to go into executive session, which will not be open to the public, for legal advice and discussion with the City's attorneys for legal advice on any item listed on the following agenda, pursuant to A.R.S. §38-431.03(A)(3).

2. Public Participation

Public Participation enables the public to address the council about items that are not on the prepared agenda. Public Participation appears on the agenda twice, at the beginning and at the end of the work session. You may speak at one or the other, but not both. Anyone wishing to comment at the meeting is asked to fill out a speaker card and submit it to the recording clerk. When the item comes up on the agenda, your name will be called. You may address the Council up to three times throughout the meeting, including comments made during Public Participation. Please limit your remarks to three minutes per item to allow everyone to have an opportunity to speak. At the discretion of the Chair, ten or more persons present at the meeting and wishing to speak may appoint a representative who may have no more than fifteen minutes to speak.

Aubrey Sonderegger submitted a written comment concerning anti-ESG and anti-boycotting bills.

3. Review of Draft Agenda for the February 21, 2023 City Council Meeting

None

4. **City Manager Report**

Mr. Clifton briefly reviewed his report and introduced the new Water Services Director Shannon Jones who provided some brief comments to the Council.

Parks, Recreation, Open Space, and Events Director Rebecca Sayers provided a brief review of the PROSE monthly report.

5. **Overview of Housing Programs and 10-Year Plan Update**

Housing Director Sarah Darr provided a PowerPoint presentation that covered the following:

HOUSING OVERVIEW AND UPDATE
USEFUL TERMS
PRESENTATION OVERVIEW
WHAT IS "AFFORDABLE HOUSING"?

BASIC HOUSING CONTINUUM
AREA MEDIAN INCOME (AMI)
BUT ISN'T ALL HOUSING AFFORDABLE IF YOU MAKE ENOUGH MONEY?
YES, BUT HOW?
TWEEN CHALLENGE
COMMUNITY DEVELOPMENT MISSION STATEMENT
CITY OF FLAGSTAFF HOUSING PROGRAMS
CITY OF FLAGSTAFF HOUSING
HOUSING COMMISSIONS
HOUSING AUTHORITY BOARD (OF COMMISSIONERS)
HOUSING COMMISSION
CITY OF FLAGSTAFF HOUSING AUTHORITY
PUBLIC HOUSING

Councilmember House stated that there was an attempt to repeal the Faircloth Amendment in 2021. She asked that it be something that is monitored and considered within the Council's legislative priorities.

PUBLIC HOUSING – 265 UNITS
PUBLIC HOUSING MAINTENANCE
CLARK HOMES – 80 UNITS
HOW DO VOUCHER PROGRAMS WORK?
LOCAL IMPACT OF CFHA VOUCHER PROGRAMS

Mayor Daggett asked if there was a guarantee that the rent is paid on time with the voucher program. Ms. Darr offered that the tenant is still responsible for paying their portion of the rent on time but the HUD subsidy is guaranteed to be paid on time.

Mayor Daggett offered her appreciation to the 150 participating landlords within the community.

WAITING LIST

Councilmember Matthews asked how many people were housed that have lived outside the area coming into Flagstaff in the past year. Ms. Darr stated that there is a local preference which means locals are housed first before those coming from outside the area are housed.

CITY OF FLAGSTAFF HOUSING SECTION PROGRAMS
HOUSING SECTION
INCENTIVE POLICY FOR AFFORDABLE HOUSING
NEWSLETTER
WHERE HAVE WE BEEN?
EVOLUTION OF HOUSING FOCUS
LAST YEAR/THIS YEAR…
INTRODUCING…
INTRODUCTION
NEXT YEAR AND ONGOING…
ACHIEVEMENTS SAMPLE
CONCLUSION AND PROGRESS (ANNUALLY)
INTRODUCING…
NEXT YEAR AND ONGOING…
STRATEGY IMPLEMENTATION
JAN. 2023 – JUNE 2024 STRATEGIES TABLE
JAN. 2023 – JUNE 2024 STRATEGIES
ROLE OF THE HOUSING COMMISSION

HOUSING BOND UPDATE
MORE COMING ATTRACTIONS!

Council thanked Ms. Darr for the presentation and the work that the Housing Section does.

Items number 6 and 7 were rescheduled to a later time due to inclement weather.

6. **Presentation on Civil Rights and Municipal Equality Index**

Rescheduled due to inclement weather.

7. **Discussion item seeking direction on whether to consider an invitation for bid for a lease within the Cheshire Park expansion area for a Telecommunication Facility (cell tower).**

Rescheduled due to inclement weather.

8. Public Participation

None

9. Informational Items To/From Mayor, Council, and City Manager; future agenda item requests

Councilmember House reported that there is a blood drive hosted by the Parks, Recreation, Open Space, and Events Division on February 15, 2023 in celebration of Black History Month.

Councilmember McCarthy reported that MetroPlan is seeking an Interim Executive Director to serve while they are conducting the recruitment process for the permanent director.

Councilmember Matthews reported that she, Mayor Daggett, and Councilmember Sweet attended the Summit on Equal Responsivity in Flagstaff, produced in part by Councilmember Harris. She thought the event was very informative and well ran; she looks forward to having more opportunities to participate.

Mayor Daggett offered that Lowell Observatory is hosting a number of I Heart Pluto events throughout the week. She stated that she will be doing a ride-a-long with the Fire Department later in the week. She also offered thanks to Congressman Crane and his staff for inviting her to attend the State of the Union address.

10. Adjournment

The Work Session of February 14, 2023, adjourned at 6:41 p.m.

_____
MAYOR

ATTEST:

_____
CITY CLERK

CERTIFICATION

I, STACY SALTZBURG, do hereby certify that I am the City Clerk of the City of Flagstaff, County of Coconino, State of Arizona, and that the above Minutes are a true and correct summary of the Meeting of the Council of the City of Flagstaff held on February 14, 2023. I further certify that the Meeting was duly called and held and that a quorum was present.

DATED this 21st day of March, 2023.

_____

CITY CLERK

SPECIAL MEETING (EXECUTIVE SESSION)
MONDAY, MARCH 6, 2023
STAFF CONFERENCE ROOM - SECOND FLOOR
FLAGSTAFF CITY HALL
211 WEST ASPEN AVENUE
1:00 P.M.

1. Call to Order

Mayor Daggett called the Special Meeting (Executive Session) to order at 1:04 p.m.

2. ROLL CALL

NOTE: One or more Councilmembers may be in attendance telephonically or by other technological means.

PRESENT:	ABSENT:
MAYOR DAGGETT (virtually)	
VICE MAYOR ASLAN (virtually)	
COUNCILMEMBER HARRIS	
COUNCILMEMBER HOUSE (arrived at 2:15 p.m.)	
COUNCILMEMBER MATTHEWS	
COUNCILMEMBER MCCARTHY	
COUNCILMEMBER SWEET	

Others present: City Manager Greg Clifton; City Attorney Sterling Solomon.

3. Recess into Executive Session

Moved by Councilmember Jim McCarthy, **seconded by** Councilmember Miranda Sweet to recess into Executive Session.

Vote: 6 - 0 - Unanimously

4. Executive Session Confidentiality Statement

Discussions made during Executive Session are confidential by law. All persons present in Executive Session or who receive Executive Session information or materials shall keep the discussion, information and materials confidential and shall not disclose them, except as allowed by law.

5. Executive Session:

A. Discussion or consultation for legal advice with the attorney or attorneys of the public body; and discussions or consultations with designated representatives of the public body in order to consider its position and instruct its representatives regarding negotiations for the purchase, sale or lease of real property, pursuant to A.R.S. §38-431.03(A)(3) and (7), respectively.

i. Provide legal advice and receive direction for contract and property negotiations related to possible grant of access easement to property owners at southeast corner of E. Linda Vista and Grandview Drives

ii. Provide legal advice and receive direction for contract and property negotiations related to possible lease and development of 31.45 acres adjacent to Flagstaff Pulliam Airport

iii. Provide legal advice and receive direction for contract and property negotiations related to possible commitment to loan funds to Flagstaff Senior Living related to a federal affordable housing grant application

6. Adjournment

The Special Meeting (Executive Session) of the Flagstaff City Council held March 6, 2023, reconvened into Open Session at 3:40 p.m. at which time the meeting adjourned.

_____
MAYOR

ATTEST:

_____
CITY CLERK

SPECIAL MEETING (EXECUTIVE SESSION)
TUESDAY, MARCH 7, 2023
STAFF CONFERENCE ROOM - SECOND FLOOR
FLAGSTAFF CITY HALL
211 WEST ASPEN AVENUE
1:00 P.M.

1. Call to Order

Mayor Daggett called the Special Meeting (Executive Session) to order at 1:00 p.m.

2. ROLL CALL

NOTE: One or more Councilmembers may be in attendance telephonically or by other technological means.

PRESENT:	ABSENT:
MAYOR DAGGETT	
VICE MAYOR ASLAN	
COUNCILMEMBER HARRIS	
COUNCILMEMBER HOUSE	
COUNCILMEMBER MATTHEWS	
COUNCILMEMBER MCCARTHY	
COUNCILMEMBER SWEET	

Others present: City Manager Greg Clifton; City Attorney Sterling Solomon.

3. Recess into Executive Session

Moved by Councilmember Jim McCarthy, **seconded by** Councilmember Miranda Sweet to recess into Executive Session.

Vote: 7 - 0 - Unanimously

4. Executive Session Confidentiality Statement

Discussions made during Executive Session are confidential by law. All persons present in Executive Session or who receive Executive Session information or materials shall keep the discussion, information and materials confidential and shall not disclose them, except as allowed by law.

5. Executive Session:

A. Discussion or consultation for legal advice with the attorney or attorneys of the public body and discussion or consultation with the attorneys of the public body in order to consider its position and instruct its attorneys regarding the public body's position regarding contracts that are the subject of negotiations, in pending or contemplated litigation or in settlement discussions conducted in order to avoid or resolve litigation, pursuant to A.R.S. §38-431.03(A)(3) and (4), respectively.

i. Legal Advice and Negotiations on Proposed Northern Arizona Healthcare Development Agreement

B. Discussion or consultation for legal advice with the attorney or attorneys of the public body, pursuant to A.R.S. §38-431.03(A)(3).

i. Legal advice on discussion regarding potential resolution on City Council's position regarding United States Supreme Court Decision of Dobbs v. Jackson and regarding the Arizona legislature's enactment of laws on abortion

6. Adjournment

The Special Meeting (Executive Session) of the Flagstaff City Council held March 7, 2023, reconvened into Open Session at 2:57 p.m. at which time the meeting adjourned.

_____
MAYOR

ATTEST:

_____
CITY CLERK

SPECIAL MEETING (EXECUTIVE SESSION)
TUESDAY, MARCH 14, 2023
STAFF CONFERENCE ROOM - SECOND FLOOR
FLAGSTAFF CITY HALL
211 WEST ASPEN AVENUE
12:00 P.M.

1. Call to Order

Mayor Daggett called the Special Meeting (Executive Session) to order at 12:02 p.m.

2. ROLL CALL

NOTE: One or more Councilmembers may be in attendance telephonically or by other technological means.

PRESENT: ABSENT:

MAYOR DAGGETT
VICE MAYOR ASLAN (virtually)
COUNCILMEMBER HARRIS
COUNCILMEMBER HOUSE
COUNCILMEMBER MATTHEWS
COUNCILMEMBER MCCARTHY (arrived at 12:03 p.m.)
COUNCILMEMBER SWEET

Others present: City Manager Greg Clifton; City Attorney Sterling Solomon.

3. Recess into Executive Session

Moved by Councilmember Khara House, **seconded by** Councilmember Miranda Sweet to recess into Executive Session.

Vote: 6 - 0 - Unanimously

4. Executive Session Confidentiality Statement

Discussions made during Executive Session are confidential by law. All persons present in Executive Session or who receive Executive Session information or materials shall keep the discussion, information and materials confidential and shall not disclose them, except as allowed by law.

5. Executive Session:

A. Discussion or consultation for legal advice with the attorney or attorneys of the public body and discussion or consultation with the attorneys of the public body in order to consider its position and instruct its attorneys regarding the public body's position regarding contracts that are the subject of negotiations, in pending or contemplated litigation or in settlement discussions conducted in order to avoid or resolve litigation, pursuant to A.R.S. §38-431.03(A)(3) and (4), respectively.

i. Legal advice regarding the Citizen Petition: “Climate Emergency: Stop the Money Pipeline” and Wells Fargo Bank contract, and procurement.

ii. Legal Advice and Negotiations on Proposed Northern Arizona Healthcare Development Agreement

6. Adjournment

The Special Meeting (Executive Session) of the Flagstaff City Council held March 14, 2023, reconvened into Open Session at 2:45 p.m. at which time the meeting adjourned.

_____
MAYOR

ATTEST:

_____
CITY CLERK

7. A.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Stacy Fobar, Deputy City Clerk
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration of Appointments: Tourism Commission.

STAFF RECOMMENDED ACTION:

Make one appointment to a term expiring January 2025.

Executive Summary:

The mission of the Tourism Commission is to develop, promote, and maintain Flagstaff as a year-round visitor destination with professional visitor services that will benefit the community economically, environmentally, and socially. The Tourism Commission makes recommendations to the Council concerning expenditure of the tourism portion of the Bed, Board and Booze ("BBB") tax, a 2% local transaction privilege tax. The Tourism Commission consists of seven citizens serving three-year terms. There is currently one seat available due to a resignation. It is important to fill vacancies on Boards and Commissions quickly to allow the Commission to continue meeting on a regular basis.

There are three applications on file for consideration by the Council, they are as follows:

- Ali Applin (new applicant)
- Regina Salas (new applicant)
- Caleb Schiff (new applicant)

In an effort to reduce exposure to personal information the applicant roster and applications will be submitted to the City Council separately.

COUNCIL APPOINTMENT ASSIGNMENT: Councilmember Matthews

Financial Impact:

These are voluntary positions and there is no budgetary impact to the City of Flagstaff.

Policy Impact:

None.

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

Inclusive and Engaged Community

- Foster community pride & civic engagement by increasing opportunities for public involvement, in line with best practices & legal requirements
- Enhance community involvement, education & regional partnerships to strengthen the level of public trust

Has There Been Previous Council Decision on This:

None.

Options and Alternatives:

1. Appoint one Commissioner: By appointing one member at this time, the Tourism Commission will be at full membership, allowing the group to meet and provide recommendations to the City Council.
2. Table the action to allow for further discussion or expand the list of candidates.

Community Benefits and Considerations:

The City's boards, commissions, and committees were created to foster public participation and input and to encourage Flagstaff citizens to take an active role in city government.

Community Involvement:

INFORM: The vacancies are posted on the City's website and individual recruitment and mention of the opening by Commission members and City staff has occurred, informing others of this vacancy through word of mouth.

Attachments: Tourism Commission Authority

CHAPTER 2-13
TOURISM COMMISSION

SECTIONS:

2-13-001-0001 CREATION OF THE COMMISSION:
2-13-001-0002 COMPOSITION AND TERM OF OFFICE:
2-13-001-0003 COMPENSATION OF COMMISSION MEMBERS:
2-13-001-0004 ORGANIZATION:
2-13-001-0005 MEETINGS:
2-13-001-0006 DUTIES:

2-13-001-0001 CREATION OF THE COMMISSION:

There is hereby established a City Tourism Commission. There shall be seven (7) voting members of said Commission who shall meet as hereinafter provided to consider and recommend programs for the expenditure of the tourism portion of the Bed, Board and Booze Tax allocated under Chapter 3-06, Hospitality Industry Tax Revenues.

“Tourism” means the guidance, management, marketing, accommodation, promotion and encouragement of tourists (same meaning as set forth in Section 3-06-001-0001). (Ord. No. 1579, Enacted, 08/02/88; Ord. 2001-27, Amended, 11/20/2001; Ord. 2014-28, Amended, 11/18/2014; Ord. 2015-22, Amended, 01/05/2016)

2-13-001-0002 COMPOSITION AND TERM OF OFFICE:

The composition of the membership shall consist of:

A. Seven (7) members to be appointed by the City Council. Each member shall serve for three (3) years, on a staggered term basis.

B. The City Manager or the Manager’s designee shall be an ex officio member of the Commission. The member shall have no voting privileges.

The City Manager shall be responsible for staff support of the Tourism Commission.

The Council shall fill vacancies for the unexpired term of any of the members of the Commission.

A member’s term in office shall commence with the first regular Commission meeting following the appointment and terminate with the regular Commission meeting at which the successor takes office. No voting member of the Commission may be appointed to more than two (2) consecutive full terms. (Ord. No. 1579, Enacted, 08/02/88; Ord. No. 1674, Amended, 09/18/90; Ord. 2001-27, Amended, 11/20/2001; Ord. No. 2006-09, Amended 04/10/2006; Ord. 2014-28, Amended, 11/18/2014; Ord. 2015-22, Amended, 01/05/2016)

2-13-001-0003 COMPENSATION OF COMMISSION MEMBERS:

Members of the Commission shall serve without compensation.

(Ord. No. 1579, Enacted, 08/02/88)

2-13-001-0004 ORGANIZATION:

The Commission shall elect a Chairperson from among its members. The term of the Chairperson shall be one year with eligibility for reelection. Commission members may not serve more than two (2) consecutive terms as Chairperson. The Council representative shall not be eligible for the Chair.

(Ord. No. 1579, Enacted, 08/02/88)

2-13-001-0005 MEETINGS:

A. The Commission shall hold at least one (1) regular meeting per month, which shall at all times be open to the public. The time and place of said meeting shall be posted in accordance with the applicable Arizona State Statutes.

A quorum consisting of a minimum of four (4) voting members shall be required to conduct business.

B. The Chairperson of the Commission shall meet with the Chairpersons of the Economic Development Commission and the Beautification Commission at least once per month. The purpose of the meeting is for coordination of the three (3) commissions only. The intent is not to create another commission. The meeting shall at all times be open to the public. The time and place of said meeting shall be posted in accordance with applicable Arizona State Statutes.

C. If a member is absent for three (3) meetings within a twelve (12) month period, excused or unexcused, that member may be replaced by the City Council. (Ord. No. 1579, Enacted, 08/02/88; Ord. 2001-27, Amended, 11/20/2001; Ord. 2014-28, Amended, 11/18/2014)

2-13-001-0006 DUTIES:

The duties of the Commission shall be to:

A. Prepare a Five (5) Year Master Plan. The Five (5) Year Plan shall be used as a guideline for future programs. Said Plan shall be presented to the Council prior to April 1st of each year.

B. Develop and present to City Council an Annual Plan outlining the Commission’s program recommendations for the upcoming fiscal year. Said plan shall be presented to the Council prior to April 1st of each year.

C. Make recommendations to the City Council concerning the annual budgetary allocation of the tourism portion of the Bed, Board and Booze Tax to include, but not be limited to:

1. Providing funding to the qualified, established public or private agency to administer, on a contract basis, tourism programs as required.

2. Developing and implementing a marketing plan. Major elements of the marketing plan will include, but not be limited to, developing a specific image for Flagstaff, identifying target market segments, and implementing a promotional plan directed to target market segments.

3. Establishing visitor information center(s) to include, but not be limited to, a high profile location, easy visitor access, adequate staffing, a toll-free telephone number for visitor information, and develop other facilities as needed to benefit visitors and the community.

4. Establishing an educational program to include, but not be limited to, scholarships for hospitality education at Northern Arizona University.

5. Promoting activities that enhance the community's image and the overall quality of life.

6. Retaining of appropriate staff to implement approved programs.

D. Perform any additional duties as determined by the City Council related to tourism activities. (Ord. No. 1579, Enacted, 08/02/88; Ord. 2015-22, Amended, 01/05/2016)

7. B.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Stacy Fobar, Deputy City Clerk
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration of Appointments: Heritage Preservation Commission.

STAFF RECOMMENDED ACTION:

Make one AT-LARGE appointment to a term expiring December 2025.

Executive Summary:

The Heritage Preservation Commission consists of seven citizens serving three-year terms. Two positions represent historic owners, two positions represent the professional industry, and three positions are at-large seats. The Heritage Preservation Commission locates sites of historic interest in the City, advises the City Council on all matters relating to historic preservation, and reviews development projects in the downtown design review district.

There is one at-large seat available for appointment. It is important to fill vacancies on Boards and Commissions quickly so as to allow the Commission to continue meeting on a regular basis. Please note that professionals and historic property owners can be appointed to at-large seats.

There are six applications on file for consideration by the Council, they are as follows:

- Alycia Hayes (new applicant)
- Wil Hernadez (new applicant)
- Amy Horn (current commissioner)
- Stephanie Martin Lamberson (new applicant)
- Bob Pauls (new applicant)
- April Smith (new applicant)

In an effort to reduce exposure to personal information the applicant roster and applications will be submitted to the City Council separately.

COUNCIL APPOINTMENT ASSIGNMENT: Mayor Daggett

Financial Impact:

These are voluntary positions and there is no budgetary impact to the City of Flagstaff.

Policy Impact:

None

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

There is no Council goal that specifically addresses appointments to Boards and Commissions; however, boards and commissions provide input and recommendations based on City Council goals that may pertain to the board or commission work plan.

Has There Been Previous Council Decision on This:

None

Options and Alternatives:

1. Appoint one Commissioner: By appointing one member at this time, the Heritage Preservation Commission will be able to meet quorum, allowing the group to meet and provide recommendations to the City Council.
2. Postpone the action to allow for further discussion or expand the list of candidates.

Background/History:

The City's boards, commissions, and committees were created to foster public participation and input and to encourage Flagstaff citizens to take an active role in city government.

The Heritage Preservation Commission consists of two historic property owners, two industry professionals, and three at-large members. It will be up to the Council to make the determination of whether an applicant is qualified for a particular seat.

Community Involvement:

INFORM: The vacancies are posted on the City's website and individual recruitment and mention of the opening by Commission members and City staff has occurred, informing others of this vacancy through word of mouth.

Attachments: HPC Authority

CHAPTER 2-19
HERITAGE PRESERVATION COMMISSION

SECTIONS:

2-19-001-0001 ESTABLISHMENT OF THE COMMISSION
2-19-001-0002 MEMBERSHIP
2-19-001-0003 TERMS AND OFFICERS
2-19-001-0004 MEETINGS
2-19-001-0005 POWERS AND DUTIES

2-19-001-0001 ESTABLISHMENT OF THE COMMISSION:

There is hereby created a commission to be known as the Heritage Preservation Commission. (Ord. 2010-35, Amended, 11/16/2010)

2-19-001-0002 MEMBERSHIP:

A. The membership of the commission shall consist of seven (7) voting members. Additional members may be appointed in the future, if and when additional Historic Design Review Districts beyond the first district are created, to represent those additional districts and help develop and adopt design guidelines for those districts.

1. At least two (2) members must be professionals in the areas of architecture, history, architectural history, planning, or archaeology.

2. At least two (2) members shall be owners of locally designated historic properties or properties listed on the National Register of Historic Places.

3. At least three (3) members shall be from the general community.

4. Any member may satisfy more than one (1) of the above qualifications and any "professional" category may be filled by a person who is retired from that profession.

B. Appointed members shall have an interest in the history of the community and heritage preservation and be committed to represent not only their specific areas of expertise, but also the community at large. (Ord. 2005-08, Amended, 04/05/2005; Ord. 2007-07, Amended, 02/06/2007; Ord. 2010-35, Amended, 11/16/2010; Ord. 2014-28, Amended, 11/18/2014; Ord. 2015-22, Amended, 01/05/2016; Ord. 2016-33, Amended, 09/20/2016)

2-19-001-0003 TERMS AND OFFICERS:

A. Terms of appointment shall be three years, or until a successor is appointed.

B. A chairperson and vice-chairperson shall be elected from and by the voting membership of the Commission to serve one-year terms. A chairperson may serve no more than two consecutive terms as chairperson (exclusive of a term as vice-chairperson). Upon the conclusion of a second, consecutive term as chairperson, such commission member shall be ineligible to serve as either Chairperson or Vice-Chairperson until a calendar year has expired. (Ord. 2010-35, 11/16/2010)

2-19-001-0004 MEETINGS:

The Commission shall at a minimum hold at least one (1) regular meeting quarterly, but shall normally hold monthly meetings.

A quorum shall consist of four (4) voting members of the Commission. (Ord. 2005-08, Amended 04/05/2005; Ord. 2010-35, Amended, 11/16/2010; Ord. 2016-30, Amended, 07/05/2016)

2-19-001-0005 POWERS AND DUTIES:

A. The Commission may recommend to the City Council that properties be designated landmarks or historic design review districts, subject to the procedures and requirements of the adopted land use regulations and/or development code of the City of Flagstaff. See Title 10, Chapter 30 of the City Code for Purpose, Applicability, Procedures and Requirements.

B. The Commission shall increase public awareness of the value of historic, cultural, and architectural preservation by developing and participating in public education programs.

C. The Commission shall advise and assist owners of landmarks or historic structures on physical and financial aspects of preservation, renovation, rehabilitation, and reuse.

D. The Commission shall make recommendations to the City Council concerning the utilization of federal, state, local or private funds to promote the preservation of landmarks and historic districts within the City.

E. The Commission may recommend acquisition of landmark structures by the City where:

1. Preservation is essential to the purposes of the Land Development Code;

2. Private preservation is not feasible, and where either imminent demolition is pending or, for a period in excess of one year, required maintenance of said

structures according to City Building Codes has not been accomplished due to deficiencies of ownership affecting maintenance; and

3. Where preservation of said structures is related to some other existing plan or report.

F. The Commission shall review and make decisions on any development application for a Certificate of Appropriateness and require the same plans to be submitted to the Development Review Board, plus applicable elevation drawings.

G. The Commission shall develop and adopt design guidelines for historic and non-historic structures within designated design review districts, or individual historic structures or landmarks, to assist property owners and developers in preservation, renovation, rehabilitation, and reuse of historic structures and others within designated districts. If there is more than one designated district, the Commission shall develop appropriate design guidelines for each district. The design guidelines, and major amendments thereto, shall be subject to a public hearing before the Commission, including notification of the property owners within the district to which they would apply, per procedures outlined in Section 10-30.30 of the City Code.

H. The Commission shall carry out other such duties as determined by the City Council; and present other recommendations the City Council deems pertinent. (Ord. 1857, Enacted, 02/07/1995; Ord. 1997, Amended, 06/15/1999; Ord. 2010-35, Amended, 11/16/2010)

7. C.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Stacy Fobar, Deputy City Clerk
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration of Appointments: Indigenous Commission

STAFF RECOMMENDED ACTION:

Make two appointments to terms expiring in December 2025.

Executive Summary:

The Indigenous Commission consists of seven (7) voting members and three (3) ex-officio (non-voting) members from the Indigenous Peoples Advisory Council appointed by the City Council in accordance with a Memorandum of Understanding between the City of Flagstaff and the Coconino County Indigenous Peoples Advisory Council. Members must have a tribal affiliation as enrolled members of a tribe/nation recognized by the federal and/or state governments. Members will have interest in the issues presented in the Strategic Plan as presented to City Council by the Coordinator for Indigenous Initiatives. The Commission serves as an advisory board to City Council; makes recommendations with respect to certain policies, needs, issues, and methods in promoting the Strategic Plan and Recommendations accepted by City Council; and furnish the City Council with information through the Coordinator for Indigenous Initiatives.

There are eight applications on file for consideration by the Council.

In an effort to reduce exposure to personal information, the applicant roster and applications will be submitted to the City Council separately.

There are nine (9) applications on file for voting members. The applications are as follows:

- Amber Renee Archie (new applicant)
- Kimberly Hoskie (new applicant)
- Lauren Kaibetoney (new applicant)
- Darren Lance (new applicant)
- Dianne Lomahaftewa-Albery (new applicant)
- Marian Marshall (new applicant)
- Quinn Nez (new applicant)
- Cora M. Phillips (current commissioner)
- Mariah Zavala (new applicant)

In an effort to reduce exposure to personal information, the applicant roster and applications will be submitted to the City Council separately.

COUNCIL APPOINTMENT ASSIGNMENT: Councilmember McCarthy and Councilmember Matthews

Financial Impact:

These are voluntary positions and there is no budgetary impact to the City of Flagstaff.

Policy Impact:

None.

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

Inclusive and Engaged Community

- Foster community pride & civic engagement by increasing opportunities for public involvement, in line with best practices & legal requirements
- Enhance community involvement, education & regional partnerships to strengthen the level of public trust

Has There Been Previous Council Decision on This:

None.

Options and Alternatives:

1. Appoint 2 Commissioners: By appointing members at this time, the Indigenous Commission will be at full membership, allowing the group to meet and provide recommendations to the City Council.
2. Table the action to allow for further discussion or expand the list of candidates.

Community Benefits and Considerations:

The City's boards, commissions, and committees were created to foster public participation and input and to encourage Flagstaff citizens to take an active role in city government.

Community Involvement:

INFORM: The vacancies were posted on the City's website and through word of mouth.

Attachments: Indigenous Commission Authority

CHAPTER 2-26
INDIGENOUS COMMISSION

2-26-001-0001 CREATION OF COMMISSION

An Indigenous Commission is hereby created.

2-26-001-0002 MEMBERS AND OFFICERS

The Indigenous Commission shall have seven (7) voting members appointed by the City Council and three (3) ex-officio (non-voting) members from the Indigenous Peoples Advisory Council appointed by the City Council in accordance with a Memorandum of Understanding between the City of Flagstaff and the Coconino County Indigenous Peoples Advisory Council. All voting members shall reside within the Flagstaff City limits.

A. Members must have a tribal affiliation as enrolled members of a tribe/nation recognized by the federal and/or state governments. Members will have interest in the issues presented in the Strategic Plan as presented to City Council by the Coordinator for Indigenous Initiatives.

2-26-001-0003 TERMS OF OFFICE

A. Terms shall be for three years except for the first appointments to create staggered terms. The City Council shall appoint three members for three (3) year term, two members for two (2) year terms, and two members for one (1) year terms. After the initial appointment all terms thereafter will be three (3) year terms.
B. The City Council will make every effort to recruit and appoint those individuals that represent the diverse Indigenous population of Flagstaff and who have demonstrated an interest in the recommendations as directed at the October 10, 2017 City Council meeting by the Indigenous Circle of Flagstaff.
C. Two (2) Co–Chairpersons from among the seven (7) voting members shall be selected by a majority vote of those members at a meeting called for that purpose.

2-26-001-0004 PURPOSE AND DUTIES

A. The Indigenous Commission serves as an advisory board to City Council, makes recommendations with respect to certain policies, needs, issues, and methods in promoting the Strategic Plan and Recommendations accepted by City Council and furnishes the City Council with information through the Coordinator for Indigenous Initiatives.

B. The duties of the Indigenous Commission shall include:

1. Fostering mutual understanding, respect and awareness among all citizens within the City of Flagstaff; recognizing the different economic, cultural, social, racial, religious and ethnic groups within the City; cooperating in the development of educational programs dedicated to improvement of community relations with and to enlist the support of various groups to foster understanding of strategic plan.
2. Developing recommendations for the Mayor and City Council to assist in developing certain policies required to respond to the concerns and needs of those in the community and on the Commission in the promotion of strategic plan.
3. Advising and assisting the City Council on ways to educate the community and

developing ways to disseminate such information through surveys, studies, forums, workshops, brochures or other events.

4. Developing and providing public forums for identifying and discussing issues of interest relating to the area of Indigenous related awareness.
5. Acting as an information or referral group to assist individuals, organizations and employers in an effort to aid the community towards greater understanding and respect for diversity awareness among all individuals.

C. The Indigenous Commission shall not advise or make recommendations to the City Council regarding:

1. Any litigation involving any Indigenous peoples or tribes.
2. Any water matters or issues.
3. Any land matters or issues.

C. Strategic Plan and Recommendations:

1. Visibility: To build visibility of Indigenous presence and contributions through public art, street and place names, public advertising, and possible support for a Flagstaff Powwow.
2. Economic Inclusion: Finance and promote a study to quantify Indigenous contribution to Flagstaff's economy. Create a directory of and promote Indigenous-owned businesses in Flagstaff. Feasibility study for a public marketplace for Indigenous artists.
3. Community Cultural Center: Develop a vision statement, and to identify a location, administrative structure, and funding partners for an Indigenous Community Cultural Center. This is the costliest of the recommendations and also the most frequently articulated.
4. Education: Work with Flagstaff Unified School District to support expanded curricula and staff training on Indigenous histories, cultures, and contributions.
5. Public Safety and Criminal Justice: Work with Police, Fire Departments and the Courts to include conversations and input on public safety.
6. Wellness: Take initiative in identifying, assisting, and supporting Indigenous organizations to build culturally grounded resources for the treatment of intergenerational trauma and other sources of damage expressed by means of substance abuse, homelessness, domestic violence, and suicide. Including positive programs such as Indigenous community gardens and youth-elder programs ideally based within Community Cultural Center. Explore ways to show consideration and respect for lands that are revered, beloved, and sacred for Indigenous people. This is a paramount issue of physical, mental, and spiritual health for the Indigenous people of Flagstaff.
7. Housing: Work with Indigenous organizations to further support affordable housing for Indigenous people. Identify and recommend ways the City can ease the burden of Flagstaff's restrictive price levels for housing and utilities.
8. Transportation: Explore solutions to regional transportation deficits that place particular obstacles in the path of Native Indigenous people who travel between the City and nearby homes or additional family homes for work, shopping, family connections, and health services.

2-26-001-0005 MEETINGS; ATTENDANCE

A. The Commission shall hold regular meetings at such dates and times as determined by the members except that the Chairperson may call a special meeting with not less than twenty-four (24) hours' notice as properly posted under Arizona Open Meeting laws.

B. The Indigenous Commission shall not conduct any business at a meeting unless a quorum is present. A quorum shall consist of four (4) voting members of the Commission.

C. Official business shall be conducted pursuant to the Board and Commission Members' Rules and Operations Manual adopted by Resolution No. 2019-38 of the City Council, as may be amended from time to time, and in accordance with meeting procedures, if any, adopted by the Commission insofar as they are not in conflict with the Board and Commission Members' Rules and Operations Manual. In the event of any such conflict, the provisions of the Board and Commission Members' Rules and Operations Manual shall prevail.

8. A.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Tim Harrington, Utilities GIS Analyst
Co-Submitter:	Corryn Smith
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration and Approval of License Agreement: Enterprise License Agreement with Azteca Systems, LLC in the amount of $147,836.25, plus additional fees, for the Cityworks Software.

STAFF RECOMMENDED ACTION:

1. Approve the Enterprise License Agreement with Azteca Systems, LLC in the amount of $147,836.25, plus additional fees, for the Cityworks Software; and
2. Authorize the City Manager to execute all necessary documents.

Executive Summary:

The 2025 Flagstaff Water Services Strategic Plan emphasizes the benefit of implementing data driven decisions to increase the efficiency of managing the City's water, wastewater, reclaimed water, and stormwater infrastructure. Water Services has been utilizing the Cityworks Software to digitally track work orders, inspections, service requests, and as an inventory management system for all Water Services assets.

This new Enterprise License Agreement (License) for the Cityworks Software with Azteca Systems, LLC, a Trimble company, will provide Water Services increased functionality for regulatory compliance, water production, and wastewater reclamation plants. The License will also provide a digital inventory tracking solution, additional seats for the Stormwater Flooding Request Call Center, and create efficiencies for cataloging Water Distributions and Wastewater Collections service request calls from the public.

Financial Impact:

For Fiscal Year 2023, the cost is $4,836.25. The purchase has been budgeted through:
Wastewater: 204-08-321-1201-0-4343 $1,000
Wastewater Collections: 203-08-313-1130-0-4343 $3836.25

For Fiscal Year 2024, the cost is $68,000. The purchase has been budgeted through:
Wastewater: 203-08-311-1110-0-4343 $2,000
Wastewater: 203-08-312-1120-0-4343 $1,000
Wastewater: 204-08-321-1201-0-4343 $1,000
Wastewater Collections: 203-08-313-1130-0-4343 $10,000
Information Systems: 202-08-307-1090-0-4343 $21,000
SCADA Water: 202-08-307-1015-0-4343 $10,000
Water Distributions: 202-08-303-1050-0-4343 $10,000

Stormwater Maintenance: 206-08-331-1257-0-4343 $5,000
Regulatory Compliance: $4,000
Water Production: $4,000

For Fiscal Year 2025, the cost is $75,000. The purchase has been budget through:
The FY25 funds will be the same as FY24
Water Distributions: $1,000
Wastewater Collections: $1,000
Wastewater Reclamation (Rio): $1,000
Wastewater Reclamation (Wildcat Hill): $1,000
Water Production: $1,000
Stormwater: $1,000
Regulatory Compliance; $1,000

Policy Impact:

None.

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

Priority Based Budget Key Community Priorities and Objectives

High Performing Governance: Enhance the organization's fiscal stability and increase efficiency and effectiveness.

Carbon Neutrality Plan

CR-1: Ensure all mitigation actions improve Flagstaff's ability to adapt to the future.

Regional Plan

Goal WR.2. Manage a coordinated system of water, wastewater, and reclaimed water utility service facilities and resources at the City level and identify funding to pay for new resources

Has There Been Previous Council Decision on This:

No.

Options and Alternatives:

1. Approve the Enterprise License Agreement with Azteca Systems, LLC in the amount of $147,836.25, plus additional fees, for the Cityworks Software for a three-year period; or
2. Do not approve the long-term Enterprise License Agreement and continue to pay for the Cityworks Software al-a-carte. Staff does not recommend this option. This piecemeal approach will hinder the ability of Water Services staff to to digitally track asset inspections and maintenance records of the City's water infrastructure.

Background/History:

Since implementing the Cityworks Software in various sections in Water Services, staff can now easily send digital work orders, inspections, and service requests to the field crews for completion. Water Distributions, Wastewater Collections, and Stormwater Maintenance crews rely on the Cityworks Software to record and track work orders and inspections for various assets. Acting as a digital repository, the Cityworks Software allows crews to record the type of work performed, time spent, materials/equipment used, and more. Since using Cityworks Software to track and create a preventative maintenance cleaning schedule, sanitary sewer overflows have decreased within the City. Likewise, Water Services now has a better understanding on the time and expenses it takes to clean and maintain open and closed channel stormwater infrastructure. By entering the new long-term License with

Azteca Systems, LLC, Water Services will continue to expand these efficiencies within various Sections.

Key Considerations:

Approving the License with Azteca Solutions, LLC, aligns with Water Service's 2025 Strategic Goals of:

- Use Standards and Data to Drive Decision Making
- Upgrade Stormwater System and Increase Maintenance
- Accelerate Infrastructure Maintenance and Replacement
- Improve Compliance with Environmental Standards and Protections
- Enhance Communications and Customer Service

Attachments: Azteca Contract with COF

Example of Software Display

ORDER FORM

Order Date:	Date of the last signature below
Trimble Entity Name ("Trimble") and Address:	Azteca Systems, LLC, a Trimble company 11075 South State, Suite 24, Sandy, Utah 84070
Customer Entity Name ("Customer") and Address:	City of Flagstaff, AZ 211 West Aspen Ave Flagstaff, AZ 86001
Billing Contact Name and E-Mail Address:	Tim Harrington 928-213-2413 tharrington@flagstaffaz.gov
Initial Term:	05/01/2023 - 07/31/2023
Miscellaneous:	*Purchase orders issued by Customer are issued for administrative purposes only; terms and conditions contained in any such purchase order shall be null and void.*

Licensed Software:

Description	Number of Authorized Users	Annual Term	Total
Server AMS Custom Enterprise License Agreement (ELA), Includes Unlimited Quantities of the Identified Products: Office Respond Mobile Native Apps (for iOS/Android) --Includes the following Add-ons: Storeroom Equipment Checkout Cityworks for Excel Cityworks Analytics for AMS eURL (Enterprise URL) Workload Web Hooks Inspections API Work Order API - Basic Use of Cityworks AMS Application Programming Interfaces (APIs) with commercially available Cityworks-centric applications that are licensed and maintained by authorized Cityworks partners	**Unlimited**	**05/01/2023 - 07/31/2023**	**$4,836.25***
		08/01/2023 - 07/31/2024	**$68,000.00**
		08/01/2024 - 07/31/2025	**$75,000.00**

**Fee for Year 1 reflects upgrade and is pro-rated for period of 05/01/2023 - 07/31/2023. Current Renewal Amount of $40,655.00 for period 08/01/2022 - 07/31/2023 has previously been paid.*

All Licensed Software is for the indicated term and not perpetual. Annual fee herein is based on 50,001 - 75,000 population range. Trimble reserves the right to adjust the annual fee accordingly to align with the Customer's actual population range.

Addendums:

1. Terms of Service
2. Supplemental Product Terms
3. Support

TERMS AND CONDITIONS

1. Terms and Conditions. All offerings are made available by Trimble subject to the terms and conditions set forth in this Order and the above referenced Addendums.

2. Annual Renewals; Additional Software Products and Licenses. This Order will automatically renew for subsequent 12 month term(s) at then-current pricing, unless either party provides the other with notice of cancellation at least 30 days prior to the expiration of the then-current term. Additional Software Products & Licenses may be added to this Agreement with either an acknowledgement of an official Cityworks quote signed by Licensee and additional fees, if necessary or applicable being paid, or receipt of Purchase Order from Licensee in response to an official Cityworks quote and additional fees, if applicable, being paid.

3. Payment Terms. All fees are due net 30 from the date of the Trimble invoice. Trimble will invoice upon execution of this Order and each renewal hereof.

4. Annual Price Increase. At each renewal, Trimble has a right to increase the annual fees by the greater of (a) CPI plus two percent (2%) or (b) five percent (5%). "CPI" shall mean for all Urban Consumers, the U.S. City Average, for all items, 1982-84=100 (the "CPI-U"), as published by the Bureau of Labor Statistics, U.S. Department of Labor, and shall be for the prior twelve months as of the date the calculation is made. Trimble will use commercially reasonable efforts to notify Customer of the new pricing no later than sixty (60) days prior to the expiration of the prior term.

5. Electronic Invoices. Customer hereby consents to the receipt of invoices electronically at the indicated e-mail address(es) and accepts such invoices as if received by mail. Customer's e-mail address may be changed by written notice given by Customer to Trimble at: customer_master@trimble.com. Customer is responsible for maintaining a current e-mail address and shall under no circumstances be excused from payment of applicable charges by its failure to access its designated e-mail address.

6. Due Authority. By signing below, the signatory represents that he/she (i) is an authorized representative of Customer and (ii) has the authority to legally and functionally commit the Customer.

[Signature Page to Follow]

ACCEPTANCE

Accepted and agreed:

CUSTOMER:	**TRIMBLE:**
Signature:	Signature:
Print Name:	Print Name: George Mastakas
Title:	Title: Vice President
Date:	Date:

Addendum #1

Terms of Service
v5.1 (O&PS)

These Terms of Service (this "**Agreement**") are entered into by and between (a) the "Trimble" entity identified on an Order or SOW and (b) the "Customer" entity identified on an Order or SOW ("**Customer**" or "**you**"). Certain capitalized terms are defined in Exhibit B and others are defined contextually in this Agreement.

The Order may also be subject to supplemental product terms and conditions referenced in the applicable Order ("**Supplemental Product Terms**"). This Agreement consists of the terms and conditions set forth below and any applicable Supplemental Product Terms, Support Terms, Order, and SOW. Any conflict or inconsistency will be resolved in the following order of precedence: (1) the Order, (2) the Supplemental Product Terms, (3) the body of this Agreement, (4) the Support Terms, and (5) the SOW.

The "**Effective Date**" of this Agreement means the effective date stated on the Order, or if there is no Order, then the date that the Products are first made available to Customer. This Agreement will govern Customer's initial purchase(s) as well as any renewals thereof (unless different terms are specified upon renewal).

If you are accessing or using Products on behalf of your company, you represent that you are authorized to accept this Agreement on behalf of your company. All references to "you" reference your company. **BY SIGNING AN ORDER OR SOW OR INSTALLING, ACCESSING, OR USING ANY PRODUCTS THAT ARE SUBJECT TO THIS AGREEMENT, YOU INDICATE YOUR ACCEPTANCE OF THIS AGREEMENT AND AGREE TO BE BOUND BY THE TERMS AND CONDITIONS OF THIS AGREEMENT. EACH PARTY EXPRESSLY AGREES THAT THIS AGREEMENT IS LEGALLY BINDING UPON IT.**

1. Products.

1.1 Product Types. The following provisions apply to the applicable Product type, as set forth in the Order.

(a) Software-as-a-Service. For Products that are deployed as Software-as-a-Service, as set forth in the Order, subject to the terms of this Agreement, Customer may access and use the Products during the Term only for its internal business purposes in accordance with the Documentation, Usage Limitations, any applicable Supplemental Product Terms, and this Agreement.

(b) Licensed Software. For Products that are Licensed Software for deployment on premises or on a device, as set forth in the Order, subject to the terms of this Agreement, Trimble hereby grants Customer a non-transferable, non-sublicensable, non-exclusive license, during the Term, to install, copy, and use the Licensed Software on systems or devices under Customer's control only for its internal business purposes in accordance with the Documentation, Usage Limitations, any applicable Supplemental Product Terms, and this Agreement. Licensed Software is licensed, not sold.

(c) Hosting Services. For Products that are Licensed Software, but are deployed through hosting services delivered by Trimble, as set forth in the Order, the Products are subject to the terms and conditions applicable to Licensed Software.

1.2 Authorized Users and Administrators.

(a) Only Authorized Users may access or use the Products. User IDs are granted to individual, named persons, and each Authorized User will keep login credentials confidential and not share them with anyone else. Customer is responsible for its Authorized Users' compliance with this Agreement and actions taken through their accounts. In the event an Authorized User is no longer authorized to use a Product on Customer's behalf, Customer will promptly de-activate such Authorized User's access. Only if expressly permitted under the applicable Order or Supplemental Product Terms, Customer may transfer Authorized User status from one individual to another at any time, provided that use of the Products by its Authorized Users in the aggregate remains within any applicable Usage Limitations. Customer will promptly notify Trimble if it becomes aware that any of its Authorized User login credentials have been compromised.

(b) If a Product permits administrator access, as described in the Documentation, Customer may designate one or more Authorized Users to be administrators (each an "**Administrator**") with control over Customer's account, including management of Authorized Users and Customer Data, as described in the Documentation. Customer is fully responsible for its choice of Administrators and any actions they take with respect to the Products. Trimble's responsibilities do not extend to the internal management or administration of the Products for Customer.

1.3 API Access and Customer Applications.

(a) API. Products may include one or more application program interfaces ("**API(s)**") that allow Customer to develop applications, code, or services that communicate with the Products (collectively, "**Customer Applications**"). Such APIs, if any, may be available upon request. Customer may use an API only if such use is authorized in the Documentation or otherwise in writing by Trimble. Use of APIs

may be subject to additional terms and conditions. Trimble may modify APIs from time to time, and Trimble is not responsible for the compatibility of any such modifications with Customer Applications.

(b) Use of Customer Applications. If use of an API is authorized, subject to the terms of this Agreement and in compliance with the applicable Documentation, Customer may develop Customer Applications for use solely by Customer's Authorized Users. Customer will not develop Customer Applications for the benefit of, or distribute Customer Applications to, any third party. Customer assumes all risk and liability regarding the development or use of any Customer Applications. Other customers or Trimble itself may independently develop applications similar to Customer Applications.

1.4. Restrictions. Customer will not (and will not permit, encourage, or assist anyone else to) do any of the following: (a) provide access to, distribute, sell, or sublicense the Products to a third party; (b) use the Products on behalf of, or to provide any product or service to, third parties; (c) use the Products to develop a similar or competing product or service; (d) reverse engineer, decompile, disassemble, or seek to access the source code or non-public APIs to any element of the Products, except to the extent expressly permitted by Law (and then only after providing prior written notice to Trimble); (e) modify or create derivative works of the Products or copy any element of the Products (other than in connection with making copies of Licensed Software authorized under this Agreement); (f) remove or obscure any proprietary notices in the Products; (g) publish benchmarks or performance information about the Products, except to the extent expressly permitted by Law; (h) interfere with the Products' operation or its use by others, circumvent its access restrictions or, without the prior written permission of Trimble, conduct any security or vulnerability test of the Products; (i) transmit any viruses or other harmful materials to the Products; (j) submit to the Products any information that is inappropriate, defamatory, obscene, salacious, or unlawful, or use the Products to defame, harass, stalk, threaten, or otherwise violate the rights of others; (k) use the Products to advertise, offer to sell or buy goods, or otherwise for business promotional purposes; or (l) for Licensed Software, unless expressly permitted in the Order, Supplemental Product Terms, or the Documentation, use or host any Licensed Software in a virtual server environment.

1.5 Trials and Betas. If Customer receives access to the Products or any features thereof on a free or trial basis or as an alpha, beta, or early access offering ("**Trials and Betas**"), use is permitted only for Customer's internal evaluation to determine whether to purchase a license or subscription to the Product during the period designated by Trimble (or if not designated, 30 days). If Customer purchases a license or subscription to the Products, this Agreement will apply to Customer's use unless otherwise specified in the applicable Order. Trials and Betas are optional and Trimble may cease offering Trials and Betas at any time for any reason. Trials and Betas may be inoperable, incomplete, or include features that Trimble may never release, and their features and performance information are Trimble's Confidential Information. If the Products include a mechanism that limits access to Trials and Betas, Customer will not attempt to circumvent any such mechanism or restriction. **Notwithstanding anything else in this Agreement: (a) Trimble has no obligation to retain Customer Data used with Trials and Betas; (b) Trimble provides the Trial and Betas "AS-IS" with no warranty, indemnity, service levels, or support; and (c) Trimble's liability for Trials and Betas will not exceed US$50**.

1.6 Educational Versions. Notwithstanding the foregoing, for any version of the Products designated as "educational," or a similar term, Customer may use the Products solely for educational purposes (i.e., by an instructor or a student at an educational institution and while engaged in educational work). Such educational versions may not be used (a) by any other person; (b) by any educational institution for any non-educational purposes; or (c) for any for-profit purpose, including professional work or training offered for a fee, or by commercial entities.

1.7 Internet Connection. Products may require an active Internet connection or other means of electronic communications to operate, which are not the responsibility of Trimble.

1.8 Delivery and Deployment. Products, Documentation, and License Keys, if any, will be delivered by electronic means unless otherwise specified on the applicable Order. Delivery is deemed to occur on the date on which a Product and License Key, if any, are first made available to Customer. Products may gather and transmit to Trimble license compliance and activation data. Customer will not disable, modify, or interfere with the operation of any such functionality of the Products. Trimble may use the foregoing information to validate the authenticity of Customer's license to the Products, to register Customer's Products, for license metering, and to protect Trimble against unlicensed or illegal use of the Products.

2. Data Rights.

2.1 Data Usage and Ownership.

(a) Customer hereby grants to Trimble and its Affiliates the non-exclusive, worldwide, irrevocable, royalty-free right: (i) to use Customer Data during the Term to provide the Products, Support, and Professional Services to Customer; (ii) to use and disclose Customer Data as otherwise permitted pursuant to this Agreement or any written consent or instructions of Customer; and, (iii) on a perpetual basis: (A) to create, use, and disclose Anonymized Data for any purpose and (B) subject to Trimble's confidentiality obligations in Section 13 (Confidentiality) and all applicable Data Protection Legislation, to use Customer Data to develop, maintain, and improve the Products and any other products, software, and services of Trimble or its Affiliates.

(b) Except for Trimble's use rights set forth in this Agreement, as between the parties, Customer retains all intellectual property and other rights in Customer Data. Trimble owns all right, title, and interest in Anonymized Data (including, without limitation, any and all intellectual property rights).

(c) Customer will not have access to Customer Data after termination or expiration of the Term, unless otherwise indicated in the Documentation, Order, Supplemental Product Terms, or the parties agree otherwise in writing.

(d) In the event of any conflict between the terms of Section 13 (Confidentiality) and this Section 2.1 (Data Usage and Ownership), the terms of this Section 2.1 (Data Usage and Ownership) will control.

2.2 Personal Information and Data Protection.

(a) All applicable laws, rules, and regulations relating to privacy and data protection, including GDPR and CCPA (as defined below), are referred to as "**Data Protection Legislation**." "**Personal Information**" is defined as in the applicable Data Protection Legislation, or if no definition is provided, any personally identifiable information which is either (i) provided by Customer or on its behalf as required for and in connection with the normal use and operation of Products or (ii) automatically collected through the Products on Customer's behalf. "**Applicable**," in this context, means the Data Protection Legislation applicable to Customer at Customer's principal place of business or to Trimble at Trimble's principal place of business, and such laws that Customer notifies Trimble in writing of that apply to the parties.

(b) Each party will comply with all applicable requirements of the Data Protection Legislation that applies to it. This Section 2.2(b) is in addition to, and does not relieve, remove, or replace, a party's obligations or rights under the applicable Data Protection Legislation.

(c) Without prejudice to the generality of Section 2.2(b), Customer will ensure that it has all necessary and appropriate consents and notices in place (i) to enable lawful transfer of the Personal Information to Trimble for the duration and purposes of the Agreement and (ii) to enable Trimble to lawfully use, process, and transfer the Personal Information in accordance with this Agreement, including on the Customer's behalf.

(d) The parties acknowledge that: (i) if Trimble processes any Personal Information hereunder, it is on the Customer's behalf when performing its obligations under this Agreement and (ii) the Personal Information may be transferred, stored, and/or accessed from outside of the country where the Customer's principal place of business is located in order to provide the Products or to otherwise perform any of Trimble's other obligations under this Agreement.

(e) If the processing of Personal Information by Trimble is subject to the General Data Protection Regulation ((EU) 2016/679) or the Data Protection Act 2018 of the United Kingdom ("**GDPR**"), then, at the request of Customer, the parties will execute an applicable data processing addendum.

(f) If the processing of Personal Information by Trimble is subject to the California Consumer Privacy Act of 2018 (Title 1.81.5, §1798.100 et. seq.) ("**CCPA**"), then the terms of this clause (f) apply, and capitalized terms shall have the meanings afforded to them under the CCPA unless otherwise stated. In connection with a Verifiable Consumer Request by a Consumer pursuant to an exercise of rights under CCPA related to Personal Information, (i) Trimble is Customer's Service Provider; (ii) Customer (and not Trimble) will respond to such request; and (iii) if necessary, in connection with such request, Customer will utilize the tools and information provided or made generally available by Trimble, such as Trimble's online portals or APIs and Documentation regarding Trimble's products, software, and services. To the extent such tools do not enable Customer to respond to a Verifiable Consumer Request, upon Customer's request, Trimble will provide reasonable assistance with respect to Personal information in Trimble's systems that is required for Customer's response to such request. Trimble will not retain, use, or disclose Personal Information for any purpose other than as expressly permitted under this Agreement or as otherwise permitted under CCPA. A Verifiable Consumer Request to delete Personal Information will not require Trimble to delete Personal Information required to provide Customer with the Products (as defined in this Agreement), which includes any of Trimble's Service Provider(s) acting on Trimble's behalf to provide the Products (as defined in this Agreement); provided, however, that such service provider(s) do not have a separate right to Sell or otherwise use Customer's Personal Information other than as required for Trimble's Business Purposes.

3. Customer Obligations.

3.1 Compliance with Laws. Customer is responsible for complying with all Laws in its use of the Products and any results derived from the Products.

3.2 No High Risk Activities. Customer will not use the Products for High Risk Activities. Customer acknowledges that the Products are not intended to meet any legal obligations for High Risk Activities.

3.3 No Prohibited Data. Customer will not use the Products with Prohibited Data. Customer acknowledges that the Products are not intended to meet any legal obligations for these uses, including HIPAA requirements, and that Trimble is not a Business Associate as defined under HIPAA.

3.4 Customer Data. Customer is responsible for its Customer Data, including its content, accuracy, and compliance with Laws. Customer represents and warrants that it has made all disclosures and has all rights, consents, and permissions necessary to use its Customer Data with the Products and grant Trimble the rights in Section 2.1 (Data Use and Ownership), all without violating or infringing Laws, third-party rights (including intellectual property, publicity, or privacy rights), or any terms or privacy policies that apply to its Customer Data.

4. Suspension of Access to Products. Trimble may suspend Customer's access to the Products, Support, and/or Professional Services, without liability, and in whole or in part, if (a) Customer breaches Section 1.4 (Restrictions) or Section 3 (Customer Obligations); (b) Customer's account is 10 days or more overdue; or (c) Customer's actions risk harm to other customers or the security, availability, or integrity of the Products. Where practicable, Trimble will use reasonable efforts to provide Customer with prior notice of the suspension. Once Customer resolves the issue requiring suspension, Trimble will promptly restore Customer's access to the Products in accordance with this Agreement.

5. Certain Product Features. The following provisions apply to the extent applicable to the Products.

5.1 Devices. The Products may be compatible with or require use of a device ("**Device**"). Compatible Devices are specified in the applicable Documentation. Trimble makes no warranties regarding the operation of any Device or continued compatibility of a Product with any such Device. Customer is solely responsible for the configuration and operation of the Device. The results obtained through a Product may be affected by, and Trimble will have no liability for, the compatibility, placement, configuration, or operation of the Device, weather or other environmental conditions, color or composition of materials being scanned, or other factors outside of Trimble's control.

5.2 Use with Other Trimble Products. The Products may allow Customer to connect with other products or services made available by Trimble. Use of such other products or services that are not part of the Products may require payment of a separate fee and are governed by those products or services' respective terms of service, end user license agreement, or other agreement, and not by this Agreement.

5.3 Scripts. The Products may allow Customer to input and/or develop custom scripts, macros, and commands (collectively, "**Scripts**") that control the operation of the Products. Scripts may be available for download or purchase from Trimble or third parties, or created by Customer. Unless otherwise specified by Trimble in writing, Scripts are not part of the Product. Customer's development and use of any Scripts are solely at its own risk. To the extent any Scripts are provided by a third party, such Scripts will be deemed to be Third-Party Materials, and may be subject to Third-Party Terms.

5.4 Third-Party Materials. The Products may provide Customer with access to Third-Party Materials. Third-Party Materials are not part of the Products. To the extent specified by Trimble (including in any Supplemental Product Terms or Documentation), use of the Third-Party Materials may be subject to additional terms or restrictions ("**Third-Party Terms**"). Customer is solely responsible for its compliance with any Third-Party Terms, and failure to comply with such terms may result in termination of Customer's right to access any features of the Products that utilize such Third-Party Materials. If no Third-Party Terms are specified, Customer may use Third-Party Materials solely in support of Customer's authorized use of the Products in accordance with this Agreement.

5.5 Open Source. The Products may incorporate third-party open source software ("**Open Source**"), as listed in the Documentation or Supplemental Product Terms, or otherwise made available by Trimble. To the extent the terms of the Open Source license prohibit the terms of this Agreement from applying to the Open Source, the terms of the Open Source license will apply to the Open Source on a stand-alone basis instead of this Agreement.

5.6 Content Subscriptions. This Section applies if the Product makes available Third-Party Materials as a data or content subscription ("**Subscription Content**"). If Customer has a separate agreement with Trimble or the applicable third party in place regarding the use of Subscription Content ("**Subscription Content Agreement**"), then such Subscription Content Agreement governs the use of Subscription Content accessed through the Product, but not the use of the Product itself, which will be governed by this Agreement. If no Subscription Content Agreement is in place, then, unless otherwise authorized by Trimble in writing, such Subscription Content may only be used solely for Customer's internal purposes during the applicable Term and only when accessed pursuant to a manual end user request. Customer will not: (i) access, extract, or download any Subscription Content, or portions thereof, in batch or mass by any means; (ii) sell, offer to sell, rent, sublicense, or transfer any copies of the Subscription Content, or portions thereof, to a third party or allow a third party to use the Subscription Content; (iii) use the Subscription Content to develop services or products for sale or include any portion of the Subscription Content in any product or service; (iv) use any portion of the Subscription Content to create a competitive service, product, or technology; (v) recreate the Subscription Content or create otherwise a separate database or other repository of Subscription Content; (vi) use Subscription Content to train, augment, or correct another database or information repository; or (vii) make any portion of the Subscription Content available to the public in any manner. Upon notice from Trimble and/or any termination or expiration of the Term, Customer will immediately cease using and delete/destroy all electronic and physical copies of Subscription Content.

5.7 Third-Party Platforms.

(a) Customer may choose to use a Product with Third-Party Platforms. Third-Party Platforms are not part of the Product. Subject to payment of additional fees, Trimble may host Trimble-approved Third-Party Platforms or integrations to Third-Party Platforms for use in connection with the Products.

(b) Use of Third-Party Platforms is subject to Customer's agreement with the relevant provider and not this Agreement, and may enable data exchange between the Products and Third-Party Platform. Trimble does not control and has no liability for Third-Party Platforms, including their security, functionality, operation, availability, or interoperability, or how the Third-Party Platforms or their providers use Customer Data. If Customer enables a Third-Party Platform with a Product, Trimble may access and exchange Customer Data with the Third-Party Platform on Customer's behalf.

(c) Customer represents and warrants that it shall, and shall require any provider of a Third-Party Platform to: (i) establish and maintain industry standard technical, organizational, physical, and administrative safeguards designed to ensure the security and integrity of the Product and Trimble cloud environment and (ii) comply with the security controls, configuration requirements, and access limitations imposed by Trimble, as may be modified by Trimble from time to time. If Trimble hosts the Third-Party Platform or integration to the Third-Party Platform, Customer represents and warrants to Trimble that Customer has all rights necessary to grant Trimble the right to host the Third-Party Platforms on its behalf.

5.8 Third-Party Application Stores.

(a) Purchase from Application Store. If Customer obtains the Product through a third-party application store, marketplace, or other site or service (each, an "**Application Store**"), such Application Store is considered a reseller. All Fees are non-refundable once paid. Customer's download of the Product may be subject to other terms as specified by the operator of the Application Store from which Customer downloaded the Product.

(b) Apple-Specific Terms. If Customer downloaded the Product from Apple Inc.'s ("**Apple's**") Application Store, the following terms are part of this Agreement:

(i) This Agreement is between Customer and Trimble, and not with Apple. However, as required by Apple, Apple and its subsidiaries will be third-party beneficiaries of this Agreement and will have the right (and will be deemed to have accepted the right) to enforce this Agreement against Customer as a third-party beneficiary.

(ii) To the maximum extent permitted by Law, Apple will have no warranty obligation with respect to the Product, and, as between Apple and Trimble, any other claims, losses, liabilities, damages, costs, or expenses attributable to a failure to conform to a warranty will be Trimble's responsibility. Apple has no obligation whatsoever to furnish any maintenance or support services with respect to the Product.

(iii) As between Trimble and Apple, Trimble is solely responsible for the Product and for addressing any claims Customer or any third parties have about the Product or Customer's possession or use of the Product, including without limitation (A) product liability claims; (B) any claim that the Product fails to conform to any applicable legal or regulatory requirement; and (C) claims arising under consumer protection or similar legislation. In the event of any third-party claim that the Product or Customer's possession or use of the Product infringes that third party's intellectual property rights, Apple will not be responsible for the investigation, defense, settlement, or discharge of such claim.

6. Support and Professional Services.

6.1 Support. During the Term, Trimble will provide support and/or maintenance for the Products ("**Support**" or "**Software Assurance**") in accordance with the service level commitments specified on the applicable Order or the Supplemental Product Terms, if any ("**Support Terms**").

6.2 Professional Services. Trimble will provide Professional Services related to the Products as specified on the Order or a statement of work or work order ("**SOW**") signed or accepted by Customer. Professional Services are subject to the terms and conditions set forth in Exhibit C and the applicable Order or SOW.

7. Term and Termination.

7.1 Initial Term. If Customer purchases a subscription to a Product or a license to Licensed Software for a limited period of time, the duration of the initial term of the Order and this Agreement is set forth in the Order ("**Initial Term**"). Upon the expiration of the Initial Term, the Order and this Agreement shall automatically renew in accordance with Section 7.2 (Renewal Term(s)), unless otherwise set forth in the Supplemental Product Terms or the Order. The Initial Term and any renewal period are collectively referred to as "**Term**."

7.2 Renewal Term(s). Unless otherwise set forth in the Order, if Customer purchases a termed license or subscription to a Product or Support, upon the expiration of the Initial Term or any renewal Term, the Term shall automatically renew for subsequent term(s) equal in duration to the then-current term, until either party provides written notice to the other party of its intent not to renew at least 30 days before the expiration of the then-current Term.

7.3 Termination. Either party may terminate this Agreement, an Order, or a SOW if the other party (a) fails to cure a material breach of this Agreement (including a failure to pay Fees) within 30 days after written notice; (b) ceases operation without a successor; or (c) seeks protection under a bankruptcy, receivership, trust deed, creditors' arrangement, composition, or comparable proceeding, or if such a proceeding is instituted against that party and not dismissed within 60 days. Termination of the Agreement will terminate all Orders and any SOWs, unless otherwise stated in the termination notice. Termination of an Order or SOW will not, by itself, terminate this Agreement.

7.4 Effect of Termination. Upon expiration or termination of this Agreement or an Order, Customer's right to use the Products (including its license to any Product) will cease and Customer will immediately cease any and all use of and access to the Products and will delete (or, upon request, return) all copies of any Product. At the disclosing party's request upon expiration or termination of this Agreement, the receiving party will delete all of the disclosing party's Confidential Information (excluding Customer Data, which is addressed in Section 2.1 (Date Usage and Ownership)). Customer Data and other Confidential Information may be retained in the receiving party's standard backups after deletion but will remain subject to this Agreement's confidentiality restrictions.

7.5 Survival. These Sections survive expiration or termination of this Agreement: 1.4 (Restrictions), 2.1 (Data Usage and Ownership), 3 (Customer Obligations), 7.4 (Effect of Termination), 7.5 (Survival), 8 (Financial Terms), 9.3 (Disclaimers), 10 (Ownership), 11 (Limitations of Liability), 12 (Indemnification), 13 (Confidentiality), 15 (General Terms), and Exhibit B. Except where an exclusive remedy is provided, exercising a remedy under this Agreement, including termination, does not limit other remedies a party may have.

8. Financial Terms.

8.1 Fees. Fees are as described in the Order or SOW ("**Fees**"). The payment terms for the first invoice for Products or Support will be set forth on the Order. Thereafter, the payment terms for Fees for Products and Support under that Order will be set forth in the invoice. Unless otherwise stated in a SOW or set forth in an invoice, Fees for Professional Services under an SOW are due upon receipt. Trimble may, without limiting Trimble's other rights and remedies, accelerate Customer's unpaid Fees under any Order for any breach of Customer's payment obligations under any Order so that all such obligations become immediately due and payable, including Fees for all unbilled future Fees under any Order.

8.2 Increases. Unless otherwise set forth in the Order, (a) all recurring Fees will be fixed for a period of 12 months from the Effective Date, and (b) thereafter, Trimble may increase recurring Fees once every 12 months during the Term.

8.3 Late Fees. Any amount due under this Agreement that remains unpaid after its due date will bear interest at the lower of 1.5% per month or the maximum rate permitted by Law, calculated from the date such amount was due until the date that payment is received. Customer will pay all costs and expenses of collection (including attorneys' fees) incurred by Trimble collecting any amounts past due under this Agreement. Subject to any mandatory Laws to the contrary, all Fees and expenses are non-refundable.

8.4 Taxes. Customer will pay any sales, use, GST, value-added, withholding, or similar taxes or levies that apply to its Orders or SOWs, whether domestic or foreign ("**Taxes**"), other than Trimble's income tax. Fees and expenses are exclusive of Taxes. Customer will pay any foreign exchange transaction fees and any foreign exchange profits or losses incurred on such transactions.

9. Warranties and Disclaimers.

9.1 Limited Warranty. Unless otherwise specified in the Supplemental Product Terms, and subject to any mandatory Laws to the contrary, Trimble warrants to Customer that during the Warranty Period the Products will perform materially as described in the Documentation. The "**Warranty Period**" is (i) 90 days from the Effective Date for Licensed Software deployed on premises or on a device pursuant to Section 1.1(b) and (ii) for the duration of the Term for any (1) Software-as-a-Service made available pursuant to Section 1.1(a) or (2) Licensed Software deployed through hosting services provided by Trimble pursuant to Section 1.1(c).

9.2 Warranty Remedy. If Trimble breaches Section 9.1 (Limited Warranty) during the Warranty Period, Customer may make a reasonably detailed warranty claim within 30 days of discovering the issue. Trimble will correct such breach by issuing corrected instructions, a restriction, or a bypass, or by replacing the Product. Subject to any mandatory Laws to the contrary, these procedures are Customer's exclusive remedy and Trimble's entire liability for breach of the warranty in Section 9.1 (Limited Warranty). This warranty does not apply to (a) issues caused by misuse or unauthorized modifications; (b) unsupported versions of Licensed Software; (c) issues in or caused by Third-Party Platforms or other third-party systems; or (d) Trials and Betas or other evaluation use.

9.3 Disclaimers.

(a) **General**. **EXCEPT AS EXPRESSLY PROVIDED IN SECTION 9.1 (LIMITED WARRANTY) OR IN ANY SUPPLEMENTAL PRODUCT TERMS, PRODUCTS, SUPPORT, AND PROFESSIONAL SERVICES ARE PROVIDED "AS IS". TRIMBLE AND ITS SUPPLIERS MAKE NO (AND HEREBY DISCLAIM ALL) OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NONINFRINGEMENT, OR ANY WARRANTIES ARISING FROM A COURSE OF DEALING OR USAGE OF TRADE. WITHOUT LIMITING ITS EXPRESS OBLIGATIONS IN SECTION 6 (SUPPORT AND PROFESSIONAL SERVICES), TRIMBLE DOES NOT WARRANT THAT CUSTOMER'S USE OF THE PRODUCTS WILL BE UNINTERRUPTED OR ERROR-FREE, THAT TRIMBLE WILL REVIEW CUSTOMER DATA FOR ACCURACY, OR THAT IT WILL MAINTAIN CUSTOMER DATA OR OTHER DATA WITHOUT LOSS. TRIMBLE IS NOT LIABLE FOR DELAYS, FAILURES, OR PROBLEMS INHERENT IN USE OF THE INTERNET AND ELECTRONIC COMMUNICATIONS OR OTHER SYSTEMS OUTSIDE TRIMBLE'S CONTROL. TRIMBLE WILL NOT BE LIABLE IN ANY MANNER FOR THE OUTPUT OBTAINED THROUGH USE OF THE PRODUCTS OR CUSTOMER'S RELIANCE ON SUCH OUTPUT. CUSTOMER IS RESPONSIBLE FOR THE SUPERVISION, MANAGEMENT, AND CONTROL OF CUSTOMER'S USE OF THE PRODUCTS. THIS RESPONSIBILITY INCLUDES THE DETERMINATION OF APPROPRIATE USES FOR THE PRODUCTS AND THE SELECTION OF THE PRODUCTS AND OTHER PROGRAMS TO ACHIEVE INTENDED RESULTS. ANY FORMS, POLICIES, OR OTHER MATERIALS PROVIDED BY TRIMBLE THROUGH THE PRODUCTS OR DOCUMENTATION ARE NOT INTENDED AND SHOULD NOT BE RELIED UPON AS LEGAL ADVICE OR LEGAL OPINION. CUSTOMER SHOULD CONSULT ITS OWN LEGAL COUNSEL REGARDING THE USE OF ANY SUCH MATERIALS. CUSTOMER IS ALSO RESPONSIBLE FOR ESTABLISHING THE ADEQUACY OF INDEPENDENT PROCEDURES FOR TESTING THE RELIABILITY AND ACCURACY OF ANY OUTPUT OF THE PRODUCTS. CUSTOMER MAY HAVE OTHER STATUTORY RIGHTS, BUT ANY STATUTORILY REQUIRED WARRANTIES WILL BE LIMITED TO THE SHORTEST LEGALLY PERMITTED PERIOD.**

(b) Customer Applications. Trimble hereby disclaims any warranty, support, or other obligations with respect to any Customer Applications.

(c) Scripts. **Subject to mandatory Laws to the contrary, Scripts are provided "AS IS" and Trimble hereby disclaims any warranty, support, or other obligations with respect to any Scripts, including, without limitation, any Scripts provided by Trimble.**

(d) Third-Party Materials and Third-Party Platforms. Third-Party Materials and Third-Party Platforms are provided "AS IS" and Customer assumes all risk and liability regarding any use of (or results obtained through) Third-Party Materials or Third-Party Platforms. Trimble and its suppliers make no warranty or guarantee regarding any Third-Party Materials or Third-Party Platforms, including regarding their accuracy or continued availability or compatibility.

(e) High Risk Activities and Prohibited Data. Trimble and its suppliers specifically disclaim any responsibility for, and will not be liable in any manner arising from, any use of the Products in connection with High Risk Activities or with any Prohibited Data.

10. Ownership. Neither party grants the other any rights or licenses not expressly set out in this Agreement. Except for Customer's use rights in this Agreement, Trimble and its licensors retain all intellectual property and other rights in the Products, Documentation, other deliverables and related Trimble technology, templates, formats, and dashboards, including any modifications or improvements to these items made by Trimble. If Customer provides Trimble with any suggestions, ideas, enhancement requests, feedback, recommendations, or other information relating to a Product ("**Feedback**"), Customer hereby grants to Trimble and its Affiliates a nonexclusive, worldwide, perpetual, irrevocable, transferable, sublicensable, royalty-free, fully paid up license to use and otherwise exploit the Feedback.

11. Limitations of Liability. **TRIMBLE'S CUMULATIVE LIABILITY TO CUSTOMER FOR ALL CLAIMS IN ANY WAY ARISING OUT OF OR RELATING TO THE ORDER, ANY SOW, THIS AGREEMENT, AND THE PRODUCTS OR SERVICES, REGARDLESS OF THE FORM OR THEORY OF ACTION (INCLUDING BREACH OF CONTRACT, STRICT LIABILITY, TORT (INCLUDING NEGLIGENCE), OR ANY OTHER LEGAL OR EQUITABLE THEORY), SHALL NOT EXCEED THE TOTAL AMOUNT OF FEES PAID TO TRIMBLE BY CUSTOMER FOR THE RELEVANT PRODUCT OR SERVICES IN THE PRIOR 12 MONTHS UNDER THIS AGREEMENT. IN NO EVENT WILL TRIMBLE OR ITS SUPPLIERS OR THIRD-PARTY VENDORS HAVE ANY OBLIGATION OR LIABILITY FOR INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY, PUNITIVE, OR AGGRAVATED DAMAGES, LOSS OF GOODWILL, LOSS OF DATA, OR ANTICIPATED PROFITS ARISING FROM OR RELATING TO THIS AGREEMENT, CUSTOMER'S USE OF OR THE PERFORMANCE OF THE PRODUCTS OR FROM THE SERVICES, OR FOR ANY OTHER REASON, EVEN IF TRIMBLE OR ITS SUPPLIERS OR THIRD-PARTY VENDORS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH POTENTIAL LOSS OR DAMAGE. CUSTOMER ACKNOWLEDGES THAT THE FEES REFLECT THE ALLOCATION OF RISK SET FORTH IN THIS AGREEMENT AND THAT TRIMBLE WOULD NOT ENTER INTO THIS AGREEMENT WITHOUT THESE LIMITATIONS. THE FOREGOING LIMITATION OF LIABILITY AND EXCLUSION OF CERTAIN DAMAGES SHALL APPLY REGARDLESS OF THE SUCCESS OR EFFECTIVENESS OF OTHER REMEDIES.**

12. Indemnification. Customer will defend, indemnify, and hold harmless Trimble from and against any and all third-party claims, costs, damages, losses, liabilities, and expenses (including reasonable attorneys' fees and costs) arising out of or in connection with (a) any Customer Data, or (b) Customer's breach or alleged breach of Section 3 (Customer Obligations), Section 5.4 (Third-Party Materials), or Section 5.7 (Third-Party Platforms) (each, a "**Claim**"). Trimble will give Customer prompt written notice of any Claim and

will cooperate in relation to the Claim at Customer's expense. Customer will have the exclusive right to control and settle any Claim, except that Customer may not settle a Claim without Trimble's prior written consent (not to be unreasonably withheld) if the settlement requires Trimble to admit any liability or take any action or refrain from taking any action (other than ceasing use of infringing materials). Trimble may participate in the defense of any Claim at its expense.

13. Confidentiality.

13.1 Definition. "**Confidential Information**" means information disclosed to the receiving party under this Agreement that is designated by the disclosing party as proprietary or confidential or that should be reasonably understood to be proprietary or confidential due to its nature and the circumstances of its disclosure. Trimble's Confidential Information includes the terms and conditions of this Agreement and any technical or performance information about the Products, Support, or Professional Services. Customer's Confidential Information includes Customer Data.

13.2 Obligations. As a receiving party, each party will use reasonable care to protect the disclosing party's Confidential Information from being disclosed to third parties except as permitted in this Agreement, including, without limitation, in Section 2.1 (Data Usage and Ownership) and (b) only use Confidential Information to fulfill its obligations and exercise its rights in this Agreement. The receiving party may disclose Confidential Information to its employees, agents, Affiliates, contractors, and other representatives having a legitimate need to know (including, for Trimble, the subcontractors referenced in Section 15.8 (Subcontractors), provided it remains responsible for their compliance with this Section and they are bound to confidentiality obligations no less protective than this Section.

13.3 Exclusions. These confidentiality obligations do not apply to information that the receiving party can document (a) is or becomes public knowledge through no fault of the receiving party; (b) it rightfully knew or possessed prior to receipt under this Agreement; (c) it rightfully received from a third party without breach of confidentiality obligations; or (d) it independently developed without using the disclosing party's Confidential Information.

13.4 Remedies. Unauthorized use or disclosure of Confidential Information may cause substantial harm for which damages alone are an insufficient remedy. Each party may seek appropriate equitable relief, in addition to other available remedies, for breach or threatened breach of this Section.

13.5 Required Disclosures. Nothing in this Agreement prohibits either party from making disclosures, including of Customer Data or Confidential Information, if required by Law, subpoena, or court order, provided (if permitted by Law) it notifies the other party in advance and reasonably cooperates in any effort to obtain confidential treatment.

14. Publicity. Neither party may publicly announce this Agreement except with the other party's prior consent or as required by Law. Trimble may include Customer and its trademarks in Trimble's customer lists and promotional materials but will cease this use at Customer's written request.

15. General Terms.

15.1 Assignment. Trimble may assign this Agreement upon notice to Customer. Customer may not assign or transfer this Agreement (by operation of law or otherwise) without the prior consent of Trimble. Any non-permitted assignment is void. This Agreement will bind and inure to the benefit of each party's permitted successors and assigns.

15.2 Non-Solicitation. During the Term of this Agreement, and for a period of one year following expiration or termination of this Agreement, Customer shall not on its own behalf or on behalf of any third party, solicit, hire, or cause to be hired as an employee or engage or caused to be engaged as an independent contractor any person who was an employee or independent contractor of Trimble, without the prior written consent of Trimble.

15.3 Notices. Except as set out in this Agreement, any notice or consent under this Agreement must be in writing and will be deemed given: (a) upon receipt if by personal delivery; (b) upon receipt if by certified or registered mail (return receipt requested); or (c) one day after dispatch if by an internationally reputable commercial overnight delivery service. If to Trimble, notice must be provided to the address in Exhibit A, with a copy to Trimble Inc., Attn: General Counsel – Important Notice, 935 Stewart Drive, Sunnyvale, CA 94085, USA. If to Customer, Trimble may provide notice to the address Customer provided at registration or on the Order. Either party may update its address with notice to the other party. Trimble may also send general and operational notices to Customer by email or through the Products, including suspension, collection, and termination notices related to overdue Fees.

15.4 Entire Agreement. This Agreement (which includes the Order, any SOWs, any applicable Supplemental Product Terms, and any applicable Support Terms) is the parties' entire agreement regarding its subject matter and supersedes any prior or contemporaneous agreements regarding its subject matter. In this Agreement, headings are for convenience only and "including" and similar terms are to be construed without limitation. The terms in any Customer purchase order, business form, or other similar documents will not

amend or modify this Agreement and are expressly rejected by Trimble; any of these Customer documents are for administrative purposes only and have no legal effect.

15.5 Amendments. Except as otherwise provided herein, any amendments, modifications, or supplements to this Agreement must be in writing and signed by each party's authorized representatives or, as appropriate, agreed through electronic means provided by Trimble. Documentation and Support Terms are not subject to this Section. Trimble may modify Documentation and Support Terms to reflect new features or changing practices, but the modifications will not materially decrease Trimble's overall obligations during a Term.

15.6 Waivers and Severability. Waivers must be in writing signed by the waiving party's authorized representative and cannot be implied from conduct. Each provision contained in this Agreement constitutes a separate and distinct provision severable from all other provisions. If any provision (or any part thereof) is unenforceable under or prohibited by any present or future law or is held by a court of competent jurisdiction or arbitrator to be invalid, void, or unenforceable, then such provision (or part thereof) will be amended, and is hereby amended, so as to be in compliance with such law, while preserving to the maximum extent possible the intent of the original provision. Any provision (or part thereof) that cannot be so amended will be severed from this Agreement; and, all the remaining provisions of this Agreement will remain unimpaired.

15.7 Force Majeure. Neither party is liable for any delay or failure to perform any obligation under this Agreement (except for a failure to pay Fees) due to events beyond its reasonable control, such as a strike, blockade, war, act of terrorism, riot, Internet or utility failures, refusal of government license, pandemics, or natural disaster.

15.8 Subcontractors. Trimble may use subcontractors and permit them to exercise Trimble's rights in connection with this Agreement, including for hosting purposes. Trimble remains responsible for compliance of any such subcontractors with this Agreement and for its overall performance under this Agreement.

15.9 Independent Contractors. The parties are independent contractors, not agents, partners, or joint venturers.

15.10 Export Restrictions. Customer acknowledges that the Products are subject to export restrictions by the United States government and import restrictions by certain foreign governments. Customer will not, and will not allow any third party to, remove or export from the United States or allow the export or re-export of any part of the Products or any direct product thereof: (i) into (or to a national or resident of) any embargoed or terrorist-supporting country; (ii) to anyone on the U.S. Commerce Department's Table of Denial Orders or U.S. Treasury Department's list of Specially Designated Nationals; (iii) to any country to which such export or re-export is restricted or prohibited, or as to which the United States government or any agency thereof requires an export license or other governmental approval at the time of export or re-export without first obtaining such license or approval; or (iv) otherwise in violation of any export or import restrictions, Laws of any United States, or foreign agency or authority. Customer warrants that it is not located in, under the control of, or a national or resident of any such prohibited country or on any such prohibited party list. The Products are further restricted from being used for the design or development of nuclear, chemical, or biological weapons or missile technology, or for terrorist activity, without the prior permission of the United States government. Customer will defend, indemnify, and hold Trimble harmless against any liability (including attorneys' fees) arising out of Customer's failure to comply with the terms of this Section. Customer's obligations under this Section will survive the termination of this Agreement for any reason whatsoever.

15.11 Anti-Corruption. Each party shall, and shall require that its officers, employees, and agents, (a) comply with all applicable anti-corruption and anti-bribery laws, including but not limited to the U.S. Foreign Corrupt Practices Act of 1997 and the U.K. Bribery Act 2010, each as amended and including any rules or regulations thereunder; (b) not directly or indirectly offer, promise, or give any person working for or engaged by the other party a financial or other advantage to induce that person to perform improperly a relevant function or activity or reward that person for improper performance of a relevant function or activity; and (c) not directly or indirectly request, agree to receive, or accept any financial or other advantage as an inducement or reward for improper performance of a relevant function or activity in connection with this Agreement.

15.12 Government End-Users. Elements of the Products are commercial computer software. If the user or licensee of the Products is an agency, department, or other entity of the United States Government, the use, duplication, reproduction, release, modification, disclosure, or transfer of the Products or any related documentation of any kind, including technical data and manuals, is restricted by the terms of this Agreement in accordance with Federal Acquisition Regulation 12.212 for civilian purposes and Defense Federal Acquisition Regulation Supplement 227.7202 for military purposes. The Products were developed fully at private expense. All other use is prohibited.

15.13 No Third-Party Beneficiaries. This Agreement does not confer any rights or remedies upon any third party except to the extent expressly set forth in this Agreement.

15.14 Governing Law, and Venue. The Agreement is governed exclusively by, and construed and enforced exclusively in accordance with, the laws of the applicable jurisdiction set forth in Exhibit A under "Governing Law" for the applicable Trimble entity without

regard to or application of its conflicts of laws provisions and without regard to or application of the United Nations Convention on the International Sale of Goods. The parties agree that any legal proceeding arising out of or related to this Agreement will be subject to the sole and exclusive jurisdiction and venue set forth in Exhibit A under "Exclusive Venue/Jurisdiction," to the exclusion of all others. Each party irrevocably consents and hereby submits to the personal jurisdiction thereof.

15.15 Jury Trial Waiver. If the Agreement is governed by U.S. law, this Section applies. EACH PARTY IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY LEGAL ACTION, PROCEEDING, CAUSE OF ACTION, OR COUNTERCLAIM ARISING OUT OF OR RELATING TO THIS AGREEMENT, INCLUDING ANY EXHIBITS, SCHEDULES, AND APPENDICES ATTACHED TO THIS AGREEMENT, OR THE TRANSACTIONS CONTEMPLATED HEREBY.

EXHIBIT A

TRIMBLE NOTICE ADDRESS, GOVERNING LAW, AND VENUE/JURISDICTION

Trimble Entity and Notice Address*	**Governing Law**	**Exclusive Venue/Jurisdiction**
Trimble Inc. 935 Stewart Drive, Sunnyvale, CA 94085 United States AgileAssets Inc. 3001 Bee Caves Rd #200, Austin, TX 78746 Azteca Systems, LLC 11075 South State Street Suite 24 Sandy, UT 84070 e-Builder Inc. 13450 West Sunrise Blvd Suite 600, Sunrise, FL	Delaware	State of Delaware and United States federal courts located in Wilmington, Delaware
Trimble Europe B.V. Industrieweg 187a, 5683 CC, Best, The Netherlands	The Netherlands	Courts of Amsterdam

**See additional notice address for Trimble in Section 15.3 (Notices).*

EXHIBIT B

DEFINITIONS

"**Affiliate**" means an entity that, directly or indirectly, owns or controls, is owned or controlled by, or is under common ownership or control with a party, where "ownership" means the beneficial ownership of 50% or more of an entity's voting equity securities or other equivalent voting interests, and "control" means the power to direct the management or affairs of an entity.

"**Anonymized Data**" means any data collected in connection with the Products (including Customer Data) that has been aggregated and/or de-identified in such a manner that neither Customer nor any of its Authorized Users or any other individual can be identified from the data when it is shared outside of Trimble or its Affiliates.

"**Authorized User**" or "**User**" means any type of user authorized by Customer to access and use the Products on Customer's behalf, including any additional requirements as set forth in the Order or Supplemental Product Terms.

"**Concurrent User**" means any type of User authorized by Customer to access and use the Products on Customer's behalf simultaneously at a given point in time.

"**Customer Data**" means any information, documents, materials, or other data of any type that is input by or on behalf of Customer into the Products or that is created or generated by Customer through Customer's use of the Products, including without limitation information or data that is submitted manually by Authorized Users or through a Third-Party Platform.

"**Customer Group**" means, if applicable, Customer's business units, Affiliates, or Joint Ventures listed in the Order that are permitted to authorize Users to use the Products on behalf of those business units, Affiliates, or Joint Ventures.

"**Deliverables**" shall mean any Trimble deliverables as expressly set forth on a SOW.

"**Documentation**" means Trimble's then-current usage guidelines and standard technical documentation applicable to the Products.

"**High Risk Activities**" mean any mission critical, hazardous, strict liability, or other activity(ies) where use or failure of the Products could lead to death, personal injury, or physical or environmental damage. Examples of High Risk Activities include, but are not limited to: aircraft or other modes of human mass transportation, nuclear or chemical facilities, life support systems, implantable medical equipment, motor vehicles, autonomous vehicles, air traffic control, emergency services, or weaponry systems. High Risk Activities do not include utilization of Products for administrative purposes, to store configuration data, engineering and/or configuration tools, or other non-control applications, the failure of which would not result in death, personal injury, or physical or environmental damage. These non-controlling applications may communicate with the applications that perform the control, but must not be directly or indirectly responsible for the control function.

"**Joint Venture**" means a business arrangement in which Customer and one or more other third parties agree to pool their resources to accomplish a Project or other commercial enterprise.

"**Law(s)**" means all applicable local, state, federal, and international laws, regulations, and conventions, including those related to data privacy and data transfer, international communications, and export of technical or personal data.

"**License Keys**" means electronic passwords or other enabling mechanisms provided for use with a Product.

"**Licensed Software**" means the object code form of Trimble's proprietary installed software product, as identified in the relevant Order. The Licensed Software includes the Documentation, and any maintenance releases of the same Licensed Software product provided by Trimble to Customer under this Agreement, and optional software component module(s) that provides specific features and functionality enhancements for the Licensed Software not available in the standard configuration of the Licensed Software. Licensed Software does not include Third-Party Materials or Third-Party Platforms.

"**Named User**" means any type of User designated by Customer by name or other identifier to access and use the Products on Customer's behalf.

"**Order**" means (a) any ordering documents, proposals, quotations, sales agreement, or similar documents issued by Trimble or executed by Customer or (b) any Trimble-issued entitlement confirmation or online order acknowledgement.

"**Product(s)**" means the applicable Licensed Software or Software-as-a-Service offerings listed on an Order, including any platforms, add-on, integrations, service, or products provided or sold by Trimble with any of the foregoing.

"**Professional Services**" means any training, enablement, configuration, or other professional consulting services provided by Trimble related to the Products, as identified in the Order or SOW.

"**Prohibited Data**" means any (a) patient, medical, or other protected health information regulated by the Health Insurance Portability and Accountability Act (as amended and supplemented) ("**HIPAA**"); (b) credit, debit, or other payment card data subject to the Payment Card Industry Data Security Standards (PCI DSS); or (c) information subject to regulation or protection under the Children's Online Privacy Protection Act or Gramm-Leach Bliley Act.

"**Software-as-a-Service**" means a Trimble proprietary cloud service, any Product available through a software-as-a-service, or other hosting services deployment model, as identified in the relevant Order and as modified from time to time. This includes Documentation, but does not include Third-Party Materials or Third-Party Platforms not provided by Trimble.

"**Third-Party Materials**" means any third-party data, content, or proprietary software.

"**Third-Party Platform**" means any platform, add-on, service, or product not provided by Trimble that Customer elects to integrate or enable for use with the Products, including any Trimble-approved Third-Party Platforms that Trimble may host on behalf of Customer.

"**Usage Limitations**" means Customer's authorized scope of use for the Products as specified in the applicable Order or Supplemental Product Terms, which may include any user, seat, copy, instance, data storage, CPU, computer, field of use, location, or other restrictions.

EXHIBIT C

PROFESSIONAL SERVICE TERMS

1. Statements of Work. If purchased by Customer, Trimble or its authorized service providers will use commercially reasonable efforts to provide Professional Services to Customer described in an Order or SOW by the delivery dates specified therein, if any, or on a mutually agreeable schedule. Any changes in scope must be made in writing and approved by authorized representatives of Customer and Trimble.

2. Customer Materials. Customer agrees to provide Trimble with reasonable access to Customer's technical data, computer programs, files, documentation, and/or other materials (collectively, "**Customer Materials**") and to Customer's resources, personnel, equipment, and facilities to the extent necessary for the performance of Professional Services. Client will be responsible for, and assumes the risk of any problems resulting from the content, accuracy, completeness, competence, or consistency of Customer Materials or its personnel. To the extent that Customer does not timely provide the foregoing access required for Trimble to perform the Professional Services, Trimble shall be excused from performance until such items or access are provided. Subject to the confidentiality provisions of this Agreement, Customer hereby grants Trimble a limited and revocable right to use the Customer Materials for the purpose of performing the Professional Services for Customer. Customer owns and will retain ownership (including all intellectual property rights) in the Customer Materials.

3. Customer Premises. Customer shall provide Trimble with safe access to Customer's premises as reasonably required for Trimble to perform the Professional Services, if onsite performance of Professional Services is needed and agreed to by Customer. Trimble personnel shall comply with the reasonable written rules and regulations of Customer related to use of its premises, provided that such written rules and regulations are provided to Trimble prior to commencement of the Professional Services.

4. Deliverables. Trimble hereby grants Customer worldwide, royalty-free, non-exclusive license to use the Deliverables for its internal business purposes in connection with the Products associated with such Deliverables and only for the period of time that Customer has a license or subscription to such Products. Unless expressly stated otherwise in the applicable SOW, Trimble owns and will retain ownership (including all intellectual property rights) in and to the Deliverables (excluding any Customer Materials) and any modifications, improvements, and derivative works thereof (including any such materials to the extent incorporating any Feedback). If the parties have agreed that Trimble will assign ownership of Deliverables to Customer, the relevant SOW must set forth the terms and conditions regarding such assignment.

5. Services Warranty. Trimble will perform the Professional Services and deliver the Deliverables as scoped in an Order or SOW in a professional and workmanlike manner. If notified of a non-conformity within 10 days of delivery of the applicable Professional Services or Deliverables, and if Customer provides a sufficiently detailed justification to Trimble to allow Trimble to identify the non-confirming Professional Services or Deliverables, Trimble will, as its sole liability and obligation for failure to provide Professional Services or Deliverables meeting this warranty, re-perform the non-conforming Professional Services or re-deliver the non-conforming Deliverables at no additional cost to Customer.

6. Travel Expenses. Trimble will invoice Customer for reasonable out-of-pocket travel expenses incurred in connection with performing Professional Services. Expenses may include, but are not limited to, airfare and other transportation, lodging, and incidentals. Expenses may also include meals reimbursable per a flat per diem rate, available upon request. Expenses will be invoiced monthly as incurred at Trimble's cost (except per diem), and may be invoiced separately from Fees. For Professional Services performed onsite at Customer's premises, Trimble may invoice Customer for its consultants' time spent traveling to and from Customer's premises if set forth in the SOW.

Addendum #2

Supplemental Product Terms

1. **Intellectual Property Indemnification.**

   (a) Indemnification by Trimble. Trimble shall defend Customer from and against any claim of infringement of a U.S. patent, U.S. copyright, or U.S. trademark asserted against Customer by a third party based upon Customer's use of the Products in accordance with the terms of this Agreement, and pay any resulting settlement or final judgment. If Customer's use of any of the Products are, or in Trimble's opinion are likely to be, enjoined due to the type of infringement specified above, or if required by settlement, Trimble may, in its sole discretion: (a) substitute for the Products substantially functionally similar programs and documentation; (b) procure for Customer the right to continue using the Products; or if (a) and (b) are commercially impracticable, (c) terminate the Agreement and refund to Customer the fee paid by Customer as reduced to reflect a five year straight-line depreciation from the applicable purchase date. The foregoing indemnification obligation of Trimble will not apply: (1) if the Products are modified by any party other than Trimble; (2) if the Products are combined with other non-Trimble products, but solely to the extent that the alleged infringement is caused by such combination; (3) to any unauthorized use of the Products; (4) to any unsupported release of the Products; or (5) to any third-party code, content, and/or data contained in and/or delivered with the Products.

   (b) Indemnification Process. Trimble's indemnification obligations are contingent upon receipt of: (i) prompt notice of such claim (but in any event notice in sufficient time for the indemnifying party to respond without prejudice); (ii) the exclusive right to control and direct the investigation, defense, and settlement (if applicable) of such claim; and (iii) all reasonable necessary cooperation of Customer.

   (c) THIS ADDENDUM #2 OF THE SUPPLEMENTAL PRODUCT TERMS SETS FORTH TRIMBLE'S AND ITS SUPPLIERS' SOLE LIABILITY AND CUSTOMER'S SOLE AND EXCLUSIVE REMEDY WITH RESPECT TO ANY CLAIM OF INTELLECTUAL PROPERTY INFRINGEMENT AND/OR MISAPPROPRIATION.

2. **Roadmap Disclaimer. CUSTOMER AGREES THAT ITS PURCHASES ARE NOT CONTINGENT ON THE DELIVERY OF ANY FUTURE FUNCTIONALITY OR FEATURES, OR DEPENDENT ON ANY ORAL OR WRITTEN PUBLIC COMMENTS MADE BY TRIMBLE REGARDING FUTURE FUNCTIONALITY OR FEATURES.**

3. **Public Entity.** To the extent Customer is a public or governmental entity, then the following provisions apply to the extent applicable:

   a. **Tax Exemption.** If Customer is a tax exempt entity and provides evidence of a tax-exempt certificate prior to executing this Agreement, then Section 8.4 (Taxes) of the Agreement shall be inapplicable.

   b. **No Indemnification by Customer.** Section 12 (Indemnification) of the Agreement and the second to last sentence of Section 15.10 (Export Restrictions) of the Agreement shall be inapplicable.

   c. **Public Records Law.** Customer's confidentiality obligations in Section 13 (Confidentiality) of the Agreement may be subject to applicable public records law.

   d. **Limited Publicity.** The second sentence of Section 14 (Publicity) of the Agreement shall be inapplicable.

   e. **Termination for Convenience**. Customer may terminate this Agreement for convenience on not less than sixty (60) days' written notice to Trimble. If Customer terminates this Agreement under this paragraph, all fees properly due, but not paid, shall immediately become due and payable. All previously paid fees (both used and unused) for the current Term shall be non-refundable and forfeited. Furthermore, all earned, but unpaid, fees for Professional Services must be paid in full before the termination becomes effective.

   f. **Non-Appropriation of Funds.** The Customer's funds for future and ongoing purchases are contingent on the availability of future appropriations of funds. If funds are not appropriated for any payments due under this Agreement, the Customer will promptly notify Trimble in writing and the applicable Order will terminate as of the date of the notice in accordance with paragraph (e) above and the Customer will have no further obligation to make any payments with respect to the affected Order, provided however that the Customer shall pay for any goods or services ordered prior to the date of the Customer's notice.

g. **Piggyback.** Trimble does business with many government entities whose applicable laws permit them to join an existing contract between another governmental agency and vendor to acquire goods and services thereunder. In such circumstances and if allowable by applicable law and contract, Customer expressly agrees to allow the other governmental agencies to acquire goods and services using this Agreement ("piggyback"), subject to applicable pricing of the Trimble offerings at the time of the piggyback purchase.

h. **Governing Law**. Notwithstanding Section 15.14 (Governing Law, and Venue) of the Agreement, the Laws of the jurisdiction required by applicable law shall exclusively govern this Agreement.

4. **Post-Termination.** Upon expiration or termination of the Agreement, Customer will (i) stop accessing and using affected Product(s); (ii) clear any client-side data cache derived from use of the Product(s); and (iii) uninstall, remove, and destroy all copies of affected Product(s) in Licensee's possession or control, including any modified or merged portions thereof, in any form, and execute and deliver evidence of such actions to Trimble. Upon termination of the License and Maintenance Agreement, all Product licenses granted hereunder terminate as well. For 30 days from the expiration or termination of the Agreement, Trimble will make Customer Data available to Customer upon request for export or download for the applicable Product. Additional fees may apply.

5. **Consultant or Contractor Access.** Trimble grants Customer the right to permit Customer's Third-Party Consultants or Contractors to use the Products exclusively and solely for Customer's benefit. Customer must comply with terms and provisions of Exhibit D and provide an executed copy to Trimble. Customer shall be solely responsible for compliance by Third-Party Consultants and Contractors with this Agreement and shall ensure that the Third-Party Consultant or Contractor discontinues Product use upon completion of work for Customer. Access to or use of Products by Third-Party Consultants or Contractors not exclusively for Customer's benefit is prohibited.

EXHIBIT D

THIRD-PARTY CONSULTANT/CONTRACTOR ACKNOWLEDGMENT

If Customer engages any third party or contractor (Third Party) and desires to grant access to use the Products, the access may be granted subject to the following terms conditions and provisions:

1. Access and use of the Licensed Products by Third Party is solely for Customer's benefit;
2. Third Party (or, if applicable, its employee) shall be considered the Authorized User, and all use shall be in accordance with the terms and conditions of the Trimble Agreement with Customer;
3. Before accessing the Products, Third Party agrees that (i) the Products shall be used solely in accordance with the terms of this Agreement, and (ii) Third Party shall be liable to Trimble for any breach by it of this Agreement;
4. Customer hereby agrees and acknowledges that Customer will be responsible for all use by Third Party with respect to the use of the Products;
5. Upon expiration or termination of this Agreement, the rights of usage of Third Party shall immediately terminated;
6. Use of the Products by Third Party will be governed by the terms of Customer's Agreement with Trimble, and will require that Customer purchase the appropriate license or access for each user utilized by Third Party; and
7. Customer will ensure that Third-Party agrees to comply with and does comply with the terms of Customer's Trimble Agreement on the same basis as the terms apply to Customer.

The rights granted under Third-Party Contractor Addendum, do not modify Customer's Agreement with Trimble or increase the access or licenses granted under this Agreement. Third Party, by their signature below, acknowledges that it has a copy of Customer's Agreement with Trimble and agrees to the terms herein. Customer shall provide a signed copy of this Agreement to Trimble at contracts@cityworks.com.

Third Party (Print):_____ **Customer:** **City of Flagstaff, AZ**

By: _____

Third Party/Contractor Authorized Signature

Title: _____

Date: _____

Third Party Information:

Address City, State, Zip	
Contact Name	
Phone Number	
Email	

Addendum #3

Support
Version 1.0

1. Releases

1.1. General. "**Release**" means an update or upgrade to the Product made available to all customers using that Product that improves usability or adds functionality, cosmetic changes, or bug fixes. Trimble will use commercially reasonable efforts to provide prior notice to Customer through the Customer Portal, or other communication channels when Releases are made generally available to all customers, excluding any non-general Releases or unplanned Releases. Trimble will decide the contents and timing of all Releases in its sole discretion.

1.2. Software-as-a-Service and Hosted License Software. Trimble will update (i) Software-as-a-Service or (ii) Licensed Software hosted by Trimble in each case as new Releases become generally available.

1.3. On Premise Licensed Software. For Licensed Software not hosted by Trimble, Customer is responsible for installing all Releases. Upon Customer's election to install a Release, Customer agrees to cease all use of the prior version of the Licensed Software and destroy all copies. Releases may require Customer to update third party software, hardware, or operating systems at Customer's expense.

2. Support

2.1. Generally.

a) Trimble shall use the applicable level of effort to correct or provide a workaround for any reproducible error in the Product attributable to Trimble commensurate with the severity of the error, as reasonably determined by Trimble in accordance with Section 2.3 below.

b) For certain Products as set forth in Section 2.2(a) below, Trimble may provide a customer support portal (the "**Support Portal**"), which may allow Customer to submit support requests, report issues, view case histories, search the general knowledge database, and other features, as applicable. In the event of any conflicts between the terms set forth herein and any set forth in the applicable Support Portal, the terms herein shall govern.

c) For certain Products as set forth in Section 2.2(a) below, Trimble will provide support to Customer only by communication with the contacts designated by Customer in the Support Portal or otherwise as instructed by Trimble (each, a "**Authorized Support Contact**"). Customer may update Authorized Support Contact(s) from time to time as instructed by Trimble. Trimble may require the Authorized Support Contact(s) to have the relevant technical knowledge regarding the Products necessary to assist Trimble as needed.

d) Upon identification of any error that cannot be resolved by Customer as first line of support (e.g., via the Support Portal, its internal staff, etc.), then Customer (through its Authorized Support Contact(s)) shall promptly notify Trimble of such error and shall provide Trimble with enough information, assistance, and cooperation to reproduce the error, including a listing of output and any other data that Trimble may reasonably request in order to reproduce the error and operating conditions under which the error occurred or was discovered. Trimble shall not be responsible for correcting any errors not attributable to Trimble.

e) For certain Products, Trimble may provide additional or different support services or procedures as set forth in the applicable documentation, support handbook, or other written documentation provided by Trimble, if any (the "**Additional Support Documentation**"). If there is any conflict between these support terms and such Additional Support Documentation with respect to the description of support services or procedures, the provisions of such Additional Support Documentation will prevail. Trimble may use third-parties to provide support and maintenance services on its behalf. Customer expressly consents to Trimble permitting such third parties to access Customer information and data

to perform the support services.

2.2. Reporting; Availability

a) Support portals and general availability is described below.

Product	Support Portal*	Authorized Support Contacts Only?**
AgileAssets	https://agileassets.com/techsupport	Yes
Cityworks	https:mycityworks.force.com	Yes
e-Builder (non-Fed Ramp)	https://www.e-builder.net/customer-center	No
e-Builder (Fed Ramp)	Support information available upon request.	Yes
Trimble Water	https://mytrimblewater.force.com/s/login	No

** Additional phone numbers and hours of availability for contacting Trimble with support requests may be listed in the Support Portal.*

2.3. Severity Priority Levels. As soon as reasonably practicable after Customer submits the relevant case information, Trimble will collect additional information and categorize the issue into one of four classifications as set forth below in good faith. Upon Customer submission of the case information, Trimble will use commercially reasonable efforts to issue a Response (as defined below) by the indicated target response goal set forth below. Once the priority level is determined, Trimble will use the level of effort for resolution described below.

Priority Level*	Priority Criteria	Target Response Goal**	Level of Effort for Resolution
P1	most urgent and impactful	½ hour	Trimble and Customer will prioritize any reasonably available resources to resolve the situation or identify a work around.
P2	urgent and impactful, but usually has an acceptable temporary workaround	½ hour	Trimble and Customer will prioritize any reasonably available resources during standard business hours to resolve the situation or identify a work around.
P3	important, but not urgent and impactful	4 hrs	Trimble and Customer will use generally available resources during standard business hours to resolve the situation or identify a work around.
P4	a low priority, informational, or an enhancement request	24 hrs	Trimble and Customer are willing to use generally available resources during standard business hours to provide information or assistance.

** See Priority Matrix and definitions below. The main factors in determining priority level are urgency and impact. Trimble will also consider in good faith any additional relevant facts and circumstances in consultation with Customer that may result in a mutually agreed upon change in priority level.*

******** *The use of the term "hour(s)" refers to business hours based on Trimble's regular business schedule, and excludes nights, weekends and locally-observed holidays (e.g., 24 hrs equals 3 business days at 8 hrs a day). "Response" means acknowledgment of the issue via the creation of a case number. Determination of priority level will occur as soon as practicable thereafter.*

Priority matrix					
		Impact			
		Widespread	**Large**	**Localized**	**Individualized**
Urgency	**Critical**	P1	P1	P2	P2
	High	P1	P2	P2	P3
	Medium	P2	P3	P3	P3
	Low	P4	P4	P4	P4

Definitions		
Impact	Impact is a measure of the number of users, sites, or devices affected.	**Widespread**. More than three quarters of users or devices are affected.
		Large. (1) Multiple sites are affected or (2) between one-half and three-quarters of users or devices are affected.
		Localized. (1) A single site is affected or (2) less than one half of users or devices are affected.
		Individualized. A single or a small number of users or devices are affected.
Urgency	Urgency is a measure of the severity of the issue on the Customer's operations.	**Critical**. Use of Product as a whole or core functionality is stopped with no work around and with severe immediate impact to the Customer's operations (e.g., outage).
		High. Use of Product as a whole or core functionality is severely degraded or a work around is available, and with immediate impact to the Customer's operations.

Definitions		
		Medium. Use of Product or any functionality is not working as expected, and can be addressed through education, training, work around, work order, or a future enhancement.
		Low. All other requests that are not the above.

2.4. Limitations and Conditions.

(a) Unless otherwise expressly provided by Trimble in writing, Trimble does not support: (i) use of the Product in a manner other than as authorized in the Agreement; (ii) alterations of the Product by Customer or a third-party; (iii) conversions of Customer's databases to accommodate new hardware or software, (iv) Customer Data debugging or manipulation, (v) recurring support issues where Customer failed to initiate corrective actions previously recommended by Trimble or to provide information requested by Trimble, (vi) training, implementation, report creation, onsite support, customizations (e.g., scripting or integration), or assistance with server migrations are not included as part of Support, but such services but may be purchased separately, (vii) any Release of the Product other than the current and an immediately preceding Release unless covered under a separate agreement (this includes preview, beta, or candidate releases), (viii) Third-party Materials or Third-Party Platforms; (ix) any Products for which maintenance and/or support fees have not been paid, or (x) any Product where Customer has failed to meet its obligations with respect to the Agreement, including, without limitation, as set forth below.

(b) Customer must (i) require its personnel to obtain adequate training to operate the Product(s), (ii) if required by Trimble for the particular Product, designate Authorized Support Contacts who will submit all support cases to Trimble, (iii) provide internet and/or network access for Trimble when requesting support; and (iv) provide all information and assistance reasonably requested by Trimble related to the support request.

(c) For Licensed Software not hosted by Trimble, Customer is responsible for (i) securing the server environment, local network, and system security and protocols, including having staff qualified to assume responsibility for management administration and support for Customer's hardware, database, and any Third-Party Materials and/or Third-Party Platforms, (ii) maintaining regular and frequent data backups, and recovering such data if necessary from backups maintained by Customer, (iii) establishing a secure method of access to Customer's network as well as maintaining security protocols for Customer's network; and (iv) incorporating Releases and any associated data migration.

(d) If any Customer support request is subject to any of the foregoing, then Trimble reserves the right to impose support fees at its then standard commercial time and materials rates for all such services, including pre-approved travel and per diem expenses to be reimbursed consistent with Customer's policies. Trimble will notify Customer in advance of incurring any such fees.

Water Distribution - Fire Hydrant Inspection Data from Cityworks CMMS

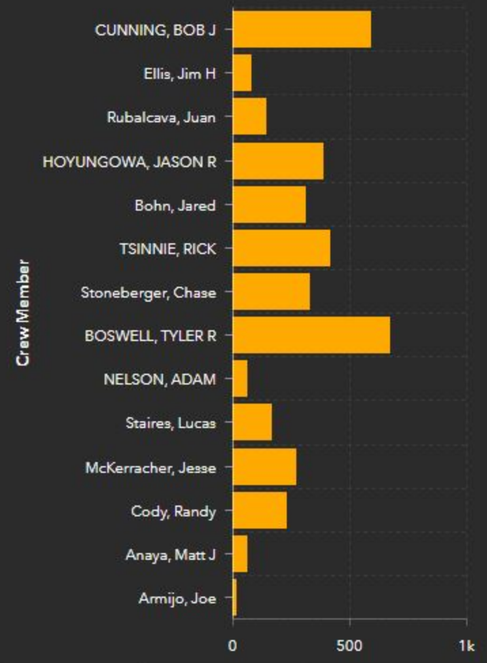
Select a date
7/1/2021 - 6/30/2022

Closed Inspections

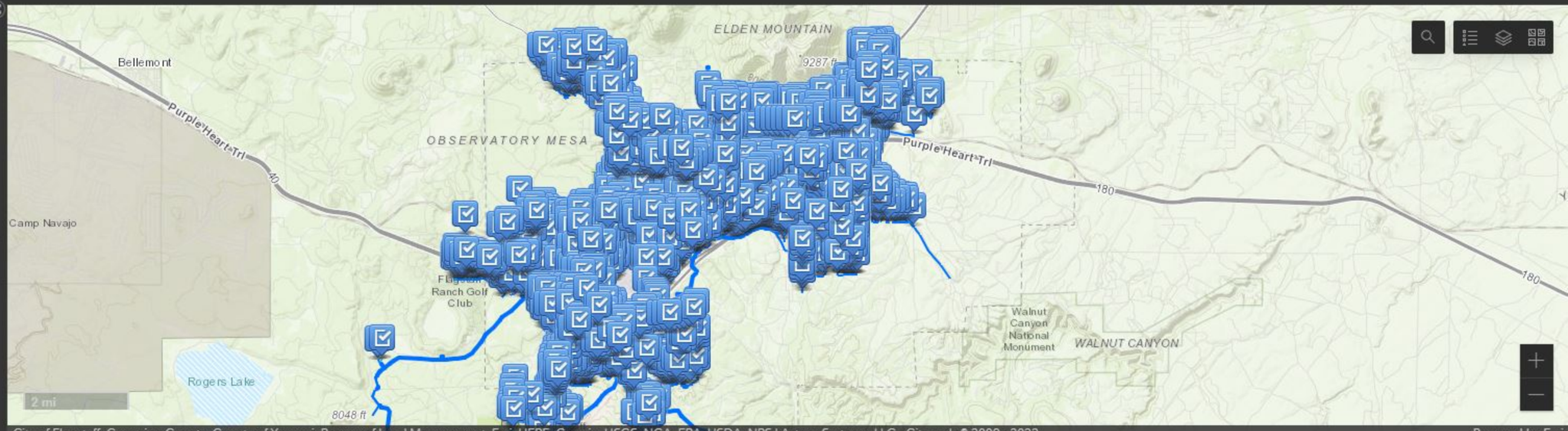


Closed Inspections | Closed Work Orders

Closed Hydrant Inspection by Crew



Inspections | Work Orders



The following numbers reflect **Open Fire Hydrant Work Orders** based on closed Fire Hydrant Inspections. The bold numbers reveal current fire hydrants with that condition.

Hydrants
8
Condition 2

Hydrants
105
Condition 3

Hydrants
25
Condition 4

Hydrants
2
Condition 5

Hydrants - Condition 2
Priority: 4 - Repair
Priority: 4 - Repair
Priority: 4 - Repair Valve
Priority: 5 - General Site
Priority: 5 - General Site
Priority: 5 - Repair

Hydrants - Condition 3
Priority: 3 - General Site
Priority: 3 - Repair
Priority: 3 - Repair
Priority: 3 - Replacement
Priority: 3 - Repair
Priority: 3 - Repair

Hydrants - Condition 4
Priority: 2 - Repair
Priority: 2 - Replacement
Priority: 2 - Replacement
Priority: 2 - Replacement
Priority: 2 - Rebuild
Priority: 2 - Rebuild

Hydrants - Condition 5
Priority: 1 - General Site
Priority: 1 - Replacement

8. B.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Stacey Brechler-Knaggs, Grants, Contracts & Emergency Management Director
Co-Submitter:	Daniel Kelly, Emergency Manager
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration and Approval of Contract: Emergency Operations Plan Development Contract between the City of Flagstaff and Emergency Management Partners, LLC (EM Partners)

STAFF RECOMMENDED ACTION:

1. Approve the contract with EM Partner to develop a City Emergency Operations Plan (EOP) in the amount of $71,348.50.
2. Authorize the City Manager to execute all necessary documents.

Executive Summary:

Emergency operations planning is key to managing our risk and response to critical incidents. This plan will detail the roles and responsibilities of the city and stakeholders in emergency response, recovery, and mitigation efforts as they relate to wildfire, post-fire flooding, and other threats and hazards the city may face.

Financial Impact:

The Consultant Services fee is funded 100% by State of Arizona House Bill 2001 through the Department of Forestry and Fire Management (DFFM). Funds are to be budgeted in FY2023-24 in account number 001-02-039-0114-1-4290.

Policy Impact:

None

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

Priority Based Budget Key Community Priorities and Objectives

Safe & Healthy Community - Provide public safety services with resources, staff & training responsive to the community needs

Has There Been Previous Council Decision on This:

No

Options and Alternatives:

- Approve the contract to create a City EOP
- Do not approve the contract

Background/History:

EM Partners is working currently with Coconino County to update their Emergency Operations Plan. City Procurement staff reviewed the scope and determined to authorize a sole source procurement due to the requirement to interface with other agencies in the state of Arizona that are already utilizing EM Partners for their Emergency Operations Plan. The operation plan will share critical information amongst the agencies.

Key Considerations:

EM Partner will utilize the Federal Emergency Management Agency (FEMA) Comprehensive Preparedness Guide (CPG) 101 – Developing and Maintaining Emergency Operations Plans to guide our development of the City of Flagstaff Emergency Operations Plan (EOP). They will ensure the plan aligns with the National Incident Management System (NIMS), the Coconino County EOP, which EM Partners is currently updating, and the Arizona State Emergency Response and Recovery Plan (SERRP), in order to accurately reflect operational relationships between governmental levels. As part of CPG 101, FEMA outlines a six-step planning process which is flexible and adaptable to the specific needs of jurisdictions. Our team will follow this planning process, applying national standards for planning in our approach, while updating the EOP to be both aligned with these standards and unique to the City of Flagstaff. These steps, 1) Project Scoping and Management, 2) Data Collection and Analysis, and 3) Plan Development will inform our streamlined and systematic approach to supporting the City of Flagstaff EOP development project.

Community Benefits and Considerations:

This plan will ensure that necessary and appropriate actions are taken to protect people and property from an all-hazards approach.

Attachments: Emergency Operations Plan Contract

PROFESSIONAL SERVICES CONTRACT
Contract No.: 2023-103

This Contract is entered into this _____ day of _____, 20___ by and between the City of Flagstaff, a political subdivision of the State or Arizona ("City"), and Emergency Management Partners, LLC (EM Partners), a limited liability company of the State of Virginia ("Consultant").

WHEREAS, the City desires to receive and Consultant is able to provide professional services;

NOW THEREFORE, in consideration for the mutual promises contained herein, the City and Consultant (the "parties") agree as follows:

SERVICES

1. Scope of Work: Consultant shall provide the professional services described as follows:

Emergency Operations Plan Development

and as more specifically described in the scope of work attached hereto as ***Exhibit A.***

2. Schedule of Services: Consultant shall perform all work per the schedule in ***Exhibit A.***

3. Standard Terms and Conditions: The City of Flagstaff Standard Terms and Conditions, attached hereto as ***Exhibit B*** are hereby incorporated by reference and shall apply to performance of this Contract, except to the extent modified in ***Exhibit A.***

4. Key Personnel/Subcontractors: Consultant's Key Personnel, Subcontractors (if any), and contact information are designated in ***Exhibit A.*** Key Personnel are those employees whose license number and signature will be placed on key documents and those employees who have significant responsibilities for completion of the services. The City Representative for this Contract has the right to approve any proposed substitution of Key Personnel or Subcontractors.

CITY RESPONSIBILITIES

5. City Representative: The City Representative is Stacey Brechler-Knaggs, Grants, Contracts and Emergency Management Director or her designee. All communications to the City shall be through the City Representative. City Representative is responsible for bringing any request for a Contract amendment or price adjustment to the attention of the City Buyer.

6. City Cooperation: City will cooperate with Consultant by placing at its disposal all available information concerning the City, City property, or the City project reasonably necessary for Consultant's performance of this Contract.

CONTRACT TERM

7. Contract Term: The Contract term is for a period of three (3) years unless terminated pursuant to the Standard Terms and Conditions attached hereto as ***Exhibit B.*** This Contract will be effective as of the date signed by both parties. Performance shall commence within ten (10) days from City's issuance of the Notice to Proceed.

8. Renewal: The Contract may be renewed for up to two (2) additional one (1) year terms by mutual written consent of the parties. The City Manager or his designee (the Purchasing Director) shall have authority to approve renewal on behalf of the City.

PAYMENT

9. Compensation: Consultant shall be paid **seventy-one thousand three hundred forty-eight dollars and fifty cents ($71,348.50)** for satisfactory performance of the services in accordance with the Scope of Work identified in *Exhibit A.*

10. Price Adjustment: Any price adjustment must be approved by the City in writing as a formal Contract Amendment. The City Council must approve the price adjustment if the annual contract price exceeds $50,000; otherwise the City Manager or his designee (the Purchasing Director) shall have authority to approve a price adjustment on behalf of the City.

DATA AND RECORDS

11. City Ownership of Document and Data: Any original documents prepared or collected by Consultant in performance of this Contract such as models, samples, reports, test plans, survey results, graphics, tables, charts, plans, maps, specifications, surveys, computations and other data shall be the property of City ("City's work product"), unless otherwise agreed by the parties in writing. Consultant agrees that all materials prepared under this Contract are "works for hire" within the meaning of the copyright laws of the United States and hereby assigns to the City all rights and interests Consultant may have in the materials it prepares under this Contract, including any right to derivative use of the material.

12. Re-Use: The City may use the City's work product without further compensation to Consultant; provided, however, that the City's reuse without written verification or adaption by Consultant for purposes other than contemplated herein is at the City's sole risk and without liability to Consultant. Consultant shall not engage in any conflict of interest nor appropriate any portion of the City's work product for the benefit of Consultant or any third parties without the City's prior written consent.

13. Delivery of Document and Data: Upon termination of this Contract in whole or part, or upon expiration if not previously terminated, Consultant shall immediately deliver to the City copies all of the City's work product and any other documents and data accumulated by Consultant in performance of this Contract, whether complete or in process.

INSURANCE

14. Insurance: Consultant shall meet insurance requirements of the City, as set forth in *Exhibit C.*

MISCELLANEOUS

15. Notice: Any notice concerning this Contract shall be in writing and sent by certified mail and email as follows:

To the City:
Patrick Brown
Purchasing Director
City of Flagstaff
211 W. Aspen Ave.
Flagstaff, Arizona 86001
pbrown@flagstaffaz.gov

To Consultant:
Paul Manno
President
EM Partners, LLC
1318 Autumn Breeze Drive
Oilville, VA 23129
paul@em-partners.com

With a copy to:
Stacey Brechler-Knaggs
Grants, Contracts and Emergency Management Director
Community Development
City of Flagstaff
211 W. Aspen Ave.
Flagstaff, AZ 86001
sknaggs@flagstaffaz.gov

16. Authority; Each party warrants that it has authority to enter into this Contract and perform its obligations hereunder, and that it has taken all actions necessary to enter into this Contract.

EMERGENCY MANAGEMENT PARTNERS, LLC

_____

Print name:_____

Title:_____

CITY OF FLAGSTAFF

_____

Print name:_____

Title:_____

Attest:

_____
City Clerk

Approved as to form:

_____
City Attorney's Office

Notice to Proceed issued:_____, 20___

EXHIBIT A

SCOPE OF WORK

EM PARTNERS

December 30, 2022

Stacey Brechler-Knaggs
Grants, Contracts, & Emergency Management Director
City of Flagstaff
211 West Aspen
Flagstaff, AZ 86001

RE: CITY OF FLAGSTAFF, AZ EMERGENCY OPERATIONS PLAN DEVELOPMENT

Director Brechler-Knaggs,

Emergency Management Partners, LLC (EM Partners) is delighted to submit this proposal to the City of Flagstaff, Arizona to develop an Emergency Operations Plan (EOP) for the city. From preparedness planning to post-disaster support consulting, EM Partners brings experience in all aspects of emergency management, with specific expertise in real-world operations analysis and plan development. For this project, we offer a team with over 70 years combined experience in emergency management, including emergency operations planning subject-matter experts. Our team members have experience developing and updating emergency operations plans throughout the country, and our proposed project manager has experience with local, county, and state planning throughout Arizona.

Emergency operations planning is key to managing your risk and response to critical incidents. It is important to develop plans that represent the current operating environment and establish roles and responsibilities of key city stakeholders during emergencies and disasters. EM Partners will develop your plan in alignment with the latest federal guidance, planning doctrine, and industry best practices, as well as with the Arizona State Emergency Response and Recovery Plan (SERRP) and the Coconino County EOP; this will ensure your plan accurately reflects the local to county to state to federal operational relationship. A thorough review of the city's emergency operations and structure should also occur as part of this planning process to ensure the EOP is developed to address the current operating environment and unique needs of the city.

This EOP development project will be conducted to address the 10 primary hazards listed in the existing Coconino County Multi-Jurisdictional Hazard Mitigation Plan, FEMA approved 2021, of which wildfires and flooding/post-fire flooding are the number one and number two hazard priorities in the plan and that pose the most significant threats to the City of Flagstaff as a participating/adopting jurisdiction in the plan. The EOP will be developed to guide operations in response to these identified hazards. It is critical to have a

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well-developed plan for project oversight. The plan will detail the **roles and responsibilities** of the city and stakeholders in emergency response, recovery, and mitigation efforts as they relate to wildfire, post-fire flooding, and other threats and hazards the city may face.

Customer Service Philosophy—At EM Partners, we strive to provide the highest level of customer service through four core values, each building on the next to reach a common goal, Partnership!



Communications—at EM Partners, the foundation of any relationship and project is frequent and open communications. Each of our Project Leads utilizes and implements a tried-and-true approach to project management that is rooted in communication.



Honesty—we pride ourselves on being honest with our clients and potential clients. If we cannot do something or it is not of value to our clients, we will tell you. If issues or mistakes arise, we identify them and work together to produce a resolution.



Trust—through communications and honesty, we strive to build trust with our clients. We want to be your first call when you have a need, issue, or challenge. If we cannot help you solve a problem, we will help you find someone who can.



Partnership—ultimately, we want to build partnerships, not just projects. When our clients succeed, we succeed.

Relevant Experience

Our team brings valuable capabilities and experience relevant to the requirements of this project. The table below provides examples of projects similar in scope that members of our team have supported.

Project Name	Project Overview
Coconino County, AZ Emergency Operations Plan Update	Supporting the Coconino County Emergency Management Department with an update to their all-hazards, multi-jurisdictional emergency operations plan (EOP). Our team is facilitating the planning process for this EOP update to include an update to the existing EOP base plan, as well as the development of new, department-specific annexes, which capture key department roles and responsibilities during emergencies and disasters, and an emergency operations center checklist annex.
City of Sedona, AZ Evacuation/Re-Entry Plan and Traffic Study	The City of Sedona, Arizona, hired EM Partners, along with our Arizona-based subcontractor Greenlight Traffic Engineering, to develop a citywide all-hazards evacuation/re-entry plan and conduct a supporting traffic study. The City of Sedona is frequently threatened by wildfire and flash flooding events, which necessitate evacuation and re-entry operations for the life safety of its residents and significant tourist/visitor population. This project includes a comprehensive traffic analysis to inform the development of community evacuation "best route" maps and an evacuation/re-entry plan that addresses the roles and responsibilities of the city and external stakeholders, as well as guidance for the community during emergencies. The goal of this planning project is to provide the City of Sedona with actionable, ground-truth traffic study data

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Project Name	Project Overview
	and maps along with an operational plan to guide effective evacuation and re-entry operations for all threats and hazards.
Fairfax County, VA Financial Recovery Plan Update	Drafted an update to Fairfax County's Disaster Financial Recovery Guide. The document will allow the county to outline responsibilities and processes for collecting incident-related cost data throughout the response and recovery phases. It will be used along with county finance operational procedures, plans, and protocols. Lessons learned from COVID-19 recovery processes were incorporated into the guide.
FEMA Public Assistance Technical Assistance Contract-Nationwide	EM Partners is a subcontractor on a five-year (2019-2024) Federal Emergency Management Agency (FEMA) contract to provide recovery services to Zone 1 of FEMA's Public Assistance Division's Technical Assistance Contracts IV (PA-TAC IV). This is part of a new approach by FEMA to align PA-TAC IV contractors with one of three geographical zones to more effectively provide resource support. The contract includes FEMA Regions I, III, and IV. The contract has a five-year period of performance and is valued at $610 million. Through this program, FEMA provides supplemental federal disaster grant assistance for debris removal, emergency protective measures, and the repair, replacement, and restoration of disaster-damaged, publicly owned facilities, and the facilities of certain private nonprofit organizations. We currently have staff supporting FEMA's CRC in Winchester, VA. EM Partners staff have deployed to more than thirty federally declared disasters since 2019, serving in a variety of capacities, including Site Inspectors, Program Delivery Managers, Policy Specialists, Environmental and Historical Specialists, Quality Control Specialists, and Costing Specialists.
Virginia Department of Emergency Management Hurricane Contingency Planning Support	In early June, the Virginia Department of Emergency Management (VDEM) determined the need for additional support for contingency planning in the COVID-19 environment. This project required a thorough understanding of the Commonwealth of Virginia Emergency Operations Plan (COVEOP), the Hurricane Support Annex, and the Hurricane Evacuation Study to develop a working contingency plan to allow the agency to pivot response recovery efforts in the COVID-19 environment. Functions considered in this contingency planning included Safety, Public Health, Search and Rescue, Oil Spill/Hazardous Substance, Firefighting, Environmental Protection, Transportation Restoration, Power Restoration, Water/Wastewater Restoration, Commerce Restoration, Security, Wildlife, Stakeholder Outreach, Media Relations, Communications, and Information Management. Program planning efforts required integration with the COV Incident Management Team (COVIMT) and the VDEM Planning Division Director. Contractor support focused on the planning objectives and coordination with regional and local stakeholders to complete the plan within the required, brief timeframe – and under budget- allowing the already overburdened resources and staff of the Commonwealth to continue their essential duties. Support for shelter planning efforts for VDEM is ongoing.
City of Fairfax, VA Emergency Management Support	Over the past fifteen years, staff have been supporting the City of Fairfax to help build the city's Emergency Management Program. Over the past four years, staff have been supporting projects across the entire spectrum of emergency management, from updating the city's EOP, to revising and updating the Debris Plan, to facilitating preparedness workshops for the city, to updating plans to be compliant with the Emergency Management Accreditation Program (EMAP) Standard.
Fairfax County, VA COVID-19 Recovery Support	Supporting Fairfax County with maximizing FEMA Public Assistance grant funding for COVID-19 reimbursements. Working directly with Fairfax County, our staff drafted compelling requests for FEMA reimbursement of PPE, disinfection, communication, security, non-congregate sheltering, and other FEMA-eligible claims for the COVID-19 FEMA PA declaration. EM Partners is providing subject-matter-expert consultation along with technical support in the compilation, validation, and packaging of fully documented claims. Projects were formulated and submitted as closeout

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Project Name	Project Overview
	ready for projected funding of more than $110M, with reimbursement to date of $100M. Our staff has also been supporting the county with Grants Portal uploading.
Fairfax County, VA COVID-19 After-Action Review	Supporting the Fairfax County Department of Emergency Management and Security (DEMS) and the Fairfax County Health Department with a total of four COVID-19 after-action reviews. To date, a total of 40 hotwash meetings have been held with over 900 participants in all. We have completed over 15 individual interviews and have had over 2500 survey respondents. This project will culminate with the completion of four after-action reviews, two for DEMS and two for the Health Department.
City of Falls Church, VA COVID-19 After-Action Review	Our team is supporting the City of Falls Church with its COVID-19 after-action review. This review focuses on the overall response and support to the community. In addition to the after-action report and improvement plan, we will be developing a Pandemic Playbook that will capture actions, tasks, and coordination that would need to occur or be considered in the event of another public health incident.
Southside Electric Cooperative -SEC- (Crewe, VA) Recovery Support	Supporting SEC with maximizing FEMA Public Assistance grant funding from Winter Storm Shirley. Working directly with SEC, our staff drafted compelling requests for FEMA reimbursement of emergency repairs to SEC's electrical distribution system, EOC costs, and permanent repairs to their system. We have also submitted a mitigation proposal for damages to their system. Providing subject-matter-expert consultation along with technical support in the compilation, validation, and packaging of fully documented claims. Projects are estimated at approximately $22M, across categories B, E, and F. Our staff has also been supporting the County with Grants Portal uploading.
Salem Academy (Massachusetts) COVID-19 FEMA PA Grant Support	EM Partners assisted Salem Academy Charter School, an independent charter school, with compiling, submitting, and maximizing eligible COVID-19 FEMA Public Assistance funding for school reopening. Costs related to social distancing, disinfecting, and viral monitoring were verified and substantiated with proper, closeout quality documentation. EM Partners consultants entered all required supporting data into the FEMA Grants Portal as streamlined projects under DR-4496.
Oregon COVID-19 After-Action Reviews	Conducted a series of COVID-19 after-action reviews for the State of Oregon focusing on five areas: management and distribution of personal protective equipment; initial enterprise-wide response; function of the Joint Information Center; re-opening of Oregon; and distribution of vaccines. Collected and analyzed input from hundreds of stakeholders across various functional areas. We conducted over 200 interviews, developed approximately 20 surveys, and distributed them to over 6,000 stakeholders. We also reviewed the state's response plans and incident-specific documents. Our work to date has resulted in five AARs. The recommendations and findings of our AARs have influenced and been leveraged to inform major legislative actions this past year.
Oregon Wildland Fire Response After-Action Review	Amid the pandemic, Oregon experienced the worst wildland fires in the State's history. Given the nature of the fires and the response considerations in a COVID environment, the State contracted to do an after-action review for this event as well. We were able to compare and contrast the response operations of the non-traditional pandemic event and the more, unfortunately traditional, fire event. The approach for this project was similar to that of the COVID-19 after-action reviews and resulted in a comprehensive AAR and Improvement Plan.
Oregon Wildland Fire Debris After-Action Review	Supporting the State of Oregon's Department of Transportation with their after-action review of the debris management and operations after the September 2020 Wildland Fires. The state had

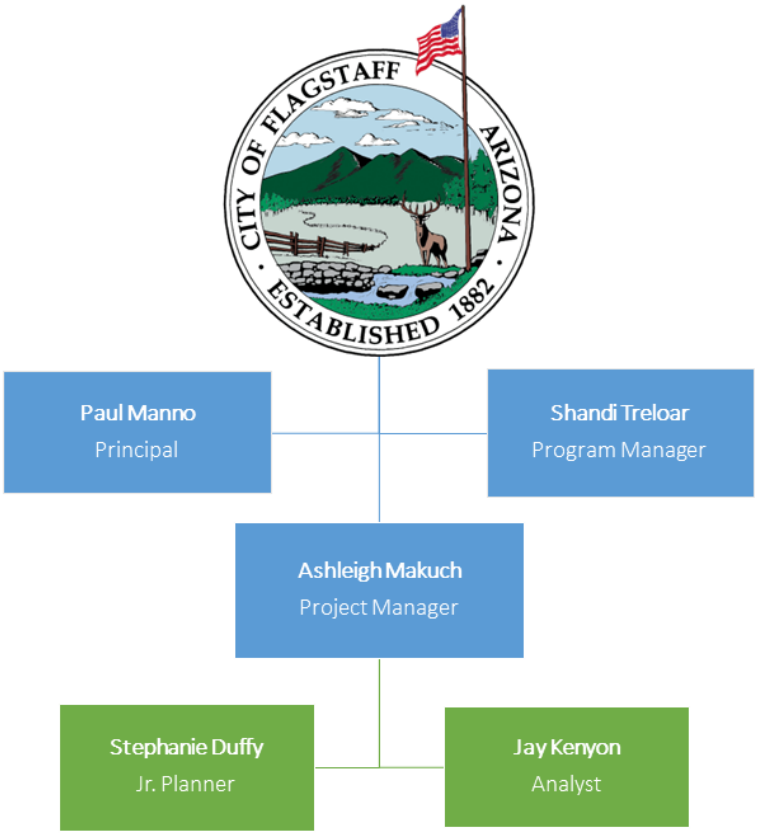
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Project Name	Project Overview
	never been involved in any debris operation of this magnitude. Our support has included subject-matter experts facilitating ten in-person hotwash meetings with over 60 participants. The final report will provide ODOT with recommendations for how to improve its operations for future all-hazard events.
Kansas Division of Emergency Management COVID-19 CARES Act Grant Program Development and Support	The Kansas Division of Emergency Management (KDEM) identified the need for developing and administering two grant programs. These grant programs needed to be developed to administer CARES Act funding to local emergency management organizations for planning and emergency operations center capability enhancements. A grant program was also developed to support private sector partners in procuring and obtaining necessary personal protective equipment (PPE) and vetted disinfectant supplies. Our staff spent a week in Kansas working directly with KDEM to identify and develop these formal program processes and procedures for both grant programs. This included the development of eligibility criteria, priority projects, application packages and instructions, stakeholder engagement, and messaging strategies. Our team provided support in developing the applications and messaging that were ultimately used. Once the EOC Grant program was launched, our team provided technical assistance to over 60 applicants as they were developing their applications and continued to provide technical assistance to KDEM as the funds were awarded and require reporting and closeout support. The support provided to the State of Kansas allowed them to launch two very important grant programs in a very short timeframe. These grant programs will support the communities around the state to be better able to respond to and recover from COVID-19. Our technical assistance allowed more communities to apply for the grant funds and apply for projects that will truly enhance their programs. These grant programs can now be used as a model for future programs.
Delaware Department of Health and Social Services Continuity of Operations Planning	Supported the Delaware Department of Health and Social Services (DHSS) in reviewing COOP plans for nine of the eleven agencies under DHSS that have a role in providing critical health services within the community. This project supported DHSS in expanding COOP plans for these individual agencies. Our approach was to determine whether areas of improvement defined during a recent DHSS COOP Exercise are included in agency COOP plans and to ensure agency COOP plans include FEMA's recommended areas. We provided COOP checklists and templates to drive consistency in COOP plans across the nine agencies. We facilitated a virtual COOP workshop to include a COOP Overview for designated COOP planners from each DHSS division, and we assisted the DHSS division with one-on-one planning meetings to finalize agency-level COOP plans. The support provided to the State of Delaware DHSS allows DHSS to focus on the continuation of critical community health services while at the same time seeing areas where COOP planning improvement is needed and implementing those improvements in real time. Areas of improvement and best practices identified and developed through this COOP initiative will allow for continued strengthening of the Delaware DHSS operations during current and future events. The support we are providing to Delaware DHSS has allowed for already tapped resources and staff to continue their important work during COVID-19 knowing that staff is providing experienced and dedicated support for this initiative.

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Key Personnel

The organizational chart below shows our project team structure, followed by a table highlighting our highly qualified staff.



Staff	Qualifications
Paul Manno Principal-in-Charge	Mr. Manno is a respected and proven industry leader with 25 years of progressive experience in planning, project management and program management, specializing in emergency management planning, response, and recovery. He has led teams of multi-disciplined professionals in planning for and responding to disasters across the country and in U.S. territories for almost two decades. He has managed and directly supervised more than $5B in FEMA Public Assistance grants written by FEMA or contractor staff encompassing hazards including floods, hurricanes, tornadoes, ice storms, and terrorist attacks. He has a successful track record in managing disaster preparedness and recovery contracts with federal, state, local, private sector, and not-for-profit clients. In addition, Mr. Manno has deployed on more than forty disaster assignments, serving as a Program Advisor, Deputy Public Assistance Officer, PAC, Project Specialist, Debris Specialist, and Closeout Specialist. His assignments have included Hurricanes Sandy, Michael, Florence, Ike, Katrina, Charley, Jeanne, Frances, Ivan, Isabel, Lili, and Georges, as well as the terrorist attack on the World Trade Center.
Shandi Treloar Program Manager	From preparedness planning to post-disaster support consulting, Shandi Treloar brings over 16 years of experience across the entire spectrum of emergency management. Shandi's experience ranges from data collection and analysis, program evaluation, risk assessments, strategic

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Staff	Qualifications
	planning, plan development, outreach, debris management, disaster recovery, and the use of technology to enhance the planning process and implementation. Over the past year and a half, Ms. Treloar has been supporting VDEM with their COVID-19 private sector engagement as well as supporting the evaluation of the private sector program overall. She has also been leading the after-action review (AAR) efforts for the State of Oregon's COVID-19 and Wildfire AARs, the Fairfax County AARs, and the State of Kansas CARES Act EOC Enhancement Grant program development.
Ashleigh Makuch Project Manager	Ashleigh Makuch is a certified Associate Emergency Manager (AEM) with over 8 years of experience in emergency management and program coordination, having held positions in the state, higher education, and county agencies. Her background includes emergency operations planning, continuity planning, training and exercise development, and emergency operations center activations. She is also experienced in human services, including mass care, community recovery and Individual Assistance, and voluntary agency and private sector coordination. Ashleigh's significant achievements include rewriting the Arizona State Emergency Response and Recovery Plan, working on Arizona's COVID-19 pandemic response and recovery, providing technical review of federal and gubernatorial declaration documents, and supporting wildfires, flooding, and other disasters in Arizona. She is also a certified Emergency Management Accreditation Program (EMAP) assessor. Ashleigh has supported EOP development, updates, and review for many local, county, tribal, and state agencies in Arizona. She is also very familiar with Flagstaff, having held a planner position in the Coconino County Emergency Management Office early in her career, as well as supporting the city and county while working at the state, and now managing the Coconino County EOP project, of which Flagstaff is a Planning Team member.
Stephanie Duffy Jr. Planner	Stephanie is an accomplished program coordinator with over 10 years of experience planning and managing national and regional training and conferences related to federal and local prosecutors and law enforcement. Stephanie is dynamic and results-driven with extensive knowledge related to training and program planning for teams and individuals, particularly on large federal contracts. She has outstanding leadership and communication skills. Stephanie has extensive experience in training program design and development, needs assessments, evaluations, and research and facilitation.
Jay Kenyon Analyst	Jay currently serves as a junior consultant and has provided support to projects in multiple states. These projects include assisting Southside Electrical Cooperative through the grants process, the after-action reports for the COVID-19 response and wildfires in the state of Oregon, the after-action review for Fairfax County, an EOC enhancement program for rural counties in the state of Kansas, efforts in the commonwealth of Virginia to increase private sector engagement, and the VDEM private sector program that tracks donations to aid in the state COVID-19 response. He has assisted in projects to engage the private sector by developing best practices and providing recommendations to enhance the mitigation, response, and recovery planning and preparations sections of the Private-Public Partnership program. Jay is continuing to expand his knowledge of emergency management by working on his Master's degree in Homeland Security and Emergency Preparedness at Virginia Commonwealth University as well as completing numerous courses through FEMA's independent study program. Jay is also a certified program delivery manager.

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Project Approach

Our team will utilize the Federal Emergency Management Agency (FEMA) Comprehensive Preparedness Guide (CPG) 101 – Developing and Maintaining Emergency Operations Plans to guide our development of the City of Flagstaff Emergency Operations Plan (EOP). We will ensure the plan aligns with the Coconino County EOP, which EM Partners is currently updating, and the Arizona State Emergency Response and Recovery Plan (SERRP), in order to accurately reflect operational relationships between governmental levels.

As part of CPG 101, FEMA outlines the following six-step planning process which is flexible and adaptable to the specific needs of jurisdictions. Our team will follow this planning process, applying national standards for planning in our approach, while updating the EOP to be both aligned with these standards and unique to the City of Flagstaff. These six steps are reflected in the activities table below and inform our streamlined and systematic approach to supporting the City of Flagstaff EOP development project.



The specific activities we will perform to complete the EOP are detailed below.

Activity	EM Partners Approach
Project Scoping and Management—*Provide outstanding customer service through clear communication, systematic project management, and effective budget oversight.*	
Project Kickoff Meeting	Our proposed Project Manager, Ashleigh Makuch, will conduct a Project Kickoff Meeting with the City of Flagstaff Project Lead and key stakeholders to validate the expectations and requirements for this EOP development project. During this meeting we will: • Introduce the project team • Establish a shared understanding of roles and responsibilities and overall project goals and objectives • Identify the Planning Team and the engagement strategy • Identify and request key documentation for review • Review the proposed communications plan and draft the project plan. Prior to the meeting, Ashleigh will confirm meeting objectives with the City Project Lead and disseminate an agenda to all participants at least one day before the meeting.

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Activity	EM Partners Approach
Project Plan	Our team will revise the approach and project plan outlined in this proposal to reflect any adjustments discussed during the kickoff meeting.
Project Communications	Ashleigh will serve as the primary point of contact for the project. She will be available to the City of Flagstaff for consultation for the project's duration to ensure they receive the desired project support. Our team will utilize email, telephone, in-person meetings, and video call methods of communication as appropriate to engage with project stakeholders.
Project Reporting	Our team will schedule re-occurring meetings with the City of Flagstaff Project Lead and submit a weekly status report outlining: • Percentage of budget expended • Action items accomplished each week • Items that need resolution or assistance • Anticipated action items for the following week • Additional comments This reporting process has proven highly successful for our team on projects of similar size and scope.
Data Collection and Analysis—*Employ diverse information-gathering strategies to capture timely and accurate information related to the city operations and EOP.*	
Document Collection and Review	We will work with the Planning Team to identify and collect policies, plans, and response documents that are applicable to the EOP objectives for review and assessment. We will utilize Microsoft Teams as the document repository tool for all stakeholders. If a stakeholder cannot access Teams, an alternative collection mechanism will be utilized (e.g., Google Drive, thumb drives, email, etc.). All efficient planning processes begin with an evaluation of the existing hazard environment. The Coconino County Multi-Jurisdictional Hazard Mitigation Plan will be reviewed and analyzed to understand the situation and risks as they apply to the City of Flagstaff, with emphasis on wildfire and flooding/post-fire flooding as the top two hazard priorities identified in the plan. The understanding of this risk analysis information, as step 2 in the FEMA planning process, informs all-hazards plan development.
Interviews	In addition to reviewing collected documents and data, our staff will coordinate with the City Project Lead and Planning Team to understand how the city currently operates in response to emergencies and disasters. This process may include up to ten (10) virtual semi-structured interviews (either one-on-one or small group) with key stakeholders to collect information on their roles, responsibilities, capabilities, authorities, and/or resources as they relate to the EOP to inform plan development. These interviews will focus on foundational operating information necessary for base plan development outside of department-specific annex roles and responsibilities which will be addressed in planning workshops.
Data Analysis	Our team will conduct a thorough review and assessment of the city's current operating environment and structure as they relate to the EOP and based on local, state, and federal

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Activity	EM Partners Approach
	legal authorities, standards and guidance documents, lessons learned, and best practices. We will analyze collected documents and data gathered from interviews against these standards and guidance. This will support the identification of organizational and response structures, as well as planning assumptions and other information that should be addressed in plan development. Actual incidents and training exercises are a primary means to validate emergency operations plans. EM Partners will work with the Planning Team to obtain any applicable after-action reports for exercises and significant incidents. EM Partners will catalog and synthesize the recommendations from these reports that relate to the development of the EOP so the recommendations may be incorporated into the plan.
EMAP Assessment	The Emergency Management Accreditation Program (EMAP) assessment is voluntary for local governments and its purpose is to provide a mechanism for continuous improvement in emergency management and homeland security efforts. The assessment looks at local government programs for coordinating prevention, mitigation, preparedness, response, and recovery activities for natural and human-caused disasters and compares them against collaboratively developed national standards. An assessment identifies gaps in existing programs, policies, and procedures and provides a road map for areas of improvement. This EMAP assessment is a key data element that will guide EOP development. EM Partners will use the most current EMAP standards and utilize Ashleigh Makuch, a certified EMAP Assessor, for this assessment. EM Partners will analyze city data collected against the EMAP Standard and ensure that applicable Standard elements are addressed in the EOP development.
***Plan Development**—Develop an emergency operations plan in alignment with national planning standards and unique to the operations and needs of the city.*	
Facilitated Planning Meetings	Our team will facilitate up to six (6) in-person planning meetings with the City Planning Team: • Initial planning meeting – We will facilitate an initial in-person planning meeting to kick off the plan update and gain the Planning Team's input on goals and objectives for the project and the plan outline. • Department-specific planning meetings – We will facilitate up to four (4) planning meetings (in-person or virtual) focused on the development of the department-specific annexes for key emergency response city departments/divisions in alignment with CPG 101 (other supporting city department and external stakeholder roles and responsibilities will be referenced and addressed in the base plan). These meetings will be conducted with the City Project Lead, Planning Team, and appropriate department representation for each respective annex. During these meetings, our team will gain necessary operational information and stakeholder feedback which will be incorporated into the draft annexes prior to the final draft review meeting.

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Activity	EM Partners Approach
	○ Anticipated department-specific annexes include Emergency Management, Public Works, Water Services (including Stormwater), and others as identified in coordination with the City Project Lead. (Other city departments/divisions with lesser roles during emergencies and/or existing ample documentation of roles, such as Police and Fire, will be addressed and referenced in the base plan; this aligns with the organization of the Coconino County EOP.) • Draft review meeting – We will facilitate a final in-person planning meeting once the draft update, including the base plan update and annex development, is nearly finalized to gain planning team feedback and revisions necessary for the final draft. We will work to incorporate needed revisions prior to submitting the finalized plan to the City Project Lead for review and approval. We will facilitate and document each meeting. We will also prepare meeting materials such as an agenda, sign-in sheet, and PowerPoint presentation, as necessary.
Draft Revised Plan	EM Partners will develop a proposed outline and format for the revised EOP based on the existing plan, FEMA's Comprehensive Planning Guide 101 (CPG-101), National Incident Management System (NIMS) requirements, EMAP standards, the Arizona SERRP, the Coconino County EOP, and the information identified during the data collection and analysis. This outline will be reviewed and approved by the City Project Lead. In addition to the base plan review and update, we will develop up to four (4) department-specific annexes (for the city's identified departments/divisions) that will assist the stakeholders in developing and maintaining their own plans and procedures to prepare them for their roles and responsibilities in the EOP. Additionally, the EOP may include an appendix that contains sample documentation that can be used as a reference to develop items such as declarations of emergency, evacuation orders, curfew notifications, and/or press releases. Upon approval of the outline, EM Partners will create an initial draft of the base plan and annexes by populating the proposed EOP with validated information from our data collection efforts. EM Partners will coordinate with the appropriate stakeholders and city subject-matter experts during the update and development of the plan.
Draft Review and Stakeholder Feedback	Upon completion of the initial EOP draft, EM Partners will provide the Planning Team with the document for review and comment. A review period, consistent with the project schedule, will be established to gather feedback from stakeholders, including the draft plan review meeting, which we will use to facilitate a thorough review process. EM Partners will consolidate, incorporate, and/or address all of the comments received. Following the initial revisions to the draft, EM Partners will conduct additional coordination with city departments and organizations as necessary to clarify and expand upon feedback received. If conflicting recommendations are identified, EM Partners will facilitate consensus building with the stakeholders to ensure the plan content is agreeable

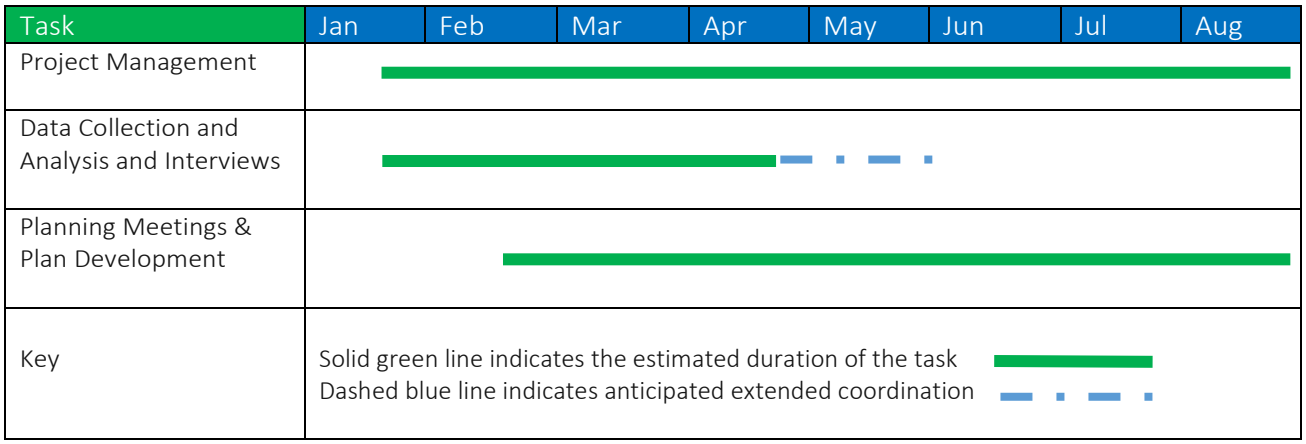
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Activity	EM Partners Approach
	to all involved stakeholders. If additional information needs are identified, EM Partners will conduct the necessary research and coordination to address these recommendations. Based on our findings, EM Partners will suggest plan revisions, as necessary and appropriate, to ensure that the EOP is consistent with city missions and functions. The EOP and its components will be compiled into a revised draft plan, and an additional review period will be scheduled to gather final feedback from stakeholders in alignment with the final draft review meeting.
Final Plan Development	Upon completion of the review period, incorporation of the recommended changes, and consensus of the plan contents by the stakeholders, EM Partners will prepare the document for publication. The final plan will be submitted for approval and promulgation by appropriate city officials. Final documents will be delivered in Word and PDF formats.

Proposed Project Schedule

EM Partners has outlined the proposed timeline below for developing the City of Flagstaff Emergency Operations Plan by August 31, 2023. This timeline emphasizes conducting data collection, interviews, and planning workshops (except the final plan review meeting) before the summer 2023 wildfire/monsoon season in order to maximize stakeholder availability. With the project tasks requiring the most stakeholder engagement largely completed by the end of May 2023, our team will focus on using the data collected for plan development primarily during June and July 2023 in order to provide the city with a full draft plan by the end of July. Stakeholder reviews, revisions, and plan finalization will be conducted in August 2023.

This timeline can be adjusted in coordination with the city based on the summer 2023 wildfire/monsoon season operational demands on the key stakeholders for this plan development project.



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Project Pricing

The table below outlines our team's overall estimated cost for this project. We present estimated costs per task with a **not-to-exceed budget total**. We believe providing a true up-front estimate helps establish trust with our clients and minimizes the need for avoidable change orders throughout the project. This total estimated cost includes costs for up to seven (7) anticipated in-person planning meetings with round trip mileage of 300 miles per trip at a mileage rate of $0.625.

Project Management	Data Collection and Analysis	Base Plan Update	Annex Development
• Project plan and communications • Project kickoff meeting • Weekly status meetings • Weekly status reports for the duration of the project	• Collection and review of documents • Analysis of after-action reviews • EMAP assessment • Interviews	• Two (2) Planning Team meetings • Plan outline • Draft plan • Final plan	• Up to four (4) department annex planning workshops • Up to four (4) department-specific annexes
$10,060	$13,960	$27,425	$18,675

Travel Costs (7 in-person meetings)	$1,228.50
Total Estimated Cost:	**$71,348.50**

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We will not exceed the total estimated cost of $71,348.50 without prior authorization from the City of Flagstaff. EM Partners will invoice the city on a monthly basis, and the city will remit payment within 30 days of the invoice date.

We will begin work upon receipt of our signed proposal. Please do not hesitate to contact us if there are any questions or concerns regarding this proposal.

Kind Regards,

Paul Manno

Paul Manno
President
Emergency Management Partners, LLC

ACCEPTANCE:
The services, terms, and conditions of Tasks offered in this Letter Agreement are accepted.

Signature of City of Flagstaff Authorized Representative Date

Print/Type Name and Title of Authorized Representative

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PAUL J. MANNO

EM PARTNERS

EDUCATION

BS, Environmental Science, the University of North Carolina at Wilmington

YEARS OF EXPERIENCE

25

PROFILE

Paul Manno is a respected and proven industry leader with over 25 years of progressive experience in planning, project management, and program management, specializing in emergency management planning, response, and recovery. He has led teams of multi-disciplined professionals in planning for and responding to disasters across the country and in U.S. territories for more than two decades. Paul has managed and directly supervised more than $5B in FEMA Public Assistance grants written by FEMA or contractor staff encompassing hazards including floods, hurricanes, tornadoes, ice storms, and terrorist attacks. Mr. Manno has deployed on more than 40 disaster assignments, serving as a Program Advisor, Deputy Public Assistance Officer, PAC, Project Specialist, Debris Specialist, and Closeout Specialist. His assignments have included Hurricanes Ike, Katrina, Charley, Jeanne, Frances, Ivan, Isabel, Lili, Georges, and the terrorist attack on the World Trade Center. Mr. Manno has successfully delivered PA Project Specialist, PAC Crew Leader, and Debris Management training. In addition, he has led many programmatic tasks for FEMA headquarters, including the development of FEMA PA courses and publications. Recent projects include:

- Managing the FEMA Consolidated Resource Center (CRC) task orders for Fluor in Denton, TX, and Winchester, VA
- Managing contract staff supporting the Virginia Department of Emergency Management with the closeout of 5 disasters as well as recovery operation for a winter storm and Hurricane Matthew (2016)
- Developing and delivery of three Debris Management Workshops to the Commonwealth of Kentucky Division of Emergency Management, under a contract with FEMA's Preparedness Directorate (2015)

TRAINING, CERTIFICATIONS & LICENSES

FEMA Debris PA Pilot Program

FEMA Debris Management

Disaster Debris Monitoring

FEMA Public Assistance Program

Homeland Security Exercise and Evaluation Program Train the Trainer

Numerous FEMA Independent Study Courses

WebEOC

Project Manager, Southside Electrical Co-op, Winter Storm Shirley, EM Partners, LLC

- Served as a project manager in response to Winter Storm Shirley which damaged over 90% of Southside Electrical Co-op's infrastructure and totaled over $20 million in damages
- Established and maintained effective relationships with FEMA program managers and staff.
- Conducted meetings serving as a liaison between the client and FEMA, ensuring proper representation.
- Wrote and submitted projects into the FEMA grants portal including Category B, Category E, Category F, and Category Z ensuring reimbursement for all eligible costs.

Project Manager, Fairfax County, Virginia, EM Partners, LLC

- Served as project manager, creating close relationships with county officials and FEMA representatives to ensure reimbursement of all eligible costs from the COVID-19 disaster declaration.
- Collected and compiled all necessary documentation validating PPE costs, EOC activation, force labor, and non-congregate sheltering.
- Aided Fairfax County in reimbursement for CARES Act efforts.
- Wrote and submitted projects to the FEMA grants portal.

AFFILIATIONS

American Planning Association

Solid Waste Association of North America

Association of State Floodplain Managers

National Emergency Management Association

American Public Works Association

- Identified additional grant opportunities and provided recommendations on how to pursue such grants.

PA Support, Virginia Department of Emergency Management, Hurricane Irene, Tropical Storm Lee, and Mineral Earthquake

- Led a team of engineers, architects, and other professionals in support of the Commonwealth of Virginia's recovery from 3 federally declared disasters in 2011.
- Served as the Deputy Public Assistance Officer for the Commonwealth, responsible for managing a staff of 30 Virginia Department of Emergency Management (VDEM) resources who worked to maximize the FEMA Public Assistance grants for the Commonwealth. Coordinated daily with FEMA management and state and local stakeholders recovering from the effects of Hurricane Irene, Tropical Storm Lee, and the August Earthquake.
- Oversaw $70M worth of grants for the Commonwealth and helped expedite the schedule for delivery of the grant.
- Identified $1M+ across several Project Worksheets (PW), which FEMA was prepared to make ineligible.
- Worked with the applicants, State and FEMA, to put costs back into the PWs, helping several rural communities maximize their claims.

FEMA PA Task Management; EM Partners, LLC

- Successfully managed and delivered FEMA PA contractor services; developed process improvements and solutions to enhance the PA program and contractor operations.
- Established and maintained effective relationships with FEMA program managers and staff.
- Managed tasks across the country including flooding events, hurricanes, ice storms, tornadoes, terrorist attacks, closeout operations, and programmatic tasks.
- As a Task Manager and Team Lead, he implemented a streamlined process to close out over 1,900 Project Worksheets and work through a backlog of 200 previously unresolved issues, helping FEMA Region III close the Hurricane Isabel disaster below budget and one year ahead of schedule.

FEMA Project Specialist, Southern Parishes; Hurricanes Katrina and Rita – New Orleans, LA

- Wrote grant applications for 27 funding requests totaling $3.88MM.
- Assessed damages and estimated costs for 23 permanent work projects and prepared estimates using RS Means (CostWorks) and the FEMA Cost Estimating Format.
- Wrote, reconciled, and submitted documentation for final closeout grants for $1.7MM in emergency response costs and estimated and submitted a grant request for restoration of elevated water towers, roadways, parks, and public utilities ($1MM).
- Reconciled eligible reimbursable expenses for 10 immediate needs funding grants.

Recovery/Project Manager, Tropical Storm Lee, Disaster Recovery Borough of Middletown, PA

- Managed a $250,000 recovery project for local jurisdiction following Tropical Storm Lee in Pennsylvania in 2011.
- Led a diverse team of Technical Specialists to assist Middletown, PA with federal disaster recovery grants, covering multiple federal grant programs.
- Interviewed various local government departments.
- Identified 50% more eligible damages and formulated the additional costs into FEMA grants.
- Total grants value for Middletown, PA is approximately $7,000,000 to date.

Project Manager, Hurricane Sandy & Derecho Storm Recovery Shenandoah Valley Electric Cooperative Mount Crawford, VA

- Managed recovery projects for a local rural electric cooperative in Virginia.
- The project team successfully recovered $2.4 M in FEMA reimbursements following the summer 2012 Derecho Storm and $1.2 M in FEMA reimbursements following Hurricane Sandy.
- Submitted over $4.3 M in hazard mitigation grant applications to improve the preparedness of the cooperative for future storms.

Project Manager, Left Hand Water District, CO, Disaster Response and Recovery

- Marketed, contracted, and managed Left Hand Water District as they begin the recovery process from the 2013 floods.
- Provided two full-time on-site personnel to serve in an advisory capacity and guide the District through the FEMA Public Assistance (PA) and Hazard Mitigation Grant (HMGP) programs.
- Worked with the District to identify eligible projects for funding reimbursement, devised solutions to mitigate risk based on policy guidelines, and provided cost estimating, documentation support, and technical engineering support services as needed.

FEMA Policy and Training Contribution Experience.

- FEMA 325 Debris Management Guide (Project Manager & Primary Author)
- FEMA 327 Debris Monitoring Guide (Project Manager & Primary Author)
- FEMA Reasonable Cost Study (Project Manager & Primary Author)
- FEMA Contaminated Debris Interagency Working Group (Project Manager)
- FEMA Public Assistance Policies- 9500 Series, Contributor:
- 9523.5- Debris Removal from Waterways
- 9523.11- Hazardous Stumps
- 9523.12- Hand-Loaded Trucks
- FEMA IS-630 Introduction to the Public Assistance Process (Project Manager and Contributing Author)
- FEMA IS-631 Public Assistance Operations I (Project Manager and Contributing Author)
- FEMA 632-Introduction to Debris Operations in FEMA's Public Assistance Program (Project Manager and Contributing Author)
- FEMA E202 Debris Management Planning for State, Tribal and Local Officials (Project Manager & Contributing Author)

SHANDI L. TRELOAR

EM PARTNERS

EDUCATION

MA, Political Management, Graduate Certificate, Crisis, and Emergency Management, George Washington University

BS, Social Work, University of Portland

YEARS OF EXPERIENCE

22

PROFILE

From preparedness planning to post-disaster support consulting, Shandi Treloar brings over 16 years of experience across the entire spectrum of emergency management. Shandi's experience ranges from data collection and analysis, program evaluation, risk assessments, strategic planning, plan development, outreach, debris management, disaster recovery, and the use of technology to enhance the planning process and implementation.

Ms. Treloar has had a successful career in emergency management working with clients and supporting the growth of the public-private partnership. She has worked with clients to expand their understanding of the recovery process, has helped them develop strategic approaches to their own recovery programs, from debris planning and operations to understanding the requirements of funding sources to maximize reimbursements.

TRAINING, CERTIFICATIONS & LICENSES

Homeland Security Exercise and Evaluation Program Certified Train the Trainer

PA Pilot Program Debris Management Plan Workshop Trainer

FEMA Debris Management

Disaster Debris Monitoring

FEMA Public Assistance Program

Numerous FEMA Independent Study Courses

WebEOC

AFFILIATIONS

National Emergency Management Association (NEMA)—Private Sector Chair

Virginia Emergency Management Association (VEMA)

Project Manager, State of Oregon COVID-19 After-Action Report

- Leading the State of Oregon to conduct their COVID-19 after-action review, including the management and distribution of personal protective equipment, the initial enterprise response, the function of the joint information center, and the state's re-opening strategy.

Project Manager, State of Oregon Wildfire After-Action Reviews

- Leading a team of six to develop the after-action reviews for the unprecedented wildfire events Oregon experienced in September.
- Utilizing the HSEEP guidance and core capabilities to evaluate and organize this review will be invaluable for the state to improve upon current process and procedures for future events.

Project Manager, Fairfax County, VA COVID-19 After-Action Reviews

- Leading Fairfax County in conducting their after-action reviews for COVID-19.
- Four formal AAR/IPs will be developed for this project – two with an emergency management focus and two with a health department focus.

Virginia Department of Emergency Management COVID-19 Private Sector Support

- Leading a team to support the Commonwealth of Virginia with their engagement, and information sharing with the private sector.
- Developed processes and procedures to manage the engagement.
- Acts as liaison with the private sector when needed.

Project Manager, Virginia Department of Emergency Management Hurricane Contingency and Shelter Planning Support

- Supported the Commonwealth of Virginia to develop a hurricane contingency plan for COVID-19.
- Supporting the Commonwealth of Virginia with shelter planning related to COVID-19.

Kansas Division of Emergency Management COVID-19 EOC Enhancement Grant Program Development and Administration

- Led a team working directly with KDEM to identify and develop formal program processes and procedures for both grant programs.
- This included the development of eligibility criteria, priority projects, application package and instructions, stakeholder engagement, and messaging strategies.
- Our team provides support in developing the applications and messaging that was ultimately used. Once the EOC Grant program was launched our team provided technical assistance to over 60 applicants as they were developing their applications and will continue to provide technical assistance to KDEM as the funds get awarded, require reporting and closeout support.

Virginia Department of Emergency Management Private Sector Program Assessment and Development

- Leading a team to provide recommendations on the structure of a formal private sector program.
- Developing a general framework, implementation plan and maintenance plan.

Team Member, FEMA Enhanced Operational Planning, Federal Emergency Management Agency, Washington, DC

- Developed a Standard Operating Procedure (SOP) for strategic operational recovery planning.
- The SOP described an approach to performing Strategic Recovery Planning following disasters in order to maximize the effectiveness of FEMA's programs in enabling recovery of affected communities.
- This SOP outlined the processes for conducting post-incident strategic planning to support FEMA and the affected State/s short-term and long-term recovery efforts and bi-weekly reporting on the progress of recovery operations to FEMA senior management (field, regional and headquarters).
- The SOP provided templates and tools for identifying and evaluating potential recovery issues, progress tracking and reporting.

Team Member, FEMA Region IX Catastrophic Planning

- Established and conducted an extensive review of all applicable local, state, regional, and federal operational plans to assess capabilities and identify gaps, overlaps, discrepancies, and contradictions in current operational planning.
- Outcomes of these reviews were used in creating targeted questionnaires for a series of stakeholder interviews and workshops.
- Supported the development of the Catastrophic Earthquake Readiness Response Plan for FEMA Region IX and the California Governor's Office of Emergency Services (OES).

Debris Plan Workshop Instructor, FEMA Public Assistance Pilot Program

- Supported FEMA as one of 25 trained trainers around the country to instruct State and local governments on how to write a Debris Plan as part of FEMA's Public Assistance Pilot Program.
- Was given a top rating during trainer training for knowledge of content as well as presentation skills.
- Facilitated trainings for State and local debris programs, including the island of Guam.

Technical Lead, FEMA 325 and 327, Public Assistance Debris Management Guide, and Public Assistance Debris Monitoring Guide FEMA HQ, Washington DC

- Worked with FEMA HQ to update the Debris Management Guide. This update incorporated policy language directly into the chapters as well as writing new chapters for the guide.
- Was a contributing author of the Debris Monitoring Guide. This guide provided policy requirements and examples of the importance of debris monitoring during a debris generating disaster event.

Deputy Principal Investigator, National Cooperative Highway Research Program, Transportation Research Board, Debris Handbook for State and Local DOT's and DPW's, Washington DC

- Conducted Research and developed TRB's Report 781, Debris Management Handbook for local and state Departments of Transportation (DOTs) and Public Works (DPWs) throughout the nation.
- The goal behind the research project and handbook development was to help transportation and public works agencies and other key stakeholders understand how to plan for and recover from natural and man-made debris-generating disasters.
- The handbook (NCHRP Report 781) was published in 2014.

Team Member, New Jersey Waterborne Debris Management, New Jersey Department of Environmental Protection, Team Member

- Supported NJDEP in coordination and management of waterway debris removal at the state level, overseeing three regionally assigned contractors, monitoring firms, and various affiliated specialty contractors.
- Reviewed the FEMA waterway policy, which had never been used for off-shore debris removal and worked with FEMA to identify where side-scan sonar technology could be applied to the existing policy.
- The work was accomplished through an accelerated schedule, with a critical path to open beaches and navigable waterways by the opening of the following summer boating season accomplished, meeting one of the NJ Governor's key Sandy Recovery goals.

Board Member, National Emergency Management Association Private Sector Chair

- Identified critical priority issues that are impacting public and private sector engagement. These priorities included information sharing, access and re-entry, and technology.
- Established the Information Sharing Task Force through a partnership with FEMA's private sector division.
- Established the Private Sector Lead Coordination Group. This is a group made up of state private sector leads or points of contact.
- Collaborates with the Country's public and private sector emergency management leadership in a forum that is purely professional to professional, allowing for an honest and open dialogue.

Private Sector Coordinator Electric Infrastructure Security Council

- Support the EIS Council in building their private sector partnerships, specifically for non-utility private sector partners.
- Fosters the concept that private sector in and of itself is a critical infrastructure. When you think about how a natural or human-caused disaster economically impacts communities, a large part of that is due to the impact on the businesses or industry a community is dependent on. This is a key element to any public-private partnership.

Preparedness Project Manager, California Office of Emergency Management Debris Management Plan

- Supported the development of the CalOES debris management plan.
- Evaluated current common operating practices and determined that each event was different. One cookie cutter plan would not suffice for the different nuances of each disaster.
- Taking the best practices of their common practices, we helped develop a standard format and process for developing and implementing an incident debris action plan template.

Subject Matter Expert, Hurricane Michael Panama City Recovery Support

- Provided technical support to reconcile and evaluate the debris management costs for Panama City.
- Ensured backup documentation is accurate for project worksheet submittals, from expedited PW's, marine debris, Private Property Debris Removal, Construction & Demolition Debris Removal, through the general debris project worksheets.

Project Planner, Debris Management Planning, Metropolitan Washington Council of Governments, Washington, DC

- Assisted numerous communities across the National Capital Region in developing debris management contingency plans for their use as well as their effort to coordinate with one another.
- Assisted in identifying and evaluating temporary debris staging and reduction (TDSR) sites as well as developing comprehensive TDSR disaster operations plans.
- Developed the National Capital Region Resource Assessment Analysis for use by the U.S. Army Corps of Engineers National Capital Region debris management planning initiative.

Project Planner, Catastrophic Contaminated Debris Initiative, FEMA HQ, Washington, DC

- Worked with FEMA and their Interagency Working Group (IWG) to develop the contaminated debris planning efforts.
- Facilitated IWG meetings, writing white papers on relevant issues. Developed exercise scenarios for possible future exercises and worked with the IWG on a concept of operations for use during an actual Chemical, Biological, Radiological, or Nuclear (CBRN) event.

FEMA Debris Policy and Training Contribution Experience

- FEMA 325 Debris Management Guide (Project Planner, Writer)
- FEMA 327 Debris Monitoring Guide (Project Planner, Writer)
- FEMA Reasonable Cost Study (Project Planner, Writer)

ASHLEIGH MAKUCH, AEM

EM PARTNERS

EDUCATION

MA, Security Studies, Naval Postgraduate School, Center for Homeland Defense and Security

BS, Political Science, Northern Arizona University

BS, Criminology and Criminal Justice, Northern Arizona University

YEARS OF EXPERIENCE

8

PROFILE

Ashleigh Makuch is a certified Associate Emergency Manager (AEM) with over 8 years of experience in emergency management and program coordination, having held positions in the state, higher education, and county agencies. Her background includes emergency operations planning, continuity planning, training and exercise development, and emergency operations center activations. She is also experienced in human services, including mass care, community recovery and Individual Assistance, and voluntary agency and private sector coordination.

Ashleigh's significant achievements include rewriting the Arizona State Emergency Response and Recovery Plan, working on Arizona's COVID-19 pandemic response and recovery, providing technical review of federal and gubernatorial declaration documents, and supporting wildfires, flooding, and other disasters in Arizona. She is also a certified Emergency Management Accreditation Program (EMAP) assessor and a National Emergency Management Basic Academy Trainer.

TRAINING, CERTIFICATIONS & LICENSES

AZ Dept of Administration Supervisor Courses - 14 Computer-Based Trainings

Emergency Management Institute FEMA Master Continuity Practitioner-Level 2

All Hazards Planning Section Chief (MAL 962)
ADEM Certificate of Completion

All Hazards Incident Management Team (MAO 305)
ADEM Certificate of Completion

Emergency Management Institute E548 Continuity of Operations Program Manager Train-the-Trainer

Emergency Management Institute FEMA Professional Continuity Practitioner-Level 1

Emergency Management Institute, Emmitsburg, MD
National Emergency Management

Project Manager, Sedona, AZ Evacuation/Re-entry Plan and Traffic Study

- Leading the development of an all-hazards evacuation/re-entry plan for the City of Sedona, AZ. This plan is the first of its kind in the State of Arizona.
- The project includes a comprehensive traffic study, which will result in community evacuation maps and evacuation time travel estimates to inform the plan.

Project Manager, Coconino County, AZ Emergency Operations Plan Update

- Leading the update of Coconino County Emergency Management Department's all-hazards, multi-jurisdictional emergency operations plan (EOP).
- Facilitating the planning process for the EOP update to include an update to the existing EOP base plan, as well as the development of new, department-specific annexes, which capture key department roles and responsibilities during emergencies and disasters, and an emergency operations center checklist annex.

Consultant, Fairfax County, VA COVID-19 After-Action Reviews

- Supporting Fairfax County in conducting their after-action review for COVID-19.
- Reviewing and analyzing documents including county agency strengths and areas for improvement for development of after-action reports and supporting documentation of county hotwash discussions.
- Four formal AAR/IPs will be developed for this project – two with an emergency management focus, and two with a health department focus.

Consultant, State of Oregon COVID-19 After-Action Report

- Leading the State of Oregon to conduct their COVID-19 after-action review, including the management and distribution of personal protective equipment, the initial enterprise response, the function of the joint information center, and the state's re-opening strategy.

Basic Academy (Train-the-Trainer Certificate)

Associate Emergency Manager (AEM) Certification
International Association of Emergency Managers (IAEM)

Texas A&M Engineering Extension Service
Infrastructure Protection Certificate

Amateur Radio Technician License
Call Sign W7ALM

Emergency Management Institute
FEMA Advanced Professional Series Certificate

Emergency Management Institute
FEMA Professional Development Series Certificate

FEMA and DHS in-person courses
Over 40 Courses, 600 Contact Hours (including ICS 300 and 400)

FEMA Independent Study courses
Over 60 Courses, 200 Contact Hours (including ICS 100, 200, 700, and 800 courses)

AFFILIATIONS

Arizona Emergency Services Association, Member

InfraGard - Arizona Members Alliance, Member

International Association of Emergency Managers (IAEM), Member

- K-12 Education Caucus Member

National Emergency Management Association (NEMA), Member

Virginia Emergency Management Association, Member

Adjunct Instructor, Arizona Department of Emergency and Military Affairs

- Instructs state and FEMA courses for the AZ DEMA Training Branch; teaches topics including emergency planning, continuity of operations, mass care, recovery, evacuation/re-entry planning, and other related courses.
- FEMA approved National Emergency Management Basic Academy instructor.

Human Services Coordinator, Arizona Department of Emergency and Military Affairs

- Coordinated state Emergency Support Function 6 - Mass Care activities, updated related plans and procedures, and coordinated with mass care partners to support local, county, state, and tribal needs during preparedness for, response to, and recovery from all-hazard emergencies and disasters.
- Provided oversight for access and functional needs integration into DEMA emergency management activities. Participated in the Arizona Access and Functional Needs Task Force.
- Developed and maintained Individual Assistance (IA) programs for the state in alignment with FEMA IA guidance. Served as the state IA Officer. Completed annual FEMA Individuals and Households Program, Other Needs Assistance administrative plan for Arizona.
- Maintained partnerships with FEMA Region IX and other federal agency recovery and mass care counterparts.
- Provided guidance and support to county partners on Small Business Administration (SBA) Economic Injury Disaster Loan and Physical Damage Loan programs. Served as the liaison between SBA and the state to facilitate the SBA agency declaration process with the Governor's Office (COVID-19 EIDL declaration).
- Served as the state main point of contact for COVID-19 non-congregate sheltering under FEMA Public Assistance. Wrote initial request and extension letters to FEMA Region IX to ensure continued eligibility for statewide partners during the pandemic response. Provided guidance to statewide partners on the program.
- Coordinated state COVID-19 recovery activities, including authoring the DEMA recovery planning framework.
- Served as on scene Operations Chief and Deputy Operations Chief for state run COVID-19 mass vaccination Points of Distribution (PODs).
- Coordinated with the AZ National Guard Task Force Logistics to establish relationships with statewide grocery store and food bank partners for logistical support in response to COVID-19 food distribution issues.
- Developed, maintained, and administered plans for Individual Assistance Service Centers, as facilities were providing post-disaster services for those impacted by natural disasters.
- Developed All-Hazards Community Assistance Center Guide as an expansion of the state Individual Assistance Service Center model to include mass-casualty/fatality incidents, in partnership with the Arizona Attorney General's Office of Victim Services and local, county, state, and federal partners.
- Developed, maintained, and administered the Arizona Disaster Housing Strategy in alignment with FEMA Region IX and the Emergency Management Performance Grant requirements.
- Supervised the DEMA Voluntary Agency and Private Sector Liaison, including oversight of state and regional/county Voluntary Organizations Active in Disaster and Community Organizations Active in Disaster (VOAD/COAD), the state Public/Private Partnership Program, and donations and volunteer management.
- Supervised seven (7) Human Services group Disaster Reservists to support the group's activities during response to and recovery from emergencies and disasters.
- Participated in local, county, tribal, state, regional, and national mass care and individual assistance task forces/groups, trainings, exercises, conferences, seminars related to position responsibilities.

- Provided final review of state declaration of emergency documents (including declarations, amendments, and terminations) for the Governor's consideration, and served as backup for authoring declaration documents (2018 Naco Sewer Breach, 2018 Highway Flood Damage, 2019 Winter Storms, 2019 Museum Fire, 2019 Tropical Storm Lorena Flooding, 2020 COVID pandemic, 2020 Bush Fire, 2020 civil unrest, 2021 - multiple wildfire and flooding incidents).
- Served in the State Emergency Operations Center (SEOC) when activated for emergency response/recovery. Provide local, county, and tribal emergency operations center support when requested (ESF 6 Mass Care and Recovery Human Services Coordinator - SEOC, Human Services Coordinator - City Flagstaff/Coconino County EOC Museum Fire/Flooding support).
- Served on planning and implementation teams for state Recovery Support Functions, in coordination with state agencies, non-governmental organizations, voluntary agencies, private sector partners, and other "Whole Community" emergency management partners.
- Served in the DEMA Duty Officer Program as a state Duty Officer, acting as the primary point of contact during assigned weeks to facilitate situational awareness and coordination with leadership, agency personnel, and statewide partners as necessary during emergencies. Responsible for initiating SEOC until staff arrives.
- Interpreted and incorporated applicable state and federal guidance and requirements.
- Prepared reports for leadership, maintained records, and completed internal grant requirements.

SERRP/NIMS Planning Coordinator, Arizona Department of Emergency and Military Affairs

- Rewrote, maintained, and administered the Arizona State Emergency Response and Recovery Plan (SERRP), including Emergency Support Functions (ESFs) and Recovery Support Functions (RSFs), in coordination with state agencies, non-governmental organizations, voluntary agencies, private sector partners, and other "Whole Community" emergency management partners. Established and maintained ESF/RSF partner relationships.
- Developed, maintained, and administered the first formalized National Incident Management System (NIMS) program for the State of Arizona, to include local, county, tribal, and state partners. Served as the NIMS point of contact for NIMS implementation statewide and for FEMA regarding integration, updates, etc.
- Facilitated/instructed FEMA training courses for local, county, tribal, state, private sector, and non-governmental partners on the topics of emergency planning and continuity of operations.
- Served as the state point of contact to coordinate with FEMA for annual review and update of the FEMA Region IX Arizona All-Hazards Concept of Operations Plan.
- Participated in local, county, tribal, state, regional, and national planning teams/groups, trainings, exercises, conferences, and seminars related to position.
- Developed and maintained a document style guide to ensure quality and standardization of DEMA Preparedness products. Provide quality assurance and technical assistance for implementation.
- Provided planning technical assistance, review, trainings, workshop facilitation, and other assistance as requested from local, county, tribal, and state partners for emergency operations plans, supporting procedures, and other related planning and program documents.
- Assisted with development and provided final technical review of Arizona Continuity of Operations Program Document, DEMA Emergency Management COOP Plan, and State of Arizona Hazard Mitigation Plan.

- Served on the Arizona Department of Education (ADE) Emergency Preparedness Advisory Council. Participated in the working group to update the ADE Emergency Operations Plan Template for schools.
- Served in the State Emergency Operations Center (SEOC) when activated for emergency response/recovery. Provided local, county, tribal emergency operations center support when requested (Plans Section Chief - Yavapai County EOC, IAP Coordinator - Santa Cruz County EOC, Situation Unit Leader and Long-term Planner SEOC, IAP Coordinator - AZ Department of Corrections EOC).
- Provided final technical review of state declaration of emergency documents to ensure correct details, organization, and grammar in preparation for the governor's consideration.
- Assisted with the State of Arizona Emergency Management Accreditation Program (EMAP) 2020 re-accreditation activities which received 100% compliance upon initial assessment, and voluntarily served on EMAP assessment teams (state program assessment - June 2019).
- Provided final review and planning technical assistance for the preparation of the DEMA, Emergency Management Operations Procedures Manual update in preparation for the January 2020 EMAP assessment.
- Interpreted and incorporated applicable state and federal guidance and requirements.
- Prepared reports for leadership, maintained records, and completed internal grant requirements.

Emergency Management Specialist, Coconino County Department of Emergency Management

- Coordinated, developed, and administered the county Continuity of Operations (COOP) program with a plan for each of the 25 departments. Provided planning assistance, trainings, and workshops.
- Coordinated, developed, and administered the Coconino County Multi-Jurisdictional Emergency Operations Plan with local and county partners, and non-governmental organizations.
- Served as the primary emergency manager for the Town of Tusayan and the secondary for the City of Williams to provide all emergency management functions and assistance.
- Served as the county duty officer for a 24/7 emergency management point of contact during assigned weeks.
- Provided ongoing development, maintenance, and implementation of internal policies and procedures.
- Oversaw projects and timelines for department intern.
- Prepared reports, maintained records, and met state and federal grant requirements.

Emergency Management Assistant, Northern Arizona University Office of Emergency Management

- Assisted with the planning, organizing, and executing of NAU emergency management/homeland security activities, coordinating with local, county, tribal, state, federal, voluntary, and non-governmental partners.
- Maintained and updated the NAU Emergency Operations Plan and annexes.
- Created/deployed public information outreach about NAU preparedness activities.
- Designed and facilitated HSEEP exercises to test NAU plans (BSL3 lab biological spill, counseling volatile client).
- Maintained and kept ready the primary University Emergency Operations Center (UEOC). Developed standard operating procedures for UEOC operations.

Dispatcher, Northern Arizona University Police Department

- Operated as sole dispatcher per shift in the NAU Police Department 24/7 Dispatch Center.
- Responsible for answering multiple emergency and non-emergency phone lines, radio and computer aided dispatching, NAU Alert notification system, All Campus Alert system, etc.
- Developed standard operating procedures for dispatch center systems.

STEPHANIE DUFFY

EM PARTNERS

EDUCATION

BA, Criminal Justice, Michigan State University

Certificate, Homeland Security Studies, Michigan State University

YEARS OF EXPERIENCE

11

PROFILE

Stephanie is an accomplished program coordinator with over 10 years' experience planning and managing national and regional trainings and conferences related to federal and local prosecutors and law enforcement. Stephanie is dynamic and results-driven with extensive knowledge related to training and program planning for teams and individuals, particularly on large federal contracts. She has outstanding leadership and communication skills.

Stephanie has extensive experience in training program design and development, needs assessments, evaluations, and research and facilitation.

TRAINING, CERTIFICATIONS & LICENSES

Certificate, ASTD e-Learning Instructional Design

Junior Consultant, Falls Church, VA COVID-19 After-Action Review

- Supporting the City of Falls Church, VA to conduct their COVID-19 after-action review and develop a pandemic playbook for the city based on AAR findings and recommendations.

Compliance Specialist, EM Partners, LLC

- Prepares and completes regulatory and compliance documentation to ensure documents meet federal, state, and local requirements.
- Responds to compliance notices and completes state-specific reporting.
- Supports EM Partners' management team on FEMA PA subcontract with Fluor in regard to training, security and weekly time and cost reporting.

Training Technician, FSA Federal

- Served as primary point of contact for trainings sponsored by the Department of Justice, Money Laundering and Asset Recovery Section (MLARS).
- Managed logistics, marketing, and operations including the production of materials for over 50 MLARS training events reaching 7,000 students and coordinating the efforts of over 100 instructors.
- Managed the design, development, and implementation of a web-based training budget request and approval system. The system collected the training requests from 15 government agencies, managed the review and approval workflow and then authorized each training event's implementation.
- Served as the administrator of the Training Budget Request system, built on the Drupal 7 core, an open-source web-based content management platform.
- Coordinated and supervised the law student internship program.
- Managed the review and approval of a $13 million training budget allocation from the Assets Forfeiture Fund.
- Collaborated with client to determine training needs as well as identify and develop training opportunities and initiatives
- Served as Section Administrator for the DOJ learning management system.
- Provided on-the-job instruction to new supervisors, DOJ personnel, and support personnel.
- Developed training request memoranda and quarterly training cost reports.

- Coordinated and managed quarterly working group meetings for federal training coordinators.
- Ensured continuing education guidelines were met for each training seminar and processed attendee requests.
- Contributed to the development of curriculum and law enforcement tools.

Training Coordinator, Serco, Inc.

- Served as primary point of contact to law enforcement agencies for DOJ AFMLS Financial Investigations Seminars drawing students from over 15 federal, state, and local law enforcement agencies nationwide.
- Conducted hotel/venue site visits and prepared summary reports for recommendation and approval.
- Coordinated with a third-party event planner to evaluate proposals and review submitted contracts.
- Reviewed, revised, and approved Function Event Orders with hotel/venue.
- Procured all training equipment and materials required for seminar delivery.
- Oversaw all aspects of the training environment and lodging accommodations for seminar attendees and instructors.
- Prepared OPM TMA-required travel and separately priced item proposals.
- Managed onsite audio/visual support during seminar deliveries.
- Audited hotel/venue invoices for compliance with contract provisions.
- Developed additional seminar reports, as required.

Analyst, L3 Communications

- Assisted with detailed analysis and research for development and implementation of national preparedness policies and operations associated with the National Response Plan, Homeland Security Presidential Directives, Department of Homeland Security policies and procedures, National Incident Management System (NIMS), and FEMA policies and procedures.
- Developed plans, standard operating procedures, and job aides to support federal disaster response initiatives.
- Coordinated meetings with federal and state entities that assisted with developing and/or validating planning documents and conducting scenario-based tabletops, and prepared meeting materials and meeting minutes.
- Supported the design, development, and execution of response training supporting Federal incident response operations.
- Contributed to operational and administrative tasks to support the FEMA Incident Response Section.

JAY KENYON

EM PARTNERS

EDUCATION

MA Homeland Security and Emergency Preparedness, Virginia Commonwealth University
Scheduled completion: Fall 2022

BA Criminology, University of Lynchburg

YEARS OF EXPERIENCE

7

TRAINING, CERTIFICATIONS & LICENSES

Certified Program Delivery Manager

HSEEP Certified

FEMA IS-100 Introduction to Incident Command System

FEMA IS-200 Basic Incident Command System for Initial Response

FEMA IS-230 Fundamentals of Emergency Management

FEMA IS-235 Emergency Planning

FEMA IS-800 National Response Framework, an Introduction

FEMA IS-1000 Public Assistance Program and Eligibility

FEMA IS-1001 The Public Assistance Delivery Model Orientation

FEMA IS-1006 Disaster Damage and Developing Project Files

FEMA IS-1007 Detailed Damage Description and Dimensions

PROFILE

Jay currently serves as a junior consultant and has provided support to projects in multiple states. These projects include the after-action reports for the COVID-19 response and wildfires in the State of Oregon, an EOC enhancement program for rural counties in the state of Kansas, efforts in the commonwealth of Virginia to increase private sector engagement, and the VDEM private sector program that tracks donations to aid in the state COVID-19 response. He has assisted in projects to engage the private sector by developing best practices and providing recommendations to enhance the mitigation, response, and recovery planning and preparations sections of the Private-Public Partnership program. Jay is continuing to expand his knowledge of emergency management by working on his Master's degree in Homeland Security and Emergency Preparedness at Virginia Commonwealth University as well as completing numerous courses through FEMA's Independent Study program. Jay is also a certified program delivery manager.

Project Manager, Falls Church, VA COVID-19 After-Action Review

- Leading the City of Falls Church, VA to conduct their COVID-19 after-action review and develop a pandemic playbook for the city based on AAR findings and recommendations.

Junior Consultant, Fairfax County, VA COVID-19 After-Action Reviews

- Supporting Fairfax County in conducting their after-action review for COVID-19.
- Reviewing and analyzing documents including county agency strengths and areas for improvement for development of after-action reports and supporting documentation of county hotwash discussions.
- Four formal AAR/IPs will be developed for this project – two with an emergency management focus, and two with a health department focus.

Junior Consultant, State of Oregon COVID-19 After-Action Review

- Supporting the State of Oregon to conduct their COVID-19 after-action review.
- The three initial focus areas were on the management and distribution of personal protective equipment, the initial response, the function of the joint information center, and the state's re-opening strategy.
- Scheduled and conducted numerous stakeholder interviews helping identify strengths, weaknesses, and gaps in the state's COVID-19 response.
- Reviewed documents and developed detailed timeline of events from the beginning of the pandemic.

Junior Consultant, State of Oregon COVID-19 and Wildfire After-Action Report

- Supporting the development of the after-action reviews for the unprecedented Wildfire events Oregon experienced in September.
- Utilizing the HSEEP guidance and core capabilities to evaluate and organize this review will be invaluable for the state to improve upon current processes and procedures for future events.

FEMA IS-1018 Determination Memorandums and Appeals

FEMA IS-1300 Introduction to Continuity of Operations

FEMA IS-2200 Basic Emergency Operations Center Functions

FEMA IS-2901 Introduction to Community Lifelines

Program Support Analyst, Virginia Department of Emergency Management COVID-19 Private Sector Support

- Supported the establishment of a data tracking process and partner outreach and follow-up approach.
- Providing liaison support with other departments and agencies.
- Established a battle rhythm and standard operating procedures for the program's tasks and coordinated with external partners.

Program Support Analyst, Virginia Department of Emergency Management COVID-19 Shelter Planning

- Document review and analyst support for COVID-19 shelter contingency planning.

Virginia Department of Emergency Management Private Sector Program Assessment

- Directly assisting with program framework development for the Virginia Department of Emergency Management implementation of a private-sector program.
- Conducted research on the economic make-up of each region in the commonwealth and creating economic profiles.
- Identification of stakeholders for engagement in the building of the program.

Team Member, Virginia Commonwealth University Hazard Mitigation Plan Update

- Worked with a team to evaluate and analyze the current hazard mitigation plan and providing recommendations for updating and renewing components.

Disaster Recovery Specialist, Southside Electrical Co-op, Winter Storm Shirley, EM Partners, LLC

- Provided support by developing spreadsheets that documented more than $20 Million in damages and repairs after Winter Storm Shirley which damaged more than 90% of their infrastructure.
- Cross-walked invoices, purchase orders, checks, and bank statements to ensure that all costs were eligible and reimbursed.
- Participated in meetings with the client as well as FEMA taking detailed notes.

Grant Support Team, State of Kansas CARES Act Grant Program Support

- Provided technical reviews of grant documentation for closeout for over 60 applicants to ensure eligibility requirements are met.
- Developed and submitted closeout packages into WebEOC.

EXHIBIT B

STANDARD TERMS AND CONDITIONS

(Last Updated January 19, 2023)

*The term “Contractor” may substitute for the term “vendors,” “consultants,” or “firms,” depending on the purpose of the underlying Contract.

IN GENERAL

1. **PARTIES:** The City of Flagstaff (“City”) and the contractor identified in the Contract (“Contractor”) may be referred to individually as “Party” or collectively as “Parties”.

2. **NOTICE TO PROCEED:** Contractor shall not commence performance until after the City has issued a Notice to Proceed.

3. **LICENSES AND PERMITS:** Contractor its expense shall maintain current federal, state, and local licenses, permits and approvals required for performance of the Contract and provide copies to City upon request.

4. **COMPLIANCE WITH LAWS:** Contractor shall comply with all applicable federal, state and local laws, regulations, standards, codes and ordinances in performance of the Contract.

5. **NON-EXCLUSIVE:** Unless expressly provided otherwise in the Contract, the Contract is non-exclusive and the City reserves the right to contract with others for materials or services.

6. **SAMPLES:** Any sample submitted to the City by the Contractor and relied upon by City as representative of quality and conformity, shall constitute an express warranty that all materials and/or service to be provided to City shall be of the same quality and conformity.

MATERIALS

7. **PURCHASE ORDERS:** The City will issue a purchase order for the materials covered by the Contract, and such order will reference the Contract number.

8. **QUALITY:** Contractor warrants that all materials supplied under the Contract will be new and free from defects in material or workmanship. The materials will conform to any statements made on the containers or labels or advertisements for the materials and will be safe and appropriate for use as normally used. The City’s inspection, testing, acceptance or use of materials shall not serve to waive these quality requirements. This warranty shall survive termination or expiration of the Contract.

9. **ACCEPTANCE:** All materials and services provided by Contract are subject to final inspection and acceptance by the City. Materials and services failing to conform to the Contract specifications may be rejected in whole or part. If rejected, Contractor is responsible for all costs associated arising from rejection.

10. **MANUFACTURER’S WARRANTIES:** Contractor shall deliver all Manufacturer’s Warranties to the City upon the City’s acceptance of the materials.

11. **PACKING AND SHIPPING:** Contractor shall be responsible for industry standard packing which conforms to requirements of carrier's tariff and ICC regulations. Containers shall be clearly marked as to lot number, destination, address and purchase order number. All shipments shall be F.O.B. Destination, City of Flagstaff, 211 West Aspen Avenue, Flagstaff, Arizona 86001, unless otherwise specified by the City. C.O.D. shipments will not be accepted.

12. **TITLE AND RISK OF LOSS:** The title and risk of loss of material shall not pass to the City until the City actually receives the material at the point of delivery and the City has completed inspection and has accepted the material, unless the City has expressly provided otherwise in the Contract.

13. **NO REPLACEMENT OF DEFECTIVE TENDER:** Every tender of materials shall fully comply with all provisions of the Contract. If a tender is made which does not fully conform, this shall constitute a breach and Contractor shall not have the right to substitute a conforming tender without prior written approval from the City.

14. **DEFAULT IN ONE INSTALLMENT TO CONSTITUTE TOTAL BREACH:** Contractor may not substitute nonconforming materials and/or services. Delivery of nonconforming materials and/or services, or a default of any nature, shall constitute a breach of the Contract as a whole.

15. **SHIPMENT UNDER RESERVATION PROHIBITED:** Contractor is not authorized to ship materials under reservation and no tender of a bill of lading shall operate as a tender of the materials.

16. **LIENS:** All materials and other deliverables supplied to the City shall be free of all liens, other than the security interest held by Contractor, until payment in full is made by the City. Upon request of the City, Contractor shall provide a formal release of all liens.

17. **CHANGES IN ORDERS:** The City reserves the right at any time to make changes in any one or more of the following: (a) methods of shipment or packing; (b) place of delivery; and (c) quantities. If any change causes an increase or decrease in the cost of or the time required for performance, an equitable adjustment may be made in the price or delivery schedule, or both. Any claim for adjustment shall be evidenced in writing and approved by the City Purchasing Director prior to the institution of the change.

PAYMENT

18. **INVOICES:** A separate invoice shall be issued for each shipment and each job completed. Invoices shall include the Contract and/or Purchase Order number and dates when goods had been shipped or work performed. Invoices shall be sent within thirty (30) days following performance. Payment will only be made for satisfactory materials and/or services received and accepted by City.

19. **LATE INVOICES:** The City may deduct up to 10% of the payment price for late invoices. The City operates on a fiscal year budget, from July 1 through the following June 30. Except in unusual circumstances, which are not due to the fault of Contractor, the City will not honor any invoices or claims submitted after August 15 for materials or services supplied in the prior fiscal year.

20. TAXES: Contractor shall be responsible for payment of all taxes including federal, state, and local taxes related to or arising out of Contractor's performance of the Contract. Such taxes include but are not limited to federal and state income tax, social security tax, unemployment insurance taxes, transaction privilege taxes, use taxes, and any other taxes or business license fees as required.

Exception: The City will pay any taxes which are specifically identified as a line-item dollar amount in the Contractor's bid, proposal, or quote, and which were considered and approved by the City as part of the Contract award process. In this event, taxes shall be identified as a separate line item in Contractor's invoices.

21. FEDERAL EXCISE TAXES: The City is exempt from paying certain Federal Excise Taxes and will furnish an exemption certificate upon request.

22. FUEL CHARGES: Contractor at its own expense is liable for all fuel costs related to performance. No fuel surcharges will be accepted or paid by the City.

23. DISCOUNTS: If the Contract provides for payment discounts, payment discounts will be computed from the later date of the following: (a) when correct invoice is received by the City; or (b) when acceptable materials and/or materials were received by the City.

24. AMOUNTS DUE TO THE CITY: Contractor must be current and remain current in all obligations due to the City during performance. Payments to Contractor may be offset by any delinquent amounts due to the City or fees and charges owed to the City under the Contract.

25. OFAC: No payments may be made to any person in violation of Office of Foreign Assets Control regulations. 31 C.F.R. Part 501.

SERVICES

26. INDEPENDENT CONTRACTOR: Contractor shall be an independent contractor for purposes of all laws, including but not limited to the Fair Labor Standards Act, Federal Insurance Contribution Act, Social Security Act, Federal Unemployment Tax Act, Internal Revenue Code, Immigration and Naturalization Act; Arizona revenue and taxation, workers' compensation, and unemployment insurance laws.

27. CONTROL: Contractor shall be responsible for the control of the work.

28. WORK SITE: Contractor shall inspect the work site and notify the City in writing of any deficiencies or needs prior to commencing work.

29. SAFEGUARDING PROPERTY: Contractor shall responsible for any damage to real property of the City or adjacent property in performance of the work and safeguard the worksite.

30. QUALITY: All work shall be of good quality and free of defects, performed in a diligent and professional manner.

31. ACCEPTANCE: If the City rejects Contractor's work due to noncompliance with the Contract, the City, after notifying Contractor in writing, may require Contractor to correct the

deficiencies at Contractor's expense, or cancel the work order and pay Contractor only for work properly performed.

32. WARRANTY: Contractor warrants all work for a period of one year following final acceptance by the City. Upon receipt of written notice from the City, Contractor at its own expense shall promptly correct work rejected as defective or as failing to conform to the Contract, whether observed before or after acceptance, and whether or not fabricated, installed or completed by Contractor, and shall bear all costs of correction. If Contractor does not correct deficiencies within a reasonable time specified in the written notice from the City, the City may perform the work and Contractor shall be liable for the costs. This one year warranty is in addition to and does not limit Contractor's other obligations herein. This warranty shall survive termination or expiration of the Contract.

INSPECTION, RECORDS, ADMINISTRATION

33. RECORDS: The City shall have the right to inspect and audit all Contractor books and records related to the Contract for up to five years after completion of the Contract.

34. RIGHT TO INSPECT BUSINESS: The City shall have the right to inspect the place of business of the Contractor or its subcontractor during regular business hours at reasonable times, to the extent necessary to confirm Contract performance.

35. PUBLIC RECORDS: The Contract and any related materials are a matter of public record and subject to disclosure pursuant to Arizona Public Records Law. A.R.S. § 39-121 et seq. If Contractor has clearly marked its proprietary information as "confidential", the City will endeavor to notify Contractor prior to release of such information.

36. CONTRACT ADMINISTRATION: Contractor will be required to participate in the City's contract administration process. Contractor will be closely monitored for Contract compliance and will be required to promptly correct any deficiencies.

INDEMNIFICATION

37. GENERAL INDEMNIFICATION: Contractor shall indemnify and hold the City, and its officers, agents, employees, and subcontractors, harmless from and against any third-party claims, actions, liabilities, costs, including reasonable attorneys' fees and other costs of defense, arising out of the acts, errors, or omissions of Contractor, its officers, agents, employees, and subcontractors, in performing or failing to perform the responsibilities identified in the Contract. In the event any such action or claim is brought against the City, Contractor shall, if the City so elects, and upon tender by the City: (a) defend the same at Contractor's sole cost and expense; and/or (b) promptly satisfy any judgment adverse to the City; or (c) reimburse the City for any loss, cost, damage, or expense, including attorneys' fees, suffered or incurred by the City. The City shall notify Contractor, within a reasonable time, of any claim, threat of claim, or legal action as it relates to the responsibilities identified in the Contract. This indemnification shall survive termination or expiration of the Contract.

38. INTELLECTUAL PROPERTY INDEMNIFICATION: Contractor shall indemnify and hold the City, and its officers, agents, employees, and subcontractors, harmless from and against any third-party claims, actions, liabilities, costs, including reasonable attorneys' fees and other costs of defense arising out of the alleged infringement of any patent, trademark or copyright or other proprietary rights of any third-parties arising out of Contract performance

or use by the City of materials furnished or work performed under the Contract. In the event any such action or claim is brought against the City, Contractor shall, if the City so elects and upon tender by the City: (a) defend the same at Contractor's sole cost and expense; and/or (b) promptly satisfy any judgment adverse to the City; or (c) reimburse the City for any loss, cost, damage, or expense, including attorneys' fees, suffered or incurred by the City. The City shall notify Contractor, within a reasonable time, of any claim, threat of claim, or legal action as it relates to the responsibilities identified in the Contract. This indemnification shall survive termination or expiration of the Contract.

39. NETWORK SECURITY AND PRIVACY LIABILITY: Contractor shall indemnify and hold the City, and its officers, agents, employees, and subcontractors, harmless from an against any third-party claims, actions, liabilities, costs, including reasonable attorneys' fees and other costs of defense arising out of all acts, errors, omissions, negligence, infringement of intellectual property (except patent and trade secret); network security and privacy risks, including but not limited to unauthorized access, failure of security, breach of privacy perils, wrongful disclosure, collection, or other negligence in the handling of confidential information, privacy perils, and including coverage for related regulatory defense and penalties; data breach expenses, including but not limited to, consumer notification, whether or not required by law, computer forensic investigations, public relations and crisis management firm fees, credit file or identity monitoring or remediation services in the performance of services for the City. In the event any such action or claim is brought against the City, Contractor shall, if the City so elects and upon tender by the City: (a) defend the same at Contractor's sole cost and expense; and/or (b) promptly satisfy any judgment adverse to the City; or (c) reimburse the City for any loss, cost, damage, or expense, including attorneys' fees, suffered or incurred by the City. The City shall notify Contractor, within a reasonable time, of any claim, threat of claim, or legal action as it relates to the responsibilities identified in the Contract. This indemnification shall survive termination or expiration of the Contract.

CONTRACT CHANGES

40. PRICE INCREASES: Except as expressly provided for in the Contract, no price increases will be approved.

41. COMPLETE AGREEMENT: The Contract is intended to be the complete and final agreement of the Parties.

42. AMENDMENTS: The Contract may be amended by written agreement of the Parties.

43. SEVERABILITY: If any term or provision of the Contract is found by a court of competent jurisdiction to be illegal or unenforceable, then such term or provision is deemed deleted and the remainder of the Contract shall remain in full force and effect.

44. NO WAIVER: Both Parties have the right insist upon strict performance of the Contract, and the prior failure of a Party to insist upon strict performance, or a delay in any exercise of any right or remedy, or acceptance of materials or services, shall not be deemed a waiver of any right to insist upon strict performance.

45. ASSIGNMENT: Contractor was selected for its special knowledge, skills, and expertise, and shall not assign the services/materials required in the Contract, in whole or in part, without the City's prior written consent, which may be withheld for any reason. Any

assignment without such consent shall be null and void. No assignment shall relieve Contractor (Assignor) from any of its obligations and liabilities under the Contract with respect to the City. The Purchasing Director shall have authority to consent to an assignment on behalf of the City.

46. BINDING EFFECT: The Contract shall be binding upon and inure to the benefit of the Parties and their successors and assigns.

EMPLOYEES AND SUBCONTRACTORS

47. SUBCONTRACTING: Contractor was selected for its special knowledge, skills, and expertise, and shall not assign the services/materials required in the Contract, in whole or in part, without the City's prior written consent, which may be withheld for any reason. The City reserves the right to withhold consent if the subcontractor is deemed irresponsible and/or subcontracting may negatively affect performance. All subcontracts shall comply with the underlying Contract. Contractor is responsible for Contract performance whether or not subcontractors are used.

48. NONDISCRIMINATION: Contractor shall not discriminate against any employee or applicant for employment or person to whom it provides services because of race, color, religion, sex, national origin, disability, genetic information, veteran's status, pregnancy, familial status and represents and warrants that it complies with all applicable federal, state and local laws and executive orders regarding employment. In addition, any Contractor whose business is located within City of Flagstaff limits shall comply with the City Code, Chapter 14-02, *Civil Rights*, which also prohibits discrimination based on sexual orientation, or gender identity or expression.

49. DRUG FREE WORKPLACE: The City has adopted a Drug Free Workplace policy for itself and those doing business with the City to ensure the safety and health of all persons working on City contracts and projects. Contractor's personnel shall abstain from use or possession of illegal drugs while engaged in performance of the Contract.

50. IMMIGRATION LAWS: Pursuant to A.R.S. § 41-4401, Contractor hereby warrants to the City that Contractor and each of its subcontractors shall comply with all state and federal immigration laws and regulations that relate to its employees and A.R.S. § 23-214(A). A breach of state and federal immigration laws and regulations shall constitute a material breach of the Contract and shall subject Contractor to penalties up to and including termination of the Contract. The City may, at its sole discretion, conduct random verification of the employment records of the employees of the Contractor and any subcontractors to ensure compliance with all state and federal immigration laws and regulations. Neither Contractor nor any subcontractor shall be deemed to have materially breached the Contract if Contractor or subcontractor establishes that it has complied with the employment verification provisions prescribed by sections 274A and 274B of the Federal Immigration and Nationality Act and the E-verify requirements prescribed by A.R.S. § 23-214(A).

DEFAULT AND TERMINATION

51. TERMINATION FOR DEFAULT: Prior to terminating the Contract for a material breach, the non-defaulting Party shall give the defaulting Party written notice and reasonable opportunity to cure the default, not to exceed thirty (30) days unless a longer period of time is granted by the non-defaulting Party in writing. In the event the breach is not timely cured,

or in the event of a series of repeated breaches the non-defaulting Party may elect to terminate Contract by written notice to Contractor, which shall be effective upon receipt. In the event of default, the Parties may execute all remedies available at law in addition to the Contract remedies provided for herein.

52. CITY REMEDIES: In the event of Contractor's default, the City may obtain required materials and/or services from a substitute contractor, and Contractor shall be liable to the City to pay for the costs of such substitute service. The City may deduct or offset the cost of substitute service from any balance due to Contractor, and/or seek recovery of the costs of substitute service against any performance security, and/or collect any liquidated damages provided for in the Contract. Remedies herein are not exclusive.

53. CONTRACTOR REMEDIES: In the event of the City's default, Contractor may pursue all remedies available at law, except as provided for herein.

54. TERMINATION FOR NONAPPROPRIATION OF FUNDS: The City may terminate all or a portion of the Contract due to budget constraints and non-appropriation of funds for the following fiscal year, without penalty or liability to Contractor.

55. TERMINATION FOR CONVENIENCE: Unless expressly provided for otherwise in the Contract, the Contract may be terminated in whole or part by the City for convenience upon thirty (30) days written notice, without further penalty or liability to Contractor. If the Contract is terminated, City shall be liable only for payment for satisfactory materials and/or services received and accepted by the City before the effective date of termination.

56. TERMINATION DUE TO INSOLVENCY: If Contractor becomes a debtor in a bankruptcy proceeding, or a reorganization, dissolution or liquidation proceeding, or if a trustee or receiver is appointed over all or a substantial portion of the property of Contractor under federal bankruptcy law or any state insolvency law, Contractor shall immediately provide the City with a written notice thereof. The City may terminate the Contract, and Contractor is deemed in default, at any time if the Contractor becomes insolvent, or is a party to any voluntary bankruptcy or receivership proceeding, makes an assignment for a creditor, or there is any similar action that affects Contractor's ability to perform under the Contract.

57. PAYMENT UPON TERMINATION: Upon termination of the Contract, the City will pay Contractor for satisfactory performance up until the effective date of termination. The City shall make final payment within thirty (30) days from receipt of the Contractor's final invoice.

58. CANCELLATION FOR GRATUITIES: The City may cancel the Contract at any time, without penalty or further liability to Contractor, if City determines that Contractor has given or offered to give any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with award or performance of the Contract.

59. CANCELLATION FOR CONFLICT OF INTEREST: Pursuant to A.R.S. § 38-511, if the City identifies a conflict of interest in the award or performance of the Contract, the City may cancel the Contract within three years after its execution, without penalty or further liability to Contractor.

MISCELLANEOUS

60. COOPERATIVE PURCHASE CONTRACTS: Presuming that Contractor agreed to such during the procurement process, Contractor will enter into cooperative purchase arrangements, as sanctioned by state and federal law, to allow Contractor to sell materials and services to any member of a cooperative group under the same pricing, terms and conditions of the contract awarded to the Contractor by the public procurement unit, following a competitive procurement process.

61. ADVERTISING: Contractor shall not advertise or publish information concerning its Contract with the City without the prior written consent of the City.

62. NOTICES: All notices given pursuant to the Contract shall be delivered at the addresses as specified in the Contract or updated by Notice to the other Party. Notices may be: (a) personally delivered, with receipt effective upon personal delivery; (b) sent via certified mail, postage prepaid, with receipt deemed effective four days after being sent; or (c) sent by overnight courier, with receipt deemed effective two days after being sent. Notice may be sent by email as a secondary form of notice.

63. THIRD PARTY BENEFICIARIES: The Contract is intended for the exclusive benefit of the parties. Nothing herein is intended to create any rights or responsibilities to third parties.

64. GOVERNING LAW: The Contract shall be construed in accordance with the laws of Arizona.

65. FORUM: In the event of litigation relating to the Contract, any action at law or in equity shall be filed in Coconino County, Arizona.

66. ATTORNEYS' FEES: If any action at law or in equity is necessary to enforce the terms of the Contract, the prevailing party shall be entitled to recover its reasonable attorneys' fees, costs, professional fees and expenses.

67. FORCE MAJUERE:

a. There may be events that occur during the term of the Contract that are beyond the control of both the City and Contractor, including events of war, floods, labor, disputes, earthquakes, epidemics, pandemics, adverse weather conditions not reasonably anticipated, forest fires, and other acts of God ("Events"). These Events may result in a temporary delay of contractual deliverables, or the permanent inability to provide the contractual deliverables that are the subject of the Contract.

b. There shall be no claims arising from a temporary delay of contractual deliverables, or the permanent inability to provide the contractual deliverables caused by the Events and the City shall not pay additional costs incurred by Contractor as a result of such Events.

c. The Parties shall act in good faith to extend the Contract completion date without any penalty to Contractor and that the extension will be in an amount of time equal to any temporary delay. This provision of the Contract supersedes all other terms regarding temporary delay, permanent shut down, or increased costs.

68. NO BOYCOTT OF ISRAEL: Pursuant to A.R.S. §§ 35-393 and 35-393.01, if a Party has over ten (10) employees and the Contract is worth at least one-hundred thousand dollars and no cents ($100,000), the Party shall certify that it is not currently engaged in, and agrees, for the duration of the Contract, will not engage in a boycott of Israel.

69. CHANGES TO CONTRACT: The Contract shall not be modified within the first year after Contract award where: (a) an amendment may result in a competitive advantage that was not made available to other proposers/bidders; or (b) requests for changes may delay commencement of performance.

70. FORCED LABOR OF ETHNIC UYGHURS: If Contractor engages in for-profit activity and has ten (10) or more employees, pursuant to A.R.S. §35-394, the Contractor certifies that it does not currently, and agrees for the duration of the contract that it will not, use: 1) the forced labor of ethnic Uyghurs in the People's Republic of China; 2) any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China; and 3) any contractors, subcontractors or suppliers that use the forced labor or any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China. If the Contractor becomes aware during the term of the contract that the company is not in compliance with the written certification, the Contractor shall notify the City within five (5) business days after becoming aware of the noncompliance. If the Contractor does not provide the City with a written certification that the Contractor has remedied the noncompliance within 180 days after notifying the City of the noncompliance, this Contract terminates, except that if the contract termination date occurs before the end of the remedy period the Contract terminations on the Contract termination date.

EXHIBIT C

STANDARD INSURANCE REQUIREMENTS

(Last Updated January 19, 2023)

*The term "Contractor" may substitute for the term "vendors," "consultants," or "firms," depending on the purpose of the underlying Contract.

1. IN GENERAL: Contractor shall maintain insurance against claims for injury to persons or damage to property, arising from performance of or in connection with the Contract by Contractor, its agents, representatives, employees, and/or subcontractors.

2. REQUIREMENT TO PROCURE AND MAINTAIN: Each insurance policy required by the Contract shall be in effect at, or before, commencement of work under the Contract and shall remain in effect until all of Contractor's obligations under the Contract have been met, including any warranty periods. Contractor's failure to maintain the insurance policies as required by the Contract, or to provide timely evidence of renewal, will be considered a material breach of the Contract.

3. MINIMUM SCOPE AND LIMITS OF INSURANCE: The following insurance requirements are minimum requirements for the Contract and in no way limit the indemnity covenants contained in the Contract. The City does not represent or warrant that the minimum limits set forth in the Contract are sufficient to protect Contractor from liabilities that might arise out of the Contract, and Contractor is free to purchase such additional insurance as Contractor may determine is necessary.

Where applicable, as related to the Scope of Work, Contractor shall provide coverage at least as broad and with limits not less than those stated below.

a. Commercial General Liability - Occurrence Form

General Aggregate	$2,000,000
Products/Completed Operations	$1,000,000
Each Occurrence	$1,000,000

b. Umbrella Coverage $2,000,000

c. Automobile Liability

Any Automobile or Owned, Hired, and Non-owned Vehicles Combined Single Limit Per Accident for Bodily Injury & Property Damage	$1,000,000

d. Workers' Compensation and Employer's Liability

Workers' Compensation	Statutory
Employer's Liability: Each Accident	$1,000,000
Disease - Each Employee	$1,000,000
Disease - Policy Limit	$1,000,000

e. Professional Liability $2,000,000

f. Network Security and Privacy Liability

Per claim	$2,000,000
Annual Aggregate	$2,000,000

4. **NETWORK SECURITY AND PRIVACY LIABILITY:** Contractor shall maintain the requisite insurance requirements covering all acts, errors, omissions, negligence, infringement of intellectual property (except patent and trade secret); network security and privacy risks, including but not limited to unauthorized access, failure of security, breach of privacy perils, wrongful disclosure, collection, or other negligence in the handling of confidential information, privacy perils, and including coverage for related regulatory defense and penalties; data breach expenses, including but not limited to, consumer notification, whether or not required by law, computer forensic investigations, public relations and crisis management firm fees, credit file or identity monitoring or remediation services in the performance of services for the City. The insurance policy shall include coverage for third-party claims. The insurance policy shall contain an affirmative coverage grant for contingent bodily injury and property damage emanating from the failure of the technology services or an error or omission in the content/information provided.

5. **SELF-INSURED RETENTION:** Any self-insured retentions must be declared to and approved by the City. If not approved, the City may require that Contractor reduce or eliminate such self-insured retentions with respect to the City, its officers, agents, employees, and/or subcontractors. Contractor shall be solely responsible for any self-insured retention amounts. The City at its option may require Contractor to secure payment of such self-insured retention by a surety bond or irrevocable and unconditional letter of credit.

6. **OTHER INSURANCE REQUIREMENTS:** The insurance policies shall contain, or be endorsed to contain, the following provisions:

   a. Additional Insured: In Commercial General Liability and Automobile Liability Coverages, the City of Flagstaff, its officers, officials, agents, employees, and/or subcontractors shall be named and endorsed as additional insureds with respect to liability arising out of the Contract and activities performed by or on behalf of Contractor, including products and completed operations of Contractor, and automobiles owned, leased, hired, or borrowed by Contractor.

   b. Broad Form: Contractor's insurance policy shall contain broad form contractual liability coverage.

   c. Primary Insurance: Contractor's insurance coverage shall be primary insurance with respect to the City, its officers, officials, agents, employees, and/or subcontractors. Any insurance or self-insurance maintained by the City, its officers, officials, agents, employees, and/or subcontractors shall be in excess of the coverage of Contractor's insurance and shall not contribute to it.

   d. Each Insured: Contractor's insurance policies shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.

   e. Not Limited: Coverage provided by Contractor shall not be limited to the liability assumed under the indemnification provisions of the Contract.

f. Waiver of Subrogation: The insurance policies shall contain a waiver of subrogation against the City, its officers, officials, agents, employees, and/or subcontractors for losses arising from work performed by Contractor for the City.

7. NOTICE OF CANCELLATION: Each insurance policy required by the insurance provisions of the Contract shall provide the required coverage and shall not be suspended, voided, cancelled, and/or reduced in coverage or in limits unless prior written notice has been given to the City. Notices required by this section shall be sent directly to the Procurement Agent and shall reference the Contract Number.

8. ACCEPTABILITY OF INSURERS: Contractor shall place insurance hereunder with insurers duly licensed or approved unlicensed companies in the State of Arizona and with a "Best's" rating of not less than A-: VII. The City does not represent or warrant that the above required minimum insurer rating is sufficient to protect Contractor from potential insurer insolvency.

9. CERTIFICATES OF INSURANCE: Contractor shall furnish the City with certificates of insurance (ACORD form) as required by the Contract. The certificates for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. Any policy endorsements that restrict or limit coverage shall be clearly noted on the certificate of insurance. The City Contract number shall be noted on the certificates of insurance. If requested by the City, all certificates of insurance and endorsements must be received and approved by the City before the Contractor commences work.

10. POLICIES: The City reserves the right to require, and receive within ten (10) days, complete, certified copies of all insurance policies and endorsements required by the Contract. The City shall not be obligated, however, to review any insurance policies or to advise Contractor of any deficiencies in such policies and endorsements. The City's receipt of Contractor's policies or endorsements shall not relieve Contractor from, or be deemed a waiver of, the City's right to insist on strict fulfillment of Contractor's obligations under the Contract.

11. MODIFICATIONS: Any modification or variation from the insurance requirements in the Contract must have the prior approval of the City's Attorney's Office in consultation with the City's Risk Manager, whose decision shall be final. Such action will not require a formal Contract amendment but may be made by their handwritten revision and notation to the foregoing insurance requirements.

8. C.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To: The Honorable Mayor and Council

From: Stacey Brechler-Knaggs, Grants, Contracts & Emergency Management Director

Co-Submitter: Barney Helmick

Date: 03/13/2023

Meeting Date: 03/21/2023

TITLE:

Consideration and Approval of Grant Agreement: Grant Agreement between the City of Flagstaff and AZ Department of Transportation for Airport Land Protection (Safety Areas) Acquire.

STAFF RECOMMENDED ACTION:

Approve the Grant Agreement for grant funds in the amount of $1,800,000 with a match of $200,000 for a total project cost of $2,000,000.

Executive Summary:

This grant will aid in Land Protection (Safety Areas) to acquire approximately 60 acres of Land on the North Side of the Airport for Airfield Safety and Approach Protection.

Financial Impact:

The grant requires a 10% match in the amount of $200,000. This project is budgeted at $2,750,000 in Fiscal Year 2024 assuming 90/10 cost share percentage. The grant expires upon completion of the project or on January 1, 2027, whichever is earlier.

Policy Impact:

None

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

Priority Based Budget Key Community Priorities and Objectives

- High Performance Governance - Enhance the organization's fiscal stability & increase efficiency & effectiveness.
- Safe & Healthy Community - Ensure the built environment is safe through the use of consistent standards, rules & regulations, and Land use practices.

Has There Been Previous Council Decision on This:

No

Options and Alternatives:

- Do not approve the grant award for land protection and return the funds.
- Approve the grant award for land protection to purchase the airport safety area.

Background/History:

The 2018 Master Plan Update identifies this as a short term project to be needed during the first five years of the 20-year Airport Capital Improvement Plan (ACIP). The projects identified in the short term ACIP are associated with maintaining existing airfield pavements, improving airfield safety and geometry standards, and enhancing terminal facilities.

The Airport is required to maintain safety areas to protect aircraft operational areas and keep them free of obstructions that could affect the safe operation of aircraft at the airport. The safety areas include the runway safety area (RSA), runway object free area (ROFA), runway obstacle free zone (ROFZ), and runway protection zone (RPZ). It is highly important that the airport maintain positive control over the Runway Protection Zones.

The city requested in the Airport Capital Improvement plan State and Local funding from AZ Department of Transportation, Aeronautics Group Land Protection (Safety Areas) to purchase approximately 60 acres of Land on the North Side of the Airport for Airfield Safety and Approach Protection.

Key Considerations:

Portions of the RSA, ROFA, and ROFZ beyond the northeast end of the Runway 3-21 extend outside existing airport property and are contained within an avigation easement through the U.S. Forest Service, which is an agency of the U.S. Department of Agriculture (USDA). The purchase of land on the north side of Runway 3-21 will allow the Flagstaff Pulliam Airport to own the safety area and a large majority of the approach and departure runway protection zones (RPZs) which is highly recommended by the Federal Aviation Administration.

Attachments: Grant Agreement #E3S4J 01L

Arizona Department of Transportation
Multimodal Planning Division
Aeronautics Group

Airport Development Reimbursable Grant Agreement

Part I

THIS AGREEMENT is entered into _____, 2023, between the STATE OF ARIZONA, acting by and through its DEPARTMENT OF TRANSPORTATION, through its Multimodal Planning Division (the "State") and the **City of Flagstaff** a political subdivision of the State of Arizona, (the "Sponsor") for a grant of State funds for the purpose of aiding in financing a Project of **Land Protection (Safety Areas) Acquire** (the "Project"), for the improvement of the ***Flagstaff-Pulliam Airport*** (the "Airport").

WITNESSETH

Recitals:

1) The Sponsor desires, in accordance with the authority granted by Arizona Revised Statutes (A.R.S.) Section 28-8413, funds from the State for the purpose of airport planning and/or development.

2) The Arizona State Transportation Board, as approved on ***December 16, 2022,*** and the Director of the Arizona Department of Transportation, in accordance with the authority granted by A.R.S. Sections 28-304, 28-363, and 28-401 and Title 28, Chapter 25, A.R.S., have authorized reimbursement to the Sponsor of funds expended for airport planning and/or development.

Now, therefore, in consideration of the foregoing recitals and of the covenants and agreements made by the parties herein to be kept and performed, the parties agree as follows:

Sponsor's Responsibility

1) The Sponsor shall accept this Agreement within 4 months of the date of the grant offer cover letter: **January 17, 2023.** This Grant offer, if not accepted by the Sponsor, shall expire at the end of the 4-month period.

2) The Sponsor shall commence the Project within 6 months of the date the grant was executed by the State. This Project will consist of the airport improvements as described in Exhibit C. The Sponsor shall proceed with due diligence and complete the Project in accordance with the provisions of this Agreement. The Sponsor shall provide and maintain competent supervision to complete the Project in conformance with the plans, specifications and work completion schedule incorporated as part of this Agreement.

3) The Sponsor shall submit completed Project Reimbursement and Milestone schedules, which shall be attached hereto, as Exhibit C, Schedules Two and Three respectively and shall complete the Project within that schedule. Any change to the schedule shall be submitted in writing and be approved by the State. A time extension beyond the State's obligation to provide funds herein must be reflected by formal Amendment to this Agreement.

4) The Sponsor shall comply with the Sponsor Assurances and abide by and enforce the General Provisions and Specific Provisions incorporated herein as Exhibits A, B and C respectively.

Obligations

1) The minimum funding participation from the Sponsor shall be **$200,000 (10%)** as determined by the State.

2) The maximum reimbursement available from the State to the Sponsor for this Agreement shall be **$1,800,000.00 Dollars.**

3) Except as otherwise provided herein for the State's obligation to provide funds hereunder expires upon completion of the Project required herein or ***January 1, 2027***, whichever is earlier.

4) The State may, after agreeing to provide said funds to the Sponsor, withdraw/terminate the grant if the Project has not been initiated as evidenced by a Notice to Proceed within 6 months of the date the grant was executed by the State or has not progressed as scheduled over a period of 12 months or if the State determines that Sponsor is not otherwise complying with the terms of this Agreement. If it becomes necessary to terminate a grant at any time, the State will reimburse expenses of the Sponsor, approved by the State, up to the time of notification of cancellation provided Sponsor is not in default hereunder.

5) Sponsor acknowledges that in the event of a late payment or reimbursement by the State, the State shall have no obligation to pay a late payment fee or interest and shall not otherwise be penalized.

6) Notwithstanding anything to the contrary herein, in the case where funds are no longer available or have been withdrawn or not appropriated, or the Project is no longer in the State's best interest, the State shall have the right of termination at its sole option. The State shall not reimburse any costs incurred after receipt of the notice of termination. The Governor pursuant to A.R.S. Section 38-511 hereby puts all parties on notice that this Agreement is subject to cancellation.

Preliminary Work Provision

Any preliminary work, for which costs for this Project were incurred after December 16, 2022 shall be considered eligible for reimbursement provided that said costs are directly related to the Project on which this Agreement is written. The State shall review related records and determine eligibility at its sole discretion.

Part II

The Sponsor shall approve and attach to this agreement a resolution, or Motion, or Board Action by its governing body that certifies as follows:

1) The Sponsor has the legal power and authority:

   a) to do all things necessary, in order to undertake and carry out the Project;

   b) to accept, receive and disburse grant funds from the State in aid of the Project.

2) The Sponsor now has on deposit, or is in a position to secure __Two Hundred Thousand_____ Dollars ($200,000), or an equivalent amount represented by Sponsor's proposed labor and equipment costs, for use in defraying Sponsor's share of the costs of the Project. The present status of these funds is as follows:

   _____Airport General Fund_____
   (enter local funding type and location)

3) The Sponsor hereby designates __Rick Tadder_____, _Management Services Director_____
   Name Title
to receive payments representing the State's share of project costs.

_____ ____Greg Clifton, City Manager_____
Signature of Sponsor's Representative Title of Representative

4) The Sponsor has on file with ADOT the following vendor identification and address for project payments:

Sponsor Vendor Id #: **86-6000244**

Sponsor Vendor Address: **211 West Aspen**

Flagstaff, AZ 86001

Exhibits

The following Exhibits are incorporated herewith and form a part of this Agreement.

Exhibit A - Sponsor Assurances

Exhibit B - General Provisions

Exhibit C - Specific Provisions and Project Schedules

STATE:

State of Arizona
Department of Transportation
Multimodal Planning Division

By: _____

Title: Paul Patane, MPD Division Director

Date: _____

WITNESSED BY:

Signature: _____

Print Name: _____

Date: _____

SPONSOR:

CITY OF FLAGSTAFF
FLAGSTAFF-PULLIMAN AIRPORT

By: _____

Title: Greg Clifton, City Manager

Date: _____

WITNESSED BY:

Signature: _____

Print Name: Stacey Salzburg, City Clerk

Date: _____

Approved as to Form:

_____

City Attorney

EXHIBIT A

Sponsor Assurances

Upon acceptance of the grant offer by the Sponsor, these assurances will become a part of this Agreement. The Sponsor hereby covenants and agrees with the State as follows:

General

1) That the Project is consistent with plans (existing at the time of approval of the Project) of political jurisdictions authorized by the State to plan for the development of the area surrounding the Airport and has given fair consideration to the interest of communities in or near where the Project is to be located. In making a decision to undertake any airport development Project under this Agreement the Sponsor insures that it has undertaken reasonable consultation with affected parties using the Airport at which the Project is proposed. All appropriate development standards of Federal Aviation Administration (FAA) Advisory Circulars, Orders, or Federal Regulations shall be complied with. All related state and federal laws shall be complied with.

2) That these covenants shall become effective upon execution of this Agreement for the Project or any portion thereof, made by the State and shall remain in full force and effect throughout the useful life of the facilities or the planning project's duration developed under the grant, but in any event, not less than twenty (20) years from the date of acceptance of the grant offer by the Sponsor.

3) The Sponsor certifies in this Agreement that it is a political subdivision of the State and is the public agency with control over a public-use Airport and/or on behalf of the possible future development of an Airport and is eligible to receive grant funds for the development or possible development of an Airport under its jurisdiction.

4) The Sponsor further agrees it holds good title, satisfactory to the State, to the landing area of the Airport or site thereof, or will give assurance satisfactory to the State that good title will be acquired.

5) That the Sponsor is the owner or lessee of the property or properties on which the Airport is located and that the lease guarantees that the Sponsor has full control of the use of the property for a period of not less than twenty (20) years from the date of this Agreement. All changes in airport ownership or to an airport lease shall be approved by the State.

6) The Sponsor agrees that it has sufficient funds available for that portion of the project costs which are not to be paid by the State (or the United States).

7) The Sponsor agrees to provide and maintain competent supervision to complete the Project in conformance with this Agreement.

8) Preserving Rights and Powers: The Sponsor agrees it shall not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions and assurances in this Agreement without written permission from the State, and shall act promptly to acquire, extinguish or modify any outstanding rights or claims of right by others which would interfere with such performance by the Sponsor. This will be done in a manner acceptable to the State. The Sponsor shall not sell, lease, encumber or otherwise transfer or dispose of any part of its title or other interests in the property shown on the airport property map included in the most recent FAA-approved Airport Layout Plan, or to that portion of the property upon which State

funds have been expended, for the duration of the terms, conditions and assurances in this Agreement without approval by the State. If the transferee is found by the State to be eligible under Title 49, United States Code, to assume the obligations of this Agreement and to have the power, authority and financial resources to carry out such obligations, the Sponsor shall insert in the contract or document transferring or disposing of Sponsor's interest and make binding upon the transferee all the terms, conditions and assurances contained in this Agreement.

9) Public Hearings: In Projects involving the location of an Airport, an airport runway or a major runway extension, the Sponsor has afforded the opportunity for public hearings for the purpose of considering the economic, social and environmental impacts of the Airport or runway location and its consistency with goals and objectives of such planning as has been carried out by the community and it shall, when requested by the State, submit a copy of such hearings to the State.

Financial

Pursuant to A.R.S. 35-326, the Sponsor may elect to utilize the Local Government Investment Pool ("LGIP") maintained by the state treasurer. The Sponsor shall request written approval from the State to use the LGIP. Thereafter, the State may deposit the funds authorized by the grant into the Sponsor's account. After approval of the reimbursements by the state, the funds shall be disbursed through the LGIP account to the Sponsor. The disbursements shall be made pursuant to the applicable laws and regulations.

The Sponsor shall establish and maintain for each Project governed by this Agreement, an adequate accounting record to allow State personnel to determine all funds received (including funds of the Sponsor and funds received from the United States or other sources) and to determine the eligibility of all incurred costs of the Project. The Sponsor shall segregate and group project costs into cost classifications as listed in the Specific Provisions of Exhibit C.

Record Keeping

The Sponsor shall maintain accurate records of all labor, equipment and materials used in this Project and that upon reasonable notice, shall make available to the State, or any of their authorized representatives, for the purpose of audit and examination all records, books, papers or documents of the recipient relating to work performed under this Agreement. For airport development Projects, make the Airport and all airport records and documents affecting the Airport, including deeds, leases, operation and use agreements, regulations and other instruments, available for inspection by any duly authorized agent of the State upon reasonable request.

Airport Based Aircraft Reporting

The Sponsor shall furnish to the State on a quarterly basis, a current detailed listing (including: Registration/N Number, Name, Address and Phone Number of Owner) of all based aircraft on the Airport in a form approved by the State.

Airport Layout Plan

1) The Sponsor shall maintain a current signed/approved Airport Layout Plan (ALP) of the Airport, which shows building areas and landing areas, indicating present and planned development and to furnish the State an updated ALP of the Airport as changes are made.

2) The Sponsor shall be required to prepare an ALP for update or revalidation in accordance with current FAA and State standard guidelines. The ALP will indicate any deviations from FAA design standards as outlined in current FAA

Advisory Circulars, orders or regulations. A copy of the signed/approved ALP in electronic format shall be forwarded to the State after authentication by FAA or the State.

3) The Sponsor shall assure that there are no changes to the airport property boundaries, together with any off-site areas owned or controlled by the Sponsor which support the Airport or its operations as a part of this project.

4) If a change or alteration is made at the Airport which the State determines adversely affects the safety, utility or efficiency of the Airport, or any State funded property on or off Airport which is not in conformity with the ALP as approved by the State, the Sponsor will, if requested by the State, eliminate such adverse affect in a manner approved by the State.

Immediate Vicinity Land Use Restriction

The Sponsor shall restrict the use of land, adjacent to or in the immediate vicinity of the Airport, to activities and purposes compatible with normal airport operations and to take appropriate action including the adoption of appropriate zoning laws. In addition, if the Project is for noise compatibility or to protect the 14 CFR Part 77 imaginary surfaces of the Airport, the Sponsor will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the Airport, of the noise compatibility program measures or the imaginary surfaces of the Airport upon which State funds have been expended.

Airport Operation

1) The Sponsor shall promote safe airport operations by clearing and protecting the approaches to the Airport by removing, lowering, relocating, marking and/or lighting existing airport hazards and to prevent, to the extent possible, establishment or creation of future airport hazards. The Sponsor shall take appropriate action to assure such terminal airspace as is required to protect instrument and visual operations to the Airport (including established minimum flight altitudes) will be adequately cleared and protected by preventing the establishment or creation of future airport hazards. The Sponsor shall promptly notify airmen of any condition affecting aeronautical use of the Airport.

2) The Sponsor further agrees to operate the Airport for the use and benefit of the public and to keep the Airport open to all types, kinds and classes of aeronautical use without discrimination between such types, kinds and classes; provided that the Sponsor shall establish such fair, equal and nondiscriminatory conditions to be met by all users of the Airport as may be necessary for the safe and efficient operation of the Airport; and provided further, that the Sponsor may prohibit any given type, kind or class of aeronautical use of the Airport if such use would create unsafe conditions, interfere with normal operation of aircraft, or cause damage or lead to the deterioration of the runway or other airport facilities.

3) In any agreement, contract, lease or other arrangement under which a right or privilege at the Airport is granted to any person, firm or corporation to conduct or engage in any aeronautical activity for furnishing services to the public at the Airport, the Sponsor shall insert and enforce provisions requiring said person, firm or corporation:

   a) to furnish services on a reasonable and not unjustly discriminatory basis to all users thereof and charge reasonable and not unjustly discriminatory prices for each unit or service;

   b) and be allowed to make reasonable and nondiscriminatory discounts, rebates or similar types of price reductions to volume purchasers;

c) each Fixed Based Operator (FBO) and Air Carrier at the Airport shall be subject to the same rates, fees, rentals and other charges as are uniformly applicable to all other FBOs and Air Carriers making the same or similar uses of the Airport and utilizing the same or similar facilities;

d) each Air Carrier using such Airport shall have the right to service itself or to use any FBO that is authorized or permitted by the Airport to serve any Air Carrier at the Airport.

4) The Sponsor shall not exercise or grant any right or privilege which operates to prevent any person, firm or corporation operating aircraft on the Airport from performing any services on its own aircraft with its own employees (including but not limited to maintenance, repair and fueling) that it may choose to perform. In the event the Sponsor itself exercises any of the rights and privileges referred to in this assurance, the services involved will be provided on the same conditions as would apply to the furnishing of such services by a commercial aeronautical operator authorized by the Sponsor under these provisions.

5) The Sponsor shall suitably operate and maintain the Airport and all facilities thereon or connected therewith which are necessary for airport purposes and to prohibit any activity thereon which would interfere with its use for aeronautical purposes and to operate essential facilities, including night lighting systems, when installed, in such manner as to assure their availability to all users of the Airport; provided that nothing contained herein shall be construed to require that the Airport be operated and maintained for aeronautical uses during temporary periods when snow, flood or other climatic conditions interfere substantially with such operation and maintenance.

6) The Sponsor shall not permit an exclusive right for the use of the Airport by any person providing, or intending to provide, aeronautical services to the public. For purposes of this paragraph, providing services at an Airport by a single FBO shall not be construed as an "exclusive right" if:

a) it would be unreasonably costly, burdensome or impractical for more than one FBO; and

b) if allowing more than one FBO to provide such services would require a reduction of space leased pursuant to an existing agreement between a single FBO and the Airport.

Note: Aeronautical activities that are covered by this paragraph include, but are not limited to: charter flights, pilot training, aircraft rental, sightseeing, air carrier operations, aircraft sales and services, aerial photography, agricultural spraying, aerial advertising and surveying, sale of aviation petroleum products whether or not conducted in conjunction with any other aeronautical activity, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can be regarded as an aeronautical activity.

7) The Sponsor shall terminate any exclusive right to conduct an aeronautical activity now existing at the Airport before any grant of assistance from the State. However, there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the Airport is used as an Airport. There shall be no limit on the duration of the terms, conditions, and assurances with respect to real property acquired with State funds.

8) Airport Pavement Preservation Program: The Sponsor certifies that they have implemented an effective pavement preservation management program at the Airport in accordance with Public Law 103-305 and with the most current associated FAA policies and guidance for the replacement, reconstruction or maintenance of pavement at the Airport. The Sponsor assures that it shall use and follow this program for the useful life of the pavement constructed, reconstructed or repaired with financial assistance from the State and that it will provide such reports on pavement condition and pavement management programs as may be required by the State.

Sponsor Transactions

The Sponsor shall refrain from entering into any transaction which would deprive the Sponsor of any of the rights and powers necessary to perform any or all of the covenants made herein, unless by such transaction the obligation to perform all such covenants is assumed by another public agency eligible to assume such obligations and having the power, authority and financial resources to carry out such obligations; and, if an arrangement is made for management or operation of the Airport by an agency or person other than the Sponsor, the Sponsor shall reserve sufficient powers and authority to insure that the Airport will be operated and maintained in accordance with these covenants or insure that such an arrangement also requires compliance therewith.

Airport Revenues

The Sponsor shall maintain a fee and rental structure for the facilities and services at the Airport which will make the Airport as self-sustaining as possible under the circumstances existing at the particular Airport, taking into account such factors as the volume of traffic and economy of collection. All revenues generated by the Airport (and any local taxes established after Dec 30, 1987), will be expended by it for the capital or operating costs of the Airport; the local airport system; or the local facilities which are owned or operated by the owner or operator of the Airport and which are directly or substantially related to the actual air transportation of passengers or property, on or off the Airport.

Disposal of Land

1) For land purchased under a grant for airport development purposes (it is needed for aeronautical purposes, including runway protection zones, or serve as noise buffer land; and revenue from the interim use of the land contributed to the financial self-sufficiency of the Airport), the Sponsor shall apply to the State and FAA for permission to dispose of such land. If agreed to by the State and/or FAA, the Sponsor shall dispose of such land at fair market value and make available to the State and FAA an amount that is proportionate to the State and FAA's share of the cost of the land acquisition. That portion of the proceeds of such disposition, which is proportionate to the share of the cost of acquisition of such land, shall be (a) reinvested in another eligible airport development Project or Projects approved by the State and FAA or (b) be deposited to the Aviation Trust Fund if no eligible Project exists.

2) Disposition of such land shall be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with operation of the Airport.

EXHIBIT B

General Provisions

Employment of Consultants

The term consultant, as used herein, includes planners, architects and/or engineers. If a consultant is to be used for this Project, the Sponsor agrees to consider at least three (3) consultant firms. If the Sponsor has contracted with or will contract with a consultant on a retainer basis, the Sponsor assures to the State that prior to entering such a contract, at least three (3) consultants were or will be considered. The Sponsor shall submit to the State, for review and approval, a copy of the request for proposals and/or request for qualifications, and the proposed consultant contract prior to its execution and upon award of the contract, a fully executed copy. All requests for qualifications and requests for proposals shall be in accordance with A.R.S. 34, Chapters 1, 2 and 6, and shall include a list of projects and project locations to be awarded project contracts.

Contracts

1) The Sponsor as an independent entity and not as an agent of the State may obtain the services required in order to fulfill the work outlined in the Project Description as approved by the State for funding in the Airport Capital Improvement Program. All contracts awarded to accomplish the project work described in this Agreement shall state:

   a) The name of the consultant authorized to perform the work and to communicate on behalf of the Sponsor;

   b) The Sponsor must insure that contracts issued under this Agreement comply with the provisions of Arizona Executive Order 75-5 as amended by Arizona Executive Order 2009-9, relating to equal opportunity;

   c) The terms for termination of the contract either for failure to perform or in the best interest of the Sponsor;

   d) The duly authorized representatives of the State shall have access to any books, documents, papers and records of the consultant and/or contractor which are in any way pertinent to the contract for a period of five years, in accordance with A.R.S. 35-214, for the purpose of making inspections, audits, examinations, excerpts and transcriptions.

2) All contracts shall stipulate and make clear:

   a) The responsibilities of the consultant to gain authorization for changes on the Project which may have an affect on the contract price, scope, or schedule;

   b) That all construction contractors and sub-contractors hired to perform services, shall be in compliance with A.R.S. 32, Chapter 10.

   c) That any materials, including reports, computer programs or files and other deliverables created under this Agreement are the sole property of the Sponsor. That these items shall be made available to the public. The Contractor/Consultant is not entitled to a patent or copyright on these materials and may not transfer the patent or copyright to anyone else.

d) That any travel shall be reimbursable by the State only within the rules and costs in accordance with the State of Arizona Travel Policy.

3) **Liability of Subcontractors**

1) It shall be the responsibility of the Sponsor to ensure through contractual agreement that any independent contractor, subcontractors, or sub consultants utilized by the Sponsor, defend, indemnify, save, and hold harmless the State and any of their departments, divisions, agencies, officers, or employees who may be obligated to pay by reason of any liability imposed upon any of the above for damages arising out of any error, negligence, omissions, or act of the independent contractor, subcontractor, or sub consultant.

Conflict of Interest

Each consultant submitting a proposal shall certify that it shall comply with, in all respects, the rules of professional conduct set forth in Arizona Administrative Code R4-30-301. In addition, a conflict of interest shall be cause for disqualifying a consultant from consideration; or terminating a contract if the conflict should occur after the contract is made. A potential conflict of interest includes, but is not limited to:

1) Accepting an assignment where duty to the client would conflict with the consultant's personal interest, or interest of another client.

2) Performing work for a client or having an interest which conflicts with this contract.

Reports

1) Reimbursement Requirements

a). The Sponsor shall submit quarterly Grant Reimbursement Requests (GRR's) to the Aeronautics Grant Manager after the date of the grant agreement has been signed by both Sponsor and State.

b). The Sponsor shall prepare quarterly (GRR) forms with the appropriate invoices attached which clearly indicate the project's progress to date and the amount of reimbursement due by virtue of that progress. All GRR's for payment shall be for work completed unless otherwise agreed to by State.

(i). The State has the right to withhold reimbursement payments if the Sponsor does not fill out the State GRR form correctly. If the State does decide to withhold payments to the Sponsor for any reason, it must provide written notification and an explanation to the Sponsor within ten (10) days of the date of the invoice submitted.

c). The State has the right to suspend any current or future grants should the Sponsor neglect to make a grant reimbursement request after 180 days as stated on the **Projected Reimbursement Requests / State Cash Flow** section of the grant agreement under Exhibit C, Schedule 2.

d). An Airport may be awarded a pavement management agreement through the State's Airport Pavement Management System (APMS Program). Sponsors receiving APMS treatment will be responsible for 10% of the eligible construction cost. Outstanding balances after final costs reconciliation shall be paid to the State upon

written notice. Any unpaid balance by the Sponsor can result in suspension of participation in the State's Airport Pavement Management System and State/Local Grants.

2) The Sponsor shall submit monthly status reports during planning, shall submit monthly status reports during design, and shall submit weekly reports during construction. All reports shall reflect, at a minimum, the progress accomplished in relation to the Grant and Project schedules and milestones, the reasons for any changes, and the recommended corrections of problems encountered. Upon completion of the Project, the Sponsor shall submit a letter to the State specifying that the Project has been completed to their satisfaction and that the consultant and the contractor have completed their contractual responsibilities.

Changes

Any changes to the consultant contract, authorized by the Sponsor, that include additional funds, time and/or scope, shall be by amendment and shall be approved by the State prior to being made in order to be eligible for reimbursement. Approval of a change by the State shall not obligate the State to provide reimbursement beyond the maximum funds obligated by this Agreement. Any increase to the amount of funds authorized hereunder, to the expiration date of this agreement, or to the scope of work included in this agreement must be by formal amendment, and signed by all parties.

Any changes to the contract documents, authorized by the Sponsor, must be approved by the State prior to any changes being made in order to be eligible for reimbursement.

Audit

Upon completion of the Project, the Sponsor agrees to have an audit performed. The audit examination may be a separate project audit or in accordance with the Single Audit Act of 1984 (Single Audit). If the Sponsor is required under law to have a Single Audit, this Project shall be considered for inclusion in the scope of examination.

The Sponsor shall keep all project accounts and records which fully disclose the amount and disposition by the recipient of the proceeds of the grant, the total cost of the Project in connection with which the grant is given or used, and the amount or nature of that portion of the cost of the Project supplied by other sources, and such other financial records pertinent to the Project. The accounts and records will be kept in accordance with A.R.S. 35-214.

In any case in which an independent audit is made of the accounts of a Sponsor relating to the disposition of the proceeds of a grant relating to the Project in connection with which the grant was given or used, it shall file a certified copied of such audit with the State not later than six (6) months following the close of the fiscal year in which the audit was made.

The Sponsor shall make available to the State or any of their other duly authorized representatives, for the purpose of audit and examination, any books, documents, papers and records of the recipient that are pertinent to the grant. The Sponsor further agrees to provide the State a certified copy of the audit report. The State is to determine the acceptability of this audit.

Suspension

If the Sponsor fails to comply with any conditions of this Agreement, the State, by written notice to the Sponsor, may suspend participation and withhold payments until appropriate corrective action has been taken by the Sponsor. Costs incurred during a period of suspension may not be eligible for reimbursement by the State.

Failure to Perform

If the Sponsor fails to comply with the conditions of this Agreement the State, may by written notice to the Sponsor, terminate this Agreement in whole or in part. The notice of termination will contain the reasons for termination, the effective date, and the eligibility of costs incurred prior to termination. The State shall not reimburse any costs incurred after the date of termination.

Termination for Convenience

When the continuation of the Project will not produce beneficial results commensurate with the further expenditure of funds or when funds are not appropriated or are withdrawn for use hereunder, the State may terminate this Agreement. In the case where continuation of the Project will not produce beneficial results, the State and the Sponsor shall mutually agree upon the termination either in whole or in part. In the case where funds are no longer available or have been withdrawn or not appropriated, or the Project is no longer in the State's best interest, the State shall have the right of termination as its sole option. The State shall not reimburse any costs incurred after receipt of the notice of termination. The Governor pursuant to A.R.S. Section 38-511 hereby puts all parties on notice that this Agreement is subject to cancellation.

Waiver by State

No waiver of any condition, requirement or right expressed in this Agreement shall be implied by any forbearance of the State to declare a default, failure to perform or to take any other action on account of any violation that continues or repeats.

Compliance with Laws

The Sponsor shall comply with all Federal, State and Local laws, rules, regulations, ordinances, policies, advisory circulars, and decrees that are applicable to the performance hereunder.

Arbitration

In the event of a dispute, the parties agree to use arbitration to the extent required by A.R.S. Section 12-1518.

Jurisdiction

Any litigation between the Sponsor and the State shall be commenced and prosecuted in an appropriate State court of competent jurisdiction within Maricopa County, State of Arizona.

Excess of Payments

If it is found that the total payments to the Sponsor exceed the State's share of allowable project costs, the Sponsor shall promptly return the excess to the State. Final determination of the State's share of allowable costs shall rest solely with the State. Any reimbursement to the Sponsor by the State not in accordance with this Agreement or unsubstantiated by project records will be considered ineligible for reimbursement and shall be returned promptly to the State.

State Inspectors

At any time and/or prior to final payment of funds for work performed under this Agreement, the State may perform an inspection of the work performed to assure compliance with the terms herein and to review the workmanship of the Sponsor's contractors and/or consultants. No inspector is authorized to change any provisions of this Agreement or any provisions of Agreements between the Sponsor and the Sponsor's contractor and/or consultant.

Indemnification

The State of Arizona, acting by and through the Arizona Department of Transportation, does not assume any liability to third persons nor will the Sponsor be reimbursed for the Sponsor's liability to third persons resulting from the performance of this Agreement or any subcontract hereunder.

The Sponsor shall indemnify and hold harmless the State, any of their departments, agencies, officers and employees from any and all liability, loss or damage the State may suffer as a result of claims, demands, costs or judgments of any character arising out of the performance or non-performance of the Sponsor or its independent contractors in carrying out any provisions of this Agreement. In the event of any action, this indemnification shall include, but not be limited to, court costs, expenses of litigation and reasonable attorney's fees.

Required Provisions Deemed Inserted

Each and every provision of law and clause required by law to be inserted in this Agreement shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, this Agreement shall forthwith be physically amended to make such insertion or correction.

Property of the Sponsor and State

Any materials, including reports, computer programs or files and other deliverables created under this Agreement are the sole property of the Sponsor. The Contractor/Consultant is not entitled to a patent or copyright on these materials and may not transfer the patent or copyright to anyone else. The Sponsor shall give the State unrestricted authority to publish, disclose, distribute and otherwise use at no cost to the State any of the material prepared in connection with this grant. At the completion of the project, the Sponsor shall provide the State with an electronic copy, in a format useable by the State, and one hard copy in a format useable by the State, of final plans, specifications, reports, planning documents, and/or other published materials as produced as a result of this project.

Title VI List of Pertinent Nondiscrimination Authorities

During the performance of this Agreement, the Sponsor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Sponsor") agrees to comply with the following non-discrimination statutes and authorities, Including but not limited to:

1) Title VI of the Civil Rights Act of 1964 (42 U.S.C. §2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
2) 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation – Effectuation of Title VI of The Civil Rights Act of 1964);

3) The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
4) Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;
5) The Age Discrimination Act of 1975, as amended, (42 U.S. C. § 6101 et seq.), (prohibits discrimination on the basis of age);
6) Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
7) The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs of activities" to include all the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
8) Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;
9) The Federal Aviation Administration's Non-discrimination statute (49 U.S.C § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
10) Executive Order 12898, Federal Actions to Address Environmental justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
11) Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin, discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
12) Title IX of the Education Amendments of 1972, as amended, which prohibits you from discrimination because of sex in education programs or activities (20 U.S.C 1681 et. Seq.).
13) All parties shall comply with all applicable federal, state, county, cities, and local laws, rules, regulations, and assurances in addition to all applicable provisions of Title 14 (Aeronautics and Space Chapter 1 – Federal Aviation Administration, Department of Transportation) and Title 49 (United States Department of Transportation) and other applicable Codes of Federal Regulations where and when relevant.

EXHIBIT C

Specific Provisions and Project Schedules

Provisions for Land Acquisition

Financial Cost Categories

The Sponsor shall segregate and group project costs in categories as follows:

1) "Land Acquisition" (as applicable), including consulting services, legal fees, appraisal services, and surveys.

2) "Sponsor Administration" directly associated with this Project (not to exceed 5% of Land Acquisition costs).

3) "Sponsor Force Account" contribution (if applicable).

4) "Other" with prior approval of the State.

Land Acquisition Documents

The Sponsor shall insure the following documents and approvals are provided to the State at the conclusion of any Land Acquisition grant agreement.

1) All environmental documentation including the final determination. At a minimum, an environmental assessment is required for land acquisition for three acres or more.

2) All applicable Federal Aviation Administration Advisory Circulars, Orders, Regulations, and Program Guidance shall be followed.

3) Legal Description/Plat Map of the property to be or acquired. All pertinent legal documents.

4) Appraisal(s) of the property. Only appraisals completed by ADOT approved appraisal firms are eligible for reimbursement.

5) ADOT Right-of-Way memo of acquisition support will determine the maximum amount of eligible funds for the purchase of the property.

6) The governing body's resolution approving purchase of the land.

7) Title of the acquired property.

8) An updated airport property map that will be included in the Airport Layout Plan.

Project Schedules for Land Acquisition

The Schedule Forms are intended to identify and monitor project scope, costs, and basic milestones that will be encountered during various phases of the Project. The Sponsor shall complete these three schedules showing the project description and total costs, project reimbursements (cash flow) schedule and project milestones.

Schedule One shows the total Project estimated costs associated with each share - State and Federal and Local. Schedule Two shows a projected cash flow for State funds only. The Sponsor is to estimate requests to the State for Project reimbursement. Schedule Three shows anticipated dates of Project milestones. These schedules will be used to keep track of the Project's progress. Be sure to develop realistic schedules.

As the project progresses, and the original reimbursement schedule and or milestone dates change, the Sponsor must submit a revised Schedule to the State for approval.

NOTE: The Sponsor must attach the airport's currently approved property map as included in the most recent approved ALP showing the land area to be acquired.

Schedule One
Project Description and Funding Allocation

Detailed Project Description: ***Land Protection (Safety Areas) Acquire***

_____

_____

_____

Project Cost Category	**Total Estimated Project Cost**	**Estimated Local Share**	**Estimated Federal Share**	**Estimated State Share***
Land Acquisition Costs	$2,000,000	$200,000	$	$1,800,000
Sponsor Administration**	$	$	$	$
Sponsor Force Account Work***	$	$	$	$
Other	$	$	$	$
Total Project Costs	$2,000,000	$200,000	$	$1,800,000

*Total of this column to be used in Schedule Two.
** Sponsor Administration is not eligible for reimbursement above 5% of the Land Acquisition service costs.
*** All force account work is to be approved by the State prior to the grant agreement being signed.

Schedule Two
Land Acquisition Project Reimbursement Schedule

The Sponsor must complete this Project Reimbursement Schedule showing the projected cash flow of State grant funds only for this Project. Projections must include all consultant and contractor services. The reimbursement schedule should be a realistic schedule and will be used to keep track of a project's progress. Reimbursement requests must be submitted regularly by the Sponsor while the grant is active. The cash flow should reflect when a request is submitted to the State, not when invoices are paid by the Sponsor.

Instructions:

1) For "Total State Funds" below, enter the Total Project Costs/Estimated State Share from Schedule One.

2) For each month/year, indicate the projected reimbursement request amount for **State Funds Only** (use whole dollars only, e.g. $540 or $1,300).

3) Continue the process by entering a Zero (Ø) in the month/year for which no reimbursement is anticipated and/or a dollar amount of the reimbursement, until the total State funds are accounted for in the cash flow.

Total State Funds: $1,800,000

Projected Reimbursement Requests / State Cash Flow
Grant #
FAA Id #

Calendar Year	Jan	Feb	Mar	Apr	May	Jun
2023	$	$	$	$	$	$
2024	$	$	$	$	$	$
2025	$	$	$	$	$	$
2026	$	$	$	$	$	$
2027	$	$	$	$	$	$
Calendar Year	Jul	Aug	Sep	Oct	Nov	Dec
2023	$	$	$	$	$	$
2024	$	$	$	$	$	$
2025	$	$	$	$	$	$
2026	$	$	$	$	$	$
202	$	$	$	$	$	$

Grants expire 4 years from the date approved by the State Transportation Board. The Sponsor shall schedule the work to be completed within the 4 years.

Schedule Three
Land Acquisition Project Milestones

Milestone Duration Guidelines

The below duration periods are intended to provide guidelines for you to consider. These are average time periods (in calendar days), but it is understood these periods may vary by Sponsor and Project, and are subject to modification. If an entry on the form is not applicable write N/A.

1) The Consultant Selection Phase for all Projects, regardless of type, is approximately ninety (90) days but should not exceed one hundred eighty (180) days.
2) The Land Acquisition Phase is subject to the complexity of the acquisition, however, most Land Acquisition projects can be accomplished within fourteen hundred and sixty (1460) days.
3) State review periods should be thirty (30) days.

Land Acquisition Milestone Schedule

Milestones	Duration # of Days	Start Date		Completion Date	
		Proposed	Actual	Proposed	Actual
Consultant Selection Phase		mm/dd/year	mm/dd/year	mm/dd/year	mm/dd/year
Submit Scope for State Review/Approval*					
Submit Contract for State Review/Approval					
Award Consultant Contract					
Appraisal Phase					
Submit Approved Environmental Documentation to ADOT & FAA					
Sponsor Issue Notice to Proceed with Appraisal firm					
Sponsor Issue Notice to Proceed for Survey and legal description					
Submit Appraisal to ADOT ROW for support					
Submit Final Appraisal to State & FAA					
Acquisition Phase					
Board/Council resolution of approval to acquire land					
Submit offer to Land Owner					
Acquire Property (Submit all documentation)					
Submit Final Documentation					
Submit updated "Exhibit A"					
Submit Final Reimbursement Request and Sponsors Closeout Letter					

* The solicitation for qualifications and the resulting service agreements must contain a list of projects, including this grant project, per A.R.S. 34, Chapter 6.

8. D.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Shawn Johnson, Chief of Staff
Date:	03/15/2023
Meeting Date:	03/21/2023

TITLE:

Consideration and Approval of Ratification: Letter of Support for the National League of Cities to encourage Congress to improve rail safety in the U.S.

STAFF RECOMMENDED ACTION:

Approve ratification of letter of support.

Executive Summary:

Railroads are part of America's communities, and that is why the City of Flagstaff and the National League of Cities supports action by Congress to improve rail safety in the U.S.

The unfortunate derailment and environmental contamination in East Palestine, Ohio is not unprecedented. There are more than 1,000 trains derailing each year in multiple states. With 140,000 miles of track in the U.S. crossing directly through thousands of cities, towns and villages, the severity of this derailment requires proactive reflection on rail safety actions that Congress can take now. Here are detailed rail safety recommendations from the National League of Cities to Congress - www.nlc.org/wp-content/uploads/2023/03/NLC-Rail-2023-Priorities-Letter-3.1.23.pdf.

Financial Impact:

None

Policy Impact:

None.

Connection to PBB Key Community Priorities/Objectives & Regional Plan:

Safe & Healthy Community, Sustainable, Innovative Infrastructure, Livable Community, and Environmental Stewardship.

Previous Council Decision on This:

None

Attachments: Letter of Support

CITY OF
FLAGSTAFF

FLAGSTAFF CITY COUNCIL
211 West Aspen Avenue, Flagstaff, Arizona 86001
Main Line: 928-213-2000
Website: https://www.flagstaff.az.gov

March 15, 2023

Members of the U.S. Senate and House of Representatives:

Railroads are part of America's communities, and that is why my city, and the National League of Cities supports action by Congress to improve rail safety in the U.S.

The unfortunate derailment and environmental contamination in East Palestine, Ohio is not unprecedented. There are more than 1,000 trains derailing each year in multiple states. With 140,000 miles of track in the U.S. crossing directly through thousands of cities, towns and villages, the severity of this derailment requires proactive reflection on rail safety actions that Congress can take now. Here are our detailed rail safety recommendations to Congress - www.nlc.org/wp-content/uploads/2023/03/NLC-Rail-2023-Priorities-Letter-3.1.23.pdf.

We are encouraged by the introduction of the bipartisan *Railway Safety Act of 2023* in the Senate which would improve rail safety, and House members have provided additional proposals to expand the list of chemicals reported so that when – not if - a derailment happens first responders know what they are dealing with.

We ask for Congress to act now on rail safety on behalf of thousands of cities, towns and villages who want to see rail safely moving through their communities.

Thank you,

Becky Daggett

On Behalf of The Flagstaff City Council
Mayor
City of Flagstaff

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Jana Weldon, Beautification Arts & Sciences Program Manager
Co-Submitter:	David McIntire
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration and Approval of Contract: Artist Services Contract with Haddad/Drugan LLC for $530,451 for two artworks for the Downtown Connection Center. Art Glass Fabrication & Delivery; and Southside Grove Sculpture Fabrication, Delivery & Installation.

STAFF RECOMMENDED ACTION:

1. Approve artist services contract for the Art Glass and the Southside Grove Sculpture at the Downtown Connection Center (DCC) with Haddad|Drugan LLC for $530,451.
2. Authorize the City Manager to execute all necessary documents.

Executive Summary:

At the January 31, 2023 Work Session, City Council reviewed and responded positively to the public art concepts recommended by the Beautification and Public Art Commission (BPAC). The proposed public art consists of: Art Glass, and a Southside Grove Sculpture. It is designed for the DCC being constructed on west Phoenix Avenue, just east of Milton Road. The City Council is being asked to approve a services contract to the artist team to coordinate the fabrication and delivery the Art Glass artwork, and the fabrication, delivery, and installation of the Southside Grove Sculpture artwork.

The full agenda and Council package for the January 31, 2023 Work Session can be found here:
https://agenda.flagstaffaz.gov/agenda_publish.cfm?id=&mt=ALL&get_month=1&get_year=2023&dsp=agm&seq=7013&rev=0&ag=3654&ln=44449&nseq=6993&prev=0&pseq=7016&prev=0#ReturnTo44449

The Art Glass:
The Art Glass is luminous art. It will be integrated into the main entry of the new DCC building, which should have its groundbreaking in February 2023. The Art Glass on the south facades is over the front door and faces Phoenix Ave, and then wraps to the east facade facing the future bus bays and civic space. The art draws from elements of the Mountain Line logo and Flagstaff's natural beauty, and fuses those elements with color and light. Using a graphic technique, the design overlays, into a unique composition, the imagery of a mountain lion, the San Francisco peaks as viewed from the DCC, and ponderosa pines in three different colors (blue, green, red). The artwork will have a different presence at night than during the day. In daylight, the multiple colors and images are superimposed. At night different colored back lights will highlight the individual layers of the overlapped images on the south facade, making each image pop as the other images recede, creating a gentle morphing through the series of colorful illuminations. The east facade will also be back-lit as the image of the ponderosa pines alone wraps around from the front facade. The architect and the artist team worked diligently to align the glass mullions and support features so that the art glass and architectural features are complementary, enhancing each other.

The Southside Grove Sculpture:
The "Southside Grove" is an immersive sculpture, has a meet-me-here presence, but also is reflective of natural and cultural history, especially that of the Southside but also Flagstaff and the surrounding region. The primary elements of the sculpture are:

- six ponderosa pine and telescope inspired "trunks" made from weathered steel, positioned in a circle to form a grove and to reflect the strong circle of community that is the Southside;
- all of the trunks have different cultural symbols etched into each representing important cultures that have come together as community in Flagstaff;
- five of the trunks are etched with a bark texture and have "branches" that end in prisms that catch and cast spectrums of color, and star clusters of luminous green needles that glow in the sunlight;
- the grove is aligned to mark the Spring and Autumn Equinoxes at sunrise and sunset and the largest trunk positioned South more strongly references a telescope and works as a sun portal casting a beam of light at noon on the summer solstice onto a "Time-Table" located at the center of the grove;
- the top of the south trunk also includes a wind activated bell-like feature that creates a chime-like sound when windy;
- in the center of the grove, a circular granite "Time-Table" is etched with tree rings that contain significant natural and cultural events in astronomy, of Indigenous peoples, of the region, and of the Southside.

While strong and durable sculptural forms are created with steel, the variety of finishes and details are layered to create a softer organic appearance and experience. Hence it is anticipated that the Southside Grove sculpture will create a natural rendezvous and visual landmark, but also have a strong experiential quality once there.

The Southside Grove Sculpture initially will be installed within a landscaped area adjacent the entry plaza of the new building, during phase one of the DCC Project. The sculpture will later be moved into a new civic space east of the future bus bays which will be constructed during phase two of the DCC Project. The relocation is necessitated by the Rio de Flag Flood Control Project work by the Army Corps of Engineers in the same area as the DCC. While the schedule and length of time between the phases has not yet been set, the current estimate is between four and eight years.

Financial Impact:

Funding is available for this contract in the Council approved 5-year plan for the Beautification Fund with $470,000 in FY2023-24 and $100,000 in FY2024-25. The Beautification Fund is supported by voter approved Bed, Board, & Beverage tax revenue and may only be used for purposes of Beautification.

Policy Impact:

No impact. This contract does, however, reflect our new practices in public art, including the following elements below, which will be codified in guidelines at some point in the future:

- **Artist Selection Panels**: The City is implementing a new process for artist selection to (a) increase inclusivity of the community and diversity in the selection of public art and beautification, and (b) better align with current 'best practices' for artist selection.
- **Inclusion of Artist on Design Teams**: The City is shifting our processes to bring artists in earlier in the design phase when art and beautification are part of a larger project to help create more integrated pieces and, where possible and appropriate, bring an artistic viewpoint to project design. For example, rather than adding art at the end of a project, it may be integrated into infrastructure such as walls, floors or seating.

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

This project and contract are related to several Priority-Based Budgeting (PBB) Key Community Priorities, including:

- Livable Community: The inclusion of art in the new Downtown Connection Center creates a more welcoming, vibrant and beautiful public space in the city's historic core.
- Robust Resilient Economy: The project adds to community draw for tourists and locals alike in a new and important hub for transportation.
- Inclusive and Engaged Community: This project includes community outreach for input on design elements by the artist and city staff.
- Sustainable, Innovative Infrastructure: This project allows for innovative, creative integration of designs.

This project also reflects the following Regional Plan Goals and Policies:
Goal CC.3. Preserve, restore, enhance, and reflect the design traditions of Flagstaff in all public and private development efforts.

Goal CC.4. Design and develop all projects to be contextually sensitive, to enhance a positive image and identity for the region.

Goal CC.5. Support and promote art, science, and education resources for all to experience. (Including: Policy CC.5.3. Encourage the integration of art into public and private development projects.)

Goal LU.3. Continue to enhance the region's unique sense of place within the urban, suburban, and rural context.

Goal LU.9. Focus reinvestment, partnerships, regulations, and incentives on developing or redeveloping urban areas.

Goal LU.11. Prioritize the continual reinvigoration of downtown Flagstaff, whose strategic location, walkable blocks, and historic buildings will continue to be a vibrant destination for all.

Goal LU.17. Protect, manage, and enhance the region's Special Planning Areas to benefit the whole community.

Goal LU.18. Develop well designed activity centers and corridors with a variety of employment, business, shopping, civic engagement, cultural opportunities, and residential choices.

Goal PF.2. Provide sustainable and equitable public facilities, services, and infrastructure systems in an efficient and effective manner to serve all population areas and demographics. (Including: Policy PF.2.3. Provide accessible public facilities and services in strategic locations. Policy PF.2.4. Support quality civic design for all public facilities.)

Goal NH.2. Look to downtown Flagstaff as the primary focal point of the community character. (Highlighting Policy NH.2.1. Encourage the rehabilitation of historic downtown structures and contextual new structures as office, retail, entertainment, and residential space to reinvigorate the area as a destination of culture, shopping, government, and the arts.)

Goal ED. 6. Tourism will continue to provide a year-round revenue source for the community, while expanding specialized tourist resources and activities.

Goal ED.7. Continue to promote and enhance Flagstaff 's unique sense of place as an economic development driver. (Including:

Policy ED.7.1. Support planning, design, and development that positively, creatively, and flexibly contribute to the community image.)

Policy T.1.7. Coordinate transportation and other public infrastructure investments efficiently to achieve land use and economic goals.

Goal T.4. Promote transportation infrastructure and services that enhance the quality of life of the communities within the region. (Including: Policy T.4.1. Promote context sensitive solutions (CSS) supportive of planned land uses, integration of related infrastructure needs, and desired community character elements in all transportation investments, and Policy T.4.3. Design transportation facilities and infrastructure with sensitivity to historic and prehistoric sites and buildings, and incorporate elements that complement our landscapes and views.)

Goal T.7. Provide a high-quality, safe, convenient, accessible public transportation system, where feasible, to serve as an attractive alternative to single-occupant vehicles. (Including: Policy T.7.1. Cooperate with Mountain Line in developing and implementing the five-year transit master planning goals and objectives to continuously improve service, awareness, and ridership.)

Goal T.11. Build and sustain public support for the implementation of transportation planning goals and policies, including the financial underpinnings of the Plan, by actively seeking meaningful community involvement. (Including: Policy T.11.5. Promote effective intergovernmental relations through agreed-upon procedures to consult, cooperate, and coordinate transportation-related activities and decisions, including regional efforts to secure funding for the improvement of transportation services, infrastructure, and facilities.)

Southside Neighborhood Specific Plan: The new Southside plan supports these activities, such as stating “Opportunities for public art are highly prized” (Chapter 2 page 25). Outdoor public spaces are also emphasized in the plan. This contract also supports “Encourage the Southside community work with Mountain Line on the Downtown Connection Center design” on page 54.

Has There Been Previous Council Decision on This:

Council approved a design contract for this artist team on Dec 1, 2020
(https://agenda.flagstaffaz.gov/agenda_publish.cfm?id=&mt=ALL&get_month=12&get_year=2020&dsp=agm&seq=5032&rev=1&ag=1147&ln=26891&nseq=5051&prev=1&pseq=5029&prev=1#ReturnTo26891).

Council heard a presentation on the art concepts on January 31, 2023
(https://agenda.flagstaffaz.gov/agenda_publish.cfm?id=&mt=ALL&get_month=1&get_year=2023&dsp=agm&seq=7013&rev=0&ag=3654&ln=44449&nseq=6993&prev=0&pseq=7016&prev=0#ReturnTo44449)

Council has previously approved the FY 2023 Beautification 5-Year Plan and authorized the FY 2023 budget for this project.

Options and Alternatives:

1. Approve the contract award and go forward with the fabrication and delivery of the Art Glass, and the fabrication, delivery and installation of the Southside Grove Sculpture
2. Council may request changes to the contract which may delay implementation and inclusion of the artwork in the DCC project
3. Reject the contract award and give direction to staff. This will prevent these artworks from being implanted.

Background/History:

Purchasing staff published a Request for Statement of Qualifications (RSOQ) solicitation for Artistic Services for Downtown Connection Center Art in the Arizona Daily Sun on September 13 and September 20, 2020 and posted the solicitation to the City of Flagstaff's PlanetBids Website on September 8, 2020. On September 30, 2020, the City received 13 Statements of Qualifications (SOQs) from Artist firms. A seven- member Selection Committee reviewed and evaluated the statements. Based upon the numerical scoring of the written SOQs, the Selection Committee identified the most qualified Firm to perform the engineering professional services for the Project and recommended to commence negotiations for a scope and fee proposal to be provided by Haddad|Drugan LLC. Final scores of all firms are as follows:

Haddad Drugan, LLC 662
Social Space LLC 648
James Carpenter Design Associates Inc. 624
zischke studio 622
Willco Art and Design 620
Zokaites Sculpture LLC 602
Five Moores Enterprises 570
Summer Kitchen Studios 568
Mary Shindell 559
Hans van Meeuwen LLC 525
Brailsford Public Art 502
Four Lizard Studios LLC 463
Robin Wallenfang 427

Haddad|Drugan LLC demonstrated, a clear recognition of the knowledge and experience needed to represent the City’s vision in this undertaking, as well as understanding the schedule and collaboration requirements for completing this project.

City Council approved award of design services contract on December 1, 2020 with Haddad/Drugan LLC, the artist team of Laura Haddad and Tom Drugan. The artist team was charged to work with Mountain Line’s design team to identify and design multiple public art or beautification projects/elements that integrate with the new Downtown Connection Center project. The original contract of $25,000 took this design work to 60%, and a subsequent amendment in the amount of $22,000 is taking the Art Glass and Southside Grove sculpture art concepts to 100% of design.

The agenda and full Council package for the December 1, 2020 contract approval can be found here:
https://agenda.flagstaffaz.gov/agenda_publish.cfm?id=&mt=ALL&get_month=12&get_year=2020&dsp=agm&seq=5032&rev=1&ag=1147&ln=26891&nseq=5051&prev=1&pseq=5029&prev=1#ReturnTo26891

Best practices in the field of public art were utilized in all stages of design. Vested community members were on the selection panel. Prior to design commencement, a broad community survey was conducted for which approximately 70 responses were received, and a photo contest was run to provide images to inspire the artist team. Also prior to design commencement, the artist team met with a group of Southside residents and business owners on site, met with the City team for the Rio de Flag project, participated in a walking tour with the Historic Preservation Officer and administrator of the Southside Plan, did regional hiking, and went to Lowell Observatory among other cultural centers. The artist team then came up with a master plan of about fifteen (15) project ideas. Through vetting with the design team and Mountain Line’s Southside Stakeholder group, five (5) project ideas emerged. These five ideas were presented in public meetings with Mountain Line in the Fall of 2021 for feedback and all five went forward based on responses. Three (3) of these ideas will be developed by other artists. This artist team took two (2) ideas, Art Glass and the Southside Grove sculpture, and developed the concepts while working with the design team to integrate the art within the evolving design of the DDC. The developed concepts were presented for comment to the original selection panel members, the Southside Community Association, and Mountain Line’s Southside Stakeholder group and Boards in the Spring of 2022. The artist team made some modifications, and BPAC at its May 2022 meeting approved its recommendation to City Council for Council approval of the Art Glass, and provisionally recommended the Southside Grove sculpture with some changes. The artist team incorporated the direction and other community and upper management comments into the features of the sculpture, and at the November 2022 BPAC gave its full recommendation to Council to approve the Southside Grove sculpture. Staff sought the input of the Indigenous Commission and has recommendations from the Southside Community Association for cultural submissions for the project. Staff reviewed the concepts with Risk Management for safety. No changes were sought.

Staff presented the art concepts to Council in a work session on January 31, 2023

Community Involvement:

See **Background/History** above. Further vetting of the cultural and historical text in the Time Table element of the Southside Grove Sculpture with the Southside and Indigenous communities will occur in the upcoming year.

Attachments: Council Presentation
2023-116 Contract for DCC Two Pieces of Artwork



Artist Services Contract Approval Art Glass and Southside Grove Sculpture - Fabrication and Installation Downtown Connection Center (DCC)

Dave McIntire,

Community Investment Director

CITY OF FLAGSTAFF · ARIZONA · ESTABLISHED 1882

TEAM FLAGSTAFF

WE MAKE THE CITY BETTER

Downtown Connection Center (DCC) Art Concepts



Agenda

- **Budget and Funding**
  - Design Contracts
  - BBB Tax Revenue
  - Budget for Art Glass and Southside Grove Sculpture
- **Art Glass**
  - Location
  - Imagery
  - Light
- **Southside Grove Sculpture**
  - Phased Location
  - Trees
  - Time-Table

Design Contracts

- In December 2020, City Council approved Haddad/Drugan for a design services contract in the amount of $25,000 for the initial design-team work.

- A subsequent amendment in the amount of $22,000 is taking the Art Glass and Southside Grove sculpture art concepts to 100% of design.

Funding Source

- All funding for DCC projects from design through installation is from the dedicated Bed, Board & Beverage Funds, either Beautification or Arts & Sciences
- The funding for the fabrication and installation of the Art Glass and Southside Grove will be drawn from Beautification
- Support work by Mountain Line's contractor for the Art Glass and Southside Grove Sculpture will be in a separate agreement and will be drawn from Beautification
- Three other projects identified in the initial contract will be developed by other artists in subsequent contracts and will be drawn from Arts & Science

Funding Source

- All funding for DCC projects from design through installation is from the dedicated Bed, Board & Beverage Funds, either Beautification or Arts & Sciences
- The funding for the fabrication and installation of the Art Glass and Southside Grove will be drawn from Beautification
- Support work by Mountain Line's contractor for the Art Glass and Southside Grove Sculpture will be in a separate agreement and will be drawn from Beautification
- Three other projects identified in the initial contract will be developed by other artists in subsequent contracts and will be drawn from Arts & Science

Budget for Art Glass/Sculpture

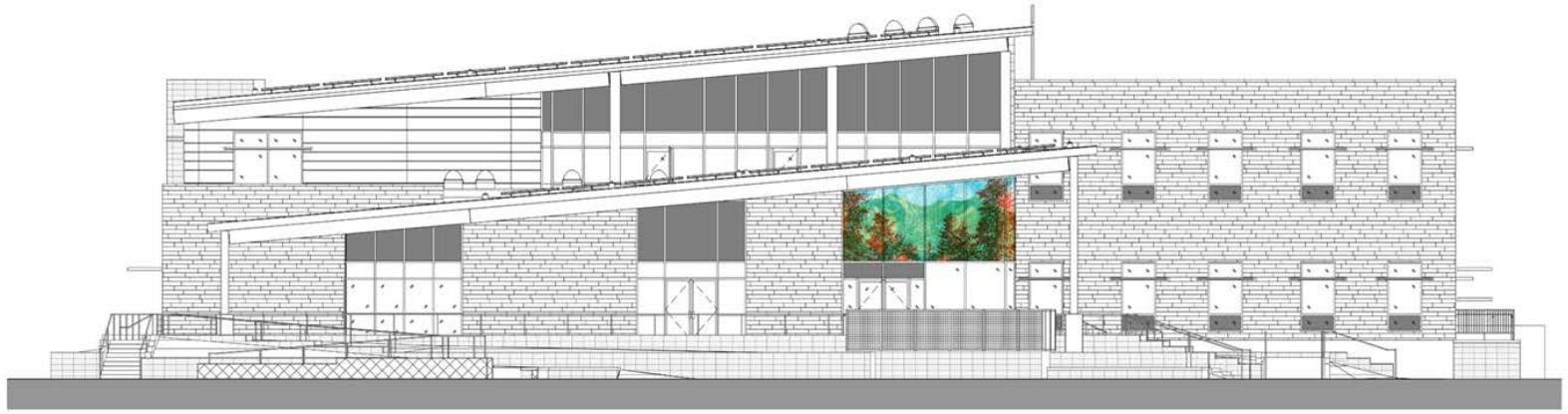
- **Art Glass: $121,296**
  - Includes 5% contingency
  - Artist fee with travel does not exceed 10%

- **Southside Grove Sculpture: $409,155**
  - Includes 5% contingency
  - Artist fee with travel approximately 7%

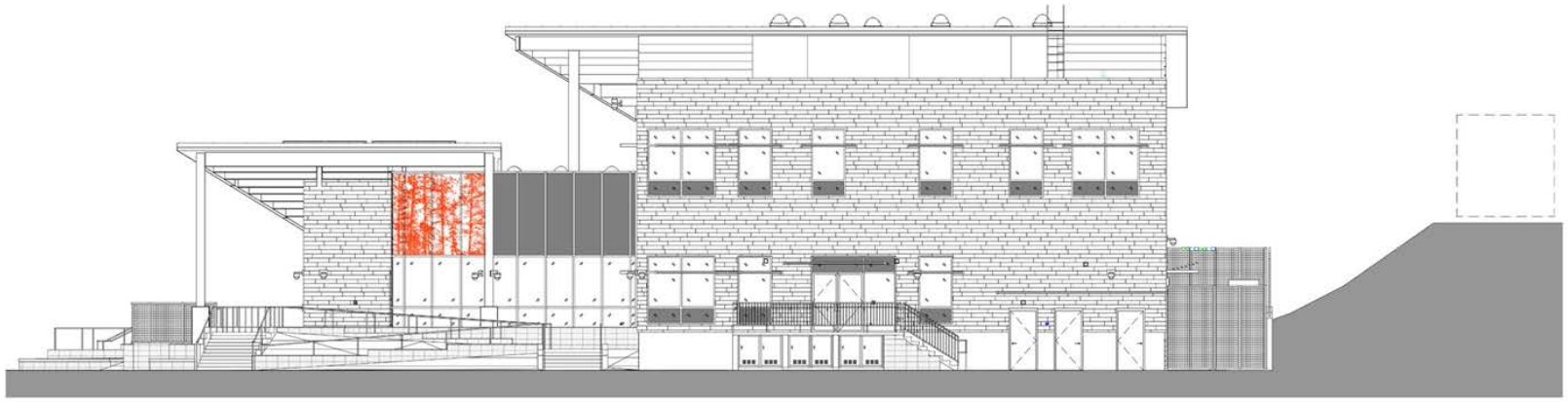
Art Glass



Art Glass

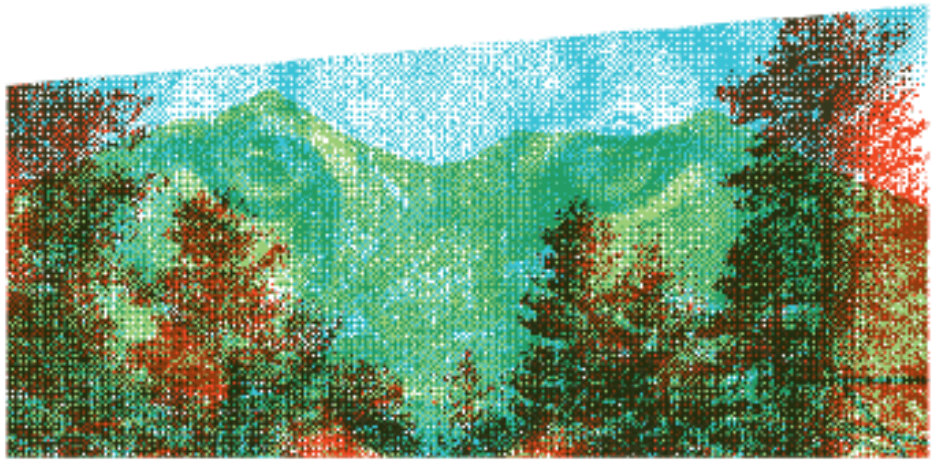


3 SOUTH ELEVATION
1/8" = 1'-0"

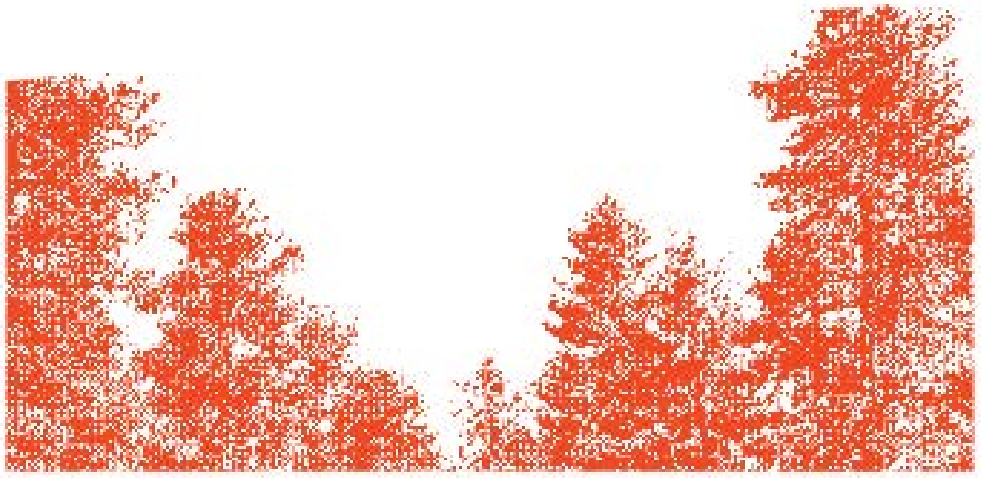


4 EAST ELEVATION
1/8" = 1'-0"

South Façade: Glass Imagery Overlaps 3 Elements in 3 Colors



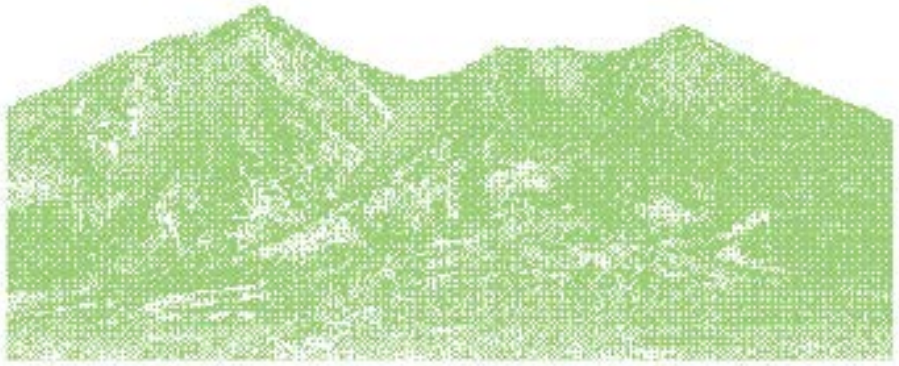
3 Images Overlaid



Ponderosa Pines



Mountain Lion

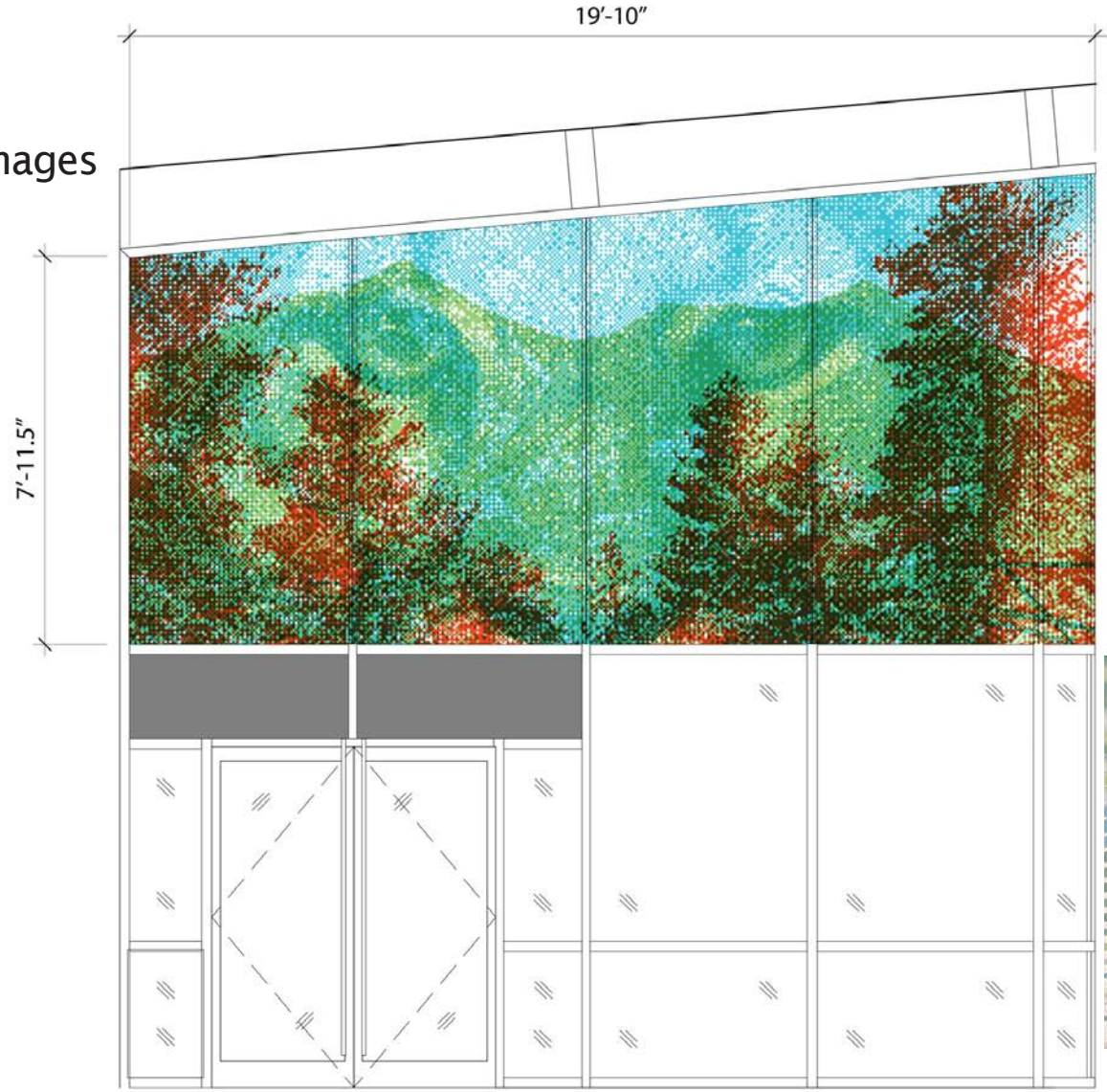


San Francisco Peaks

Art Glass

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South Art Glass — 3 Colors/Images



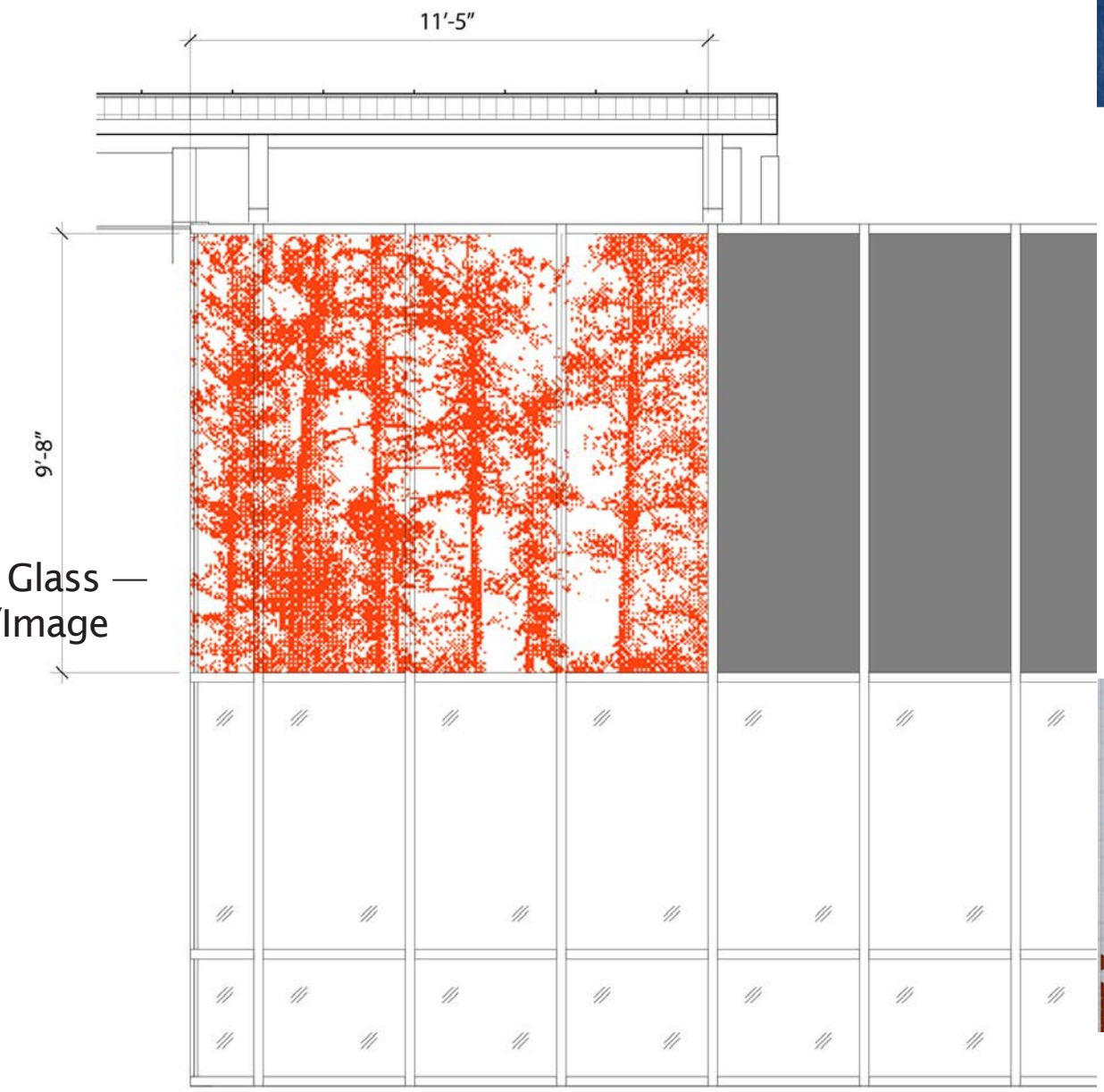
1 CW4 ELEVATION
1/2" = 1'-0"



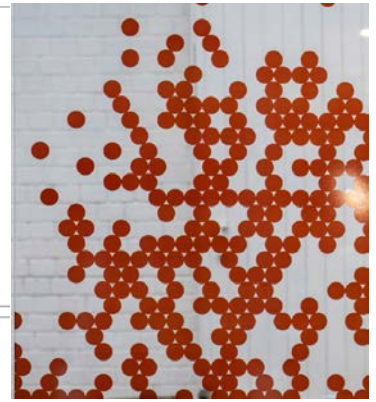
3-color glass sample

Art Glass

East Art Glass —
1 Color/Image



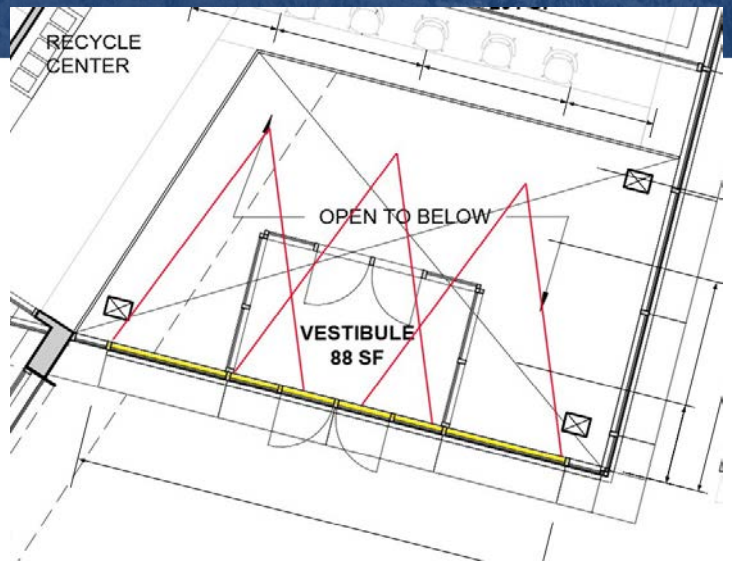
2 CW5 ELEVATION
1/2" = 1'-0"



1-color glass sample

Art Glass

Lighting Equipment



3 fixtures, configuration TBD with updated plan



Color Kinetics ColorBlast



Color Kinetics
Data Enabler Pro



Color Kinetics
iPlayer Controller



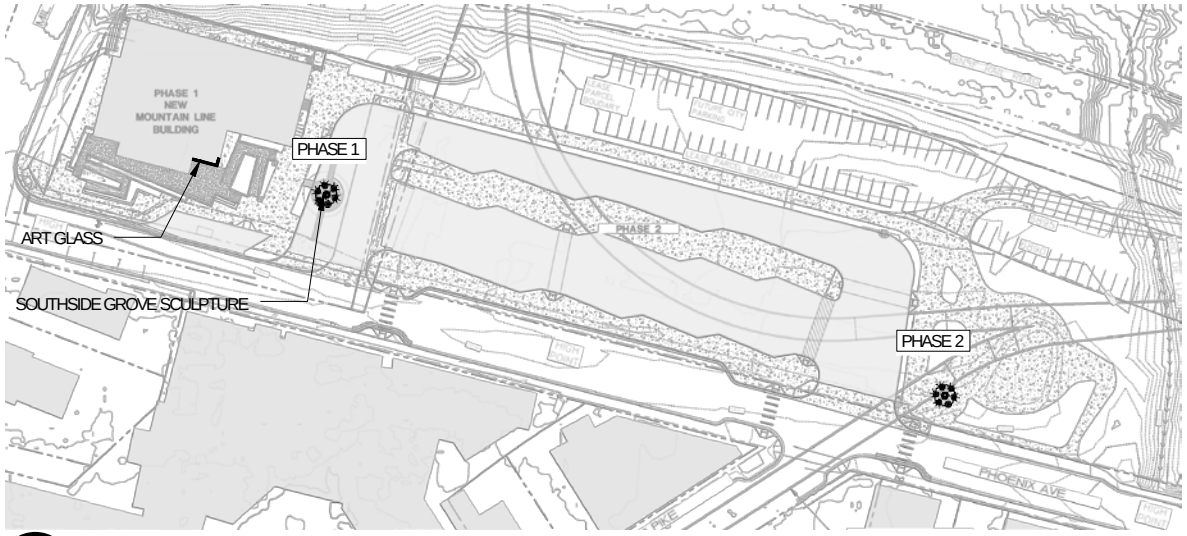
40-degree beam mock-up



light filling whole room

Southside Grove Sculpture

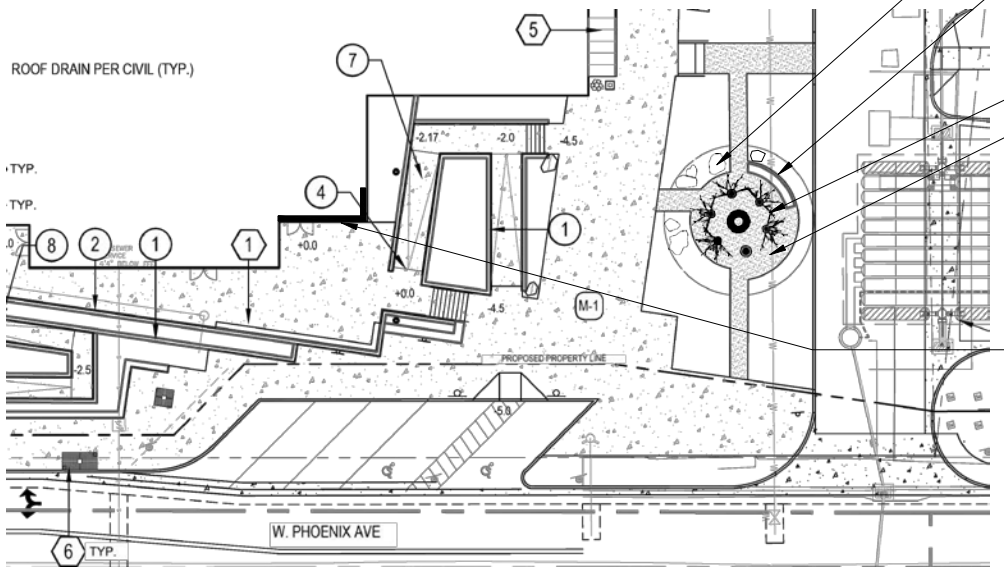




NOTE:
SCULPTURE WILL BE LOCATED IN DCC PHASE ONE PROJECT AT APPROXIMATE LOCATION SHOWN. SCULPTURE WILL BE MOVED TO DCC PHASE 2 LOCATION AT CIVIC SPACE AT A LATER DATE

1 ART LOCATION PLAN

SCALE: 1" = 100'-0"



BOULDERS (TYP.)

BENCH:
ROUGH & READY CURVED BENCH, WOOD SEAT TOP/CORTEN STEEL BASE BY STREETLIFE (HTTPS://WWW.STREETLIFE.NL), OR APPROVED EQUAL; OR DARK GRAY CONCRETE SEATWALL W/ LIGHT SANDBLAST AND HARDWOOD TOP

SOUTHSIDE GROVE SCULPTURE

STABILIZED $\frac{1}{4}$" MINUS DECOMPOSED GRANITE PAVING, COLOR: APACHE BROWN

INSULATED ART GLASS UNITS, TO BE PROVIDED BY HADDAD|DRUGAN TO OWNER, FOR INSTALLATION BY GC; ILLUMINATED FROM BEHIND BY RGB SPOTLIGHTS TO BE SPECIFIED BY HADDAD|DRUGAN AND PROCURED AND INSTALLED BY GC

N

2 PHASE 1 PLAN

SCALE: 1"=30'-0"

HADDAD
DRUGAN
315 28TH AVENUE S.
SEATTLE, WA 98144 USA
TEL: 206-621-7333
WWW.HADDAD-DRUGAN.COM

SOUTHSIDE GROVE

FLAGSTAFF, AZ

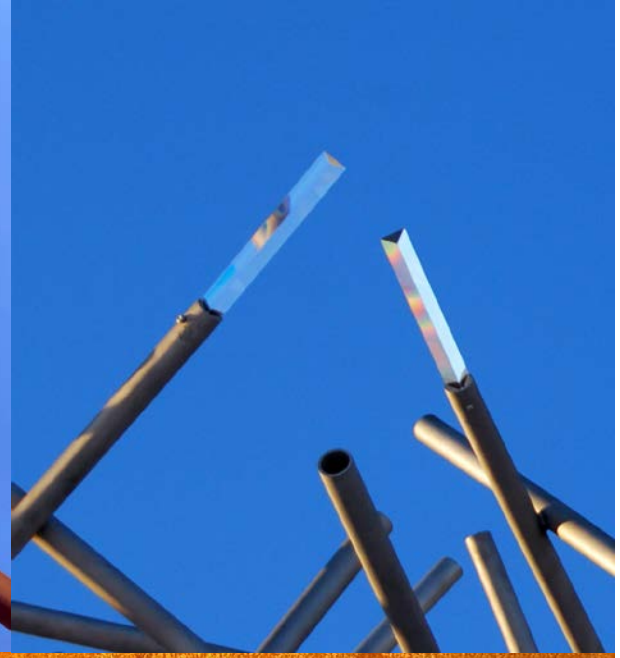
ART-0.1
ART LOCATION PLANS

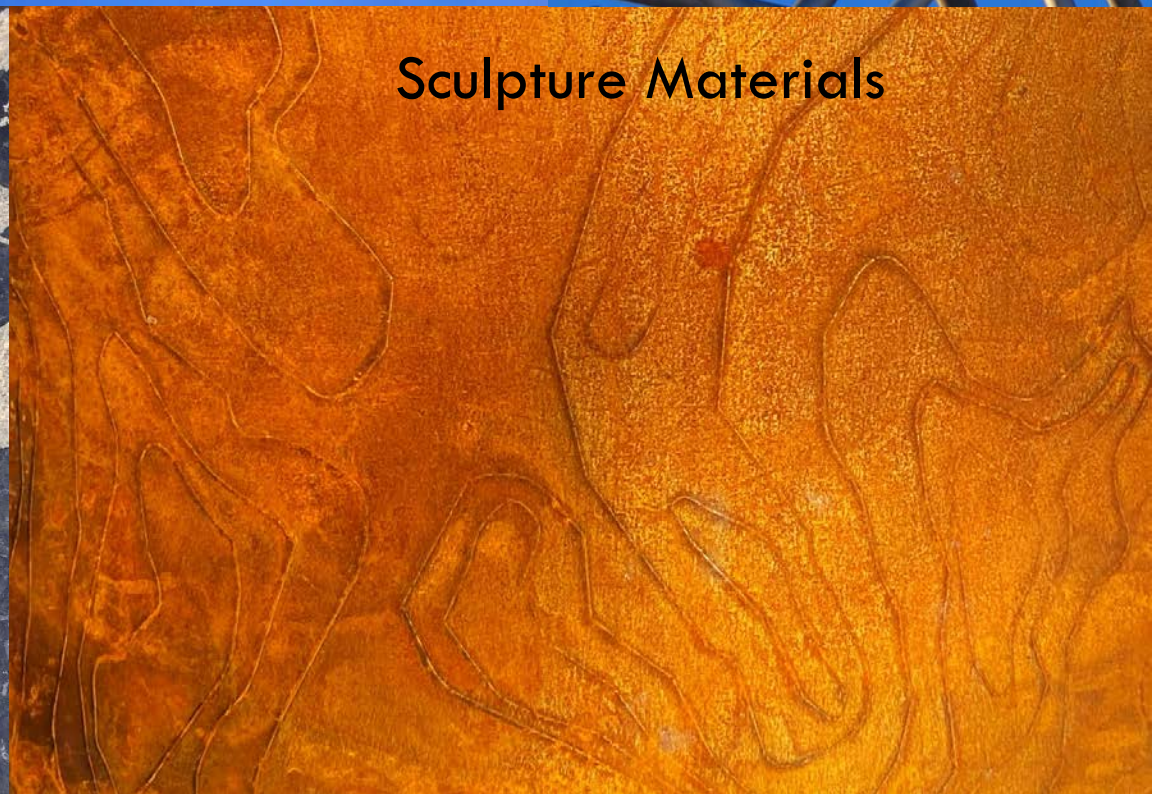
DECEMBER 16, 2022



- Six ponderosa pine and telescope inspired “trunks” made from weathered steel, positioned in a circle to form a grove and to reflect the strong circle of community that is the Southside
- Trunks are angled toward center 2.5° to enhance sense of enclosure and are approximately 20 feet high



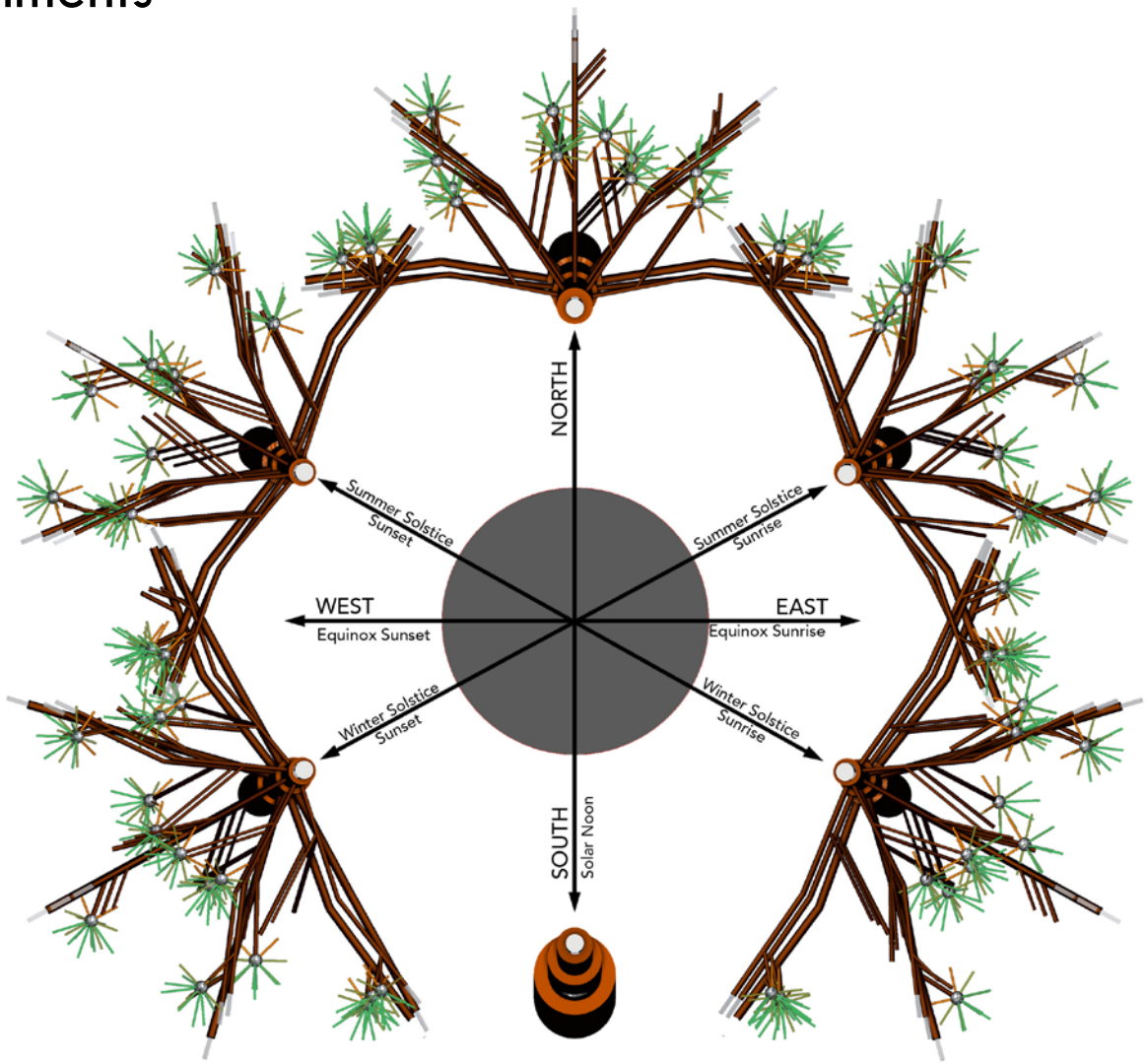




Sculpture Materials

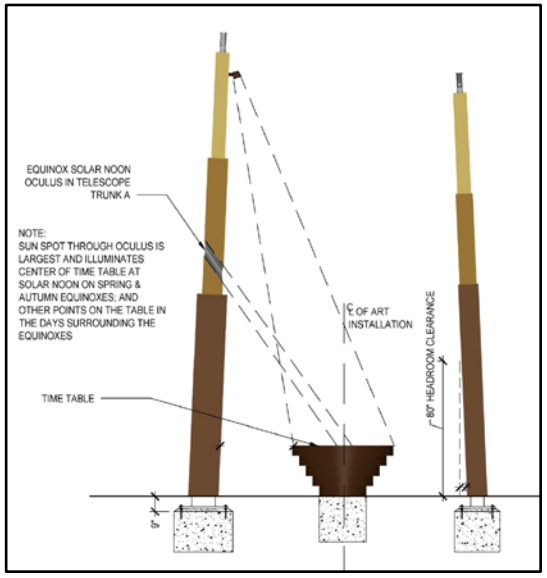
Sculpture Forms & Alignments





Plan View of Trunks and Branches with Solar Alignments

South Telescope Trunk — Equinox Sun Portal



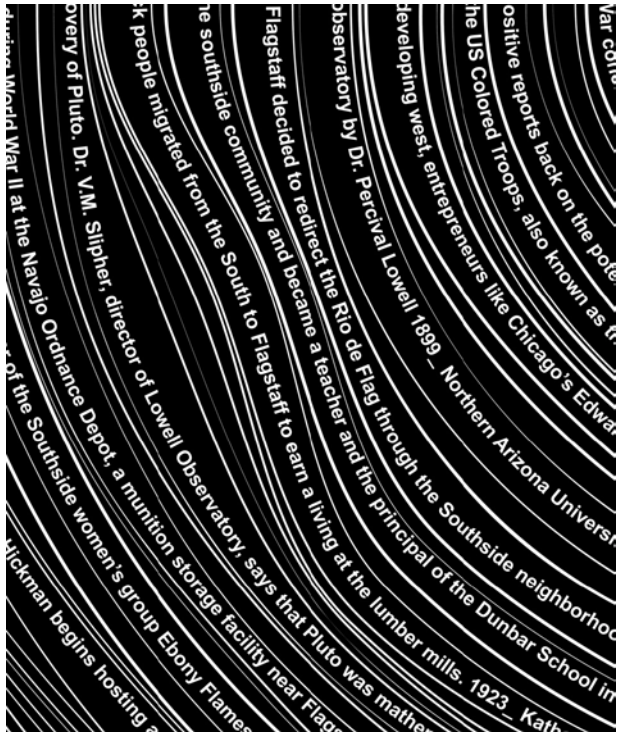
A stainless tube diagonally piercing the South Trunk aligns with the sun's position in the sky at noon on the Spring and Autumn Equinoxes.

On Equinox days, sun casting through this tube will form an ellipse of light in the middle of the central table.



Time-Table

Words describing Indigenous, Southside, Flagstaff, and Arizona history will be woven amongst tree ring lines to create a concentric timeline.







Time-Table Study Area



Time-Table History Excerpt Sample:

1899_ Northern Arizona Normal School, later renamed Northern Arizona University, founded (university started with a total of twenty-three students and two instructors)

1900s_City of Flagstaff redirects the Rio de Flag through the Southside neighborhood

1901_Mrs. Cleo Wilson Murdoch born April 9th

1901_Northern Arizona Normal School graduates four women (It's first graduating class of four women received their teaching credentials.)

1903 _ Rio de Flag Floods (major flood)

1909_Legal segregation begins in Flagstaff (Students of color are taught in separate classrooms at Emerson School.)

1912_ Arizona gains statehood (Febuary 14th)

1915_Flagstaff Public Library was founded by the Women's Club

1916 The Wong family becomes Flagstaff's first permanent Chinese settlers. (The Wong's immigrate and move to the Southside, becoming Flagstaff's first permanent Chinese settlers and operating American Laundry on Phoenix Avenue for many years)

1917_Wilson Riles born June 27th (Riles was one of the most distinguished Northern Arizona University graduates of his time. He became a prominent figure in the southside community and became a teacher and the principal of the Dunbar School in the late 40s.)

1919 Grand Canyon National Park Established

1920s_Many African Americans Migrated from the South to Flagstaff to earn a living at the lumber mills.

1923_Katherine 'Mother Hickman' Born (Born in Forest Hill, La. Hickman was an educator and activist dedicated to the church and community in Southside.)

1925_Work began on Our Lady of Guadalupe Church –

1926_Route 66 Established (Over 2,400 miles of road running from Chicago to Santa Monica and through Flagstaff, was established.)

1926_ Our Lady of Guadalupe Church First Mass (On December 12th, the Feast of Guadalupe – which is how the name was chosen, the first mass was held. The project ran into multiple financial issues, causing the construction process to take a long time. The future parishioners rallied around the project and leveraged their collective time, money, and resources to see the project to completion. With time OLG would be frequented by Flagstaff's Black Catholic community as well.)

1926_Tourst Home, a Basque boarding house built (Isabelle Garcia and her son Jesus built the Tourist Home to serve as a boarding house for their Basque community.

1927_Dunbar School, Flagstaff's first African American school Opens (Flagstaff's first formal segregated school (grades 1-8), the Dunbar School opened in 1927 and operated until 1952 when Flagstaff schools became desegregated. Named for Paul Lawrence Dunbar, a famed Black poet, essayist, and playwright. Born to an escaped slave and went on to publish a

Perimeter “bark” texture will be hand carved:





Treelines and text will be sandblasted:





Chimes



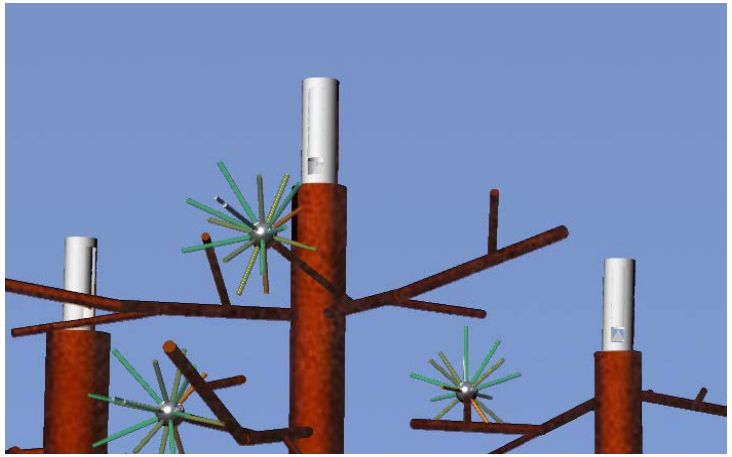
polished stainless steel cap and bell



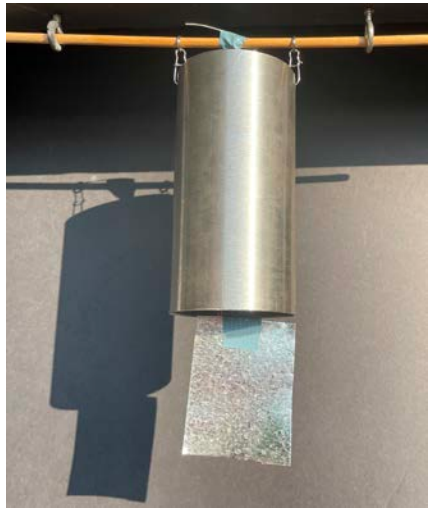
Exterior View
3”-diameter bell housed inside a 4”-diameter cap with vertical slot for wind flow



Sectional View



Chimes ae incorporated into caps of all 6 trunks?
Or maybe just the South Trunk

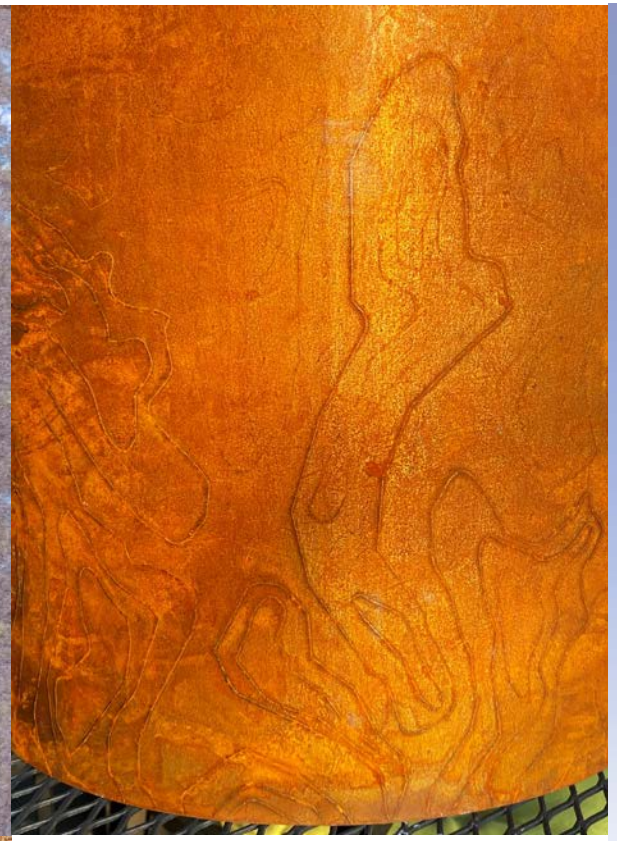


Mock-up

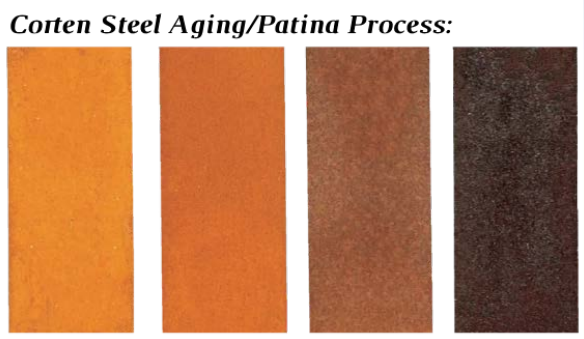
Bark Texture

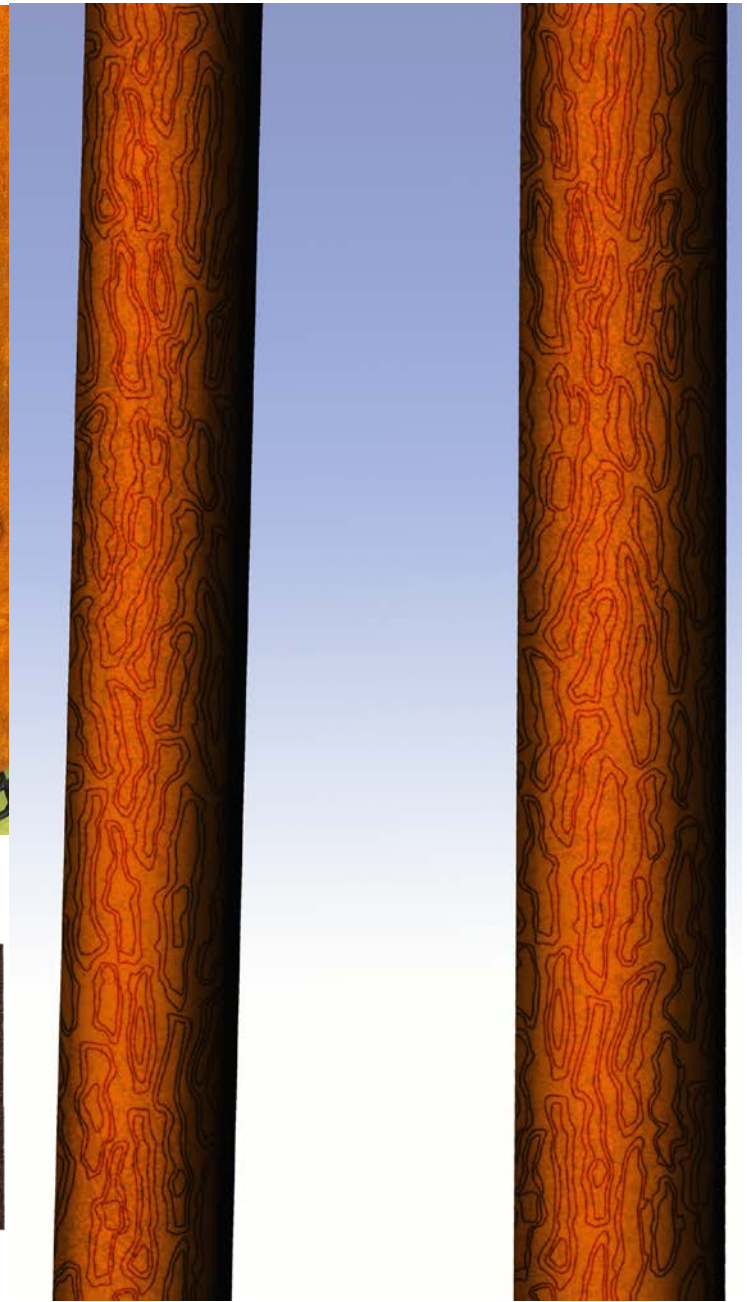
Mock-up of etched bark lines on weathering steel sample, with rust forming at etched lines

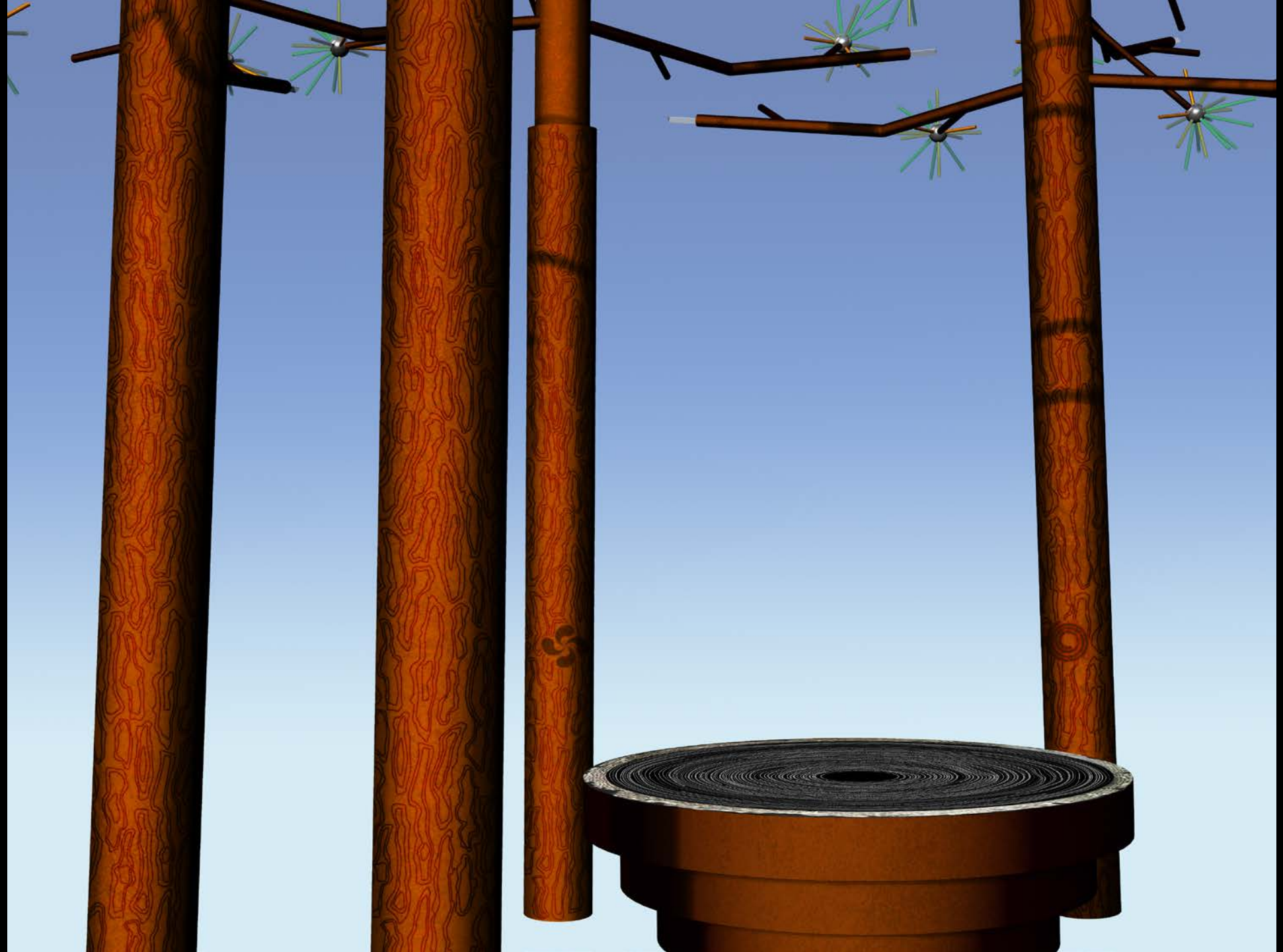








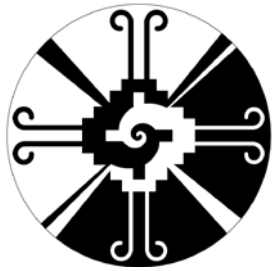




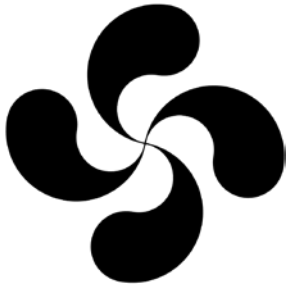
Community Symbols



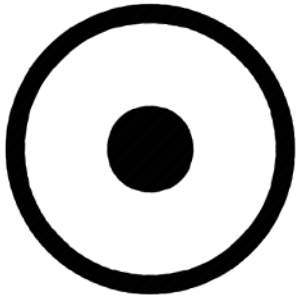
Endless Knot (Asian)



Hunab Ku Symbol (Latinx/Hispanic)



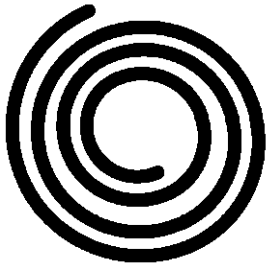
Lauburu (Basque)



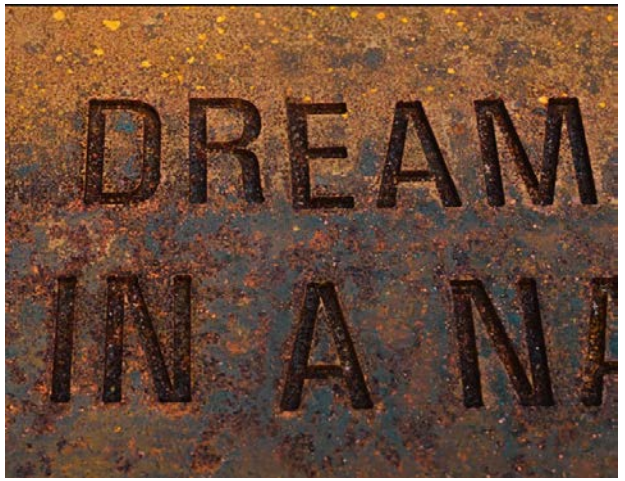
Sun (Astronomical)



Nkonsonkonson (West African)



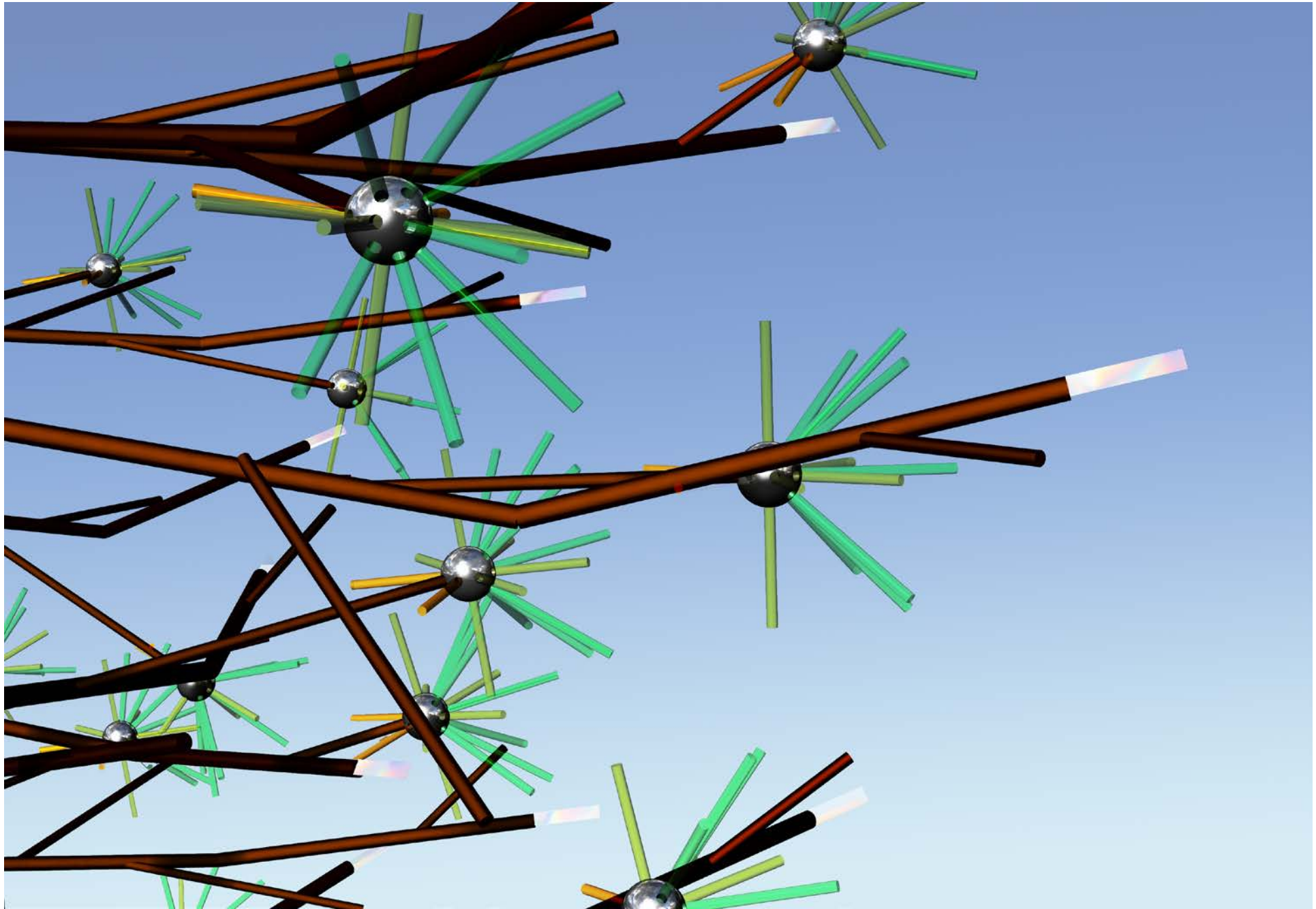
Spiral (Indigenous)



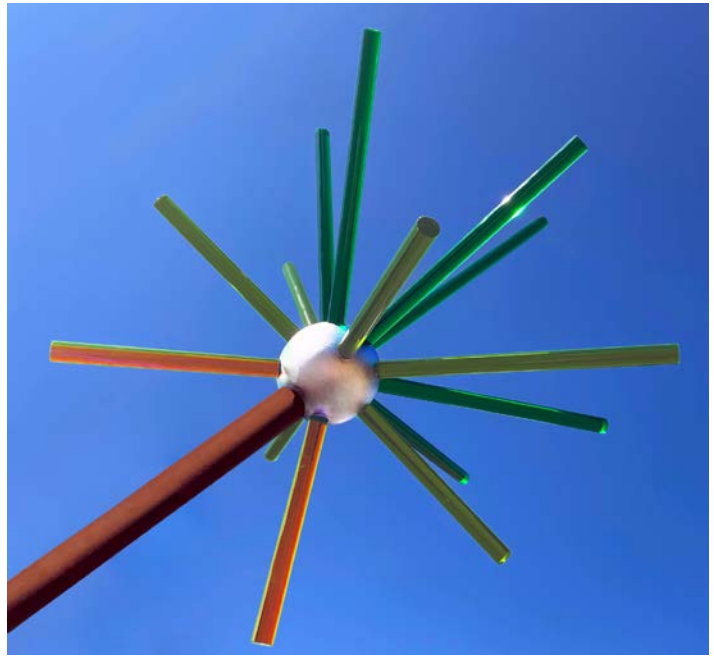
Symbol to be engraved in cladding



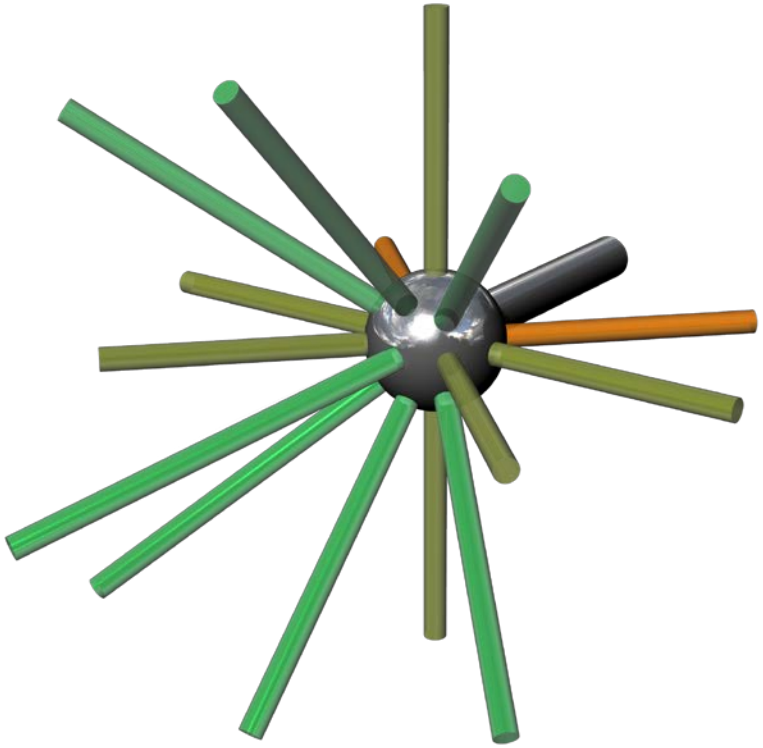
Needle Clusters & Prisms



Needle Clusters

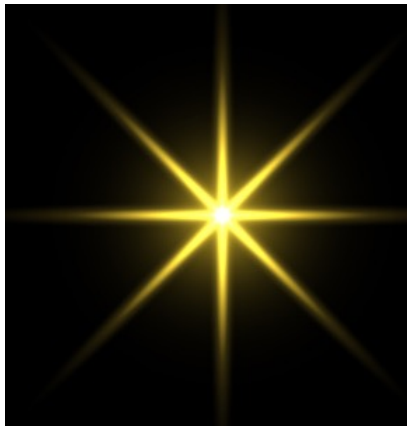






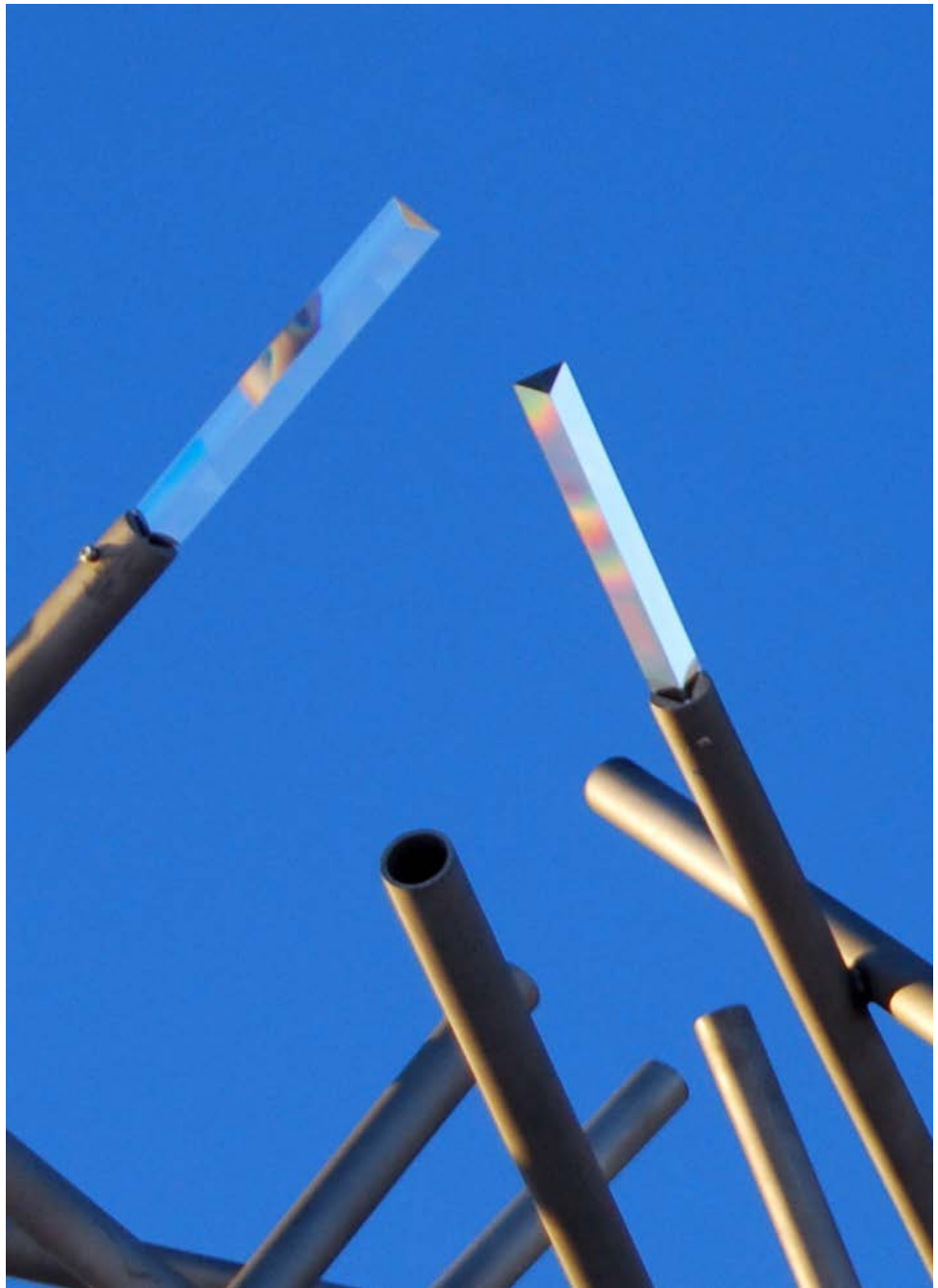


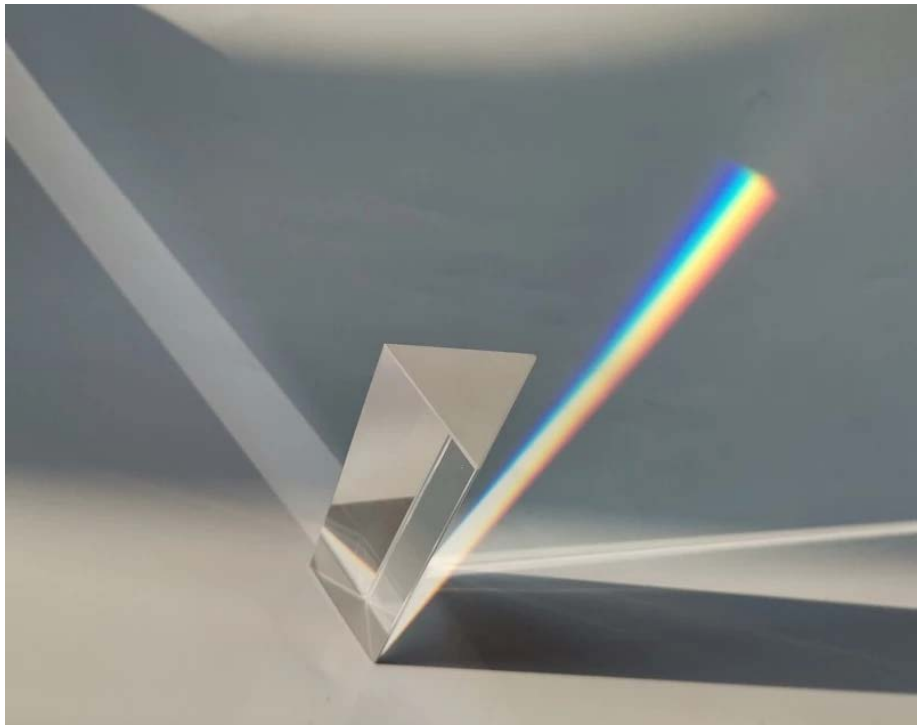
- Cast colored polycarbonate rods with mirror-finish spheres
- Inspired by pine needle and star formations





Prisms





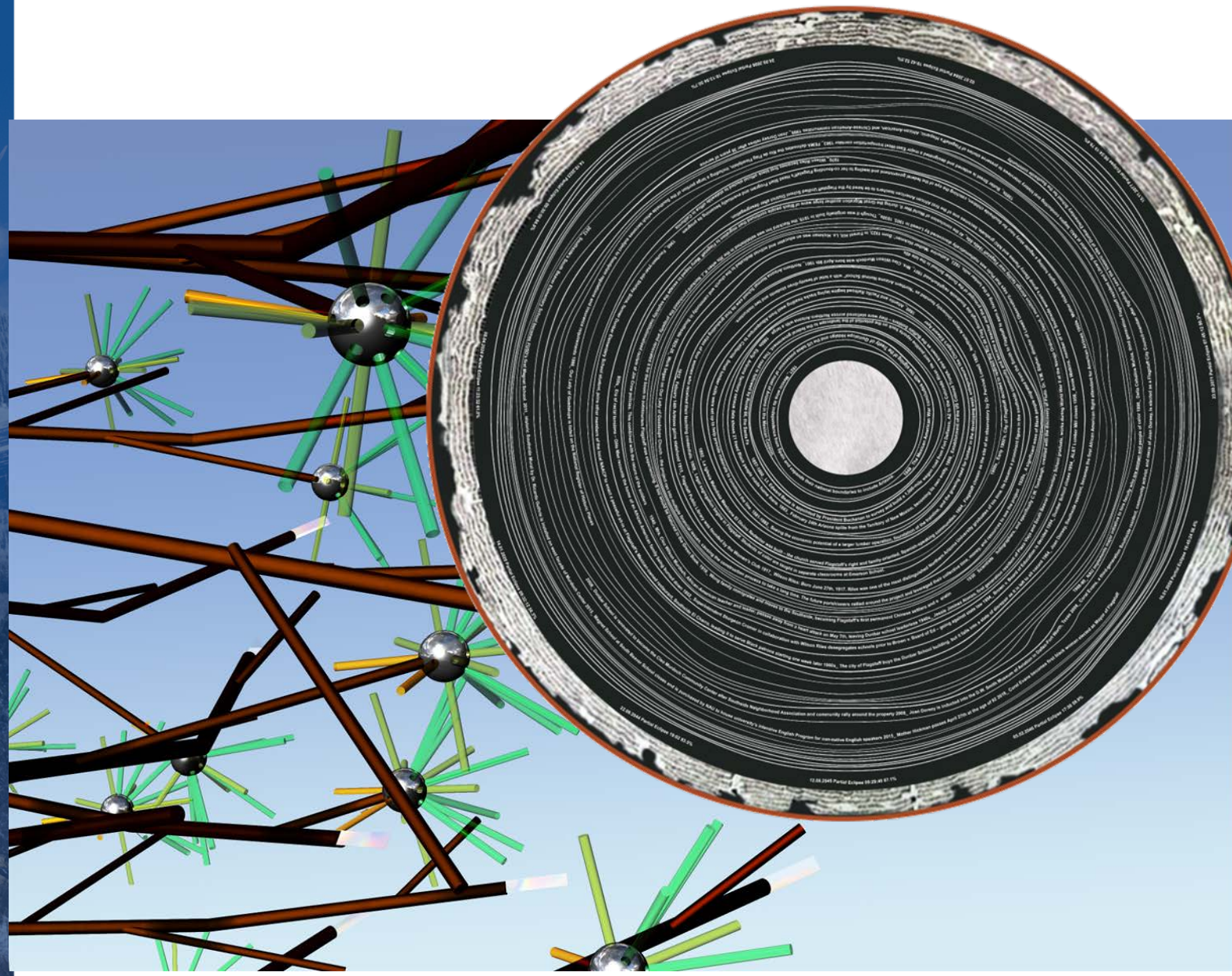


Southside Grove – Summary of Features

- Six ponderosa pine and telescope inspired “trunks” made from weathered steel, positioned in a circle to form a grove and to reflect the strong circle of community that is the Southside
- Trunks are angled toward center 2.5° to enhance sense of enclosure and are approximately 20 feet high
- All of the trunks have different cultural symbols etched into each representing important cultures that have come together as community in Flagstaff;
- Five of the trunks are etched with a bark texture and have “branches” that terminate in prisms to soften the ends cast iridescent effects with star clusters of luminous green needles that glow in the sunlight;
- Branches vary in length, are smaller in diameter, and are staggered and twisted on tree trunks, to elicit a organic feel
- The grove is aligned to mark the Spring and Autumn Equinoxes at sunrise and sunset and the largest trunk positioned South more strongly references a telescope and works as a sun portal casting a beam of light at noon on the summer solstice onto a “Time-Table” located at the center of the grove
- The top of the south trunk also includes a wind activated bell-like feature that creates a chime-like sound when windy
- In the center of the grove, a circular granite “Time-Table” is etched with tree rings that contain significant natural and cultural events in astronomy, of Indigenous peoples, of the region, and of the Southside.



Consideration and Approval of Artist Services Contract with Haddad/Drugan LLC for $530,451 for two artworks for the Downtown Connection Center: Art Glass Fabrication & Delivery; and Southside Grove Sculpture Fabrication, Delivery & Installation.



TEAM FLAGSTAFF
WE MAKE THE CITY BETTER

CONTRACT FOR PURCHASE OF SERVICES

Contract No. 2023-116

This Contract is entered into this day of_____, 23 by and between the City of Flagstaff, a political subdivision of the State of Arizona ("City"), and Haddad Drugan LLC, a Washington State Limited Liability Company ("Contractor" or "Artist').

WHEREAS, City issued Request for Statement of Qualifications #2021-26 for Artistic Services for Downtown Connection Center, and Contractor was selected to provide artistic services through a competitive process;

WHEREAS, City and Contractor anticipated that the artistic services would be provided over a period of time, and pursuant to a series of mutually satisfactory agreements;

WHEREAS, Contractor completed conceptual design in contract City of Flagstaff Contract No. TER-2021-054-AG1 and completed the design phase of the Art Glass and the Southside Grove Sculpture in contract amendment TER-2021-054-AG1-AM1, City and Contractor seek to enter into this contract for artistic services through fabrication and delivery of Art Glass and through installation of the Southside Grove Sculpture;

WHEREAS, the City desires to receive and Contractor is able to provide materials and/or services; and

NOW THEREFORE, in consideration for the mutual promises contained herein, the City and Contractor (the "parties") agree as follows:

1. Scope of Work: Contractor shall provide the services generally described as follows:

Two Art Works for the Downtown Connection Center: Art Glass Fabrication & Delivery; and Southside Grove Sculpture Fabrication, Delivery & Installation

and as more specifically described in the Scope of Work attached hereto as ***Exhibit A***.

2. Compensation: In consideration for the Contractor's satisfactory performance, City shall make payment to the Contractor not to exceed Five Hundred and Thirty Thousand Four Hundred and Fifty-One Dollars and zero cents ($530,451). Payment Schedule is included in the Scope of Work attached hereto as ***Exhibit A***. Any price adjustments must be approved by mutual written consent of the parties. The City Manager or his/her designee (the Purchasing Director) may approve an adjustment if the annual contract price increase is less than $50,000; otherwise, City Council approval is required.

3. Standard Terms and Conditions: The City of Flagstaff Standard Terms and Conditions, attached hereto as ***Exhibit B*** are hereby incorporated into this Contract by reference and shall apply to performance of this Contract, except to the extent modified in *Exhibit A.*

4. City Representative: The City Representative is Jana Weldon, Beautification, Arts & Sciences Project Administrator, or his/her designee. All communications to the City shall be through the City Representative. City Representative is responsible for bringing any request for a contract amendment or price adjustment to the attention of the City Buyer.

5. City Cooperation: The City will cooperate with Contractor by placing at its disposal all available information concerning the City, City property, or the City project reasonably necessary for

Contractor's performance of this Contract.

6. Contract Term: The Contract shall be effective as of the date signed by both parties and shall continue for a two (2) year term, unless sooner terminated. The services shall be completed per the schedule set forth in *Exhibit A* and any amendments.

7. Renewal: This Contract may be renewed for an additional term by mutual written consent of the parties. The renewal must be in writing signed by both parties.

8. Termination: This Contract may be terminated pursuant to the Standard Terms and Conditions attached hereto.

9. City Ownership of Document and Data: Any original documents prepared or collected by Contractor in performance of this Contract such as models, samples, reports, test plans, survey results, graphics, tables, charts, plans, maps, specifications, surveys, computations and other data shall be the property of City ("City's work product"); however, at Contractor's election Contractor may retain any original so long as Contractor provides City with an agreed upon duplicate or copy.

10. Intellectual Property Rights Warranty; City Ownership and Use of Artwork; Artist Ownership of Artwork Copyright and Commercial Use. The rights of the parties are set forth in *Exhibit A.*

11. Delivery of Document and Data: Upon termination of this Contract in whole or part, or upon expiration if not previously terminated, upon request Contractor shall immediately deliver to City copies of all of City's work product that have not previously been delivered and any other documents and data accumulated by Contractor in performance of this Contract, whether complete or in process.

12. Insurance: Contractor shall meet insurance requirements of the City, set forth in *Exhibit C.*

13. Notice: Any formal notice concerning this Contract shall be in writing and sent by certified mail and email as follows:

To the City:

Emily Markel
Acting Purchasing Manager
City of Flagstaff
211 W. Aspen Avenue
Flagstaff, Arizona 86001
Emily.Markel@flagstaffaz.gov

Jana Weldon
Beautification, Arts & Sciences
Program Manager
211 W. Aspen Ave
Flagstaff, AZ 86001
Jana.Weldon@flagstaffaz.gov

To Contractor:

Laura Haddad
Haddad Drugan LLC
315 28th Avenue S.
Seattle, WA 98144
Laura@Haddad-Drugan.com

14. Authority. Each party warrants that it has authority to enter into this Contract and perform its obligations hereunder, and that it has taken all actions necessary to enter into this Contract.

CONTRACTOR

Haddad Drugan, LLC

_____
Laura Haddad, Authorized Representative

CITY OF FLAGSTAFF

_____

Becky Daggett, Mayor

Attest:

_____
City Clerk

Approved as to form:

_____
City Attorney's Office

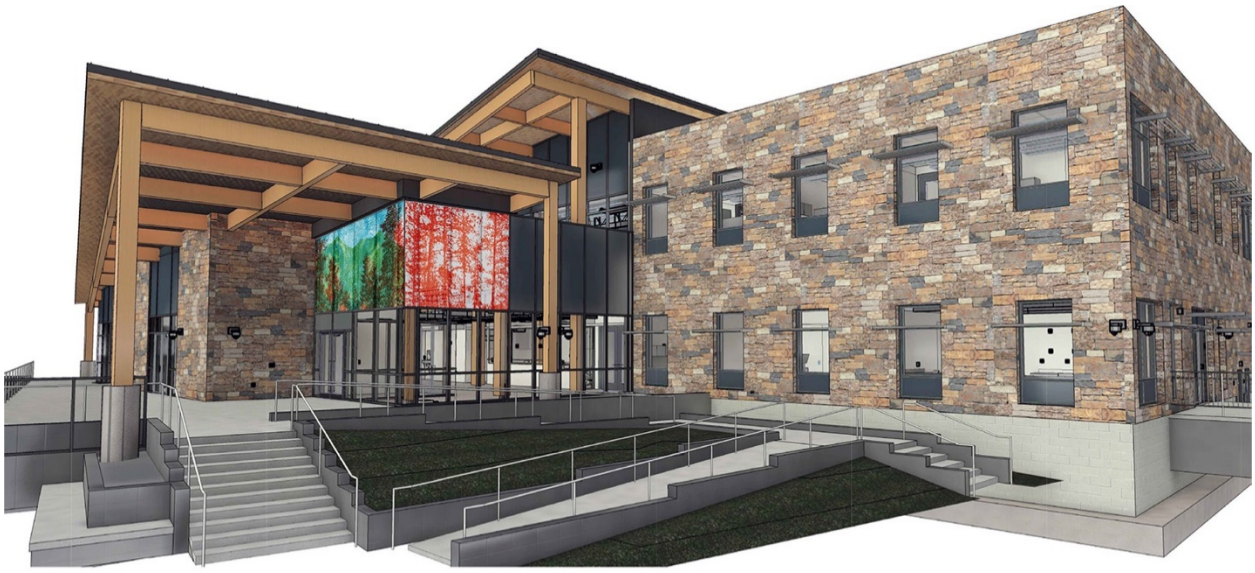
EXHIBIT A

SCOPE OF WORK ART

I. ART GLASS

A. SITE:
The City of Flagstaff is designing art and beautification projects at the New Mountain Line Downtown Connection Center (DCC), an expansion of the existing transit hub on Phoenix Ave, between Milton St and Beaver St, Flagstaff, AZ 86001 ("the Site").

B. ARTWORK DESCRIPTION:
Art Glass will be integrated into the main entry of the new DCC building. The architect and the artist team worked diligently to align the glass mullions and support features so that the art glass and architectural features are complimentarily enhancing each other.



1 GLASS ART PERSPECTIVE
SCALE: NTS

A multi-color section of art glass, composed of five glazing units, is located on the south façade over the front entry to the building, facing Phoenix Avenue. Another section of art glass, composed of four glazing units but of a single color, is located on the east façade facing the future bus bays and civic space. Drawing from Flagstaff's natural beauty and elements of the Mountain Line logo and identity, the artwork is contextual as well as colorful. At night, color-changing RGB floodlights mounted to walls inside the building will backlight the art , projecting changing colors that alter the appearance of the imagery on the glass, making images dynamically emerge and recede from view.

The artistic design will be translated to glass with screen-printed enamels. The applied colors will be kiln-fired to the glass to form a permanent bond with the glass. After all colors have been individually fired, the float glass will be thermally toughened to form safety glass (according to DIN

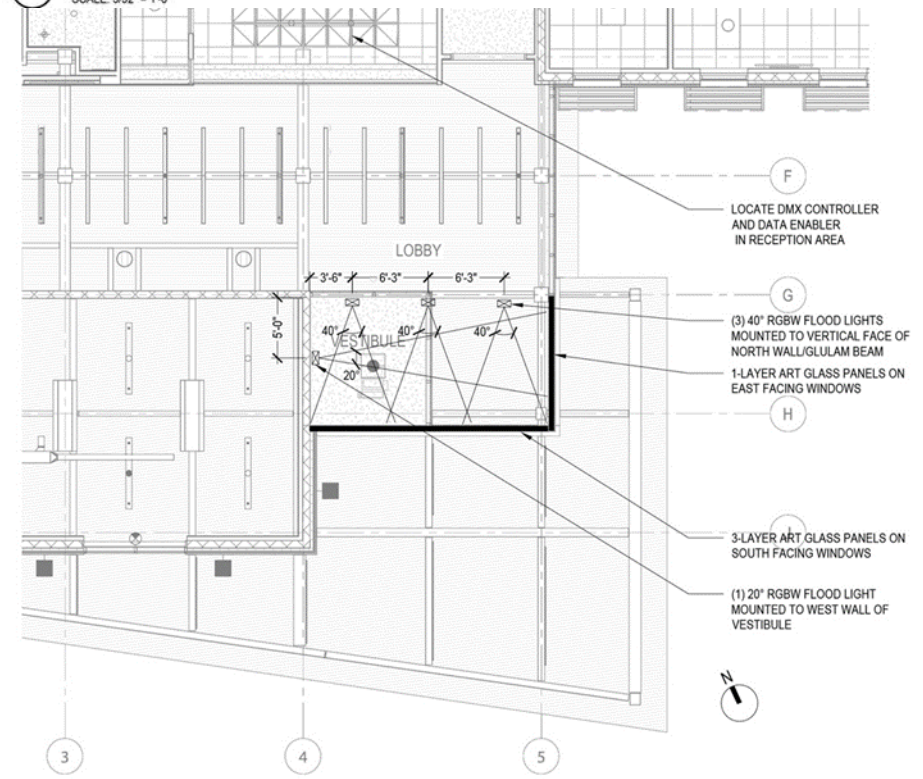
12150-1) and worked into insulated glass units following the architect's given specifications. The overall artwork will have an approximate area of 285.5 square feet.



1 SOUTH ELEVATION
SCALE: 3/32" = 1'-0"



2 EAST ELEVATION
SCALE: 3/32" = 1'-0"



1 LIGHT FIXTURE LOCATION PLAN
SCALE: 1/8" = 1'-0"

90% Fabrication Documents are included in Attachment 1. Final Fabrication Documents are subject to approval of the City of Flagstaff, and a copy of the final documents will be submitted for the Contract file. Services will be performed per the Final Fabrication Documents.

C. ARTWORK PROCUREMENT:
The Artist will deliver to the Site:

- Insulated art glass units, per specifications and sizes dictated by Mountain Line's DCC project team and included in the final Fabrication Documents.
- Electrical equipment required for the art installation, also per the final Fabrication Documents.

Artist Exclusion: Installation of the art glass units and art-related electrical equipment will be installed by Mountain Line's DCC Project General Contractor as part of a separate agreement with the City, with oversight by the Artist. Installation is anticipated to occur in Summer 2024.

D. TASKS

1. Start-up and Shop Drawings:
    - Enter into subcontract with art glass fabricator (Glasmalerei Peters), which shall incorporate the final Fabrication Documents.
    - Create detailed graphics suitable for screen printing the design onto glass (by Artist)
    - Receive final dimensions of art glass units (by General Contractor)
    - Adjust artwork graphics with final glass dimensions; provide digital files to art glass fabricator for production (by Artist)
    - Deliverable: PDF files of detailed artwork graphics for review by City

2. Art Glass Fabrication (by Artist's subcontractor, Glasmalerei Peters), which shall incorporate the final Fabrication Documents:
    - Apply artwork to float glass (by Peters)
    - Assemble art glass into insulated glass units (by Peters)
    - Review artwork fabrication in process to ensure artistic intent is met (by Artist)
    - Deliverable: Photographs of art glass fabrication in process

3. Art Glass Installation:
    - Coordinate art installation schedule and details with Project Team (by Artist)
    - Pack, crate and ship art glass units to Site for receipt by General Contractor (by Peters)
    - Oversee installation of art glass units (by General Contractor, with Artist review)
    - Deliverable: Art glass units (for installation by General Contractor)

4. Electrical Equipment Installation:
    - Procure and ship electrical equipment to Site for receipt by General Contractor (by Artist)
    - Review installation of electrical equipment (by General Contractor, with Artist review)
    - Deliverable: Electrical equipment (for installation by General Contractor)

5. Electrical Equipment Start-up Services:
    - Design light shows for color-changing effects (by Artist)

- Address light fixtures and input light show programs (by Programmer TBD)
- On-site review and adjustment of light shows over 1-2 nights (by Artist, Programmer, and City)

6. Project Close-Out:
   - Produce and deliver maintenance record, including light show descriptions (by Artist)
   - Provide plaque information (by Artist and City)
   - Provide day and night photographs of artwork (by Artist)
   - Participate in ribbon-cutting or other opening event (by Artist)
   - Deliverables: Maintenance record, plaque information, photographs

Exclusions: Task includes ancillary work necessary to complete the work listed as Artist's responsibility, but Artist is not responsible for work that is not listed.

E. PAYMENT SCHEDULE WITH BUDGET:

1. Payment 1 - **(50%)** – Shall be paid upon execution of the contract, for procurement of materials and equipment
2. Payment 2 **(40%)** – Shall be paid upon receipt of art glass units at site
3. Payment 3 **(10%)** – Shall be paid upon completion of Project Close-out; delay of project ribbon cutting shall not delay payment of artist upon City's receipt of Deliverables.

TOTAL PAYMENT AMOUNT: $121,296.

Flagstaff DCC Phase 1 Art Budget — Art Glass

02/08/2023 FINAL DESIGN

1. MATERIALS, EQUIPMENT, & LABOR

1.01 Production Graphics	1 l.s.	$5,000 /l.s.	$5,000	*Haddad Drugan subcontractor; layout of dots and graphic files for glass production*
1.02 Glass Samples	1 l.s.	$1,260 /l.s.	$1,260	*Peters Studio 1/27/23 quote 23-00-033; two samples printed and fired with 3 colors*
1.03 South Art Glass Fabrication (CW 4)	175 s.f.	$285 /s.f.	$49,930	*Peters Studio 1/27/23 quote 23-00-033; 3-color screen-print assembled into 5 insulated glass units*
1.04 East Art Glass Fabrication (CW 5)	110 s.f.	$225 /s.f.	$24,830	*Peters Studio 1/27/23 quote 23-00-033; 1-color screen-print assembled into 4 insulated glass units*
1.05 Glass Packing and Shipping	1 l.s.	$5,000 /l.s.	$5,000	*Peters Studio 1/27/23 quote 23-00-033; crating, ocean shipping, customs*
1.06 RGB LED Floodlights (4) + Controls	1 l.s.	$12,500 /l.s.	$12,500	*Stoneway Electric 2/1/23 Quote; (4) RGB fixtures, (1) power/data supplier, (1) DMX controller*
1.07 Shipping Lights to Flagstaff	1 l.s.	$500 /l.s.	$500	*Shipping costs to send electrcial equipment from Seattle to Flagstaff*
1.08 Programming Lights	1 l.s.	$4,000 /l.s.	$4,000	*Programmer TBD; 2 days @ $1,500 each + $1,000 travel*
Subtotal—MATERIALS, EQUIPMENT, & LABOR			**$103,020**	

2. ARTIST FEES & EXPENSES

2.01 Artist Fee - Production Oversight	1 l.s.	$7,500 /l.s.	$7,500	*Haddad Drugan: oversight of fabrication and installation, contractor coordination, pm*
2.02 Travel Expenses	2 ea	$2,000 /ea	$4,000	*assume 2 trips: 1. glass installation 2. lighting programming*
2.03 Studio Expenses – Production	1 l.s.	$1,000 /l.s.	$1,000	*Washington State B&O taxes; insurance & overhead*
Subtotal—FEES & EXPENSES			**$12,500**	

SUBTOTAL	**$115,520**	*Materials, Equipment, Labor, Fees, Expenses*
CONTINGENCY	**$5,776**	*5%*
GRAND TOTAL	**$121,296**	

F. NOTICE AND CORRECTION OF DEFICIENCIES:

If at any time the City determines that the Artist's services do not conform to the scope of services

under this Agreement, the City reserves the right to notify the Contractor in writing of the deficiencies and that the City intends to withhold the next payment within 30 days of the determination, and the City may issue a stop work order. Contractor will have 30 days to cure the City's objections and will notify the City in writing of completion of the cure. If Contractor disputes the City's determination, within 15 days of Contractor's receipt of City's notice, Contractor shall notify the City in writing. In such event, the City shall make reasonable efforts to resolve the dispute however, final determination as to whether Contractor has complied with the terms of this Agreement will remain with the City.

G. PERMITS AND LICENSES

Artist will obtain a business license from the City pursuant to Flagstaff City Code, Chapter 3-01. Artist will be responsible for obtaining any transaction privilege tax license if required by the Arizona Department of Revenue, www.azdor.gov. Mountain Line will be responsible for obtaining any necessary permits from the City Community Development for the Downtown Connection Center project, which will incorporate the Glass Artwork under this Contract.

H. INTELLECTUAL PROPERTY RIGHTS WARRANTY:

Artist hereby warrants that its designs provided, and that the purchase and use of the Artwork (designs) pursuant to this Agreement does not infringe on any patent, trademark or copyright or other proprietary rights of any third parties.

I. CITY OWNERSHIP AND USE OF ARTWORK (DESIGNS):

a. Artist grants City the non-exclusive right to photograph, reproduce or manufacture renderings of the Artwork of all sizes, materials, in full color, or black and white (collectively "the Artwork Reproductions").
b. Artist grants the City the non-exclusive right to display the Artwork Reproductions on City property.
c. Artist grants City the non-exclusive right to publish the Artwork and Artwork Reproductions in any type of medium, including but not limited to electronic formats for the purposes of city or public transit publicity, marketing, community outreach, education, or public exhibition, local public or library or city calendars, and public transit service advertising.
d. Upon prior written request of Artist, City shall place a copyright notice on the Artwork plaque or Artwork Reproductions prior to manufacture.
e. City shall have the right to allow Mountain Line to exercise any or all of City's legal rights related to ownership and use of the Artwork (designs) provided pursuant to this Agreement.

J. ARTIST OWNERSHIP OF ARTWORK COPYRIGHT AND COMMERCIAL USE:

1. Except as provided for in this Contract (paragraph I, immediately above, related to City ownership and use), the Artist retains: (1) all rights to the Artwork (designs) under the Copyright Act of 1976, 17 U.S.C.
   § 101, et seq., as amended by the Visual Artists Rights Act (VARA), and any successor act; and (2) all rights expressly granted in this contract, as well as any and all other intellectual

   property rights in the Artwork, whether statutory or common law, international, federal, state or local, except as specifically set forth herein.
2. Artist may, at the Artist's expense, cause to be registered with the United States Register of Copyrights, a copyright of the Artwork in the Artist's name and may provide the City with a copy of the application for registration, the registration number and the effective date of the registration.

3. Artist as copyright owner may use or sell the Artwork for commercial purposes, so long as such sale is subject to City's ownership and use rights as stated herein.

K. MESSAGING OF ARTWORK:
Artists shall use best efforts to ensure that no work or services funded under this Contract shall inhibit, promote, or convey a religion, a political party or position, or a religious or political message or advocacy.

L. MAINTENANCE AND REPAIRS:

1. As a condition of and prior to final acceptance of the Artwork by the City, the Artist will supply the City with maintenance instructions for the Artwork and that also include a description of expectations for the natural weathering and wear and tear of the Artwork.
2. The City is responsible for the proper care and maintenance of the Artwork. The City agrees to ensure that the work is maintained and protected to the extent practical.
3. During the lifetime of the artwork the Artist will supply at no cost to the Artist and at no charge to the City, within reason, advice as to problems arising in relation to maintenance of the Artwork.
4. The City shall make every reasonable effort to consult with the Artist concerning repairs to the Artwork. To the extent practical, the Artist shall be given the opportunity to accomplish repairs at a reasonable fee. The City reserves the right to obtain competitive bids and to choose the highest quality but not necessarily the least expensive vendor for all repairs and restoration. In the event that City makes repairs or restoration not approved by Artist, Artist shall have the right, at Artist's sole option, to have Artist's association with Artwork severed.

M. ARTIST'S WARRANTIES OF QUALITY AND CONDITION OF ARTWORK:

1. The Artist warrants to the City that the fabrication and installation of the Artwork will be performed in a workmanlike manner and that the Artwork will be free of defects in workmanship, fabrication, materials or installation, including inherent vice, and that the Artist will, at the Artist's own expense, remedy any defects found in the Artwork due to faulty workmanship, fabrication, or materials for a period of two (2) years after the final acceptance of the Artwork by the City. Artist shall promptly repair or replace in the City's sole discretion and at no additional cost to the City any portion of the Artwork that is found to be defective during the warranty period. Changes in Artwork due to vandalism, inherent flaws of the architectural system in which the Artwork is integrated, or actions of Mountain Line's General Contractor responsible for installing the Artwork are not subject to warranty.
2. The Artist warrants to the City that the Artwork maintenance recommendations to be provided by the Artist to the City set forth in **Exhibit D** will be adequate to maintain the Artwork in good condition, reasonable wear and tear excepted, for the estimated life of the Artwork (a minimum of 25 years).
3. With the exception of damage due to vandalism or accident by any person other than the Artist or persons under Artist's employ, direction or supervision, the Artist warrants that the Artwork will not contain any defect in design or construction including any defect which may be a reasonably foreseeable hazard or a danger to the health and safety of the public and further agrees to cooperate in designing and permitting adjustments to the Artwork, if necessary, to eliminate hazards or potential hazards which become apparent after the Artwork is accepted by the City.
4. The Artist represents and warrants that the Artwork and the materials used are not currently known to be harmful to public health and safety.

N. MODIFICATIONS TO OR REMOVAL OF ARTWORK
The City will not intentionally alter, modify, change, destroy, or damage the Artwork without making

reasonable attempts to consult with the Artist except in cases where Artwork is posing or is in imminent danger and emergency action is required. If alteration, modification, or change is desired for non-emergency situations, City agrees to consult with Artist on best solutions to preserve integrity of Artwork. City may, in its discretion, in accordance with standards of practice deaccession or relocate the Artwork, but will endeavor to consult with the Artist prior to any deaccession or relocation, unless Artwork is posing or is in imminent danger and emergency action is required.

O. SURVIVAL OF PROVISIONS:

These representations and warranties shall survive the termination or other expiration of this Agreement:

1. INTELLECTUAL PROPERTY RIGHTS WARRANTY;
2. CITY OWNERSHIP AND USE OF ARTWORK;
3. ARTIST OWNERSHIP OF ARTWORK COPYRIGHT AND COMMERCIAL USE;
4. MESSAGING OF ARTWORK.
5. MAINTENANCE AND REPAIRS
6. ARTIST'S WARRANTIES OF QUALITY AND CONDITION OF ARTWORK
7. MODIFICATIONS TO OR REMOVAL OF ARTWORK

P. FINAL ACCEPTANCE:

Artist shall notify the City in writing when the Artwork has been completed and installed. Within fourteen (14) days after receiving the Notice of Completion, City shall inspect the Artwork to determine whether it conforms with the Final Design Documents and shall send Artist a written notice of acceptance ("Final Acceptance") or rejection of the Artwork as follows:

1. City's notice of Final Acceptance of the Artwork shall constitute City's acknowledgment that Artist has completed the Artwork in substantial conformity with the Final Design Documents. Title to the Artwork passes to the City upon Acceptance of the Artwork.
2. If the City issues a notice of rejection of the Artwork, Artist will make any necessary adjustments to the Artwork within thirty (30) days of receiving City's notice of rejection to bring the Artwork in conformance with the Final Design Documents.

II. SOUTHSIDE GROVE SCULPTURE

A. SITE:

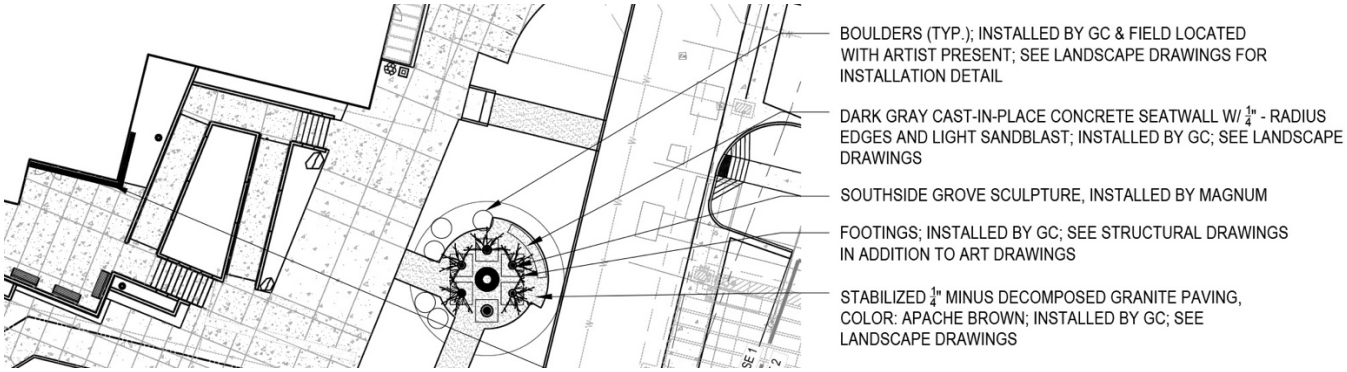
The City of Flagstaff is designing art and beautification projects at the New Mountain Line Downtown Connection Center (DCC), an expansion of the existing transit hub on Phoenix Ave, between Milton St and Beaver St, Flagstaff, AZ 86001.

B. ARTWORK DESCRIPTION:

"Southside Grove" is a landmark sculpture to be located within a landscaped area adjacent the entry plaza of the new DCC building. Sculptural steel trees, aligned to celestial events, create a strong and durable form. A variety of finishes and details give them a soft, organic appearance that plays with changing light. Together they create an immersive experience that visitors can enter to have a close-up view of the trunks as well as a central "time table" feature.



1 GROVE SCULPTURE IMAGE
SCALE: NTS



The primary elements of the sculpture are:

- Six ponderosa pine and telescope inspired “Trunks” made from weathered steel, positioned in a circle and aligned to solstices and equinoxes;
- Cultural symbols etched into all six Trunks, representing important cultures that have come together as community in Flagstaff;
- Etched bark texture inspired by Ponderosa Pines on the cladding of the five “Tree Trunks”;
- (75) overhead horizontal “Branches” on the five “Tree Trunks”;
- (75) Acrylic Linear Prisms that catch sunlight on the ends of the Branches;
- (Approximately 75) “Pine Needle Clusters” composed of colored acrylic rods and silver spheres, attached to the ends of some branchlets;
- Oculus opening in the single “Telescope Trunk,” marking the position of the sun at noon on the Vernal and Autumnal Equinoxes;
- Bell-like feature on the top of the single “Telescope Trunk” that creates a chime sound when it is windy;

- “Time Table” in the center of the sculptural grove, made from a weathering steel base with a granite top that is etched with tree rings and text referencing significant natural and cultural events in astronomy, and of Indigenous peoples and other cultures of the Southside and Flagstaff.

90% Fabrication Documents are included in Attachment 1. Final Fabrication Documents are subject to approval of the City of Flagstaff, and a copy of the final documents will be submitted for the Contract file. Services will be performed per the Final Fabrication Documents.

C. ARTWORK PROCUREMENT:

The Artist will deliver and install at the site:

- All sculpture components.

Artist Exclusion: Concrete foundations for the sculpture will be installed by the DCC Project General Contractor as part of a separate contract with the City, with oversight by the Artist. The DCC Project General Contractor will also be installing landscape elements, with Artist oversight as noted under Tasks.

Installation is anticipated to occur in Summer 2024

D. TASKS

7. Start-up and Shop Drawings:
    - Enter into subcontracts with fabricator/installer, Magnum Architectural, Inc. and stone fabricator, Hilgartner Natural Stone Company. Magnum Architectural Inc will install all elements of the sculpture and has AZ Contractor’s License: 120931 B-0. The requirement of an AZ Contractor License must be in the contract between Artist and installer. Any change of installer subcontractor must be approved by City and the AZ Contractor License requirement will not be waived.
    - Create detailed illustrative files depicting Time Table graphic, suitable for etching onto granite; revise as needed per City and Stakeholder review of content of text (by Artist)
    - Acquire material samples and make mock-ups of needle clusters, bell, and granite etching (by Magnum and Hilgartner)
    - Create detailed production drawings of sculpture parts and assemblies (by Magnum)
    - Review sculpture assemblies with Structural Engineer; engineer will stamp relevant sheets of fabricator’s shop drawings (by Meyer Borgman Johnson, under separate contract with City)
    - Deliverable: PDF files of Time Table graphic for review and comment by City; PDF files of stamped structural drawings and calculations (by MBJ)

8. Sculpture Fabrication (by Artist’s subcontractors, Magnum and Hilgartner):
    - Procure materials and hardware required to produce sculpture (by Magnum)
    - Apply Time Table graphic to granite slab; pack and ship to Magnum’s shop in Phoenix (by Hilgartner)
    - Fabricate sculpture, with oversight by Artist (by Magnum)
    - Review artwork fabrication in process to ensure artistic intent is met (by Artist)
    - Deliverable: Photographs of sculpture fabrication in process

9. Sculpture Installation:
    - Coordinate art installation schedule and details with Project Team (by Artist)
    - Review and approve layout and installation of foundation forms, work to be performed by Mountain Line's General Contractor
    - Pack, transport, and deliver sculpture to DCC Site (by Magnum)
    - Install sculpture, with oversight by Artist (by Magnum and Artist)
    - Deliverable: Sculpture

10. Project Close-Out:
    - Review placement of paving, planting, boulders and seating elements around sculpture (by General Contractor, with Artist review)
    - Produce and deliver maintenance plan (by Artist)
    - Provide plaque information (by Artist and City)
    - Provide daytime photographs of artwork (by Artist)
    - Participate in ribbon-cutting or other opening event (by Artist)
    - Deliverables: Maintenance plan, plaque information, photographs

Exclusions: Any Work not listed as a Task is assumed to be the work of others.

E. PAYMENT SCHEDULE WITH BUDGET:

1. Payment 1 - **(20%)** – Shall be paid upon execution of the contract, for procurement of subcontracts
2. Payment 2 **(50%)** – Shall be paid upon initiation of sculpture fabrication
3. Payment 3 **(25%)** – Shall be paid upon completion of sculpture installation
4. Payment 4 **(5%)** – Shall be paid upon completion of Project Close-out; delay of project ribbon cutting shall not delay payment of artist upon City's receipt of Deliverables

TOTAL PAYMENT AMOUNT: $409,155.00

Flagstaff DCC Phase 1 Art Budget — Grove Sculpture

02/08/2023 FINAL DESIGN

1. MATERIALS, EQUIPMENT, & LABOR

1.01	Sculpture Modeling and Drafting	1 l.s.	$5,000 /l.s.	$5,000	*Haddad Drugan and subcontractors; design details, 3D modeling, and CAD drafting*
1.02	Sample Materials	1 l.s.	$600 /l.s.	$600	*Acrylic rods, prisms, bell materials, bark, prisms*
1.03	Bell	1 ea	$5,000 /ea	$5,000	*Bell for South Tower*
1.04	Acrylic Prisms	93 ea	$18 /ea	$1,674	*Mini-Science Inc., 25 mm x 25 mm x 25 mm x 150 mm long; includes 18 extras*
1.05	Prisms Machining	93 ea	$10 /ea	$930	*Custom Edge 2/1/22 estimate; notch and drill holes at base*
1.06	Metalwork Fabrication–Installation	1 l.s.	$316,975 /l.s.	$316,975	*Magnum 1/27/23 estimate B-120932; shop drawings, samples, materials, labor, pre-oxidized finish, laser-cut bark, needle assemblies, prism attachments, delivery, rental equipment, installation*
1.07	Time Table Graphics	1 l.s.	$4,000 /l.s.	$4,000	*Haddad Drugan subcontractor; layout of tree rings & timeline and graphic files for etching stone*
1.08	Granite Table Top Fabrication	1 l.s.	$20,992 /l.s.	$20,992	*Hilgartner estimate; 5'-diameter, cut-to-size, polished, sandblasted, carved*
1.09	Granite Packing and Shipping	1 l.s.	$6,000 /l.s.	$6,000	*Hilgartner estimate; crating and shipping*
1.10	Table Base	1 l.s.	$0 /l.s.	$0	*Included in Magnum estimate estimate B-120932 above*
1.11	Granite Installation	1 l.s.	$0 /l.s.	$0	*Included in Magnum estimate estimate B-120932 above*
			Subtotal—GROVE SCULPTURE	**$361,171**	

2. ARTIST FEES & EXPENSES

2.01	Artist Fee - Production Oversight	1 l.s.	$22,500 /l.s.	$22,500	*Haddad Drugan: oversight of fabrication and installation, contractor coordination, pm*
2.02	Travel Expenses	2 ea	$2,000 /ea	$4,000	*assume 2 trips: 1. foundation installation 2. sculpture installation*
2.03	Studio Expenses – Production	1 l.s.	$2,000 /l.s.	$2,000	*Washington State B&O taxes; insurance & overhead*
			Subtotal—FEES & EXPENSES	**$28,500**	

SUBTOTAL	**$389,671**	*Materials, Equipment, Labor, Fees, Expenses*
CONTINGENCY	**$19,484**	*5%*
GRAND TOTAL	**$409,155**	

F. NOTICE AND CORRECTION OF DEFICIENCIES

If at any time the City determines that the Artist's services do not conform to the scope of services under this Agreement, the City reserves the right to notify the Contractor in writing of the deficiencies and that the City intends to withhold the next payment within 30 days of the determination, and the City may issue a stop work order. Contractor will have 30 days to cure the City's objections and will notify the City in writing of completion of the cure. If Contractor disputes the City's determination, within 15 days of Contractor's receipt of City's notice, Contractor shall notify the City in writing. In such event, the City shall make reasonable efforts to resolve the dispute however, final determination as to whether Contractor has complied with the terms of this Agreement will remain with the City.

G. PERMITS AND LICENSES

Artist will obtain a business license from the City pursuant to Flagstaff City Code, Chapter 3-01. Artist will be responsible for obtaining any transaction privilege tax license if required by the Arizona Department of Revenue, www.azdor.gov. Mountain Line will be responsible for obtaining any necessary permits from the City Community Development for the Downtown Connection Center project.

H. INTELLECTUAL PROPERTY RIGHTS WARRANTY:

Artist hereby warrants that its designs provided, and that the purchase and use of the Artwork (designs) pursuant to this Agreement does not infringe on any patent, trademark or copyright or other proprietary rights of any third parties.

I. CITY OWNERSHIP AND USE OF ARTWORK (DESIGNS):

f. Artist grants City the non-exclusive right to photograph, reproduce or manufacture renderings of the Artwork of all sizes, materials, in full color, or black and white (collectively "the Artwork Reproductions").

g. Artist grants the City the non-exclusive right to display the Artwork Reproductions on City property.

h. Artist grants City the non-exclusive right to publish the Artwork and Artwork Reproductions in any type of medium, including but not limited to electronic formats for the purposes of city or public transit publicity, marketing, community outreach, education, or public exhibition, local public or library or city calendars, and public transit service advertising.

i. Upon prior written request of Artist, City shall place a copyright notice on the Artwork or Artwork Reproductions prior to manufacture.

j. City shall have the right to allow Mountain Line to exercise any or all of City's legal rights related to ownership and use of the Artwork (designs) provided pursuant to this Agreement.

k. City anticipates that the Artwork (Southside Grove Sculpture) will be relocated in the future in response to the Rio de Flag Flood Control Project. In the event Artist is not able to continue providing artistic services to City through subsequent phases of the Downtown Connection Center development (relocation), and/or the parties are not able to agree upon a commercially reasonable terms and conditions for completion of the artistic services for the subsequent phases of the Downtown Connection Center development (relocation) despite good faith negotiations, then the City shall have the right to use another contractor to oversee relocation of the Artwork adhering to principles of the initial artwork siting as described in Final Fabrication Documents.

J. ARTIST OWNERSHIP OF ARTWORK COPYRIGHT AND COMMERCIAL USE:

a. Except as provided for in this Contract (paragraph G, related to City ownership and use), the Artist retains: (1) all rights to the Artwork (designs) under the Copyright Act of 1976, 17 U.S.C.

§ 101, et seq., as amended by the Visual Artists Rights Act (VARA), and any successor act; an

property rights in the Artwork, whether statutory or common law, international, federal, state or local, except as specifically set forth herein.

b. Artist may, at the Artist's expense, cause to be registered with the United States Register of Copyrights, a copyright of the Artwork in the Artist's name and may provide the City with a copy of the application for registration, the registration number and the effective date of the registration.

c. Artist as copyright owner may use or sell the Artwork for commercial purposes, so long as such sale is subject to City's ownership and use rights as stated herein.

K. MESSAGING OF ARTWORK:

Artists shall use best efforts to ensure that no work or services funded under this Contract shall inhibit, promote, or convey a religion, a political party or position, or a religious or political message or advocacy.

L. MAINTENANCE AND REPAIRS

a. As a condition of and prior to final acceptance of the Artwork by the City, the Artist will supply the City with maintenance instructions for the Artwork that also include a description of expectations for the natural weathering and wear and tear of the Artwork.

b. The City is responsible for the proper care and maintenance of the Artwork. The City agrees to ensure that the work is maintained and protected to the extent practical.

c. During the lifetime of the artwork the Artist will supply at no cost to the Artist and at no charge to the City, advice as to problems arising in relation to maintenance of the Artwork.

d. The City shall make every reasonable effort to consult with the Artist concerning repairs to the Artwork. To the extent practical, the Artist shall be given the opportunity to accomplish repairs at a reasonable fee. The City reserves the right to obtain competitive bids and to choose the highest quality but not necessarily the least expensive vendor for all repairs and restoration. In the event that City makes repairs or restoration not approved by Artist, Artist shall have the right, at Artist's sole option, to have Artist's association with Artwork severed.

M. ARTIST WARRANTIES OF QUALITY AND CONDITIONS OF ARTWORK

a. The Artist warrants to the City that the fabrication and installation of the Artwork will be performed in a workmanlike manner and that the Artwork will be free of defects in workmanship, fabrication, materials or installation, including inherent vice, and that the Artist will, at the Artist's own expense, remedy any defects found in the Artwork due to faulty workmanship, fabrication, materials or installation for a period of two (2) years after the final acceptance of the Artwork by the City. Artist shall promptly repair or replace in the City's sole discretion and at no additional cost to the City any portion of the Artwork that is found to be defective during the warranty period. Artist is not warranting against changes in the Artwork due to Mountain Line's General Contractor's work; or vandalism, and natural weathering and aging of the materials as expected by Artist and City and described in the maintenance instructions.

b. The Artist warrants to the City that the Artwork maintenance recommendations to be

provided by the Artist to the City set forth in **Exhibit D** will be adequate to maintain the Artwork in good condition, reasonable wear and tear excepted, for the estimated life of the Artwork (minimum of 25 years).

c. With the exception of damage due to vandalism or accident by any person other than the Artist or persons under Artist's employ, direction or supervision, the Artist warrants that the Artwork will not contain any defect in design or construction including any defect which may be a reasonably foreseeable hazard or a danger to the health and safety of the public, assuming sensible behavior, and further agrees to cooperate in designing and permitting adjustments to the work, if necessary, to eliminate hazards or potential hazards which become apparent after the Artwork is accepted by the City.

d. The Artist represents and warrants that the Artwork and the materials used are not currently known to be harmful to public health and safety.

N. MODIFICATIONS OR REMOVAL OF ARTWORK

The City will not intentionally alter, modify, change, destroy, or damage the Artwork without making reasonable attempts to consult with the Artist except in cases where Artwork is posing an, or is in, imminent danger and emergency action is required. If alteration, modification, or change is desired for non-emergency situations, City agrees to consult with Artist on best solutions to preserve integrity of Artwork. City may, in its discretion, in accordance standards of practice, deaccession or relocate the Artwork, but will make reasonable attempts to consult with the Artist prior to any deaccession or relocation, unless Artwork is posing an, or is in, imminent danger and emergency action is required. City and Artist agree that this sculpture has one planned relocation to the Civic Space in Mountain Line's Phase 2 of the DCC project and that if feasible Artist will participate in the process of designing its placement and integration at the Civic Space location.



O. SURVIVAL OF PROVISIONS:

These representations and warranties shall survive the termination or other expiration of this Agreement:

a. INTELLECTUAL PROPERTY RIGHTS WARRANTY;
b. CITY OWNERSHIP AND USE OF ARTWORK;
c. ARTIST OWNERSHIP OF ARTWORK COPYRIGHT AND COMMERCIAL USE;
d. MESSAGING OF ARTWORK
e. MAINTENANCE AND REPAIRS
f. ARTIST WARRANTIES OF QUALITY AND CONDITIONS OF ARTWORK
g. MODIFICATIONS OR REMOVAL OF ARTWORK

P. FINAL ACCEPTANCE

Artist shall notify the City in writing when the Artwork has been completed and installed. Within fourteen (14) days after receiving the Notice of Completion, City shall inspect the Artwork to determine whether it conforms with the Final Design Documents and shall send Artist a written notice of acceptance ("Final Acceptance") or rejection of the Artwork as follows:

1. City's notice of Final Acceptance of the Artwork shall constitute City's acknowledgment that Artist has completed the Artwork in substantial conformity with the Final Design Documents. Title to the Artwork passes to the City upon Acceptance of the Artwork.
2. If the City issues a notice of rejection of the Artwork, Artist will make any necessary adjustments to the Artwork within thirty (30) days of receiving City's notice of rejection to bring the Artwork in conformance with the Final Design Documents.

EXHIBIT B

STANDARD TERMS AND CONDITIONS

(Last Updated January 19, 2023)

*The term "Contractor" may substitute for the term "vendors," "consultants," or "firms," depending on the purpose of the underlying Contract.

IN GENERAL

1. **PARTIES:** The City of Flagstaff ("City") and the contractor identified in the Contract ("Contractor") may be referred to individually as "Party" or collectively as "Parties".

2. **NOTICE TO PROCEED:** ~~Contractor shall not commence performance until after the City has issued a Notice to Proceed.~~ Contract shall commence upon effective date of the contract.

3. **LICENSES AND PERMITS:** Contractor its expense shall maintain current federal, state, and local licenses, permits and approvals required for performance of the Contract and provide copies to City upon request.

4. **COMPLIANCE WITH LAWS:** Contractor shall comply with all applicable federal, state and local laws, regulations, standards, codes and ordinances in performance of the Contract.

5. **NON-EXCLUSIVE:** Unless expressly provided otherwise in the Contract, the Contract is non-exclusive and the City reserves the right to contract with others for materials or services.

6. **SAMPLES:** Any sample submitted to the City by the Contractor and relied upon by City as representative of quality and conformity, shall constitute an express warranty that all materials and/or service to be provided to City shall be of the same quality and conformity.

MATERIALS

7. **PURCHASE ORDERS:** The City will issue a purchase order for the materials covered by the Contract, and such order will reference the Contract number.

8. **QUALITY:** Contractor warrants that all materials supplied under the Contract will be new and free from defects in material or workmanship. The materials will conform to any statements made on the containers or labels or advertisements for the materials and will be safe and appropriate for use as normally used. The City's inspection, testing, acceptance or use of materials shall not serve to waive these quality requirements. This warranty shall survive termination or expiration of the Contract.

9. **ACCEPTANCE:** All materials and services provided by Contract are subject to final inspection and acceptance by the City. Materials and services failing to conform to the Contract specifications may be rejected in whole or part. If rejected, Contractor is responsible for all costs associated arising from rejection.

10. **MANUFACTURER'S WARRANTIES:** Contractor shall deliver all Manufacturer's Warranties to the City upon the City's acceptance of the materials.

11. **PACKING AND SHIPPING:** Contractor shall be responsible for industry standard packing which conforms to requirements of carrier's tariff and ICC regulations. Containers shall be clearly marked as to lot number, destination, address and purchase order number. All shipments shall be F.O.B. Destination, City of Flagstaff, 211 West Aspen Avenue, Flagstaff, Arizona 86001, unless otherwise specified by the City. C.O.D. shipments will not be accepted.

12. **TITLE AND RISK OF LOSS:** The title and risk of loss of material shall not pass to the City until the City actually receives the material at the point of delivery and the City has completed inspection and has accepted the material, unless the City has expressly provided otherwise in the Contract.

13. **NO REPLACEMENT OF DEFECTIVE TENDER:** Every tender of materials shall fully comply with all provisions of the Contract. If a tender is made which does not fully conform, this shall constitute a breach and Contractor shall not have the right to substitute a conforming tender without prior written approval from the City.

14. **DEFAULT IN ONE INSTALLMENT TO CONSTITUTE TOTAL BREACH:** Contractor may not substitute nonconforming materials and/or services. Delivery of nonconforming materials and/or services, or a default of any nature, shall constitute a breach of the Contract as a whole.

15. **SHIPMENT UNDER RESERVATION PROHIBITED:** Contractor is not authorized to ship materials under reservation and no tender of a bill of lading shall operate as a tender of the materials.

16. **LIENS:** All materials and other deliverables supplied to the City shall be free of all liens, other than the security interest held by Contractor, until payment in full is made by the City. Upon request of the City, Contractor shall provide a formal release of all liens.

17. **CHANGES IN ORDERS:** The City reserves the right at any time to make changes in any one or more of the following: (a) methods of shipment or packing; (b) place of delivery; and (c) quantities. If any change causes an increase or decrease in the cost of or the time required for performance, an equitable adjustment may be made in the price or delivery schedule, or both. Any claim for adjustment shall be evidenced in writing and approved by the City Purchasing Director prior to the institution of the change.

PAYMENT

18. **INVOICES:** A separate invoice shall be issued for each shipment and each job completed. Invoices shall include the Contract and/or Purchase Order number and dates when goods had been shipped or work performed. Invoices shall be sent within thirty (30) days following performance. Payment will only be made for satisfactory materials and/or services received and accepted by City.

19. **LATE INVOICES:** The City may deduct up to 10% of the payment price for late invoices. The City operates on a fiscal year budget, from July 1 through the following June 30. Except in unusual circumstances, which are not due to the fault of Contractor, the City will not honor any invoices or claims submitted after August 15 for materials or services supplied in the prior fiscal year.

20. TAXES: Contractor shall be responsible for payment of all taxes including federal, state, and local taxes related to or arising out of Contractor's performance of the Contract. Such taxes include but are not limited to federal and state income tax, social security tax, unemployment insurance taxes, transaction privilege taxes, use taxes, and any other taxes or business license fees as required.

Exception: The City will pay any taxes which are specifically identified as a line-item dollar amount in the Contractor's bid, proposal, or quote, and which were considered and approved by the City as part of the Contract award process. In this event, taxes shall be identified as a separate line item in Contractor's invoices.

21. FEDERAL EXCISE TAXES: The City is exempt from paying certain Federal Excise Taxes and will furnish an exemption certificate upon request.

22. FUEL CHARGES: Contractor at its own expense is liable for all fuel costs related to performance. No fuel surcharges will be accepted or paid by the City.

23. DISCOUNTS: If the Contract provides for payment discounts, payment discounts will be computed from the later date of the following: (a) when correct invoice is received by the City; or (b) when acceptable materials and/or materials were received by the City.

24. AMOUNTS DUE TO THE CITY: Contractor must be current and remain current in all obligations due to the City during performance. Payments to Contractor may be offset by any delinquent amounts due to the City or fees and charges owed to the City under the Contract.

25. OFAC: No payments may be made to any person in violation of Office of Foreign Assets Control regulations. 31 C.F.R. Part 501.

SERVICES

26. INDEPENDENT CONTRACTOR: Contractor shall be an independent contractor for purposes of all laws, including but not limited to the Fair Labor Standards Act, Federal Insurance Contribution Act, Social Security Act, Federal Unemployment Tax Act, Internal Revenue Code, Immigration and Naturalization Act; Arizona revenue and taxation, workers' compensation, and unemployment insurance laws.

27. CONTROL: Contractor shall be responsible for the control of the work.

28. WORK SITE: Contractor shall inspect the work site and notify the City in writing of any deficiencies or needs prior to commencing work.

29. SAFEGUARDING PROPERTY: Contractor shall responsible for any damage to real property of the City or adjacent property in performance of the work and safeguard the worksite.

30. QUALITY: All work shall be of good quality and free of defects, performed in a diligent and professional manner.

31. ACCEPTANCE: If the City rejects Contractor's work due to noncompliance with the Contract, the City, after notifying Contractor in writing, may require Contractor to correct the

deficiencies at Contractor's expense, or cancel the work order and pay Contractor only for work properly performed.

32. WARRANTY: Contractor warrants all work for a period of one year following final acceptance by the City. Upon receipt of written notice from the City, Contractor at its own expense shall promptly correct work rejected as defective or as failing to conform to the Contract, whether observed before or after acceptance, and whether or not fabricated, installed or completed by Contractor, and shall bear all costs of correction. If Contractor does not correct deficiencies within a reasonable time specified in the written notice from the City, the City may perform the work and Contractor shall be liable for the costs. This one year warranty is in addition to and does not limit Contractor's other obligations herein. This warranty shall survive termination or expiration of the Contract.

INSPECTION, RECORDS, ADMINISTRATION

33. RECORDS: The City shall have the right to inspect and audit all Contractor books and records related to the Contract for up to five years after completion of the Contract.

34. RIGHT TO INSPECT BUSINESS: The City shall have the right to inspect the place of business of the Contractor or its subcontractor during regular business hours at reasonable times, to the extent necessary to confirm Contract performance.

35. PUBLIC RECORDS: The Contract and any related materials are a matter of public record and subject to disclosure pursuant to Arizona Public Records Law. A.R.S. § 39-121 et seq. If Contractor has clearly marked its proprietary information as "confidential", the City will endeavor to notify Contractor prior to release of such information.

36. CONTRACT ADMINISTRATION: Contractor will be required to participate in the City's contract administration process. Contractor will be closely monitored for Contract compliance and will be required to promptly correct any deficiencies.

INDEMNIFICATION

37. GENERAL INDEMNIFICATION: Contractor shall indemnify and hold the City, and its officers, agents, employees, and subcontractors, harmless from and against any third-party claims, actions, liabilities, costs, including reasonable attorneys' fees and other costs of defense, arising out of the acts, errors, or omissions of Contractor, its officers, agents, employees, and subcontractors, in performing or failing to perform the responsibilities identified in the Contract. In the event any such action or claim is brought against the City, Contractor shall, if the City so elects, and upon tender by the City: (a) defend the same at Contractor's sole cost and expense; and/or (b) promptly satisfy any judgment adverse to the City; or (c) reimburse the City for any loss, cost, damage, or expense, including attorneys' fees, suffered or incurred by the City. The City shall notify Contractor, within a reasonable time, of any claim, threat of claim, or legal action as it relates to the responsibilities identified in the Contract. This indemnification shall survive termination or expiration of the Contract.

38. INTELLECTUAL PROPERTY INDEMNIFICATION: Contractor shall indemnify and hold the City, and its officers, agents, employees, and subcontractors, harmless from and against any third-party claims, actions, liabilities, costs, including reasonable attorneys' fees and other costs of defense arising out of the alleged infringement of any patent, trademark or copyright or other proprietary rights of any third-parties arising out of Contract performance

or use by the City of materials furnished or work performed under the Contract. In the event any such action or claim is brought against the City, Contractor shall, if the City so elects and upon tender by the City: (a) defend the same at Contractor's sole cost and expense; and/or (b) promptly satisfy any judgment adverse to the City; or (c) reimburse the City for any loss, cost, damage, or expense, including attorneys' fees, suffered or incurred by the City. The City shall notify Contractor, within a reasonable time, of any claim, threat of claim, or legal action as it relates to the responsibilities identified in the Contract. This indemnification shall survive termination or expiration of the Contract.

39. **NETWORK SECURITY AND PRIVACY LIABILITY:** Contractor shall indemnify and hold the City, and its officers, agents, employees, and subcontractors, harmless from an against any third-party claims, actions, liabilities, costs, including reasonable attorneys' fees and other costs of defense arising out of all acts, errors, omissions, negligence, infringement of intellectual property (except patent and trade secret); network security and privacy risks, including but not limited to unauthorized access, failure of security, breach of privacy perils, wrongful disclosure, collection, or other negligence in the handling of confidential information, privacy perils, and including coverage for related regulatory defense and penalties; data breach expenses, including but not limited to, consumer notification, whether or not required by law, computer forensic investigations, public relations and crisis management firm fees, credit file or identity monitoring or remediation services in the performance of services for the City. In the event any such action or claim is brought against the City, Contractor shall, if the City so elects and upon tender by the City: (a) defend the same at Contractor's sole cost and expense; and/or (b) promptly satisfy any judgment adverse to the City; or (c) reimburse the City for any loss, cost, damage, or expense, including attorneys' fees, suffered or incurred by the City. The City shall notify Contractor, within a reasonable time, of any claim, threat of claim, or legal action as it relates to the responsibilities identified in the Contract. This indemnification shall survive termination or expiration of the Contract.

CONTRACT CHANGES

40. **PRICE INCREASES:** Except as expressly provided for in the Contract, no price increases will be approved.

41. **COMPLETE AGREEMENT:** The Contract is intended to be the complete and final agreement of the Parties.

42. **AMENDMENTS:** The Contract may be amended by written agreement of the Parties.

43. **SEVERABILITY:** If any term or provision of the Contract is found by a court of competent jurisdiction to be illegal or unenforceable, then such term or provision is deemed deleted and the remainder of the Contract shall remain in full force and effect.

44. **NO WAIVER:** Both Parties have the right insist upon strict performance of the Contract, and the prior failure of a Party to insist upon strict performance, or a delay in any exercise of any right or remedy, or acceptance of materials or services, shall not be deemed a waiver of any right to insist upon strict performance.

45. **ASSIGNMENT:** Contractor was selected for its special knowledge, skills, and expertise, and shall not assign the services/materials required in the Contract, in whole or in part, without the City's prior written consent, which may be withheld for any reason. Any

assignment without such consent shall be null and void. No assignment shall relieve Contractor (Assignor) from any of its obligations and liabilities under the Contract with respect to the City. The Purchasing Director shall have authority to consent to an assignment on behalf of the City.

46. BINDING EFFECT: The Contract shall be binding upon and inure to the benefit of the Parties and their successors and assigns.

EMPLOYEES AND SUBCONTRACTORS

47. SUBCONTRACTING: Contractor was selected for its special knowledge, skills, and expertise, and shall not assign the services/materials required in the Contract, in whole or in part, without the City's prior written consent, which may be withheld for any reason. The City reserves the right to withhold consent if the subcontractor is deemed irresponsible and/or subcontracting may negatively affect performance. All subcontracts shall comply with the underlying Contract. Contractor is responsible for Contract performance whether or not subcontractors are used.

48. NONDISCRIMINATION: Contractor shall not discriminate against any employee or applicant for employment or person to whom it provides services because of race, color, religion, sex, national origin, disability, genetic information, veteran's status, pregnancy, familial status and represents and warrants that it complies with all applicable federal, state and local laws and executive orders regarding employment. In addition, any Contractor whose business is located within City of Flagstaff limits shall comply with the City Code, Chapter 14-02, *Civil Rights*, which also prohibits discrimination based on sexual orientation, or gender identity or expression.

49. DRUG FREE WORKPLACE: The City has adopted a Drug Free Workplace policy for itself and those doing business with the City to ensure the safety and health of all persons working on City contracts and projects. Contractor's personnel shall abstain from use or possession of illegal drugs while engaged in performance of the Contract.

50. IMMIGRATION LAWS: Pursuant to A.R.S. § 41-4401, Contractor hereby warrants to the City that Contractor and each of its subcontractors shall comply with all state and federal immigration laws and regulations that relate to its employees and A.R.S. § 23-214(A). A breach of state and federal immigration laws and regulations shall constitute a material breach of the Contract and shall subject Contractor to penalties up to and including termination of the Contract. The City may, at its sole discretion, conduct random verification of the employment records of the employees of the Contractor and any subcontractors to ensure compliance with all state and federal immigration laws and regulations. Neither Contractor nor any subcontractor shall be deemed to have materially breached the Contract if Contractor or subcontractor establishes that it has complied with the employment verification provisions prescribed by sections 274A and 274B of the Federal Immigration and Nationality Act and the E-verify requirements prescribed by A.R.S. § 23-214(A).

DEFAULT AND TERMINATION

51. TERMINATION FOR DEFAULT: Prior to terminating the Contract for a material breach, the non-defaulting Party shall give the defaulting Party written notice and reasonable opportunity to cure the default, not to exceed thirty (30) days unless a longer period of time is granted by the non-defaulting Party in writing. In the event the breach is not timely cured,

or in the event of a series of repeated breaches the non-defaulting Party may elect to terminate Contract by written notice to Contractor, which shall be effective upon receipt. In the event of default, the Parties may execute all remedies available at law in addition to the Contract remedies provided for herein.

52. CITY REMEDIES: In the event of Contractor's default, the City may obtain required materials and/or services from a substitute contractor, and Contractor shall be liable to the City to pay for the costs of such substitute service. The City may deduct or offset the cost of substitute service from any balance due to Contractor, and/or seek recovery of the costs of substitute service against any performance security, and/or collect any liquidated damages provided for in the Contract. Remedies herein are not exclusive.

53. CONTRACTOR REMEDIES: In the event of the City's default, Contractor may pursue all remedies available at law, except as provided for herein.

54. TERMINATION FOR NONAPPROPRIATION OF FUNDS: The City may terminate all or a portion of the Contract due to budget constraints and non-appropriation of funds for the following fiscal year, without penalty or liability to Contractor.

55. TERMINATION FOR CONVENIENCE: Unless expressly provided for otherwise in the Contract, the Contract may be terminated in whole or part by the City for convenience upon thirty (30) days written notice, without further penalty or liability to Contractor. If the Contract is terminated, City shall be liable only for payment for satisfactory materials and/or services received and accepted by the City before the effective date of termination.

56. TERMINATION DUE TO INSOLVENCY: If Contractor becomes a debtor in a bankruptcy proceeding, or a reorganization, dissolution or liquidation proceeding, or if a trustee or receiver is appointed over all or a substantial portion of the property of Contractor under federal bankruptcy law or any state insolvency law, Contractor shall immediately provide the City with a written notice thereof. The City may terminate the Contract, and Contractor is deemed in default, at any time if the Contractor becomes insolvent, or is a party to any voluntary bankruptcy or receivership proceeding, makes an assignment for a creditor, or there is any similar action that affects Contractor's ability to perform under the Contract.

57. PAYMENT UPON TERMINATION: Upon termination of the Contract, the City will pay Contractor for satisfactory performance up until the effective date of termination. The City shall make final payment within thirty (30) days from receipt of the Contractor's final invoice.

58. CANCELLATION FOR GRATUITIES: The City may cancel the Contract at any time, without penalty or further liability to Contractor, if City determines that Contractor has given or offered to give any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with award or performance of the Contract.

59. CANCELLATION FOR CONFLICT OF INTEREST: Pursuant to A.R.S. § 38-511, if the City identifies a conflict of interest in the award or performance of the Contract, the City may cancel the Contract within three years after its execution, without penalty or further liability to Contractor.

MISCELLANEOUS

60. COOPERATIVE PURCHASE CONTRACTS: Presuming that Contractor agreed to such during the procurement process, Contractor will enter into cooperative purchase arrangements, as sanctioned by state and federal law, to allow Contractor to sell materials and services to any member of a cooperative group under the same pricing, terms and conditions of the contract awarded to the Contractor by the public procurement unit, following a competitive procurement process.

61. ADVERTISING: Contractor shall not advertise or publish information concerning its Contract with the City without the prior written consent of the City.

62. NOTICES: All notices given pursuant to the Contract shall be delivered at the addresses as specified in the Contract or updated by Notice to the other Party. Notices may be: (a) personally delivered, with receipt effective upon personal delivery; (b) sent via certified mail, postage prepaid, with receipt deemed effective four days after being sent; or (c) sent by overnight courier, with receipt deemed effective two days after being sent. Notice may be sent by email as a secondary form of notice.

63. THIRD PARTY BENEFICIARIES: The Contract is intended for the exclusive benefit of the parties. Nothing herein is intended to create any rights or responsibilities to third parties.

64. GOVERNING LAW: The Contract shall be construed in accordance with the laws of Arizona.

65. FORUM: In the event of litigation relating to the Contract, any action at law or in equity shall be filed in Coconino County, Arizona.

66. ATTORNEYS' FEES: If any action at law or in equity is necessary to enforce the terms of the Contract, the prevailing party shall be entitled to recover its reasonable attorneys' fees, costs, professional fees and expenses.

67. FORCE MAJUERE:

a. There may be events that occur during the term of the Contract that are beyond the control of both the City and Contractor, including events of war, floods, labor, disputes, earthquakes, epidemics, pandemics, adverse weather conditions not reasonably anticipated, forest fires, and other acts of God ("Events"). These Events may result in a temporary delay of contractual deliverables, or the permanent inability to provide the contractual deliverables that are the subject of the Contract.

b. There shall be no claims arising from a temporary delay of contractual deliverables, or the permanent inability to provide the contractual deliverables caused by the Events and the City shall not pay additional costs incurred by Contractor as a result of such Events.

c. The Parties shall act in good faith to extend the Contract completion date without any penalty to Contractor and that the extension will be in an amount of time equal to any temporary delay. This provision of the Contract supersedes all other terms regarding temporary delay, permanent shut down, or increased costs.

68. **NO BOYCOTT OF ISRAEL:** Pursuant to A.R.S. §§ 35-393 and 35-393.01, if a Party has over ten (10) employees and the Contract is worth at least one-hundred thousand dollars and no cents ($100,000), the Party shall certify that it is not currently engaged in, and agrees, for the duration of the Contract, will not engage in a boycott of Israel.

69. **CHANGES TO CONTRACT:** The Contract shall not be modified within the first year after Contract award where: (a) an amendment may result in a competitive advantage that was not made available to other proposers/bidders; or (b) requests for changes may delay commencement of performance.

70. FORCED LABOR OF ETHNIC UYGHURS: If Contractor engages in for-profit activity and has ten (10) or more employees, pursuant to A.R.S. §35-394, the Contractor certifies that it does not currently, and agrees for the duration of the contract that it will not, use: 1) the forced labor of ethnic Uyghurs in the People's Republic of China; 2) any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China; and 3) any contractors, subcontractors or suppliers that use the forced labor or any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China. If the Contractor becomes aware during the term of the contract that the company is not in compliance with the written certification, the Contractor shall notify the City within five (5) business days after becoming aware of the noncompliance. If the Contractor does not provide the City with a written certification that the Contractor has remedied the noncompliance within 180 days after notifying the City of the noncompliance, this Contract terminates, except that if the contract termination date occurs before the end of the remedy period the Contract terminations on the Contract termination date.

EXHIBIT C

STANDARD INSURANCE REQUIREMENTS
(Last Updated January 19, 2023)

*The term "Contractor" may substitute for the term "vendors," "consultants," or "firms," depending on the purpose of the underlying Contract.

1. **IN GENERAL:** Contractor shall maintain insurance against claims for injury to persons or damage to property, arising from performance of or in connection with the Contract by Contractor, its agents, representatives, employees, and/or subcontractors.

2. **REQUIREMENT TO PROCURE AND MAINTAIN:** Each insurance policy required by the Contract shall be in effect at, or before, commencement of work under the Contract and shall remain in effect until all of Contractor's obligations under the Contract have been met, including any warranty periods. Contractor's failure to maintain the insurance policies as required by the Contract, or to provide timely evidence of renewal, will be considered a material breach of the Contract.

3. **MINIMUM SCOPE AND LIMITS OF INSURANCE:** The following insurance requirements are minimum requirements for the Contract and in no way limit the indemnity covenants contained in the Contract. The City does not represent or warrant that the minimum limits set forth in the Contract are sufficient to protect Contractor from liabilities that might arise out of the Contract, and Contractor is free to purchase such additional insurance as Contractor may determine is necessary.

Where applicable, as related to the Scope of Work, Contractor shall provide coverage at least as broad and with limits not less than those stated below.

a. Commercial General Liability - Occurrence Form

General Aggregate	$2,000,000
Products/Completed Operations	$1,000,000
Each Occurrence	$1,000,000

~~b. Umbrella Coverage~~ ~~$2,000,000~~

c. Automobile Liability

Any Automobile or Owned, Hired, and Non-owned Vehicles Combined Single Limit Per Accident for Bodily Injury & Property Damage	$1,000,000

d. Workers' Compensation and Employer's Liability, if applicable. Haddad/Drugan LLC has no employees

Workers' Compensation	Statutory
Employer's Liability: Each Accident	$1,000,000
Disease - Each Employee	$1,000,000
Disease - Policy Limit	$1,000,000

~~e. Professional Liability~~ ~~$2,000,000~~

~~f. Network Security and Privacy Liability~~

~~Per claim~~	~~$2,000,000~~
~~Annual Aggregate~~	~~$2,000,000~~

~~**4. NETWORK SECURITY AND PRIVACY LIABILITY:** Contractor shall maintain the requisite insurance requirements covering all acts, errors, omissions, negligence, infringement of intellectual property (except patent and trade secret); network security and privacy risks, including but not limited to unauthorized access, failure of security, breach of privacy perils, wrongful disclosure, collection, or other negligence in the handling of confidential information, privacy perils, and including coverage for related regulatory defense and penalties; data breach expenses, including but not limited to, consumer notification, whether or not required by law, computer forensic investigations, public relations and crisis management firm fees, credit file or identity monitoring or remediation services in the performance of services for the City. The insurance policy shall include coverage for third-party claims. The insurance policy shall contain an affirmative coverage grant for contingent bodily injury and property damage emanating from the failure of the technology services or an error or omission in the content/information provided.~~

5. SELF-INSURED RETENTION: Any self-insured retentions must be declared to and approved by the City. If not approved, the City may require that Contractor reduce or eliminate such self-insured retentions with respect to the City, its officers, agents, employees, and/or subcontractors. Contractor shall be solely responsible for any self-insured retention amounts. The City at its option may require Contractor to secure payment of such self-insured retention by a surety bond or irrevocable and unconditional letter of credit.

6. OTHER INSURANCE REQUIREMENTS: The insurance policies shall contain, or be endorsed to contain, the following provisions:

a. Additional Insured: In Commercial General Liability and ~~Automobile Liability Coverages~~, the City of Flagstaff, its officers, officials, agents, employees, and/or subcontractors shall be named and endorsed as additional insureds with respect to liability arising out of the Contract and activities performed by or on behalf of Contractor, including products and completed operations of Contractor, and automobiles owned, leased, hired, or borrowed by Contractor.

b. Broad Form: Contractor's insurance policy shall contain broad form contractual liability coverage.

c. Primary Insurance: Contractor's insurance coverage shall be primary insurance with respect to the City, its officers, officials, agents, employees, and/or subcontractors. Any insurance or self-insurance maintained by the City, its officers, officials, agents, employees, and/or subcontractors shall be in excess of the coverage of Contractor's insurance and shall not contribute to it.

d. Each Insured: Contractor's insurance policies shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.

e. Not Limited: Coverage provided by Contractor shall not be limited to the liability assumed under the indemnification provisions of the Contract.

f. Waiver of Subrogation: The insurance policies shall contain a waiver of subrogation against the City, its officers, officials, agents, employees, and/or subcontractors for losses arising from work performed by Contractor for the City.

7. NOTICE OF CANCELLATION: Each insurance policy required by the insurance provisions of the Contract shall provide the required coverage and shall not be suspended, voided, cancelled, and/or reduced in coverage or in limits unless prior written notice has been given to the City. Notices required by this section shall be sent directly to the Procurement Agent and shall reference the Contract Number.

8. ACCEPTABILITY OF INSURERS: Contractor shall place insurance hereunder with insurers duly licensed or approved unlicensed companies in the State of Arizona and with a "Best's" rating of not less than A-: VII. The City does not represent or warrant that the above required minimum insurer rating is sufficient to protect Contractor from potential insurer insolvency.

9. CERTIFICATES OF INSURANCE: Contractor shall furnish the City with certificates of insurance (ACORD form) as required by the Contract. The certificates for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. Any policy endorsements that restrict or limit coverage shall be clearly noted on the certificate of insurance. The City Contract number shall be noted on the certificates of insurance. If requested by the City, all certificates of insurance and endorsements must be received and approved by the City before the Contractor commences work.

10. POLICIES: The City reserves the right to require, and receive within ten (10) days, complete, certified copies of all insurance policies and endorsements required by the Contract. The City shall not be obligated, however, to review any insurance policies or to advise Contractor of any deficiencies in such policies and endorsements. The City's receipt of Contractor's policies or endorsements shall not relieve Contractor from, or be deemed a waiver of, the City's right to insist on strict fulfillment of Contractor's obligations under the Contract.

11. MODIFICATIONS: Any modification or variation from the insurance requirements in the Contract must have the prior approval of the City's Attorney's Office in consultation with the City's Risk Manager, whose decision shall be final. Such action will not require a formal Contract amendment but may be made by their handwritten revision and notation to the foregoing insurance requirements.

EXHIBIT D

ARTISTIC, TECHNICAL AND MAINTENANCE RECORD
(To be submitted with final invoice)

1. General Information

    Artist

    Title of artwork

    Location

    General description of artwork

2. Artist's Statement about Artwork – to be used for publicity of the Artwork.

3. Artwork Information – in depth information for overall Artwork and for each individual element.

    Medium and Description of Materials (include materials thickness, welding rod alloy or joint material, casting alloy, wax body, glass or fiber type)

    Special Methods Utilized in Execution of Artwork (welding or joint method, technique or construction method – attach fabrication drawings)

    Material Finish (glaze, paint color and type, sanding grit, tool pattern, patina, surface sealer)

    Installation Method(s) (foundation installation structure, bolt/pin size, grout)

    Placement of Artwork (cautions regarding sunlight, heat, etc)

4. Vendors/Parts/Storage – include supplier's name, address and phone number, description for all components of Artwork; attach copies of manufacturer specifications whenever possible.

5. Regular Maintenance Schedule – include cleaning agents and recommended cleaning procedure, yearly maintenance schedule for the entire Artwork and recommended procedure to check any electrical or mechanical parts that are integrated in this work.

6. Special Considerations and/or Additional Pertinent Information

7. Plaque Text Essentials

    Artist's Name

    Title of Artwork, Year Completed

    Materials

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Patrick O'Connor, Water Services Specialist
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration and Approval of Contract: Approve a Cooperative Purchase Contract with Drake Equipment in the amount of $146,238.48, plus additional fees, for the purchase and installation of utility equipment on two water service trucks.

STAFF RECOMMENDED ACTION:

1. Approve the Cooperative Purchase Contract from Drake Equipment in the amount of $146,238.48, plus additional fees, for the purchase and installation of utility equipment on two water service trucks; and
2. Authorize the City Manager to execute all necessary documents.

Executive Summary:

The Cooperative Purchase Contract will be used to purchase and install Drake UTB Utility Bodies on two newly purchased 2023 Ram 4500 (1.5 ton) water service trucks. On October 19, 2022, the City entered a contract to purchase two Ram 4500 (1.5 ton) water service trucks. These trucks will be used for day-to-day functions of Water Services, ranging from general maintenance, on-call responsibilities as well as emergencies. To serve these purposes, it is necessary that trucks be build-out with specialized equipment, such as, hydraulic systems to utilize on-board jackhammers, submersible water pumps, water main line drilling/tapping machines, and small tooling. Additionally, the trucks must be outfitted with electric over hydraulic cranes for many uses including fire hydrant repair and or replacement, loading and unloading of specialized equipment too heavy for personnel to safely lift by hand.

Financial Impact:

The City Council approved the purchase of the two 2023 Ram 4500 (1.5 ton) water service trucks. Now, the trucks need to be built-out and the Cooperative Purchase Contract will provide the necessary specialty equipment from Drake Utility Body.

The initial $41,801.30 of this purchase is held in account number 202-08-303-1051-0-4401
Additionally, $41,801.30 of this purchase is held in account number 202-08-303-1054-0-4401
The remaining balance of $62,635.88 is held in account number 202-08-303-1054-0-4237

Policy Impact:

No.

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

Priority Based Budget Key Community Priorities and Objectives

High Performing Governance - Serve the public by providing high quality customer service.
Sustainable, Innovative Infrastructure - Deliver outstanding services to residents through healthy, well maintained infrastructure system.

Carbon Neutrality Plan

CR-2 Strengthen existing community systems to create resilience to both short-term shocks and long-term change.
HS-4 Improve the resilience of public infrastructure and City facilities.

Regional Plan

Goal WR.2. Manage a coordinated system of water, wastewater, and reclaimed water utility service facilities and resources at the City level and identify funding to pay for new resources.
Policy WR.2.2. Maintain and develop facilities to provide reliable, safe, and cost effective water, wastewater, and reclaimed water services.

Has There Been Previous Council Decision on This:

Yes. On October 18, 2022, the City Council approved the purchase of two 2023 Ram 4500 (1.5 ton) water service trucks.

Options and Alternatives:

1. Approve the Cooperative Purchase Contract with Drake Equipment in the amount of $146,238.48, plus additional fees, for the purchase and installation of utility equipment on two water service trucks; or
2. Do not approve the Cooperative Purchase Contract and direct staff to conduct an independent procurement of the necessary utility equipment. Staff does not recommend this option as it will delay the use of the water service trucks.

Background/History:

The City will be using the Drake Equipment Cooperative Purchase Contract #CTR062308 with Arizona Department of Transportation (ADOT) to purchase these Drake UTB Utility Bodies and build-out the new 2023 Ram 4500 (1.5 ton) water service trucks. Utilization of the ADOT cooperative will ensure better pricing for the equipment. Purchasing staff reviewed the ADOT cooperative and determined the contract to be current and relevant in scope to the vehicle bodies being purchased.

Attachments:

Contract 2023-108
Exhibit A - 74324
Exhibit A - 74531
Truck Without Equipment
Truck With Equipment 1
Truck with Equipment 2
Exhibit B - Agency Contract

COOPERATIVE PURCHASE CONTRACT
Contract No. 2023-108

This Cooperative Purchase Contract is made and entered into this _____ day of _____, 20_____, by and between the City of Flagstaff, Arizona, a political subdivision of the State of Arizona ("City") and Drake Truck Bodies, LLC D.B.A. Drake Equipment, an Arizona Limited Liability Company ("Contractor").

RECITALS:

A. The State of Arizona, Procurement Department, Public Sector conducted a competitive and open procurement process through Request for Proposal Solicitation No. BPM004560 that resulted in Contract No. CTR062308 with Contractor ("Agency Contract"); and

B. Contractor is a dealer as described in the Agency Contract; and

C. The City has authority to enter into a cooperative purchase contract with Contractor utilizing the Agency Contract.

AGREEMENT:

NOW THEREFORE, in consideration for the mutual promises contained herein, the parties agree as follows:

1. Materials and or Services Purchased: Contractor shall provide to City the materials, as specified in the Scope of Work attached hereto as ***Exhibit A*** or Purchase Order(s) submitted by the City in accordance with the Agency Contract. General description of materials and or services being purchased:

Drake Work Truck Bodies for Water Services Vehicles

2. Payment: Payment to the Contractor for the materials and or services provided for **one hundred forty-six thousand two hundred thirty-eighty dollars and forty-eight ($146,238.48), in addition to other fees**; made in accordance with the price list and terms set forth in the Agency Contract.

3. Terms and Conditions of Agency Contract Apply: All provisions of the Agency Contract documents, including any amendments, are incorporated in and shall apply to this Contract as though fully set forth herein. The Agency Contract documents are set forth in ***Exhibit B*** attached hereto and incorporated by reference. Contractor is responsible for promptly notifying City in writing of any changes to the Agency Contract, including, specifically changes in price for the materials.

4. Certificates of Insurance: All insurance provisions of the Agency Contract shall apply, including any requirement to name the City as an additional insured. Prior to commencing performance under this Contract, Contractor shall furnish City with a copy of the current Certificate of Insurance required by the Agency Contract.

5. Term: This Cooperative Purchase Contract shall commence upon execution by the parties and shall continue until expiration or termination of the underlying Agency Contract, unless sooner terminated by City in writing.

6. Renewal: This Cooperative Purchase Contract shall be automatically renewed if the underlying Agency Contract is renewed, for the same renewal period, unless City provides advance written notice to Contractor of its intention to non-renew.

Drake Truck Bodies, LLC D.B.A. Drake Equipment:

By:_____

Title:_____

CITY OF FLAGSTAFF

By:_____

Title:_____

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney's Office

EXHIBIT A
QUOTE (Attached)

1. **Drake Equipment Quote No. 74324 & 74531**

EXHIBIT B
AGENCY CONTRACT (Attached)

1. Draft Equipment Offer & Acceptance, Agency Contract CTR062308 Award Request for Proposal Solicitation No. BPM004560

DRAKE EQUIPMENT OF ARIZONA
2235 S 19TH AVE
PHOENIX, AZ 85009

Voice: 602.278.2552
Fax: 602.278.0427

QUOTATION

Quote Number: 74324
Quote Date: Feb 17, 2023
Page: 1

Quoted To:

CITY OF FLAGSTAFF
ATTN: ACCOUNTS PAYABLE
211 W ASPEN
FLAGSTAFF, AZ 86001

Customer ID	Good Thru	Payment Terms	Sales Rep
FLAGST	3/19/23	Net 10 Days	120TP00

Quantity	Item	Description	Unit Price	Amount
1.00		2023 RAM 4500 DRW 60" CA -		
1.00	021-108402	108" UTILITY BODY, LOCKING HANDLES, UNDERCOATED, PRIMED, 5 YEAR WARRANTY, LOW PROFILE BODY, DIAMOND PLATE FLOOR, ELECTROGALVANIZED CONSTRUCTION, 21" DEEP COMPTS	6,317.00	6,317.00
1.00	021-965000	UPGRADE BODY TO INTERLACED LONGSILLS AND CROSSMEMBERS, FULL WIDTH REAR CROSS MEMBER, DOUBLE REINFORCED FRONT PANEL AND 1" FLOOR FLANGE	1,288.00	1,288.00
1.00	021-000001	NOTE SPECIAL BODY COPARTMENT 10860D42215VA108 LAY OUT 32-54-22	1,301.00	1,301.00
1.00	021-000001	DOUBLE DOORS FRONT PER UTB 7779	1,913.00	1,913.00
1.00	021-400001	INCREASE BODY HEIGHT TO 42"	368.28	368.28
1.00	021-010102	HEAVY DUTY DOUBLE PANEL FLIP TOP LIDS FOR 108" UTB BODY	2,240.00	2,240.00
1.00	001-507002	PAINT WHITE INDUSTRIAL GRADE POLYURETHANE	1,253.00	1,253.00
6.00	008-562253	5622537 24" LED LIGHT	69.89	419.34
1.00	001-524001	INSTALL LIGHTING IN SIX SERVICE BODY COMPARTMENTS	748.92	748.92
1.00	021-000026	24" X 94" TP STEEL PLATFORM	1,482.60	1,482.60
1.00	001-507000	INSTALL SERVICE BODY	1,161.34	1,161.34

Subtotal	Continued
Sales Tax	Continued
TOTAL	**Continued**

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Quote Number: 74324
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211 W ASPEN
FLAGSTAFF, AZ 86001

Customer ID	Good Thru	Payment Terms	Sales Rep
FLAGST	3/19/23	Net 10 Days	120TP00

Quantity	Item	Description	Unit Price	Amount
1.00	021-010301	3500LB CRANE REINFORCEMENT (SOLID TOP CONFIG.) - LOCATION _____	3,087.00	3,087.00
1.00	010-110110	10K RECEIVER HITCH W/HORI CHANNEL FOR STEP W/EXPANDED ON STEP	785.41	785.41
1.00	003-582200	7 WAY METAL TRUCK END	23.75	23.75
1.00	001-502101	INSTALL PRE-WIRE PLUG AT REAR OF CHASSIS	68.80	68.80
1.00	021-000012	UTB+ LED LIGHT KIT | TWO J-35-RK SQUARE LED STT; TWO J-35-CK SQUARE CLR LED; TWO J-56-R 3/4" RED LED MARKR LIGHT; ONE 5621534 LED LIC LIGHT	160.22	160.22
1.00	024-361259	THOR 3000 WATT INVERTER W/USB	781.42	781.42
1.00	001-601000	INSTALL INVERTOR P/S COMPARTMENT	370.00	370.00
1.00	001-601000	INSTALL 110V GFCI OUTLET P/S REAR OUTSIDE COMPARTMENT (WATERPROOF)	375.00	375.00
1.00	044-501214	VENTURO EGAAAC-0000 ET12KX-15 (NON-PROPORTIONAL CORDED ONLY), 3500LBS MAX CAP., 12K FT/LB RATING, 7'-15' BOOM, SHUT-OFF SYSTEM, 25' PLUG-IN REMOTE CONTROL	17,795.06	17,795.06
1.00	001-507011	INSTALL ELECTRIC/HYDRAULIC CRANE	1,847.33	1,847.33
1.00	001-601000	INSTALL JACK HAMMER HOLDER IN FRONT OF HYDRAULIC RESERVOIR ON P/S	412.50	412.50

Subtotal	Continued
Sales Tax	Continued
TOTAL	**Continued**

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QUOTATION

Quote Number: 74324
Quote Date: Feb 17, 2023

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CITY OF FLAGSTAFF
ATTN: ACCOUNTS PAYABLE
211 W ASPEN
FLAGSTAFF, AZ 86001

Customer ID	Good Thru	Payment Terms	Sales Rep
FLAGST	3/19/23	Net 10 Days	120TP00

Quantity	Item	Description	Unit Price	Amount
1.00	044-185000	18500 MANUAL OUT AND DOWN OR (CRANK DN) OUT RIGGORS PRICED ONLY WHEN SOLD WITH CRANE	1,862.01	1,862.01
1.00	001-507010	INSTALL OUTRIGGERS	437.50	437.50
2.00	001-601000	RECESSED SQ VISE MTGS EA SIDE OF REAR BUMPER	427.24	854.48
1.00		STANDARD REAR MUDFLAPS		
1.00	001-601000	PLUMB BULKHEAD FITTINGS THRU FRONT AND REAR FRONT TO BE IN BUMPER AREA (NOTE PROPER CLEARANCE PERMITTED)	1,103.00	1,103.00
6.00		LED EMERGENCY LIGHTING (2) FRONT GRILL AMBER EA SIDE FRONT CORNER PANEL (2) BELOW HORI DOORS (2) REAR CORNER RED	349.51	2,097.06
3.00	006-592006	E92006 LED LIGHT 3 SIDE OF BODY WIRED TO UP FIT SWITCH	277.88	833.64
4.00	021-968000	ADDITIONAL SHELFS FRONT VERT COMP	162.54	650.16
1.00	001-601000	INSTALL EXPANDE METAL AT BOTTOM OF CRANE REIN TUBES TO CREAT SHELF WIRED TO UP FIT SWITCH	267.58	267.58
1.00		ECCO 5590CA-VM AMBER CLEAR TOP LIGHT VACUUM MOUNT	784.45	784.45
1.00	001-601000	37 GAL RES TO CUSTOMER SPECS PER FORCE SPEC	865.51	865.51

Subtotal	Continued
Sales Tax	Continued
TOTAL	**Continued**

DRAKE EQUIPMENT OF ARIZONA
2235 S 19TH AVE
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QUOTATION

Quote Number: 74324
Quote Date: Feb 17, 2023
Page: 4

Quoted To:

CITY OF FLAGSTAFF
ATTN: ACCOUNTS PAYABLE
211 W ASPEN
FLAGSTAFF, AZ 86001

Customer ID	Good Thru	Payment Terms	Sales Rep
FLAGST	3/19/23	Net 10 Days	120TP00

Quantity	Item	Description	Unit Price	Amount
1.00	001-601000	SPRING WORK ON CHASSIS CRANE SIDE TO ACCOMMODATE FOR THE ADDITIONAL WEIGHT	759.54	759.54
1.00	033-000105	CUSTOM BUILT LADDER RACK COMBO ON D/S PER DRWG	2,046.64	2,046.64
1.00	033-000118	CUSTOM SERVICE BODY HEADACHE RACK FOR REAR WINDOW	750.65	750.65
4.00	032-501020	24" WORK TRUCK STEP GRIP STRUT	459.06	1,836.24
1.00		NEW PUMP AND PTO TO PROVISION OF CHASSIS 8GAL PUMP TO 1500 PSI AT 1150 RPM OF CHASSIS HYD PRESSURE GUAGE TO MONITER PRESSURE AT CONTROL VALVE FOR HYD FORCE Q	7,308.72	7,308.72
1.00		INSTALL 45 LB. CYLINDER TIE DOWNS EYELETS/BRACKETS TO THE PASSENGER SIDE INSIDE BED WALL BETWEEN THE CRANE CRADLE AND THE HYDRAULIC RES.	455.00	455.00
2.00		5601015 BUYERS BOOSTER CABLE'S GRAY QUICK CONNECT	36.90	73.80
1.00	001-505000	INSTALL FRONT AND REAR 12V POWER CONNECTIONS. -	562.50	562.50
1.00	00-SUB TO INSPECT	PRICE IS SUBJECT TO VISUAL INSPECTION OF VEHICLE OR EQUIPMENT. REFER TO TERMS AND		

Subtotal	Continued
Sales Tax	Continued
TOTAL	**Continued**

DRAKE EQUIPMENT OF ARIZONA
2235 S 19TH AVE
PHOENIX, AZ 85009

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QUOTATION

Quote Number: 74324
Quote Date: Feb 17, 2023
Page: 5

Quoted To:
CITY OF FLAGSTAFF ATTN: ACCOUNTS PAYABLE 211 W ASPEN FLAGSTAFF, AZ 86001

Customer ID	Good Thru	Payment Terms	Sales Rep
FLAGST	3/19/23	Net 10 Days	120TP00

Quantity	Item	Description	Unit Price	Amount
1.00	00-CUST ORDER	CONDITIONS. TO CONFIRM ORDER, REVIEW FOR ACCURACY AND EMAIL BACK TO YOUR SALES REP WITH SIGNATURE ORDERED CONFIRMED BY_____		

Subtotal	67,747.45
Sales Tax	5,371.79
TOTAL	**73,119.24**

DRAKE EQUIPMENT OF ARIZONA
2235 S 19TH AVE
PHOENIX, AZ 85009

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QUOTATION

Quote Number: 74531
Quote Date: Mar 8, 2023
Page: 1

Quoted To:

CITY OF FLAGSTAFF
ATTN: ACCOUNTS PAYABLE
211 W ASPEN
FLAGSTAFF, AZ 86001

Customer ID	Good Thru	Payment Terms	Sales Rep
FLAGST	4/7/23	Net 10 Days	120TP00

Quantity	Item	Description	Unit Price	Amount
		928-699-6174 poconnor@flagstaffaz.gov		
1.00		2023 RAM 4500 DRW 60" CA TRUCK 2 -		
1.00	021-108402	108" UTILITY BODY, LOCKING HANDLES, UNDERCOATED, PRIMED, 5 YEAR WARRANTY, LOW PROFILE BODY, DIAMOND PLATE FLOOR, ELECTROGALVANIZED CONSTRUCTION, 21" DEEP COMPTS	6,317.00	6,317.00
1.00	021-965000	UPGRADE BODY TO INTERLACED LONGSILLS AND CROSSMEMBERS, FULL WIDTH REAR CROSS MEMBER, DOUBLE REINFORCED FRONT PANEL AND 1" FLOOR FLANGE	1,288.00	1,288.00
1.00	021-000001	NOTE SPECIAL BODY COPARTMENT 10860D42215VA108 LAY OUT 32-54-22	1,301.00	1,301.00
1.00	021-000001	DOUBLE DOORS FRONT PER UTB 7779	1,913.00	1,913.00
1.00	021-400001	INCREASE BODY HEIGHT TO 42"	368.28	368.28
1.00	021-010102	HEAVY DUTY DOUBLE PANEL FLIP TOP LIDS FOR 108" UTB BODY	2,240.00	2,240.00
1.00	001-507002	PAINT WHITE INDUSTRIAL GRADE POLYURETHANE	1,253.00	1,253.00
6.00	008-562253	5622537 24" LED LIGHT	69.89	419.34
1.00	001-524001	INSTALL LIGHTING IN SIX SERVICE BODY COMPARTMENTS	748.92	748.92
1.00	021-000026	24" X 94" TP STEEL PLATFORM	1,482.60	1,482.60

Subtotal	Continued
Sales Tax	Continued
TOTAL	**Continued**

DRAKE EQUIPMENT OF ARIZONA
2235 S 19TH AVE
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Fax: 602.278.0427

QUOTATION

Quote Number: 74531
Quote Date: Mar 8, 2023

Quoted To:
CITY OF FLAGSTAFF ATTN: ACCOUNTS PAYABLE 211 W ASPEN FLAGSTAFF, AZ 86001

Customer ID	Good Thru	Payment Terms	Sales Rep
FLAGST	4/7/23	Net 10 Days	120TP00

Quantity	Item	Description	Unit Price	Amount
1.00	001-507000	INSTALL SERVICE BODY	1,161.34	1,161.34
1.00	021-010301	3500LB CRANE REINFORCEMENT (SOLID TOP CONFIG.) - LOCATION _____	3,087.00	3,087.00
1.00	010-110110	10K RECEIVER HITCH W/HORI CHANNEL FOR STEP W/EXPANDED ON STEP	785.41	785.41
1.00	003-582200	7 WAY METAL TRUCK END	23.75	23.75
1.00	001-502101	INSTALL PRE-WIRE PLUG AT REAR OF CHASSIS	68.80	68.80
1.00	021-000012	UTB+ LED LIGHT KIT | TWO J-35-RK SQUARE LED STT; TWO J-35-CK SQUARE CLR LED; TWO J-56-R 3/4" RED LED MARKR LIGHT; ONE 5621534 LED LIC LIGHT	160.22	160.22
1.00	024-361259	THOR 3000 WATT INVERTER W/USB	781.42	781.42
1.00	001-601000	INSTALL INVERTOR P/S COMPARTMENT	370.00	370.00
1.00	001-601000	INSTALL 110V GFCI OUTLET P/S REAR OUTSIDE COMPARTMENT (WATERPROOF)	375.00	375.00
1.00	044-501214	VENTURO EGAAAC-0000 ET12KX-15 (NON-PROPORTIONAL CORDED ONLY), 3500LBS MAX CAP., 12K FT/LB RATING, 7'-15' BOOM, SHUT-OFF SYSTEM, 25' PLUG-IN REMOTE CONTROL	17,795.06	17,795.06
1.00	001-507011	INSTALL ELECTRIC/HYDRAULIC CRANE	1,847.33	1,847.33
1.00	001-601000	INSTALL JACK HAMMER HOLDER IN FRONT OF HYDRAULIC RESERVOIR ON	412.50	412.50

Subtotal	Continued
Sales Tax	Continued
TOTAL	**Continued**

DRAKE EQUIPMENT OF ARIZONA
2235 S 19TH AVE
PHOENIX, AZ 85009

Voice: 602.278.2552
Fax: 602.278.0427

QUOTATION

Quote Number: 74531
Quote Date: Mar 8, 2023

Quoted To:

CITY OF FLAGSTAFF
ATTN: ACCOUNTS PAYABLE
211 W ASPEN
FLAGSTAFF, AZ 86001

Customer ID	Good Thru	Payment Terms	Sales Rep
FLAGST	4/7/23	Net 10 Days	120TP00

Quantity	Item	Description	Unit Price	Amount
		P/S		
1.00	044-185000	18500 MANUAL OUT AND DOWN OR (CRANK DN) OUT RIGGORS PRICED ONLY WHEN SOLD WITH CRANE	1,862.01	1,862.01
1.00	001-507010	INSTALL OUTRIGGERS	437.50	437.50
2.00	001-601000	RECESSED SQ VISE MTGS EA SIDE OF REAR BUMPER	427.24	854.48
1.00		STANDARD REAR MUDFLAPS		
1.00	001-601000	PLUMB BULKHEAD FITTINGS THRU FRONT AND REAR FRONT TO BE IN BUMPER AREA (NOTE PROPER CLEARANCE PERMITTED)	1,103.00	1,103.00
6.00		LED EMERGENCY LIGHTING (2) FRONT GRILL AMBER EA SIDE FRONT CORNER PANEL (2) BELOW HORI DOORS (2) REAR CORNER RED	349.51	2,097.06
3.00	006-592006	E92006 LED LIGHT 3 SIDE OF BODY WIRED TO UP FIT SWITCH	277.88	833.64
4.00	021-968000	ADDITIONAL SHELFS FRONT VERT COMP	162.54	650.16
1.00	001-601000	INSTALL EXPANDE METAL AT BOTTOM OF CRANE REIN TUBES TO CREAT SHELF WIRED TO UP FIT SWITCH	267.58	267.58
1.00		ECCO 5590CA-VM AMBER CLEAR TOP LIGHT VACUUM MOUNT	784.45	784.45
1.00	001-601000	37 GAL RES TO CUSTOMER SPECS PER	865.51	865.51

Subtotal	Continued
Sales Tax	Continued
TOTAL	**Continued**

DRAKE EQUIPMENT OF ARIZONA
2235 S 19TH AVE
PHOENIX, AZ 85009

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QUOTATION

Quote Number: 74531
Quote Date: Mar 8, 2023

Quoted To:

CITY OF FLAGSTAFF
ATTN: ACCOUNTS PAYABLE
211 W ASPEN
FLAGSTAFF, AZ 86001

Customer ID	Good Thru	Payment Terms	Sales Rep
FLAGST	4/7/23	Net 10 Days	120TP00

Quantity	Item	Description	Unit Price	Amount
		FORCE SPEC		
1.00	001-601000	SPRING WORK ON CHASSIS CRANE SIDE TO ACCOMMODATE FOR THE ADDITIONAL WEIGHT	759.54	759.54
1.00	033-000105	CUSTOM BUILT LADDER RACK COMBO ON D/S PER DRWG	2,046.64	2,046.64
1.00	033-000118	CUSTOM SERVICE BODY HEADACHE RACK FOR REAR WINDOW	750.65	750.65
4.00	032-501020	24" WORK TRUCK STEP GRIP STRUT	459.06	1,836.24
1.00		NEW PUMP AND PTO TO PROVISION OF CHASSIS 8GAL PUMP TO 1500 PSI AT 1150 RPM OF CHASSIS HYD PRESSURE GUAGE TO MONITER PRESSURE AT CONTROL VALVE FOR HYD FORCE Q	7,308.72	7,308.72
1.00		INSTALL 45 LB. CYLINDER TIE DOWNS EYELETS/BRACKETS TO THE PASSENGER SIDE INSIDE BED WALL BETWEEN THE CRANE CRADLE AND THE HYDRAULIC RES.	455.00	455.00
2.00		5601015 BUYERS BOOSTER CABLE'S GRAY QUICK CONNECT	36.90	73.80
1.00	001-505000	INSTALL FRONT AND REAR 12V POWER CONNECTIONS.	562.50	562.50
		-		
1.00	00-SUB TO INSPECT	PRICE IS SUBJECT TO VISUAL INSPECTION OF VEHICLE OR		

Subtotal	Continued
Sales Tax	Continued
TOTAL	**Continued**

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2235 S 19TH AVE
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QUOTATION

Quote Number: 74531
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Page: 5

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CITY OF FLAGSTAFF
ATTN: ACCOUNTS PAYABLE
211 W ASPEN
FLAGSTAFF, AZ 86001

Customer ID	Good Thru	Payment Terms	Sales Rep
FLAGST	4/7/23	Net 10 Days	120TP00

Quantity	Item	Description	Unit Price	Amount
1.00	00-CUST ORDER	EQUIPMENT. REFER TO TERMS AND CONDITIONS. TO CONFIRM ORDER, REVIEW FOR ACCURACY AND EMAIL BACK TO YOUR SALES REP WITH SIGNATURE ORDERED CONFIRMED BY_____		

Subtotal	67,747.45
Sales Tax	5,371.79
TOTAL	**73,119.24**


3-58
HEAVY DUTY


W2085
RAM
5500
HEAVY DUTY
HEMI
5.4 LITER
CITY OF FLAGSTAFF ARIZONA
WATER
SERVICES

9'6" CLEARANCE

ET12K

VENTURO

DANGER

UNLAWFUL TO OPERATE THIS EQUIPMENT WITHIN 10 FEET OF HIGH - VOLTAGE LINES OF 50,000 VOLTS OR LESS.

W2085

FIRE

WATER SERVICES

DRAKE EQUIPMENT

DocuSign Envelope ID: 601611A0-0090-4019-AB04-B058A13D333B

ADOT
Procurement

OFFER AND ACCEPTANCE

OFFER

TO THE STATE OF ARIZONA:

The undersigned hereby offers and agrees to perform in compliance with all terms, conditions, specifications and amendments of this solicitation and any written exceptions in the offer. Signature also acknowledges receipt of all pages indicated in the Table of Contents.

Drake Equipment of Arizona	
Offeror (Company) Name	Signature of Person Authorized to Sign Offer
2235 S. 19th Avenue	Mark D. Kruse 7/8/22
Address	Printed Name Date
Phoenix AZ 85009	CEO
City State Zip	Title
mark@drakeequipment.com	602-278-2552
Email Address	Phone Number
Info@drakeequipment.com	
Company Email Address	Fax Number

By signature in the Offer section above, the Offeror certifies that the submission of the Offer did not involve collusion or other anticompetitive practices.

ACCEPTANCE OF OFFER (FOR DEPARTMENT USE ONLY)

The Contractor is now bound to perform based upon Contract Number CTR062308 including all terms, conditions, specifications, amendments, etc., and the Contractor's offer as accepted by the state.

The Contractor is hereby cautioned not to commence any billable work or provide any material, service or construction under this contract until contractor receives a purchase order document.

State of Arizona

Effective this 1st day of October 20 22

DocuSigned by:
Christine Fruitman 9/23/2022
3E7EEFE3E6B54F3...

Procurement Officer Awarded Date

Procurement

STATE OF ARIZONA
ARIZONA DEPARTMENT OF TRANSPORTATION
1739 W. Jackson St., Ste. A
Phoenix, AZ 85007

REQUEST FOR PROPOSAL

SOLICITATION NUMBER: BPM004560

DESCRIPTION: Landscape and Utility Vehicles, Trailers and Equipment

QUESTIONS: Inquiries regarding the solicitation are to be submitted online through the State's e-Procurement system, Arizona Procurement Portal (APP) (https://app.az.gov/) using the Discussion Forum tab.

OFFERORS ARE STRONGLY ENCOURAGED TO READ THE ENTIRE SOLICITATION.

Patrick Breazeale
Procurement Officer
Phone: 602-712-8504
Email: PBreazeale@azdot.gov

This solicitation is issued in accordance with A.R.S. §41-2534 and A.A.C. R2-7-C301 et seq., Competitive Sealed Proposals.

"An Equal Opportunity Agency"

The Arizona Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252.42 U.S.C. §§ 2000d-4) and the Americans with Disabilities Act (ADA), hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin in consideration for an award.

Persons that require a reasonable accommodation based on language or disability should contact ADOT's Procurement Office by phone (602) 712-2089. Requests should be made as early as possible to ensure the State has an opportunity to address the accommodation.

Las personas que requieran asistencia (dentro de lo razonable) ya sea por el idioma o discapacidad deben ponerse en contacto con ADOT (602) 712-2089.

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1. Statement of Need

1.1. Pursuant to the Arizona Procurement Code, A.R.S. §41-2501 et seq., the State of Arizona Department of Transportation (Department), has a requirement for Landscaping and Utility vehicles, Trailers and Equipment.

2. Introduction and Background

2.1. The State of Arizona Department of Transportation (Department) is seeking to contract with a qualified vendor(s) who can provide various landscaping equipment and vehicles which includes but is not limited to, utility vehicles, tractors, trailers, all-terrain vehicles, grounds maintenance vehicles, lawn and garden equipment, in addition to other related products, parts and accessories for the State of Arizona and participating Eligible Agencies. This equipment will be used to support official organizational goals.

3. General Requirements

3.1. The contractor shall provide a comprehensive selection of products at anticipated volumes available through manufacturer's current published price lists. Products offered shall be the newest product model available from the manufacturer. No prototype, demo products, rebuilt or reconditioned products shall be accepted.

3.2. Contractors shall have the ability to create and process numerous individual accounts for order placement, billing and reporting purposes and have inventory and transportation capacities sufficient to meet customer demand and contract delivery requirements.

3.3. For vehicles or equipment requiring up-fit/modifications, all applicable cost may be included in quotation or as a separate quotation.

3.4. The contractor may assign a representative(s) to the State to act as a liaison between the Eligible Agencies and the contractor.

3.5. The contractor shall provide general help and ordering assistance including toll-free phone and web-based support.

3.6. The contractor shall have a return process in place to accommodate for any defective or damaged product. Any item that is received in error or in a defective or damaged condition shall be replaced or returned within thirty (30) days at no cost to the Eligible Agency. Any defects noted after thirty (30) days of acceptance, the eligible agencies will utilize the (1) year manufacturer's warranty.

3.7. The contractor shall have local Arizona authorized service and repair facilities capable of servicing, repairing and or warranty work on any equipment sold to the State of Arizona.

3.8. Once a purchase order has been issued, the contractor shall notify the Eligible Agency of any delivery date delays or changes as early as possible.

4. Specific Requirements

4.1. Product Categories

Equipment offered in the following categories shall be considered for award. These categories shall be defined by similar types of products and include all related types of powered equipment (i.e. gasoline, E85, bio-diesel, diesel, alternative fuels, battery and electric), parts and accessories. The Contractor shall provide the goods described in any or all of the following categories:

1. Lawn and garden equipment: To include but not limited to; edger's, shrub trimmers, chain saws, stump grinders, wood splitters, weed eaters, portable pumps, portable generators and leaf blowers.

2. Mowers: To include but not limited to; walk-behind, reel, rotary, flail, zero turn, ride on, commercial front and wide-area mowers, commercial boom or side-arm mowers, three point hitch type, pull behind, and trim (edge).

3. Athletic Field and Turf Equipment: To include but not limited to; aerators, ball field and bunker rakes, scrapers, stripers, rollers and edgers.

4. Sprayers: To include but not limited to; backpack sprayers, spot sprayers, electric or gas-powered towable or mounted sprayers (encompassing cart, trailer, truck or vehicle mounted) and self-standing mix tanks, including all applicable parts, attachments and accessories. Stock and custom rigs are included.

5. Brush or wood chippers: To include but not limited to; hydraulic fed, power take off (PTO) driven, skid mount or upright chippers, gas-powered capable of processing up to 3" diameter material, diesel-powered capable of chipping material up to 18" x 24", including all attachments and accessories.

6. Tractors: To include but not limited to; compact utility, utility, tow tractors and agriculture tractors, including all applicable implements and attachments.

7. Compact Excavators: (Max operational weight of 20,000 lbs.) To include but not limited to; skid steers, loader backhoes, tractor loaders and mini hydraulic excavators, including all applicable implements and attachments.

8. Utility Trailers: (Max Gross Vehicle Weight Rating (GVWR) 25,900 lbs and electric brakes only.) Full line and sizes of Fifth wheel, Ball Hitch, Lunette Eye Pintle Hook, enclosed, open, tilt, tandem axle, single axle, carry-on dump trailers, off-road vehicle trailers. Semi-trailers are not included.

9. Utility Boxes: (Maximum capacity 70 cu. ft.) To include but not limited to; steel, aluminum or plastic construction, truck toolbox, construction site storage box (job box), storage drawer boxes for van and truck bed mounting.

10. Utility Vehicles: To include but not limited to; three or four wheelers, quads, work/utility ATVs, Battery electric vehicles, burden carriers and personnel carriers including all attachments and accessories. Sand Rail and Dune Buggy ATVs and side by sides are not included.

11. Towable: To include but not limited to; towable light towers, trailer mounted centrifugal pumps, pull behind generators and air compressors.

4.2. **Training**

1. If requested by the Eligible Agency, the contractor shall provide, at no additional cost, on-site training to ensure proper use of equipment.

2. In lieu of face-to-face training, the Eligible Agency may request the contractor to provide copies of any existing training materials, which cover the inspection, service, and operation of purchased equipment.

3. Training shall be conducted by qualified representative(s) that have a high level of knowledge and experience relating to the type of equipment offered or purchased and experience in performing such training.

4. Scheduling Training: The Eligible agency shall be responsible for scheduling training. When an Eligible Agency places an order and training will be required, the Agency may designate a point of contact for any training coordination.

5. The training shall contain the following information:
   - Technical Manuals
   - Vehicle/Equipment Familiarization
   - Engine
   - Transmission
   - Brakes And Air Supply System
   - Body And Components
   - Hydraulic Systems

- Complete Electrical Components
- Calibration Systems

6. Operator and Mechanic Training: Operator training shall focus on the operation of equipment, daily inspections, as well as, minor adjustments and shall be conducted at the location requested by Eligible Agency. Mechanic training shall focus on the operations, routine/preventive maintenance and repair troubleshooting of equipment and shall be conducted at the location requested by Eligible Agency. The contractor will be notified of these locations when the Eligible Agency schedules the training.

6.1 Operator Training. At completion of training session the attending equipment operators shall be able to:

- Describe the operating capabilities and any special features present on the equipment.
- Identify all control devices to the equipment model.
- Describe the proper/safe techniques to use for transporting the equipment including loading and tie-down.

Use the Operator's Manual to identify:

- Special safety considerations that include cautions and warnings applicable to the operation of the equipment
- Manufacturer's recommended preventive maintenance service intervals and procedures including pre- and post-operational inspection and service requirements.

Demonstrate on the equipment:

- The ability to identify inspection and service points.
- Proper/safe start-up and shutdown procedures.
- Proper/safe use of all controls.

6.2 Mechanic Training. At the completion of these training sessions, the attending technicians will be able to:

1. Describe the primary equipment systems design features, function and capabilities.
2. Identify the primary equipment systems component location and function.
3. Use manufacturer's reference literature and materials to identify.
4. Manufacturer's Preventive Maintenance service intervals and procedures.
5. Recommended system diagnostic procedures and repair processes.
6. Representative component part numbers and nomenclature.

7. Demonstrate on the equipment, the use of specified diagnostic procedures and appropriate tools/devices to diagnose the most likely primary equipment system failures and describe the procedures that would be required to repair these failures.

4.3. **Manuals:** A digital version or hard copy of all manuals may be provided for an additional fee to the eligible agencies if requested. The manual fee(s) will be quoted at the time of the estimate. The contractor shall provide either electronic or hard copy manual(s) as requested by the eligible agency:

- Operator's Manuals, per unit ordered.
- Parts Manual, per unit ordered.
- Service and Repair Manual, per unit ordered.
- Overhaul Manual, per unit ordered.
- Cross reference guide from manufactures (part numbers to their suppliers part numbers), per unit ordered.

4.3.1. If Applicable, the Contractor shall include wiring diagrams, Hydraulic / Pneumatic Schematics (for basic machine and engine) as part of the manual documentation and must be delivered to the Eligible Agency if requested.

4.4. **Up-fit / Modifications**

4.4.1. The Eligible Agency may request the Contractor(s) to up-fit/modify any vehicle or equipment for specific organizational needs. Other vehicles or equipment may require interior and/or exterior modifications per the individual Eligible Agency.

4.4.2. The Eligible Agency will supply all up-fit/modification requests to the Contractor. The Contractor shall identify any conditions that apply to the up-fit/modification on a quotation to the Eligible Agency for review before any work commences.

4.5. **Estimates:** All products shall be quoted from the most current product line offered on manufactured website.

4.5.1 A written or electronic quote that includes parts, materials, and estimated delivery time shall be provided to the eligible agency prior to commencement of delivery of goods. Quote shall contain the following at a minimum:

- Manufacturer Part number
- Description
- MSRP
- Contracted Price (Showing Discount)

4.6. **Pricing Structure**

4.6.1. Contract prices shall be in the form of a fixed percentage of discounts off the most recent Manufacturers Suggested Retail Price (MSRP) part of the contract. The published price list may be in the form of an Internet website. The internet website shall include at a minimum, part numbers and descriptions (Photos Optional) of all contracted products or groups of products. Real-time MSRP may be used at the time that the estimate is issued as long as the MSRP is published and available for the eligible agency to review.

4.6.2. The contractor shall honor the quoted MSRP with applicable discounts for a minimum of 30 days.

4.6.3. Economic Surcharges: Any manufacturer imposed surcharges shall be listed on the estimate and acceptance of charges shall be determined by the eligible agency.

4.7. **Warranty**

4.7.1. Contractor shall be responsible for all warranty work. In addition, the Contractor shall have an authorized repair dealer located in Arizona that will accomplish or coordinate any necessary warranty work.

4.7.2. The minimum warranty shall be One (1) year or manufacture/industry standard warranty whichever is greater.

4.7.3. The warranty period on workmanship and materials shall be based on a minimum of twelve (12) months from the time of acceptance by the eligible agency unless otherwise agreed to in writing.

5. Contractor's Responsibilities

5.1. Contractor's Best Pricing. Supplier warrants that, for the term of the Contract, the prices and discounts awarded will be equal to or better than the lowest prices the contractor sells to an equivalent entity.

6. Department's Responsibilities

6.1. **Inspection & Acceptance:** The eligible agency shall have ten (10) business days (excluding any state holidays) to complete the inspection and acceptance of equipment. The eligible agency shall not unreasonably withhold acceptance.

1. CONTRACT TERM

The term of any resultant contract shall commence on the effective day of award and shall continue for a period of twelve months (12) thereafter, unless terminated, cancelled or extended as otherwise provided herein.

2. CONTRACT EXTENSION

By mutual written contract amendment, any resultant contract may be extended for supplemental periods of up to a maximum of forty-eight (48) months.

3. ELIGIBLE AGENCIES

This contract shall be for the use of all State of Arizona departments, agencies and boards. In addition, eligible universities, political subdivisions and nonprofit educational or public health institutions may participate at their discretion. In order to participate in any resultant contract, a university, political subdivision or nonprofit educational or public health institution must have entered into a cooperative purchasing agreement with the State Procurement Office as required by Arizona Revised Statutes §41-2632.

4. NON-EXCLUSIVE CONTRACT

This contract shall be for the sole convenience of the Department. The Department reserves the right to obtain like goods or services from another source when necessary. The Off-Contract Purchase Authorization and subsequent procurement shall be consistent with the Arizona Procurement Code.

5. ORDERING PROCESS

The Department shall issue a purchase order to the Contractor. Each purchase order must cite the contract number. This purchase order shall be the only document required for the Department to order and the Contractor to deliver the material and/or service.

Any attempts to represent any material and/or service not specifically awarded as being under contract is a breach of the contract and a violation of the Arizona Procurement Code. Any such action is subject to the legal and contractual remedies available to the State inclusive of but not limited to contract cancellation, suspension and/or debarment of the Contractor.

6. SHIPPING TERMS

Delivery shall be F.O.B. Destination to the location designated herein. Contractor shall retain title and control of all goods until they are delivered. All risk of transportation and related charges shall be the responsibility of the Contractor. All claims for visible or concealed damage shall be filed by the Contractor. The Department will notify the Contractor promptly of any damaged goods and shall assist the Contractor in arranging for inspection.

7. DELIVERY

Deliveries shall be completed In accordance with the requirements of the contract.

Delivery of the product does not constitute acceptance.

8. INSPECTION AND ACCEPTANCE

Each item delivered shall be subject to a complete inspection by the Department within Ten (10) days after delivery. Inspection criteria shall include, but not be limited to, conformity to the specifications, workmanship, quality and materials.

If the delivered product is not accepted and returned for corrective action, an additional fifteen (15) calendar days shall be allowed for inspection of the corrected or replacement product.

The Contractor shall be responsible for the transport of the material to and from the Department for the correction of items or workmanship not in compliance with the specifications.

Product returned for corrective action may delay payment. Invoices will be processed for payment only after the product is accepted.

9. INVOICING and PAYMENT

Contractor shall submit all billing notices or invoices to the ordering Eligible Agency or Co-Op Buyer at the address indicated on the applicable Order document.

Separate invoices are required for each shipment of product or delivery of service and shall include at a minimum:

- Department Location's Name and Address
- Vendor Name, Remit to Address and Contact Information
- Contract Number
- Purchase Order Number
- Invoice Number and Date
- Date the items were shipped to the Department
- Contract Line Item Number
- Line Item Description or Item or Service
- Quantity Purchased
- Line Item Unit of Measure
- Price per Unit and Total per Unit
- Catalog or Other Discount (if applicable)
- Net Unit Price and Total per Unit (if applicable)
- Applicable taxes
- Applicable Shipping/Freight Charges(inbound freight only)

- Total Invoice Amount Due

Invoices not sent to the proper address, or not containing the necessary and required information may delay payment. A Contractor whose payments are delayed due to improper invoicing shall make no claim against the Department or the State for late or finance charges.

The Department will make every effort to process payment for the purchase of product within thirty (30) calendar days after the Department has conducted the necessary reviews, inspections and acceptance as described herein.

The Department acceptance date will be the valid date for starting the thirty (30) calendar day payment period.

Payment due dates, including discount periods, will be computed from the date of acceptance or date of correct invoice (whichever is later) to the date the Department's warrant is mailed.

Purchasing Card. Applicable Eligible Agency or Co-Op Buyer may pay invoices for some or all Orders using a purchasing card. Any and all fees related to payment using a Purchasing Card are the responsibility of Contractor. Unless otherwise stated in the Contract there will be no additional fees or increase in prices associated with this method of payment.

10. ESTIMATED USAGE

The Department anticipates considerable usage under this contract. The Department reserves the right to increase or decrease actual quantities ordered as circumstances may require. No guarantees are made concerning actual purchases under this contract.

11. PRICE REDUCTION

A price reduction adjustment may be offered at any time during the term of a contract and shall become effective upon notice through a written contract amendment.

12. PRICE INCREASE

The Department will review **fully documented** requests for price increases for any contract which will or has been in effect for twelve (12) months. The request shall be submitted no less than 60 days prior to the contract renewal date. The Contractor shall provide fully documented information which supports the price increase request. Fully documented means that the request shall present detailed information and calculations that make it clear how the claimed increase has an impact on the contract unit prices. All assumptions regarding cost factors that have an impact on the requested increase shall also be clearly identified and justified. The requested price increase must be based upon a cost increase that was clearly unpredictable at the time of the offer and can be shown to directly affect the price of the item concerned. Any price increase adjustment request prior to the time of contract extension will be a factor in the extension review process. The Department will determine whether the requested price

increase or an alternate option, is in the best interest of the State. A price increase request will only be required if a reduced discount percentage revision is being requested.

13. SAFETY STANDARDS

Items supplied under this contract shall comply with all current applicable safety standards and regulations including the Occupational Safety and Health Administration (OSHA), US Environmental Protection Agency (EPA), Federal Motor Vehicle Safety Standards (FMVSS), Industrial Commission of Arizona (ICA), and Arizona Motor Vehicle Division (MVD) regulations, as well as, all other industry standards, including the National Electric Code and the National Fire Protection Association.

14. WARRANTY

The Contractor warrants:

1. That all services performed hereunder shall conform to the requirements of this contract and shall be performed by qualified personnel in accordance with the highest professional standards.

2. That all items furnished hereunder shall conform to the requirements of this contract and shall be free from defects in design materials and workmanship. Any defects of design, workmanship or materials shall be fully corrected by the Contractor (including parts and labor) without cost to the Department.

3. The manufacturer's warranty period on workmanship and materials shall be based on a minimum of twelve (12) months from the time of acceptance by the eligible agency unless otherwise agreed to in writing.

15. CURRENT PRODUCTS

All products supplied under this contract shall be in current and ongoing production; shall have been formally announced for general marketing purposes; shall be a model or type currently functioning in a user (paying customer) environment and capable of meeting or exceeding all specifications and requirements set forth in the contract.

16. PRODUCT DISCONTINUANCE

In the event that a product or model is discontinued by the manufacturer, the Department at its sole discretion may allow the Contractor to provide a substitute for the discontinued item. The Contractor shall request authorization to substitute a new product or model and provide the following:

1. A formal announcement from the manufacturer that the product or model has been discontinued.

2. Documentation from the manufacturer that names the replacement product or model.

3. Documentation that provides clear and convincing evidence that the replacement meets or exceeds all specifications required by the original solicitation.

4. Documentation that provides clear and convincing evidence that the replacement will be compatible with all the functions or uses of the discontinued product or model.

5. Documentation confirming that the price for the replacement is the same as or less than the discontinued product or model.

17. CONTRACT ADMINISTRATION

The Contractor shall contact the assigned Procurement Officer for guidance or direction in matters of contract interpretation or questions regarding the terms, conditions or scope of the contract.

18. NOTICES

All notices, requests, demands, consents, approvals, and other communications which may or are required to be served or given hereunder (for the purposes of this provisions collectively called "Notices"), shall be in writing and shall be sent by certified United States mail, return receipt requested, or by any other method that provides evidence of receipt, addressed to the party or parties to receive such notice as follows:

a. If intended for the State, to:

Arizona Department of Transportation, Procurement Group
1739 W. Jackson Street, MD 100P
Phoenix, Arizona 85007-3276

b. If intended for the Contractor, to the address as identified in the Contractor's electronic vendor profile.

Or to such other address as either party may from time to time furnish in writing to the other by notice hereunder. Any notice so mailed shall be deemed to have been given as of the date such notice is received as shown on the return receipt. Furthermore, such notice may be given by delivering personally such notice, if intended for the State, to the Arizona Department of Transportation, Procurement Officer and, if intended for the Contractor, to the person named on the Offer and Contract Award of this contract, or to such other person as either party may from time to time furnish in writing to the other by notice hereunder. Any notice so delivered shall be deemed to have been given as of the date such notice is personally delivered to the other party.

19. CANCELLATION FOR POSSESSION OF WEAPONS ON ADOT PROPERTY

This contract may be cancelled if Contractor or any subcontractors or others in the employ or under the supervision of the Contractor or subcontractors is found to be in possession of weapons.

Possession of weapons (firearms, explosive device, knife or blade of more than three inches, or any other instrument designed for lethal or disabling use) is prohibited on ADOT property.

Further, if the Contractor or any subcontractors or others in the employ or under the supervision of the Contractors or subcontractors are asked by an ADOT official to leave the ADOT property, they are advised that failure to comply with such a request shall result in cancellation of the contract and anyone who refuses, whether armed or not, is subject to prosecution under A.R.S. § 13-1502, "Criminal trespass in the third degree; classification."

20. INDEMNIFICATION CLAUSE

To the fullest extent permitted by law, Contractor shall defend, indemnify, and hold harmless the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees (hereinafter referred to as "Indemnitee") from and against any and all claims, actions, liabilities, damages, losses, or expenses (including court costs, attorneys' fees, and costs of claim processing, investigation and litigation) (hereinafter referred to as "Claims") for bodily injury or personal injury (including death), or loss or damage to tangible or intangible property caused, or alleged to be caused, in whole or in part, by the negligent or willful acts or omissions of Contractor or any of its owners, officers, directors, agents, employees or subcontractors. This indemnity includes any claim or amount arising out of, or recovered under, the Workers' Compensation Law or arising out of the failure of such Contractor to conform to any federal, state, or local law, statute, ordinance, rule, regulation, or court decree. It is the specific intention of the parties that the Indemnitee shall, in all instances, except for Claims arising solely from the negligent or willful acts or omissions of the Indemnitee, be indemnified by Contractor from and against any and all claims. It is agreed that Contractor will be responsible for primary loss investigation, defense, and judgment costs where this indemnification is applicable. In consideration of the award of this contract, the Contractor agrees to waive all rights of subrogation against the State of Arizona, its officers, officials, agents, and employees for losses arising from the work performed by the Contractor for the State of Arizona.

This indemnity shall not apply if the contractor or sub-contractor(s) is/are an agency, board, commission or university of the State of Arizona.

21. INSURANCE

Contractor and subcontractors shall procure and maintain, until all of their obligations have been discharged, including any warranty periods under this Contract, insurance against claims for injury to persons or damage to property arising from, or in connection with, the performance of the work hereunder by the Contractor, its agents, representatives, employees or subcontractors.

21.1 The Insurance Requirements herein are minimum requirements for this Contract and in no way limit the indemnity covenants contained in this Contract. The State of Arizona in no way warrants that the minimum limits contained herein are sufficient to protect the Contractor from liabilities that arise out of the performance of the work under this Contract by the Contractor, its agents, representatives, employees or subcontractors, and the Contractor is free to purchase additional insurance.

21.2 **Minimum Scope and Limits of Insurance** Contractor shall provide coverage with limits of liability not less than those stated below.

21.2.1 Commercial General Liability (CGL) – Occurrence Form Policy shall include bodily injury, property damage, and broad form contractual liability coverage.

• General Aggregate $2,000,000

• Products – Completed Operations Aggregate $1,000,000

• Personal and Advertising Injury $1,000,000

• Damage to Rented Premises $50,000

• Each Occurrence $1,000,000

a. The policy shall be endorsed, as required by this written agreement, to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by or on behalf of the Contractor.

b. Policy shall contain a waiver of subrogation endorsement, as required by this written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.

21.2.2 Business Automobile Liability Bodily Injury and Property Damage for any owned, hired, and/or nonowned automobiles used in the performance of this Contract.

• Combined Single Limit (CSL) $1,000,000

a. Policy shall be endorsed, as required by this written agreement, to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by, or on behalf of, the Contractor involving automobiles owned, hired and/or non-owned by the Contractor.

b. Policy shall contain a waiver of subrogation endorsement as required by this written agreement in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor. 23.3.3 Workers' Compensation and Employers' Liability

• Workers' Compensation Statutory

• Employers' Liability

o Each Accident $1,000,000

o Disease – Each Employee $1,000,000

o Disease – Policy Limit $1,000,000

a. Policy shall contain a waiver of subrogation endorsement, as required by this written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.

b. This requirement shall not apply to each Contractor or subcontractor that is exempt under A.R.S. § 23-901, and when such Contractor or subcontractor executes the appropriate waiver form (Sole Proprietor or Independent Contractor).

21.3 **Additional Insurance Requirements** The policies shall include, or be endorsed to include, as required by this written agreement, the following provisions:

21.3.1 The Contractor's policies, as applicable, shall stipulate that the insurance afforded the Contractor shall be primary and that any insurance carried by the Department, its agents, officials, employees or the State of Arizona shall be excess and not contributory insurance, as provided by A.R.S. § 41-621 (E).

21.3.2 Insurance provided by the Contractor shall not limit the Contractor’s liability assumed under the indemnification provisions of this Contract.

21.4 **Notice of Cancellation** Applicable to all insurance policies required within the Insurance Requirements of this Contract, Contractor’s insurance shall not be permitted to expire, be suspended, be canceled, or be materially changed for any reason without thirty (30) days prior written notice to the State of Arizona. Within two (2) business days of receipt, Contractor must provide notice to the State of Arizona if they receive notice of a policy that has been or will be suspended, canceled, materially changed for any reason, has expired, or will be expiring. Such notice shall be sent directly to the Department and shall be mailed, emailed, hand delivered or sent by facsimile transmission to (State Representative’s Name, Address & Fax Number).

21.5 **Acceptability of Insurers** Contractor’s insurance shall be placed with companies licensed in the State of Arizona or hold approved non-admitted status on the Arizona Department of Insurance List of Qualified Unauthorized Insurers. Insurers shall have an “A.M. Best” rating of not less than A- VII. The State of Arizona in no way warrants that the above-required minimum insurer rating is sufficient to protect the Contractor from potential insurer insolvency.

21.6 **Verification of Coverage** Contractor shall furnish the State of Arizona with certificates of insurance (valid ACORD form or equivalent approved by the State of Arizona) evidencing that Contractor has the

insurance as required by this Contract. An authorized representative of the insurer shall sign the certificates.

21.6.1 All such certificates of insurance and policy endorsements must be received by the State before work commences. The State's receipt of any certificates of insurance or policy endorsements that do not comply with this written agreement shall not waive or otherwise affect the requirements of this agreement.

21.6.2 Each insurance policy required by this Contract must be in effect at, or prior to, commencement of work under this Contract. Failure to maintain the insurance policies as required by this Contract, or to provide evidence of renewal, is a material breach of contract.

21.6.3 The certificate shall state that the insurance applies to any and all work performed for or on the behalf of the State of Arizona/ADOT. The State of Arizona project/contract number and project description shall be noted on the certificate of insurance. The State of Arizona reserves the right to require complete copies of all insurance policies required by this Contract at any time.

21.7 **Subcontractors** Contractor's certificate(s) shall include all subcontractors as insureds under its policies or Contractor shall be responsible for ensuring and/or verifying that all subcontractors have valid and collectable insurance as evidenced by the certificates of insurance and endorsements for each subcontractor. All coverages for subcontractors shall be subject to the minimum Insurance Requirements identified above. The Department reserves the right to require, at any time throughout the life of the Contract, proof from the Contractor that its subcontractors have the required coverage.

21.8 **Approval and Modifications** The Contracting Agency, in consultation with State Risk, reserves the right to review or make modifications to the insurance limits, required coverages, or endorsements throughout the life of this contract, as deemed necessary. Such action will not require a formal Contract amendment but may be made by administrative action.

21.9 **Exceptions** In the event the Contractor or subcontractor(s) is/are a public entity, then the Insurance Requirements shall not apply. Such public entity shall provide a certificate of self-insurance. If the Contractor or subcontractor(s) is/are a State of Arizona agency, board, commission, or university, none of the above shall apply.

22. USAGE REPORT

The Contractor shall furnish Two (2) Usage reports, the first to the Department on a quarterly basis showing purchasing activity under this contract. This usage report shall be provided in a form substantially equivalent to Exhibit 03. Usage reports shall be submitted to the Procurement Officer no later than 30 days after the end of each quarter.

Usage report quarters shall be defined as follows:

- January through March – Report due April 30

- April through June – Report due July 30
- July through September – Report due October 30
- October through December – Report due January 30

Contractor shall submit the second to the State documenting all Contract sales to both Eligible Agencies and Co-Op Buyers, itemized separately. A *Quarterly Usage Report* shall still be submitted; even if there have been no sales to either Eligible Agencies and/or Co-Op Buyers. Contractor shall further itemize divisions, groups or areas within a given Eligible Agency if they place Orders independently of each other. Failure to submit the report is a material breach of contract, and will entitle State to its remedies under Article 8 and its right to terminate for default under Article 9. Contractor shall submit the report using the forms and following the instructions on the State Procurement Office website:

https://spo.az.gov/contractor-resources/statewide-contracts-administrative-fee

23. LICENSES, PERMITS, CERTIFICATIONS

Contractor, at their expense, shall maintain in current status without any violations, complaints, or suspensions during the term of this contract all Federal, State and Local licenses, permits and certifications required for the operation of a business conducted by the Contractor.

24. CO-OP USAGE

Contractor shall verify if an ordering entity is a bona fide Co-Op Buyer before selling Materials to or providing Services for them under the Contract. The current list of Co-Op Buyers is available on the State Procurement Office website:

https://spo.az.gov/contractor-resources/statewide-contracts-administrative-fee

Contractor shall sell to Co-Op Buyers at the same price, and with the same lead times and other terms and conditions under which it sells to Eligible Agencies. With the sole exception of any legitimate additional costs for extraordinary shipping, or delivery requirements, if the Co-Op Buyer is having Materials delivered or installed or Services performed at locations not contemplated in the contracted pricing (e.g. delivery to a location outside Arizona).

Contractor shall acknowledge each Order from Co-Op Buyers in conformance with each buyer's instructions given at the time of ordering or in any supplemental participating agreement Contractor might have with them. Orders from Co-Op Buyers create no obligation on State's part, since they are entirely between the Co-Op Buyer and Contractor. That notwithstanding, Contractor's obligation under the Contract is to service Co-Op Buyers commercially as though they were with an Eligible Agency, and Contractor's refusal to do so would be a material breach of the Contract.

25. SERIAL NUMBERS

Equipment supplied under this contract must contain an original manufacturer's serial number. Serial number may not be altered in any way. Throughout the contract term, the Department reserves the right to reject any altered equipment.

26. POST AWARD MEETING

At the discretion of the Department, the Contractor, at their expense, shall attend and participate in post award meetings as scheduled by the Procurement Officer.

1. Definition of Terms

As used in this Solicitation and any resulting Contract, the terms listed below are defined as follows:

1.1. *"Attachment"* means any item the Solicitation requires the Offeror to submit as part of the Offer.

1.2. *"Contract"* means the combination of the Solicitation, including the Uniform and Special Instructions to Offerors, the Uniform and Special Terms and Conditions, and the Specifications and Statement or Scope of Work; the Offer and any Best and Final Offers; and any Solicitation Amendments or Contract Amendments.

1.3. "*Contract Amendment*" means a written document signed by the Procurement Officer that is issued for the purpose of making changes in the Contract.

1.4. *"Contractor"* means any person who has a Contract with the State.

1.5. *"Days"* means calendar days unless otherwise specified.

1.6. *"Exhibit"* means any item labeled as an Exhibit in the Solicitation or placed in the Exhibits section of the Solicitation.

1.7. *"Gratuity"* means a payment, loan, subscription, advance, deposit of money, services, or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value is received.

1.8. "*Materials"* means all property, including equipment, supplies, printing, insurance and leases of property but does not include land, a permanent interest in land or real property or leasing space.

1.9. *"Procurement Officer"* means the person, or his or her designee, duly authorized by the State to enter into and administer Contracts and make written determinations with respect to the Contract.

1.10. *"Services"* means the furnishing of labor, time or effort by a contractor or subcontractor which does not involve the delivery of a specific end product other than required reports and performance, but does not include employment agreements or collective bargaining agreements.

1.11. *"Subcontract"* means any Contract, express or implied, between the Contractor and another party or between a subcontractor and another party delegating or assigning, in whole or in part, the making or furnishing of any material or any service required for the performance of the Contract.

1.12. *"State"* means the State of Arizona and Department or Agency of the State that executes the Contract.

1.13. *"State Fiscal Year"* means the period beginning with July 1 and ending June 30.

2. Contract Interpretation

2.1. Arizona Law. The Arizona law applies to this Contract including, where applicable, the Uniform Commercial Code as adopted by the State of Arizona and the Arizona

Procurement Code, Arizona Revised Statutes (A.R.S.) Title 41, Chapter 23, and its implementing rules, Arizona Administrative Code (A.A.C.) Title 2, Chapter 7.

2.2. Implied Contract Terms. Each provision of law and any terms required by law to be in this Contract are a part of this Contract as if fully stated in it.

2.3. Contract Order of Precedence. In the event of a conflict in the provisions of the Contract, as accepted by the State and as they may be amended, the following shall prevail in the order set forth below:

2.3.1. Special Terms and Conditions;

2.3.2. Uniform Terms and Conditions;

2.3.3. Statement or Scope of Work;

2.3.4. Specifications;

2.3.5. Attachments;

2.3.6. Exhibits;

2.3.7. Documents referenced or included in the Solicitation.

2.4. Relationship of Parties. The Contractor under this Contract is an independent Contractor. Neither party to this Contract shall be deemed to be the employee or agent of the other party to the Contract.

2.5. Severability. The provisions of this Contract are severable. Any term or condition deemed illegal or invalid shall not affect any other term or condition of the Contract.

2.6. No Parole Evidence. This Contract is intended by the parties as a final and complete expression of their agreement. No course of prior dealings between the parties and no usage of the trade shall supplement or explain any terms used in this document and no other understanding either oral or in writing shall be binding.

2.7. No Waiver. Either party's failure to insist on strict performance of any term or condition of the Contract shall not be deemed a waiver of that term or condition even if the party accepting or acquiescing in the nonconforming performance knows of the nature of the performance and fails to object to it.

3. Contract Administration and Operation

3.1. Records. Under A.R.S. § 35-214 and § 35-215, the Contractor shall retain and shall contractually require each subcontractor to retain all data and other "records" relating to the acquisition and performance of the Contract for a period of five years after the completion of the Contract. All records shall be subject to inspection and audit by the State at reasonable times. Upon request, the Contractor shall produce a legible copy of any or all such records.

3.2. Non-Discrimination. The Contractor shall comply with State Executive Order No. 2009-09 and all other applicable Federal and State laws, rules and regulations, including the Americans with Disabilities Act.

3.3. Audit. Pursuant to ARS § 35-214, at any time during the term of this Contract and five

(5) years thereafter, the Contractor's or any subcontractor's books and records shall be subject to audit by the State and, where applicable, the Federal Government, to the extent that the books and records relate to the performance of the Contract or Subcontract.

3.4. Facilities Inspection and Materials Testing. The Contractor agrees to permit access to its facilities, subcontractor facilities and the Contractor's processes or services, at reasonable times for inspection of the facilities or materials covered under this Contract. The State shall also have the right to test, at its own cost, the materials to be supplied under this Contract. Neither inspection of the Contractor's facilities nor materials testing shall constitute final acceptance of the materials or services. If the State determines non-compliance of the materials, the Contractor shall be responsible for the payment of all costs incurred by the State for testing and inspection.

3.5. Notices. Notices to the Contractor required by this Contract shall be made by the State to the person indicated on the Offer and Acceptance form submitted by the Contractor unless otherwise stated in the Contract. Notices to the State required by the Contract shall be made by the Contractor to the Solicitation Contact Person indicated on the Solicitation cover sheet, unless otherwise stated in the Contract. An authorized Procurement Officer and an authorized Contractor representative may change their respective person to whom notice shall be given by written notice to the other and an amendment to the Contract shall not be necessary.

3.6. Advertising, Publishing and Promotion of Contract. The Contractor shall not use, advertise or promote information for commercial benefit concerning this Contract without the prior written approval of the Procurement Officer.

3.7. Property of the State. Any materials, including reports, computer programs and other deliverables, created under this Contract are the sole property of the State. The Contractor is not entitled to a patent or copyright on those materials and may not transfer the patent or copyright to anyone else. The Contractor shall not use or release these materials without the prior written consent of the State.

3.8. Ownership of Intellectual Property. Any and all intellectual property, including but not limited to copyright, invention, trademark, trade name, service mark, and/or trade secrets created or conceived pursuant to or as a result of this contract and any related subcontract ("Intellectual Property"), shall be work made for hire and the State shall be considered the creator of such Intellectual Property. The agency, department, division, board or commission of the State of Arizona requesting the issuance of this contract shall own (for and on behalf of the State) the entire right, title and interest to the Intellectual Property throughout the world. Contractor shall notify the State, within thirty (30) days, of the creation of any Intellectual Property by it or its subcontractor(s). Contractor, on behalf of itself and any subcontractor(s), agrees to execute any and all document(s) necessary to assure ownership of the Intellectual Property vests in the State and shall take no affirmative actions that might have the effect of vesting all or part of the Intellectual Property in any entity other than the State. The Intellectual Property shall not be disclosed by contractor or its subcontractor(s) to any entity not the State without the express written authorization of the agency, department, division, board or commission of the State of Arizona requesting the issuance of this contract.

3.9. Federal Immigration and Nationality Act. The contractor shall comply with all federal, state and local immigration laws and regulations relating to the immigration status of their employees during the term of the contract. Further, the contractor shall flow down this requirement to all subcontractors utilized during the term of the contract. The State shall retain the right to perform random audits of contractor and subcontractor records or to inspect papers of any employee thereof to ensure compliance. Should the State determine that the contractor and/or any subcontractors be found noncompliant, the State may pursue all remedies allowed by law, including, but not limited to; suspension of work, termination of the contract for default and suspension and/or debarment of the contractor.

3.10 E-Verify Requirements. In accordance with A.R.S. § 41-4401, Contractor warrants compliance with all Federal immigration laws and regulations relating to employees and warrants its compliance with Section A.R.S. § 23-214, Subsection A.

3.11 Offshore Performance of Work Prohibited.
Any services that are described in the specifications or scope of work that directly serve the State of Arizona or its clients and involve access to secure or sensitive data or personal client data shall be performed within the defined territories of the United States. Unless specifically stated otherwise in the specifications, this paragraph does not apply to indirect or 'overhead' services, redundant back-up services or services that are incidental to the performance of the contract. This provision applies to work performed by subcontractors at all tiers.

4. Costs and Payments

4.1. Payments. Payments shall comply with the requirements of A.R.S. Titles 35 and 41, Net 30 days. Upon receipt and acceptance of goods or services, the Contractor shall submit a complete and accurate invoice for payment from the State within thirty (30) days.

4.2. Delivery. Unless stated otherwise in the Contract, all prices shall be F.O.B. Destination and shall include all freight delivery and unloading at the destination.

4.3. Applicable Taxes.

4.3.1. Payment of Taxes. The Contractor shall be responsible for paying all applicable taxes.

4.3.2. State and Local Transaction Privilege Taxes. The State of Arizona is subject to all applicable state and local transaction privilege taxes. Transaction privilege taxes apply to the sale and are the responsibility of the seller to remit. Failure to collect such taxes from the buyer does not relieve the seller from its obligation to remit taxes.

4.3.3. Tax Indemnification. Contractor and all subcontractors shall pay all Federal, state and local taxes applicable to its operation and any persons employed by the Contractor. Contractor shall, and require all subcontractors to hold the State harmless from any responsibility for taxes, damages and interest, if applicable, contributions required under Federal, and/or state and local laws and regulations and any other costs including transaction privilege taxes,

unemployment compensation insurance, Social Security and Worker's Compensation.

4.3.4. IRS W9 Form. In order to receive payment the Contractor shall have a current I.R.S. W9 Form on file with the State of Arizona, unless not required by law.

4.4. Availability of Funds for the Next State fiscal year. Funds may not presently be available for performance under this Contract beyond the current state fiscal year. No legal liability on the part of the State for any payment may arise under this Contract beyond the current state fiscal year until funds are made available for performance of this Contract.

4.5. Availability of Funds for the current State fiscal year. Should the State Legislature enter back into session and reduce the appropriations or for any reason and these goods or services are not funded, the State may take any of the following actions:

4.5.1. Accept a decrease in price offered by the contractor;

4.5.2. Cancel the Contract; or

4.5.3. Cancel the contract and re-solicit the requirements.

5. Contract Changes

5.1. Amendments. This Contract is issued under the authority of the Procurement Officer who signed this Contract. The Contract may be modified only through a Contract Amendment within the scope of the Contract. Changes to the Contract, including the addition of work or materials, the revision of payment terms, or the substitution of work or materials, directed by a person who is not specifically authorized by the procurement officer in writing or made unilaterally by the Contractor are violations of the Contract and of applicable law. Such changes, including unauthorized written Contract Amendments shall be void and without effect, and the Contractor shall not be entitled to any claim under this Contract based on those changes.

5.2. Subcontracts. The Contractor shall not enter into any Subcontract under this Contract for the performance of this contract without the advance written approval of the Procurement Officer. The Contractor shall clearly list any proposed subcontractors and the subcontractor's proposed responsibilities. The Subcontract shall incorporate by reference the terms and conditions of this Contract.

5.3. Assignment and Delegation. The Contractor shall not assign any right nor delegate any duty under this Contract without the prior written approval of the Procurement Officer. The State shall not unreasonably withhold approval.

6. **Risk and Liability**

6.1. Risk of Loss: The Contractor shall bear all loss of conforming material covered under this Contract until received by authorized personnel at the location designated in the purchase order or Contract. Mere receipt does not constitute final acceptance. The risk of loss for nonconforming materials shall remain with the Contractor regardless of receipt.

6.2. Indemnification

6.2.1. Contractor/Vendor Indemnification (Not Public Agency) The parties to this contract agree that the State of Arizona, its departments, agencies, boards and commissions shall be indemnified and held harmless by the contractor for the vicarious liability of the State as a result of entering into this contract. However, the parties further agree that the State of Arizona, its departments, agencies, boards and commissions shall be responsible for its own negligence. Each party to this contract is responsible for its own negligence.

6.2.2. Public Agency Language Only Each party (as 'indemnitor') agrees to indemnify, defend, and hold harmless the other party (as 'indemnitee') from and against any and all claims, losses, liability, costs, or expenses (including reasonable attorney's fees) (hereinafter collectively referred to as 'claims') arising out of bodily injury of any person (including death) or property damage but only to the extent that such claims which result in vicarious/derivative liability to the indemnitee, are caused by the act, omission, negligence, misconduct, or other fault of the indemnitor, its officers, officials, agents, employees, or volunteers."

6.3. Indemnification - Patent and Copyright**.** The Contractor shall indemnify and hold harmless the State against any liability, including costs and expenses, for infringement of any patent, trademark or copyright arising out of Contract performance or use by the State of materials furnished or work performed under this Contract. The State shall reasonably notify the Contractor of any claim for which it may be liable under this paragraph. If the contractor is insured pursuant to A.R.S. § 41-621 and § 35-154, this section shall not apply.

6.4. Force Majeure.

6.4.1 Except for payment of sums due, neither party shall be liable to the other nor deemed in default under this Contract if and to the extent that such party's performance of this Contract is prevented by reason of force majeure. The term *"force majeure"* means an occurrence that is beyond the control of the party affected and occurs without its fault or negligence. Without limiting the foregoing, force majeure includes acts of God; acts of the public enemy; war; riots; strikes; mobilization; labor disputes; civil disorders; fire; flood; lockouts; injunctions-intervention-acts; or failures or refusals to act by government authority; and other similar occurrences beyond the control of the party declaring force majeure which such party is unable to prevent by exercising reasonable diligence.

6.4.2. Force Majeure shall not include the following occurrences:

6.4.2.1. Late delivery of equipment or materials caused by congestion at a manufacturer's plant or elsewhere, or an oversold condition of the market;

6.4.2.2. Late performance by a subcontractor unless the delay arises out of a force majeure occurrence in accordance with this force majeure term and condition; or

6.4.2.3. Inability of either the Contractor or any subcontractor to acquire or maintain any required insurance, bonds, licenses or permits.

6.4.3. If either party is delayed at any time in the progress of the work by force majeure, the delayed party shall notify the other party in writing of such delay, as soon as is practicable and no later than the following working day, of the commencement thereof and shall specify the causes of such delay in such notice. Such notice shall be delivered or mailed certified-return receipt and shall make a specific reference to this article, thereby invoking its provisions. The delayed party shall cause such delay to cease as soon as practicable and shall notify the other party in writing when it has done so. The time of completion shall be extended by Contract Amendment for a period of time equal to the time that results or effects of such delay prevent the delayed party from performing in accordance with this Contract.

6.4.4. Any delay or failure in performance by either party hereto shall not constitute default hereunder or give rise to any claim for damages or loss of anticipated profits if, and to the extent that such delay or failure is caused by force majeure.

6.5. Third Party Antitrust Violations. The Contractor assigns to the State any claim for overcharges resulting from antitrust violations to the extent that those violations concern materials or services supplied by third parties to the Contractor, toward fulfillment of this Contract.

7. Warranties

7.1. Liens. The Contractor warrants that the materials supplied under this Contract are free of liens and shall remain free of liens.

7.2. Quality. Unless otherwise modified elsewhere in these terms and conditions, the Contractor warrants that, for one year after acceptance by the State of the materials, they shall be:

7.2.1. Of a quality to pass without objection in the trade under the Contract description;

7.2.2. Fit for the intended purposes for which the materials are used;

7.2.3. Within the variations permitted by the Contract and are of even kind, quantity, and quality within each unit and among all units;

7.2.4. Adequately contained, packaged and marked as the Contract may require; and

7.2.5. Conform to the written promises or affirmations of fact made by the Contractor.

7.3. Fitness. The Contractor warrants that any material supplied to the State shall fully conform to all requirements of the Contract and all representations of the Contractor, and shall be fit for all purposes and uses required by the Contract.

7.4. Inspection/Testing. The warranties set forth in subparagraphs 7.1 through 7.3 of this paragraph are not affected by inspection or testing of or payment for the materials by the State.

7.5. Compliance With Applicable Laws. The materials and services supplied under this

Contract shall comply with all applicable Federal, state and local laws, and the Contractor shall maintain all applicable license and permit requirements.

7.6. Survival of Rights and Obligations after Contract Expiration or Termination.

7.6.1. Contractor's Representations and Warranties. All representations and warranties made by the Contractor under this Contract shall survive the expiration or termination hereof. In addition, the parties hereto acknowledge that pursuant to A.R.S. § 12-510, except as provided in A.R.S. § 12-529, the State is not subject to or barred by any limitations of actions prescribed in A.R.S., Title 12, Chapter 5.

7.6.2. Purchase Orders. The Contractor shall, in accordance with all terms and conditions of the Contract, fully perform and shall be obligated to comply with all purchase orders received by the Contractor prior to the expiration or termination hereof, unless otherwise directed in writing by the Procurement Officer, including, without limitation, all purchase orders received prior to but not fully performed and satisfied at the expiration or termination of this Contract.

8. State's Contractual Remedies

8.1. Right to Assurance. If the State in good faith has reason to believe that the Contractor does not intend to, or is unable to perform or continue performing under this Contract, the Procurement Officer may demand in writing that the Contractor give a written assurance of intent to perform. Failure by the Contractor to provide written assurance within the number of Days specified in the demand may, at the State's option, be the basis for terminating the Contract under the Uniform Terms and Conditions or other rights and remedies available by law or provided by the contract.

8.2. Stop Work Order.

8.2.1. The State may, at any time, by written order to the Contractor, require the Contractor to stop all or any part, of the work called for by this Contract for period(s) of days indicated by the State after the order is delivered to the Contractor. The order shall be specifically identified as a stop work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage.

8.2.2. If a stop work order issued under this clause is canceled or the period of the order or any extension expires, the Contractor shall resume work. The Procurement Officer shall make an equitable adjustment in the delivery schedule or Contract price, or both, and the Contract shall be amended in writing accordingly.

8.3. Non-exclusive Remedies. The rights and the remedies of the State under this Contract are not exclusive.

8.4. Nonconforming Tender. Materials or services supplied under this Contract shall fully

comply with the Contract. The delivery of materials or services or a portion of the materials or services that do not fully comply constitutes a breach of contract. On delivery of nonconforming materials or services, the State may terminate the Contract for default under applicable termination clauses in the Contract, exercise any of its rights and remedies under the Uniform Commercial Code, or pursue any other right or remedy available to it.

8.5. Right of Offset. The State shall be entitled to offset against any sums due the Contractor, any expenses or costs incurred by the State, or damages assessed by the State concerning the Contractor's non-conforming performance or failure to perform the Contract, including expenses, costs and damages described in the Uniform Terms and Conditions.

9. Contract Termination

9.1. Cancellation for Conflict of Interest. Pursuant to A.R.S. § 38-511, the State may cancel this Contract within three (3) years after Contract execution without penalty or further obligation if any person significantly involved in initiating, negotiating, securing, drafting or creating the Contract on behalf of the State is or becomes at any time while the Contract or an extension of the Contract is in effect an employee of or a consultant to any other party to this Contract with respect to the subject matter of the Contract. The cancellation shall be effective when the Contractor receives written notice of the cancellation unless the notice specifies a later time. If the Contractor is a political subdivision of the State, it may also cancel this Contract as provided in A.R.S. § 38-511.

9.2. Gratuities. The State may, by written notice, terminate this Contract, in whole or in part, if the State determines that employment or a Gratuity was offered or made by the Contractor or a representative of the Contractor to any officer or employee of the State for the purpose of influencing the outcome of the procurement or securing the Contract, an amendment to the Contract, or favorable treatment concerning the Contract, including the making of any determination or decision about contract performance. The State, in addition to any other rights or remedies, shall be entitled to recover exemplary damages in the amount of three times the value of the Gratuity offered by the Contractor.

9.3. Suspension or Debarment. The State may, by written notice to the Contractor, immediately terminate this Contract if the State determines that the Contractor has been debarred, suspended or otherwise lawfully prohibited from participating in any public procurement activity, including but not limited to, being disapproved as a subcontractor of any public procurement unit or other governmental body. Submittal of an offer or execution of a contract shall attest that the contractor is not currently suspended or debarred. If the contractor becomes suspended or debarred, the contractor shall immediately notify the State.

9.4. Termination for Convenience. The State reserves the right to terminate the Contract, in whole or in part at any time when in the best interest of the State, without penalty or recourse. Upon receipt of the written notice, the Contractor shall stop all work, as directed in the notice, notify all subcontractors of the effective date of the termination and minimize all further costs to the State. In the event of termination under this

paragraph, all documents, data and reports prepared by the Contractor under the Contract shall become the property of and be delivered to the State upon demand. The Contractor shall be entitled to receive just and equitable compensation for work in progress, work completed and materials accepted before the effective date of the termination. The cost principles and procedures provided in A.A.C. R2-7-701 shall apply.

9.5. Termination for Default.

9.5.1. In addition to the rights reserved in the contract, the State may terminate the Contract in whole or in part due to the failure of the Contractor to comply with any term or condition of the Contract, to acquire and maintain all required insurance policies, bonds, licenses and permits, or to make satisfactory progress in performing the Contract. The Procurement Officer shall provide written notice of the termination and the reasons for it to the Contractor.

9.5.2. Upon termination under this paragraph, all goods, materials, documents, data and reports prepared by the Contractor under the Contract shall become the property of and be delivered to the State on demand.

9.5.3. The State may, upon termination of this Contract, procure, on terms and in the manner that it deems appropriate, materials or services to replace those under this Contract. The Contractor shall be liable to the State for any excess costs incurred by the State in procuring materials or services in substitution for those due from the Contractor.

9.6. Continuation of Performance Through Termination. The Contractor shall continue to perform, in accordance with the requirements of the Contract, up to the date of termination, as directed in the termination notice.

10. Contract Claims

All contract claims or controversies under this Contract shall be resolved according to A.R.S. Title 41, Chapter 23, Article 9, and rules adopted thereunder.

11. Arbitration

The parties to this Contract agree to resolve all disputes arising out of or relating to this contract through arbitration, after exhausting applicable administrative review, to the extent required by A.R.S. § 12-1518, except as may be required by other applicable statutes (Title 41).

12. Comments Welcome

The State Procurement Office periodically reviews the Uniform Terms and Conditions and welcomes any comments you may have. Please submit your comments to: State Procurement Administrator, State Procurement Office, 100 North 15th Avenue, Suite 201, Phoenix, Arizona, 85007.

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, the *Federal Highway Administration,* as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performance by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the *Federal Highway Administration* to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the *Federal Highway Administration,* as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the *Federal Highway Administration* ,may determine to be appropriate, including, but not limited to:

    a. withholding payments to the contractor under the contract until the contractor complies; and/or
    b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with request to any subcontract or procurement as the Recipient or the *Federal Highway Administration* may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that **if** the contractor becomes involved in, or is threatened with litigation by a subcontractor or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

EXHIBIT 2
Title VI/Non-Discrimination Assurances
Appendix E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.,* 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin): and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *etseq.),* (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.),* as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.),* (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1687 et. seq).

ADOT
Procurement

EXHIBIT 3
ADOT Quarterly Usage Report

- *This exhibit outlines the content required for the quarterly usage report. Usage reports will be submitted to the appropriate Procurement Officer in accordance with the requirements specified in Special Terms and Conditions. The Department reserves the right to make additions, deletions and changes as deemed necessary.*

Reporting Period:

Contract ID/Code:		Contact Name:		Alternate Contact Name:	
Contract Label/Description:		Contact Phone Number:		Alternate Contact Phone Number:	
Contractor:		Contact Email:		Alternate Contact Email:	
Contractor Address:					

-

Agency/Org /Unit	Customer Name	Delivery Address	PO Number or Identify as "P-Card"	Order Date	Contract Item Number	Contract Item Description	Part/Product Code	Quantity	Unit of Measure	Contract Unit Price	Contract Extended Price	Invoice Number

8. G.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To: The Honorable Mayor and Council

From: Gregory Conlin, Public Works Manager - Fleet Services

Co-Submitter: Evan Tyrrell

Co-Submitter: Evan Tyrrell

Date: 03/13/2023

Meeting Date: 03/21/2023

TITLE:

Consideration and Approval of Contract: Approve a Cooperative Purchase Contract with Balar Equipment in the amount of $329,050.56, plus applicable fees, for a Solid Waste collection truck.

STAFF RECOMMENDED ACTION:

1. Approve a Cooperative Purchase Contract with Balar Equipment in the amount of $329,050.56, plus applicable fees, for a Solid Waste collection truck; and
2. Authorize the City manager to execute the necessary documents.

Executive Summary:

The Solid Waste Residential Program utilizes a specialized rear loading refuse truck in the performance of the residential bulky waste collection program and select commercial customers (for a fee). This purchase will replace a 2012 Peterbilt that has a reconditioned rear load collection body and has exceeded its useful life or replace a 2008 American LaFrance with a Heil body. Both trucks are in poor condition with discontinued parts that hard to find and are consequently unreliable. Solid Waste and Fleet will re-evaluate the condition of these trucks once this replacement is received to determine which truck to retire.

Solid Waste did investigate the option of purchasing an EV collection truck and found that a comparable EV collection truck would have a smaller payload and shorter duty cycle. Further, the EV collection truck is estimated to cost no less than $700,000 before applicable taxes and take eighteen (18) to twenty four (24) months for delivery.

This purchase will take place on or after July 1, 2023, during the fiscal 2024 budget cycle. The need to secure City Council approval of the Cooperative Purchase Contract at this time is to reserve this Solid Waste collection truck that is currently in production. Without this approval, the estimated delivery on this type equipment in current market conditions is estimated at eighteen (18) months and the cost is estimated to increase as much as 25%.

This replacement request is included in fiscal 2024's budget (if approved by Council June, 2023) as well as Solid Waste's 5 year capital replacement plan. This vehicle will be available late June/early July as it was ordered by another municipality that canceled their order. We will not take delivery until after July 1, 2023. The equipment warranty and services are supported locally in Flagstaff by Velocity Truck Centers

(Freightliner of Arizona).

Financial Impact:

These replacements were approved by the Fleet Management Committee (FMC) on February 14, 2023. The Solid Waste Collection Program has budget capacity planned for this purchase in fiscal 2023-24 budget in account 211-06-166-0641-0-4401.

Policy Impact:

None

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

Priority Based Budget Key Community Priorities and Objectives

-High Performing Governance by providing high quality internal and external customer service.
-Inclusive & Engaged Community by promoting environmental justice & the fair distribution of environmental benefits. A dependable solid waste collection program ensures trash and recycling services are carried out on a timely and efficient manner.
-Deliver outstanding services to residents through a healthy well maintained infrastructure system

Carbon Neutrality Plan

Actively manage and protect all environmental and natural resources while implementing sustainable building practices and alternative energy and transportation options.

Regional Plan

Policy PF.1.2. Allocate available public resources necessary for the City and County to prepare and adapt for natural and human-caused hazards so that all government operations support community resiliency.
Goal LU.7. Provide for public services and infrastructure.

Has There Been Previous Council Decision on This:

No

Options and Alternatives:

1. Approve the Cooperative Purchase Contract with Balar Equipment in the amount of $329,050.56, plus applicable fees for a Solid Waste collection truck; or
2. Not approve the Cooperative Purchase Contract and direct staff to conduct a separate procurement for the equipment. Staff does not recommend this action as it will delay the purchase.

Background/History:

The City will be using the Cooperative Purchase Contract #091219-THC that Heil Co. has with Sourcewell. Balar Equipment is an authorized dealer of Heil equipment as defined in the Sourcewell cooperative. Utilization of the Sourcewell cooperative will ensure better pricing for the equipment. Purchasing staff reviewed the Sourcewell cooperative and determined the contract to be current and relevant in scope to the vehicles being purchased.

Attachments: Contract 2023-109
Exhibit A
Exhibit B - Pricing
Exhibit B - Agency Contract

COOPERATIVE PURCHASE CONTRACT
Contract No. 2023-109

This Cooperative Purchase Contract is made and entered into this _____ day of _____, 20_____by and between the City of Flagstaff, Arizona, a political subdivision of the State of Arizona ("City") and Balar Holding Corp, DBA Balar Equipment, an Arizona Corporation ("Contractor").

RECITALS:

A. The Heil Co. has Contract #091219-THC with Sourcewell to supply materials and/or services ("Agency Contract"), which was awarded through a competitive and open procurement process;

B. Contractor is a dealer of Heil products as described in the Agency Contract; and

C. The City has authority to enter into a Cooperative Purchase Contract with Contractor utilizing the Agency Contract.

AGREEMENT:

NOW THEREFORE, in consideration for the mutual promises contained herein, the parties agree as follows:

1. Materials and or Services Purchased: Contractor shall provide to City the materials as specified in the Purchase Order(s) and/or Scope of Work attached as *Exhibit A*, submitted by the City in accordance with the Agency Contract. General description of materials and or services being purchased:

Heil DP5000 Bulky Truck

2. Payment: Payment to the Contractor for the materials and or services provided, will not exceed **three hundred twenty-nine thousand fifty dollars and fifty-six cents ($329,050.56), plus additional fees and taxes**; in accordance with the price list and terms set forth in the Agency Contract.

3. Terms and Conditions of Agency Contract Apply: All provisions of the Agency Contract documents, including any amendments, are incorporated in and shall apply to this Contract as though fully set forth herein. The Agency Contract documents are set forth in ***Exhibit B*** attached hereto and incorporated by reference. Contractor is responsible for promptly notifying City in writing of any changes to the Agency Contract.

4. Certificates of Insurance: All insurance provisions of the Agency Contract shall apply, including any requirement to name the City as an additional insured. Prior to commencing performance under this Contract, Contractor shall furnish City with a copy of the current Certificate of Insurance required by the Agency Contract.

5. Term: This Cooperative Purchase Contract shall commence upon execution by the parties and shall continue until expiration or termination of the underlying Agency Contract, unless sooner terminated by City in writing.

6. Renewal: This Cooperative Purchase Contract shall be automatically renewed if the underlying Agency Contract is renewed, for the same renewal period, unless City provides advance written notice to Contractor of its intention to non-renew.

BALAR EQUIPMENT:

By:_____

Title:_____

CITY OF FLAGSTAFF

By:_____

Title:_____

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney's Office

EXHIBIT A
SPECIFIC REQUIREMENTS OF CITY

Balar Equipment Quote # Flagstaff DP5000 REL 223227 (Attached)

EXHIBIT B
AGENCY CONTRACT

Sourcewell Contract #091219-THC. (Attached)
Heil 091219-THC Pricing (Attached)

BALAR EQUIPMENT

HEIL
a DOVER company
WE NEVER STOP WORKING FOR YOU

DuraPack® 5000
High-Compaction Rear Loader



Standard Equipment Features included in Base Price

• 3.94 yd3 hopper	• Right side buzzer controls
• Smooth body side construction	• Right side packer controls
• Extra-duty 80,000 psi body	• Backup alarm
• Bolt-on ANSI compliant rear riding steps	• Backup and license plate light
• Tailgate service props	• LED Center-mounted brake light
• Remote mount cast iron roller bearing gear pump (less PTO)	• LED Duplicate high and low mount stop, turn, and tail lights
• Chrome-plated cylinder rods	• LED Mid-body turn signals
• Chrome-plated ejector cylinder sleeves	• LED FMVSS #108 clearance lights and reflectors
• Underbody mounted oil tank	• ICC reflective tape
• Level/temperature/sight gauge for hydraulic oil tank	• Rear camera bracket and flood lights - reverse activated
• Oil suction shut-off valve	• Body undercoating
• 3-micron return line filter with magnetic trap and in-cab filter bypass monitor	• Customer's choice of one color finish paint from Color Smart brochure
• 100-micron suction line strainer	• Standard 1-year (2,000 hours of operation) warranty
• Regenerative valve for fast packer and reload times	• ANSI Z 245.1-2017 compliant
• Neutral safety switch for automatic transmissions only	• Cavity coat and joint sealer
• Abrasion resistant hydraulic hoses	• 5 lb. In-cab Fire Extinguisher
• Body side access door with step and grab handle	• Safety Triangle
• Safety Triangle	• Corrosion resistant hydraulic tubes that conform to ASTMB117
• Programmable Controller mounted in cab, on body and in tailgate with InSight™	

Quote

Quote #: Flagstaff DP5000 REL 223227
Sales Person: Michael Neubauer
Cell #: 480 670 7830
Email: mneubauer@balar.com

Customer: City of Flagstaff
Prepared for: Zack Haws
Phone: 928 213 2136
Email: Zhaws@flagstaffaz.gov

Quantity	Description	Unit Price	Extended Price
1	Heil DP5000 REL Body, 25 cubic yard mounted on a Kenworth T880 chassis ***Factory Installed Options*** *-Factory mounted* *-Clutch Shift PTO w/ Direct Mount Vane Pump* *-Dual Hopper Work Light Kit* *-Body Side Backing Assist Lights* *-Multi-Function LED Strobe / Turn Lamps* *-Left Hand Buzzer Kit* *-Dual Cart Tipper Control Valve, Handle, Plumbing and Hose Kit* *-3rd Eye® Single Camera System with 7" monitor and Single Camera Mounted on Tailgate* *-DP 5000 H.D. Contractors Package (includes 1/4" hopper floor, 3/16" hopper front face liner and tailgate spill troughs)* *-20 lb. Fire Extinguisher with Bracket* *-Dual Broom and Shovel Racks* *-Mud Flaps* *-Side Door Interlock Kit - shuts down pump when open* *-Body Front Head Splash Guard (Extends the front head an extra 11.5")* *-Fender Extension Kit* *-5 Gallon Cooler and Bracket - frame mounted*	$ 297,798.40	$ 297,798.40
1	Estimated Freight	$ 6,500.00	$ 6,500.00
	Per Sourcewell Contract#: 091219-THC	Sales Tax:	$ 24,752.16
	City of Flagstaff ID#: 32200 12%	FET:	exempt
		Total:	$ 329,050.56

Authorized By: _____

Date: _____

P.O. Number: _____

*This quote is good for 15 days. This quote may not include sales tax. This quote may not include Federal Excise Tax. Freight charges are subject to change. This quote is subject to terms included in package. By accepting this quote you are accepting its terms

THANK YOU

HEIL®

a DOVER company

WE NEVER STOP WORKING FOR YOU

DuraPack® 5000

High-Compaction Rear Loader



Environmental Solutions Group®

a DOVER company

The unrivaled workhorse of the waste industry.

www.Heil.com

DuraPack® 5000

The unrivaled workhorse of the industry.



With nearly 30 years of reliability and over 20,000 units built, the Heil® **DuraPack** 5000 high-compaction refuse vehicle has become the mainstay of collection fleets, from small independent haulers to the world's largest municipal fleet.

Built to last. The **DuraPack** 5000 features the **Heil DuraPack** body, which includes a fully welded, interlaced subframe. With formed channels for extra strength, high tensile strength steel to maximize performance at a minimum weight, and superior resistance to corrosion and cracking, the **DuraPack** 5000 is a sturdy package with the stamina to absorb years of tough hauling.

Outstanding weight distribution. Incorporating a high cylinder mount into a compact design with a short overhang creates outstanding weight distribution and reduced wear on rearward chassis components. This maximizes forward loading of both the body and the payload.

In-Sight™ Display. Now, the **Heil In-Sight Display** provides enhanced troubleshooting capabilities that can all be performed from within the safety of the cab. This is made possible by the recently upgraded remote mobile controller, which eliminates the need for a PDC box. The mobile controller provides two-way communications, and critical information directly to the display, eliminating relays and associated failures. All in-cab switches are conveniently located within the **Heil In-Sight** Display. This enhanced design allows for future additions, which in the past would have required the addition of an inconveniently placed auxiliary switch, on an already crowded dash. Now all this can be done in one, easy to access, in-cab display.

The **DuraPack** 5000 and all **Heil** products are Connected Collections™ ready. This is part of our vision focusedon helping fleet owners make better decisions, faster. Contact your local **Heil** dealer for more information, or visit www.heil.com/connected-collections.

The Heil® DuraPack® 5000

Design, performance and reliability that works for YOU.





Add 3rd Eye® Digital Packages

Connect for service verification, body/chassis data, fuel tax reporting, and route management. Includes factory installed **3rd Eye** Mobile, with the ability to connect up to eight cameras.



Add 3rd Eye® Collision Avoidance Radar

3rd Eye family of Integrated Collision Avoidance Radar Systems protect both your drivers, your assets, and those in close proximity to your vehicle, using existing **3rd Eye** Mobile camera cables.



Add Roof Or Front Of Body CNG System

This system enables your CNG refuse fleet to deliver the same productivity you would expect from a diesel unit, while saving money with clean, domestic, compressed natural gas as fuel.



Add Bayne Thinline® Premium Cart Tippers

Outfit your truck with a single or dual Bayne Thinline® premium mobile lifters and reduce the stress and strain on personnel who manually load the vehicle, and increase route efficiency.

Smarter By Design, With Loyalty Built In

The DuraPack® 5000 was specifically designed to maximize your efficiency on daily collection routes.

DuraPack® 5000



Reliable Rear Loader Performance



+ IN-SIGHT™ DISPLAY

The **In-Sight** display allows for enhanced troubleshooting from the safety of the cab. This refresh also moved all in-cab switches to the **In-Sight** Display, allowing for constant modification.

+ TIME SAVER

The **DuraPack** 5000 features a flat, abrasion-resistant steel floor, which eliminates the messy job of cleaning trash buildup out of dirty troughs.

+ SUPERIOR FILTRATION

Our three-micron filtration system keeps oil cleaner, and extends the life of hydraulic components. Other manufacturers use 10-micron filtration, which can allow particulate matter to damage the hydraulic system.

+ ONE-HANDED MANUAL PACKING

Convenient one-handed manual controls stop, start, or reverse the upper panel or sweep panel at any point in the packing cycle.

+ COMMERCIAL CAPABILITIES

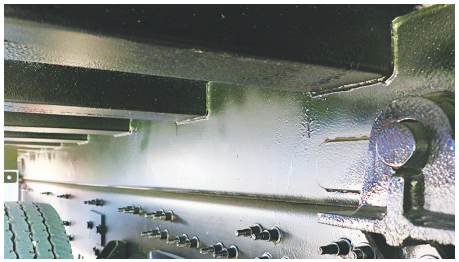
With one of the optional Commercial packages, the **DuraPack** 5000 can easily handle commercial containers. Packages can include a reeving system, winch, or roll bar coupled with a lip and latch kit.

Discover What Sets The DuraPack® Apart



HIGH CAPACITY HOPPER

The generous 3.94-cubic-yard hopper can accommodate large items with ease, and requires less cycling on the route.



DURABILITY AND LONGEVITY

Our exclusive, fully welded, interlaced subframe provides exceptional longevity, while resisting abrasion, corrosion, and salt damage. The body is constructed of 7-8 ga. high tensile strength steel, while the hopper features 1⁄4" thick AR400 steel on the floor, and 3⁄16" thick AR400 steel on the sides for superior strength and durability.



MORE PACKING POWER

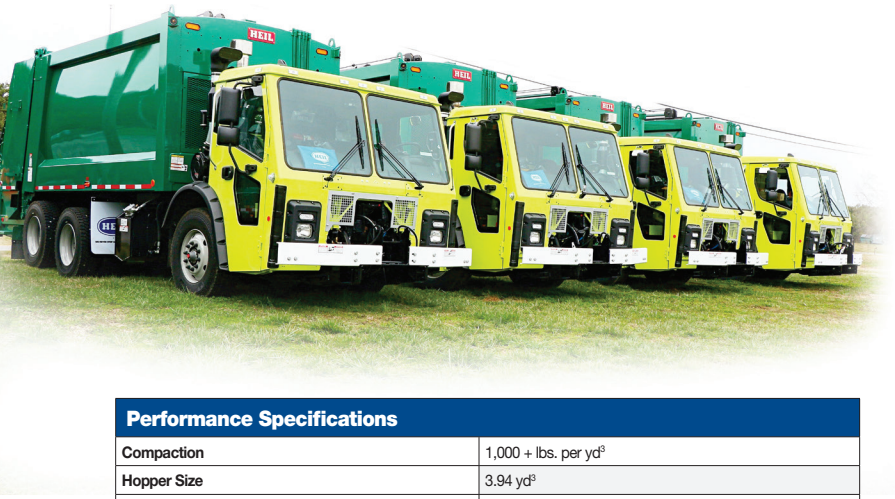
The Heil® Linkage Packing System is a proven performer. It has no rollers, slides, or slide shoes to wear out. Smaller cylinders deliver considerably more packing power for increased payloads.



SERVICE SMART SIDE DOOR

Our Service Smart design simplifies routine maintenance, keeping your truck away from the shop, and out servicing your customers, making money. The side door provides easy access for common maintenance tasks.

DuraPack® 5000 Specifications



Performance Specifications	
Compaction	1,000 + lbs. per yd³
Hopper Size	3.94 yd³
Packing Cycle Time	16 -18 seconds*
Reload Time	6 - 8 seconds*
FET Exempt	18 yd³ and 20 yd³
* with fast cycle pump option	

All designs, specifications, and components are subject to change at the manufacturer's sole discretion at any time without notice. Data published herein is for information purposes only and shall not be construed to warrant suitability of the unit for any particular purpose, as performance may vary with the conditions encountered. The only warranty is our standard written Warranty Statement for this product at the time of shipment. *Heil does not provide tax advice. Please consult your tax advisor regarding the specific tax implications of your selected product.

Hydraulic Specifications	
PUMP	
Type	High pressure gear
Maximum Operating Pressure	2,500 psi
GPM	42 GPM
OIL RESERVOIR	
Tank Capacity (net)	50 gallons (190 liters)
Filters	3-micron return filter with in-cab filter monitor; 140-micron suction line
VALVES	
Shutoff	Ball valve in suction line between pump and reservoir
Packing Control	Spool type
Ejector and Tailgate Raise	Spool type

Tailgate Specifications		
Hopper Capacity	yd³	3.94
	m³	3.01
Sill Height Below Chassis Frame	in.	3.8
	mm	97
Hopper Loading Width	in.	80
	mm	2,032
Hopper Opening Height	in.	55
	mm	1397
Cycle Time (seconds)	complete	16 - 18*
	reload	6 - 8*
* with fast cycle pump option		

Typical Chassis Configuration			18 yd³	20 yd³	25 yd³	27 yd³	32 yd³
Minimum GVWR (1)			48,000	51,000	54,000	57,000	62,000
Minimum GAWR	Conventional	front	12,000	13,000	14,000	15,000	16,000
		rear	36,000	38,000	40,000	42,000	44,000
	Cab-Over Engine	front	14,000	15,000	16,000	17,000	18,000
		rear	34,000	36,000	38,000	40,000	44,000
Usable CA		in.	127 ± 3	N/A	N/A	N/A	N/A
		mm	3,149 - 3,302	N/A	N/A	N/A	N/A
Usable CT		in.	108 ± 3	118 ± 3	153 ± 3	165 ± 3	193 ± 3
		mm	2,667 - 2,819	2,921 - 3,073	3,810 - 3,962	4,115 - 4,267	4,826 - 4,978
C.O.E. Wheelbase		in.	152 ± 3 (Single Axle) 133 ± 3 (Tandem Axle)	143 ± 3	178 ± 3	190 ± 3	218 ± 3
		mm	3,785 - 3,937 (Single Axle) 3,302 - 3,454 (Tandem Axle)	3,556 - 3,708	4,445 - 4,597	4,750 - 4,902	5,461 - 5,613
Conventional Cab Wheelbase		in.	192 ± 3 (Single Axle) 173 ± 3 (Tandem Axle)	183 ± 3	218 ± 3	230 ± 3	258 ± 3
		mm	4,801 - 4,953 (Single Axle) 4,318 - 4,470 (Tandem Axle)	4,572 - 4,724	5,461 - 5,613	5,766 - 5,918	6,477 - 6,629
Minimum Platform		in.	159 ± 3	169 ± 3	204 ± 3	216 ± 3	244 ± 3
		mm	3,962 - 4,115	4,216 - 4,369	5,105 - 5,258	5,410 - 5,563	6,121 - 6,274

Heil Environmental does not recommend mounting any chassis that does not meet the minimum GVWR/GVARs outlined above.(1) If CA/CT is not as recommended, contact Heil Environmental for applicable weight distribution and GVWR/GVAR requirements.

Body Specifications		18 yd³	20 yd³	25 yd³	27 yd³	32 yd³
Body Capacity	yd³	18	20	25	27	32
	m³	13.7	15.3	19.1	20.6	24.4
Overall Length	in.	225	235	270	282	310
	mm	5,715	5,969	6,858	7,163	7,874
Overall Length With Tailgate Raised	in.	275	285	320	332	360
	mm	6,985	7,239	8,128	8,433	9,144
Overall Width	in.	96				
	mm	2,438				
Overall Height Above Frame	in.	96				
	mm	2,438				
Overall Height With Tailgate Raised	in.	207				
	mm	5,257				
Gross Weight (approximate)	lbs.	14,300	14,800	15,500	15,900	17,200
	kg	6,487	6,727	7,045	7,227	7,818

Cylinder Specifications					
Body Cylinders	Type	Model	Stages	Bore	
Tailgate Raise	Single Acting	ALL	1	in.	4
				mm	102
Packer Sweep	3-Stage Double Acting Telescopic	ALL	4	in	5.5
				mm	140
Upper Panel	Double Acting	ALL	1	in	5
				mm	127
Ejection	Double Acting	18, 20, 25, 27 yd³	4	in	6
				mm	152
		32 yd³	5	in	7
				mm	178

KENWORTH

Vehicle Summary

Unit

Model:	T880 Series Conventional
Type:	FULL TRUCK
Description 1:	
Description 2:	REAR PACKER SPEC

Application

Intended Serv.:	Refuse packer: Vehicles which pick up r
Commodity:	Refuse/recycled material.

Body

Type:	Refuse loader/packer
Length (ft):	22
Height (ft):	13
Max Laden Weight (lbs):	4000

Trailer

No. of Trailer Axles:	0
Type:	
Length (ft):	0
Height (ft):	0
Kingpin Inset (in):	0
Corner Radius (in):	0

Restrictions

Length (ft):	75
Width (in):	102
Height (ft):	13.5

Chassis

Fr Axle Load (lbs):	20000
Rr Axle Load (lbs):	46000
G.C.W. (lbs):	66000
Road Conditions:	
Class A (Highway)	2
Class B (Hwy/Mtn)	97
Class C (Off-Hwy)	1
Class D (Off-Road)	0
Maximum Grade:	8
Wheelbase (in):	224
Overhang (in):	68
Fr Axle to BOC (in):	68
Cab to Axle (in):	156
Cab to EOF (in):	224
Overall Comb. Length (in):	340.5

Special Req.

U.S. Domestic registry, 50-state.

Approved by: _____ **Date:** _____

KENWORTH

Sales Code	Std/ Opt	Description	$ List	Weight
Model				
0000810	S	**T880 Series Conventional**		**15,549**
0070060	S	**T880**		**0**
0080075	O	**Dealer/Customer declines engine w/CARB Idle** Emissions Reduction Feature.		**0**
0090000	S	**Non-Sleeper w/rear axle capacity less than 59K.**		**0**
0098409	O	**State of Registry: Florida**		**0**
Engine & Equipment				
0701105	O	**MX-11 400R 400@1600 1450@900** 2021 with Engine Brake, Available for Refuse N09020 AE001 NO....ENBL MX RETARDER IN NEUTRAL N08200 AE002 650...IDLE TARGET N09100 AA003 64....CC MAX TARGET SPD N09110 AA004 10....CC MIN ENABLE SPD N09120 AA005 OFF...DYNAMIC CC ENABLE N09440 AA061 2000..CAB:MAX ENG SPD-ACCEL CNTRL N09430 AA062 2000..CAB: MAX ENG SPD - SW CNTRL N09420 AA063 6.....CAB: MAX VEH SPD N09510 AA065 800...CAB: DEDICATED PRESET "-" N09520 AA066 900...CAB: DEDICATED PRESET "+" N09780 AA049 CNCL..CAB: CUSTOM PRESET 1 FUNC N09640 AA050 0.....CAB: CUSTOM PRESET 1 N09790 AA051 CNCL..CAB: CUSTOM PRESET 2 FUNC N09650 AA052 0.....CAB: CUSTOM PRESET 2 N09800 AA053 CNCL..CAB: CUSTOM PRESET 3 FUNC N09660 AA054 0.....CAB: CUSTOM PRESET 3 N09500 AA060 OFF...CAB: PRESET +/- SW TYPE N09630 AA067 TRQ...CAB:ACCEL PEDAL TYPE IN PTO N09400 AA068 YES...CAB:ACCEL ACTV IN CAB PTO N09470 AA055 ON....CAB: CLUTCH INTLK N09840 AA056 OFF...CAB: CUSTOMER INTLK N09480 AA057 ON....CAB: NEUTRAL INTLK N09460 AA058 ON....CAB: PARK BRK INTLK N09490 AA059 ON....CAB:SER BRK INTLK:NO PTO N09540 AA074 2000..REM:MAX ENG SPD-ACCEL CNTRL N09530 AA075 2000..REM:MAX ENGSPD-SW/TSC1 CTRL N09610 AA077 800...REM: DEDICATED PRESET "-" N09620 AA078 900...REM: DEDICATED PRESET "+" N09810 AA043 CNCL..CAB/REM:CUSTOM PRESET1 FUNC N09670 AA044 750...CAB/REM: CUSTOM PRESET 1 N09820 AA045 CNCL..CAB/REM:CUSTOM PRESET2 FUNC N09680 AA046 850...CAB/REM:CUSTOM PRESET 2 N09830 AA047 CNCL..CAB/REM:CUSTOM PRESET3 FUNC N09690 AA048 950...CAB/REM: CUSTOM PRESET 3 N09600 AA079 OFF...REM: PRESET +/- SW TYPE N09410 AA069 YES...PTO REM PEDAL ENABLE		**-288**

Sales Code	Std/ Opt	Description	$ List	Weight
		N09560 AA070 ON AD.REM: CLUTCH INTLK N09700 AA071 OFF...REM: CUSTOMER INTLK N09570 AA072 ON AD.REM: NEUTRAL INTLK N09580 AA073 ON AD.REM:SER BRK INTLK:NO PTO N09550 AA076 650...REM: MIN ENG SPD N09450 AA064 650...CAB: MIN ENG SPD N09760 AA009 5.....DRIVER REWARD VEH SPD BONUS N09770 AA010 -5....DRIVER REWARD VEH SPD PNLTY N09750 AA013 NONE..OFFSET MODE N09720 AA015 3.....MIN SPD FOR DR SHIFT AID N09730 AA016 10....DSA LOWEST ACTV GEAR N09740 AA017 1.....DSA HIGHEST ACTV GEAR N09340 AA019 YES...EIST PARK BRK RESET ENABLE N09300 AA022 30....EIST LO CLNT TEMP OVERRIDE N09290 AA023 80....EIST HI AMBAIR TEMP OVRRDE N09280 AA024 39....EIST LO AMBAIR TEMP OVRRDE N09260 AA025 5.....EIST PTO MAX IDLE TIME N09230 AA026 5.....EIST PARKED MAX IDLE TIME N09220 AA027 5.....EIST STANDSTILL IDLE TIME N09240 AA029 YES...EIST RESET FROM ENG LOAD N09250 AA030 NO....EIST OVERRIDE FROM ENG LOAD N09200 AA031 0.....EIST EXPIRATION DISTANCE N09310 AA032 YES...EIST ACCEL PEDAL RESET N09330 AA033 YES...EIST SERVICE BRK RESET N09320 AA034 YES...EIST CLUTCH PEDAL RESET N09270 AA035 YES...EIST PTO OVERRIDE N08030 AA086 64....MAX ACCEL PEDAL VEH SPD N08000 AA087 0.....VSL EXPIRATION DISTANCE N08020 AA088 64....LRSL SPD LMT N09350 AA042 1900..FAST IDLE CNTRL MAX ENG SPD N09050 AA037 4.....DSL SPD OFFSET N09040 AA038 2.....AUTO RTRDR VEH SPD OFFSET N09030 AA039 0.....TIME DELAY FOR RTRDR ACT N09130 AA006 MT....MULTI TORQUE IN CC N09080 AQ001 4.....PCC Negative Offset N09090 AQ002 4.....PCC Positive Offset N09710 AA089 NO....REMOTE INPUTS IN CAB PTO N08200 AE002 650...IDLE TARGET		
1000046	O	**EPA Emissions Warranty Engine**		**0**
1000151	S	**PremierSpec**		**0**
1000204	O	**Engine monitoring protection -Derate- PACCAR MX** engine parameter.		**0**
1000243	O	**Gearing Analysis: Performance** power before economy results.		**0**
1000256	O	**Customer's Typical Operating Spd: 64 MPH**		**0**
1000282	O	**MX Retarder State Cruise Control On Manual Mode** Selecting this code will program the engine controller to make manual mode available when cruise control is on, but not set, and the engine		**0**

Sales Code	Std/ Opt	Description	$ List	Weight
		brake switch is on. Manual mode means the engine retarder activates whenever the throttle pedal is not depressed. 2013+		
1000684	O	**Effective VSL Setting NA**		**0**
1000857	S	**Engine Idle Shutdown Timer Enabled**		**0**
1000891	O	**Eff EIST NA Expiration Miles** Use only with MX and Cummins engines		**0**
1006003	S	**Air Compressor: WABCO 25.9 CFM PACCAR MX** 2017+ 440cc Air Compressor		**0**
1051200	S	**Air Cleaner: composite firewall mounted PACCAR or** Cummins engines		**0**
1105210	S	**Fan hub: Horton 2-Speed for PACCAR MX**		**0**
1123555	S	**Cooling module: 1330 square inches.** Includes aluminum radiator core, aluminum charge air cooler, translucent surge tank and washer bottle, silicone hoses, and extended life coolant.		**0**
1160205	O	**Bugscreen** Front of grille on 2.1M MD, C500 ,T800, T880, and W900. Behind grille on T680 and 1.9M MD.		**2**
1247234	S	**EXH: 2021 RH Under DPF/SCR with RH SOC Vertical** tailpipe. Not 2.1m high roof sleepers		**0**
1290118	O	**Tailpipe: 5 in. Single 18 in. 45 degree curved.**		**0**
1321101	S	**Fuel Filter: PACCAR Extended Service Interval** On-Engine Fuel/Water Seperator. 2021 Emissions MX Engines only.		**0**
1321205	S	**Run Aid:Fuel Heat** *For Fuel Filter		**0**
1321305	S	**Start Aid:12V Heat** *For Fuel Filter		**0**
1812164	O	**Alternator: SEG HDS 200 AMP Brushed**		**0**
1821210	S	**Batteries: 3 PACCAR GP31 threaded post (700-730)** 2100-2190 CCA dual purpose.		**0**
1836102	S	**PACCAR Premium 12V Starter with PACCAR MX Engines** PACCAR 12 volt electrical system. With centralized power distribution incorporating plug-in style relays. Circuit protection for serviceability, 12-volt light system w/circuit protection circuits number & color coded.		**0**
1840005	O	**Battery disconnect switches 2, mounted on** battery box.		**2**
1840065	S	**12V low voltage disconnect for starter battery** protection.		**0**
1901020	O	**Remote PTO/Throttle, 12-Pin, 500K, Back of Cab OR** Back of Sleeper, J1939, Remote Control Provision		**0**

Transmission & Clutch

Sales Code	Std/ Opt	Description	$ List	Weight
2016158	O	**Transmission: Allison 4500RDS 6-speed** w/o retarder, w/PTO provision. 5th generation. For vocational applications. Includes shift control, transmission oil temperature gauge, oil level sensor & heat exchanger. Transynd transmission fluid is standard on all Allison 1000, 2000, 3000 & 4000 series transmissions.		**478**
2405405	O	**Driveline: 2 Dana 1810 heavy-duty 1 centerbearing** *Heavy duty is 1810HD series.		**68**
2410018	O	**Torque converter included w/Allison** Transmission.		**0**
2410151	O	**Pushbutton control center console mounted.** Class 8 with Allison Transmission.		**0**
2410204	O	**Allison Fuel Sense: Delete**		**0**
2410244	O	**J1939 Park Brake Auto Neutral**		**0**
2410310	O	**Allison Neutral at Stop**		**0**
2429378	O	**Customer installed transmission PTO in the LH** Mounted position (8 o'clock) for Allison 3000 & 4000 transmissions.		**0**
Front Axle & Equipment				
2536002	S	**PACCAR FX-20 Front Axle rated at 20K 4" drop** standard track		**0**
2621078	O	**Front Brakes: 22K Bendix ES S-cam 16.5x6 in.**		**-46**
2690035	O	**Front Brake Drum: 22,000 lbs. 16-1/2x6 in. Cast.**		**104**
2701319	S	**Front Hubs Aluminum hub pilot 20,000 lbs.** 16.5x6in. or 7in. or air disc brakes. 10 Bolt, 11-1/4 in. bolt circle.		**0**
2741970	S	**ConMet PreSet Plus Hub package; front axle.**		**0**
2750001	S	**Hubcap: front vented.**		**0**
2765001	O	**Front Auto Slack Adjuster.**		**0**
2866020	S	**Front Springs: Taperleaf 20K w/ shock absorbers** w/ maintenance-free elastomer spring pin bushings. Standard with rubber pins except for C500 which has threaded pins. Not available on W900L. W900B use 2866021.		**0**
2895302	S	**Dual power steering gear: 16-22K Sheppard HD94.** Heavy duty. Not for use on T3.		**0**
2899336	S	**Power Steering Cooler:Radiator Mounted Air-to-Oil**		**0**
2900020	O	**Front Frame Raised: 1/2 in.**		**0**
Rear Axle & Equipment				
3142160	S	**Dual Meritor RT46-160 rear axle rated at 46K.** Tandem rear axles.		**0**
3200456	O	**Rear Axle Ratio - 4.56.**		**0**

Sales Code	Std/ Opt	Description	$ List	Weight
3334004	S	**Dual Rear Brakes 16-1/2x7 in. to 46K;** Bendix ES-extended service S-cam.		**0**
3392005	S	**Dual Rear Brake Drums: cast.**		**0**
3407050	S	**Dual Rear Hubs: Aluminum hub pilot 46K** 11-1/4 in. bolt circle.		**0**
3441972	S	**ConMet PreSet Plus Hub package; dual rear axle.**		**0**
3465002	S	**Dual Rear axle automatic slack adjusters.**		**0**
3485207	S	**Spring Brake: 3030 long stroke dual 30 square** inches travel. Helps keep brakes in adjustment longer.		**0**
3495226	O	**Bendix 4S/4M anti-lock brake system.**		**0**
3500037	O	**Interaxle driveline:1 Dana 1710 Series** Tandem Rear Axels Only.		**-12**
3742940	O	**Tandem Hendrickson HAULMAAX EX (HMX) 460 46K.** 54 in. axle spacing, 16.5 in. saddle height. With shocks, track rods and rubber bolster bushings. Unladen Height: 11.5 in. Laden Height: 9.5 in.		**174**
3830145	O	**Delete standard heavy-duty air springs for rear** suspension.		**-28**
Tires & Wheels				
4077533	S	**Front tires: Bridgestone M864 425/65R22.5 20PR** All Position, On/Off Highway, Wide-base tire.		**0**
4277513	O	**Rear tires: Bridgestone M760 Ecopia 11R22.5 14PR.** 42.2 in. diameter, drive. 19.6 in. SLR. Smartway certified. Code is priced per pair of tires.		**168**
4900008	O	**Rear Tire Quantity: 8**		**0**
5045216	O	**Front Wheel: Alcoa 82362 22.5x12.25 aluminum,** with Lvl One [TM] finish High Polish, hub-pilot mount. 11400lb. maximum rating. Super single. Standard track axles may be over 102 in. w/425 tires. Air disc brake compatible.		**-10**
5242338	O	**Rear Wheel: Accuride 43644 22.5X8.25 aluminum hub** pilot mount standard polish		**-312**
5900008	O	**Rear Wheel/Rim Quantity: 8**		**0**
Frame & Equipment				
6056400	O	**Frame Rails: 10-3/4 x 3-1/2 x 3/8in. Steel 285in.** to 336 in. Truck frame weight is 3.48 lb.-in. per pair of rails. Section modulus is17.80, RBM is 2,132,000 in-lbs per rail. Frame rail availability may be restricted based upon application, axle/suspension capacity, fifth wheel setting, or component/dimensional specifications. The results of the engineering review may result in a change to the requested frame rail. If a change is required Kenworth Application Engineering will advise the dealer of the appropriate material specification for a substitute rail.		**393**

Sales Code	Std/ Opt	Description	$ List	Weight
6141400	O	**Full Steel Insert: for 10-5/8 in. or 10-3/4 in.** Steel 285 in. to 336 in. or 2nd insert for 11-5/8 in. steel frame. Adds 1,149,000 in-lb to main rail RBM. Truck insert weight is 2.05 lb.-in. per pair of rails. Full frame insert length is equal to wheelbase plus rear frame cutoff plus dimension forward of front axle by model: T660, T680, T800, T880 = 21.26 in.; C500B = bumper setting minus 0.79 in.; W900B = 5.27 in., W900L = 1.50 in., W900S = 3.27 in.; T440/T470 50 in. bumper setting = 21.26 in., T470 73 in. bumper setting = 72.3 in.		**642**
6302461	O	**Bumper: Tapered chrome steel channel. Requires a** bumper setting code.		**63**
6319485	S	**48.5 in. Bumper setting. Requires a bumper code.**		**0**
6324025	O	**Front tow hook: Center mounted, cast.** Requires iron front drive brackets.		**28**
6390001	O	**Steel shackle links.**		**8**
6391203	O	**Custom Frame Layout: 3-4 chassis** **CFL F/T:** UNDER PASS SIDE CAB		**0**
6400636	O	**Battery box cantilever aluminum BOC with** fiberglass cover.		**8**
6409901	S	**Battery box location: LH Side.**		**0**
6451090	S	**T470,C5, T6, T8 non-polished DPF/SCR or CNG cover** diamond plate w/ step. For use w/ 2010 or later exhaust systems. For T8, use extended length non-polished battery box on opposite rail to match the length of under cab components. End plates will be painted standard black frame color.		**0**
6679824	O	**Width across front tires exceeds 102 inches.** Dealer to review delivery constraints w/transporter.		**0**
6679857	O	**Final end-of-frame cut-off dimension will be** modified to 46 in. to 50 in.		**0**
6721102	S	**Rear mudflap arms: Betts B-25 standard-duty,** straight. Includes B1732 mounting brackets as standard.		**0**
6722000	S	**Rear mudflap shields: White plastic antisail w/** Kenworth logo.		**0**
6741011	O	**Square end-of-frame w/ crossmember; non-towing.**		**30**
6790003	O	**Special frame drill: dealer to provide drawing** with dimensions and revision level. Acceptable hole diameters range from 10.2 mm to 40.4 mm. Preferred file format is .pdf. Not for use for rear suspension, fifth wheel or other published frame drilling code. Does not replace clear frame space requests or custom frame layout.		**0**
Fuel Tanks & Equip				
7210075	O	**Fuel Tank: 75 US gallon 24.5in. aluminum under** replace. Class 8 fuel tanks w/o locking caps include an anti-siphon device on the filler neck.		**-11**
7722153	S	**Small round DEF tank, 14 gallons.** The DEF tank will be located on the side you specified. If you have specific configuration or body builder concerns, please utilize the		**0**

Sales Code	Std/ Opt	Description	$ List	Weight
		Custom Frame Layout option. Standard capacity is calculated by fuel capacity of the vehicle and will accommodate two diesel fill-ups for every DEF fill-up. For 1:1 DEF fuel fill ratio, add 7889204.		
7889021	O	**Fuel tank locking cap(s). Not available w/** hydraulic tank. Tank lock does not match ignition/cab/sleeper locks.		**0**
7889204	O	**DEF to fuel fill ratio between 1:1 and 2:1.**		**0**
7889603	O	**DEF tank location is RH.**		**0**
7920075	O	**Location: 75 gal fuel tank LH under cab**		**0**
Cab & Equipment				
8025301	S	**Cab: Stamped aluminum cab with panoramic curved** glass windshield. Standard with stamped aluminum doors, heavy duty in-swinging hinges, and triple sealed doors. Manufactured using self-piercing rivets and structural adhesive. Includes LED exterior marker lights and turn signals.		**0**
8090605	S	**Hood: T880 Short Length MX-Optimized W/Mechan.** Fastened Fenders. 116.7 inch BBC.		**0**
8108011	S	**Cab HVAC - Day Cab and 40in Sleeper** System With Defrost, A/C, and 48,000 BTU/hr Heater. Includes automatic temperature control with one touch defrost operation and dash mounted cab temperature and solar intensity sensors. Pleated fresh air filter and cabin recirculation air filter standard. The Kenworth HVAC system is designed to provide optimal heating and cooling in all operating environments without need for additional insulation. Cab HVAC without sleeper heater AC is available with 40in sleeper.		**0**
8190138	O	**Shutoff Valves to Isolate Primary Heater** Remote mounted on frame under cab.		**0**
8201047	S	**Kenworth Smartwheel: 18 in. Non-Leather With** Integrated Radio and Cruise Controls.		**0**
8201051	O	**Column Mtd Retarder Control, RH Side** Use with Manual & Allison Transmissions Only.		**0**
8201200	S	**Adjustable telescoping tilt steering column.**		**0**
8203060	O	**5 sets of keys. Replaces standard 2 sets of keys.**		**0**
8205177	O	**Dash Switch: 1st Allison-mntd PTO.** Electric switch and wiring are factory-installed to control the 1st Allison Trans mounted PTO.		**0**
8208496	O	**Three spare switches: Wired to power.**		**0**
8220106	O	**Gauge: Dash mounted air filter restriction gauge.**		**0**
8222404	S	**Gauge: DD Virtual Gauge - Oil Temp Engine**		**0**
8222413	S	**Gauge: DD Virtual Gauge - Manifold** Pressure Boost		**0**

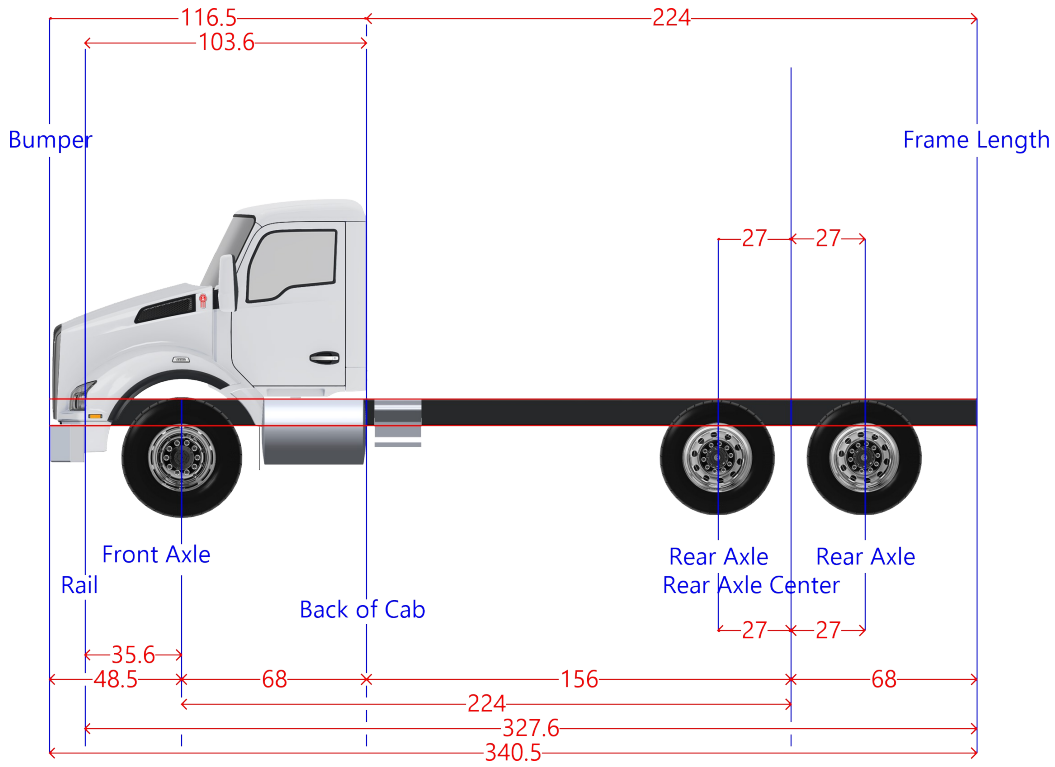
Sales Code	Std/ Opt	Description	$ List	Weight
8222414	S	**Gauge: DD Virtual Gauge - Engine Percent** Torque		**0**
8282027	S	**Main Instrument Package: 15" Digital Display.** Includes Speedometer, Tachometer, Primary Air Pressure, Secondary Air Pressure, Fuel Level #1, DEF Level, DPF Filter Status, Fuel Economy, Oil Pressure, Coolant Temp, OAT and Voltmeter, and Air Application.		**0**
8282108	O	**Modular Dash Options: RH Dash storage unit with** two shelves. Reduces total gauge count; HD by 6 and MD by 4.		**0**
8300008	S	**Interior color: Slate Gray**		**0**
8330102	S	**Interior package: Vantage daycab** Includes durable headliner and vinyl sidewalls with geometric patterned trim and anodized aluminum accents throughout. Convenient overhead storage cubbies, full size glove box, two center console cupholders, and large door pad map pocket. Standard LH/RH power windows, electric door locks, interior LED lighting, nighttime-friendly red ambient lighting for dash and footwell, and door mounted courtesy light. Includes two standard 12V power outlets. Driver sunvisor includes strap.		**0**
8390634	S	**Rubber floormat**		**0**
8410200	O	**Driver Seat: GT701 HB with Vinyl material.** The GT701 is standard with a single air bag, scissor linkage seat suspension. It includes a single chamber lumbar support, 10in Fore/Aft adjustment, 7in Up/Down adjustment, 2.5in pan extension, 51 degree seat back recline, and 16 degree full seat tilt. Includes 3-point matching seat belts. DR seat standard w/ dual armrests.		**0**
8480065	O	**Rider Seat: KW 2 Person Bench MB with Vinyl**		**22**
8490181	S	**Seat Color: Black**		**0**
8496559	O	**Driver and Rider Seat Belts: Orange Seat Belts.** Replacing standard color.		**0**
8498452	O	**Delete dual DR seat armrests.** Not available on GT703 series seats.		**-6**
8498560	O	**Delete inboard RD seat armrest.** Not available on GT703 series seats.		**0**
8601432	O	**Kenworth Radio DEA710 AM/FM/WB/USB, Bluetooth**		**0**
8601881	O	**CB Radio: Cobra 29. W/header mounted quick** release. Includes transceiver & separate speaker remote-mounted in headliner & dual CB antennas. Includes sound tracker & illuminated panel.		**11**
8698974	S	**Base Level Audio System - Daycab:High Performance** Door Speakers.		**0**
8700197	S	**Turn Signal: Non-Self Cancelling**		**0**
8700283	S	**LH and RH Trip Ledge Rain Deflectors**		**0**

Sales Code	Std/ Opt	Description	$ List	Weight
8700663	S	**Kenworth TruckTech+** The Kenworth Remote Diagnostics system provides the Worlds Best reporting of engine and aftertreatment fault codes, as well as enhanced support for the truck owner through rapid communication of fault severity and recommended actions. This option is Standard on all Heavy Duty Kenworths with a PACCAR MX engine, Cummins X15 engine, PX engine or Natural Gas engine. Optional on Medium Duty Kenworths.		0
8800382	O	**Grabhandle: LH SOC Non-Slip Ergonomic** Grab Handle Mounted To The Left Hand Exterior Of The Cab For Entry and Exit. NFPA Compliant.		3
8800402	S	**Dual Cab Interior Grabhandles: A Pillar Mounted** Dash Wrap and B Pillar Mounted Grabhandles		0
8832113	S	**Kenworth Daylite Door with standard LH/RH** electric door locks and LH/RH electric window controls.		0
8841618	O	**Dual rectangular air horn 23 in. LH & RH top of** roof. Includes air horn covers.		4
8850139	S	**Look-Down, Pass. Door, Black 11x6**		0
8850812	O	**Mirror: LH Hood Mounted, Round Convex, Chrome**		4
8850813	O	**Mirror: RH Hood Mounted, Round Convex, Chrome**		4
8865002	S	**Aero Mirror: Dual Kenworth Aerodynamic Motorized** heated mirrors, 7in X 13in with cab color mirror shell and black mirror arms. Also includes LH/RH heated 6in X 7in convex mirrors. Mirror brackets set for 8-1/2 ft load width. Mirror controls located on driver side door pad.		0
8871446	S	**Rear cab stationary window 19in x 36in**		0
8879917	O	**Two additional outboard windows 19in x 12in**		10
8890101	S	**One-piece bonded-in windshield with curved glass.** Standard.		0
8890135	S	**Exterior stainless steel sunvisor.**		19
8890349	S	**Wheelwell Fender Extension: 2.5 Inches**		0
8890876	S	**Kenworth Cab/Sleeper Air Suspension.**		0
Lights & Instruments				
9010553	S	**Headlamps: SAE Dual Halogen Complex Reflector**		0
9022137	S	**Marker Lights: Five, rectangular, LED**		0
9030016	S	**Turn Signal Lights: Flush mounted LED. Mounted at** top of fender wheel arc.		0
9030052	S	**LED Stop,Turn,Tail: With Two LED** Backup Lights and With An LED License Plate.		0

Sales Code	Std/ Opt	Description	$ List	Weight
9090039	S	**Marker Lights: Interrupter Switch.** Included in Turn Signal For All Models Except T3. The T3 Switch Is In The Dash.		0
9090049	S	**Omit Brake Light with Engine Brake.** Can only be selected when chassis also has engine brake. Cannot be used with options to delete engine brake.		0
9090115	O	**Reflectors: Two Midframe**		0
9090126	O	**Electric Backup Alarm: Meets SAE J994 & OSHA** requirements.		4
9090316	O	**Junction Box: End of Frame**		1
9090849	O	**Polyswitches replacing fuses. Switch will** automatically reset after removal of excess load.		0
Air Equipment				
9101219	O	**Air Dryer: Bendix AD-HF Extended Purge Heated** With Puraguard		0
9108001	S	**Moisture ejection valve w/ pull cable drain.**		0
9140020	S	**Nylon air tubing in frame & cab, excluding hoses** subject to excessive heat or flexing.		0
9140286	O	**Air tanks: clear of left side of transmission** area. This code requires the use of a custom frame layout code.		0
Extended Warranty				
9200006	O	**Base Warranty - PACCAR MX-11 & MX-13 Engine** 24 months / 250,000 miles / 400,000 km / 6250 hours.		0
9200021	S	**Base Warranty - Standard Service Heavy Duty** 12 months / 100,000 miles / 160,000 km.		0
9212601	S	**24 Month TruckTech+ Subscription for PACCAR MX** Engines w/ OTA Functionality		0
9220001	O	**Base Warranty: Emissions** 5YR/100K MI - EPA Engine (Does not include CARB Clean Idle sticker)		0
Miscellaneous				
9409852	O	**GHG Secondary Manufacturer: Does Not Apply**		0
9490003	O	**Additional lead time required for off highway &** /or specialty component truck.		0
9490206	O	**Warning triangle reflector kit: Shipped loose.** Kit consists of 3 triangles in plastic carrying case. Not floor mounted.		4
9490404	O	**One 5 lb. dry chemical type fire extinguisher** mounted outboard of driver seat. Class ABC.		11
9491659	S	**VMUX Architecture**		0
Promotions				
Paint				

Sales Code	Std/ Opt	Description	$ List	Weight
9700000	O	**Paint color number(s).** N9702 A - L0006 WHITE N9720 FRAME N0001 BLACK		**0**
9943004	O	**Bumper Unpainted**		**0**
9943048	O	**Day Cab Bulk Paint**		**0**
9943050	O	**Day Cab Standard Paint**		**0**
9944820	S	**1 - Color Paint - Day Cab** Color will be White if no other color is specified.		**0**
9965510	S	**Base coat/clear coat.** The Kenworth Color Selector contains additional instructions, as well as information on Kenworth paint guidelines and surface finish applications. Kenworth is standard with Dupont Imron Elite paint.		**0**

HORIZONTAL DIMENSIONS



Dimension	Measurement	Start	End
Axle Spacing	54	197	251
Bumper to Back of Cab	116.5	-48.5	68
Bumper to Front Axle	48.5	-48.5	0
Bumper to Front Frame	12.9	-48.5	-35.6
Cab to End of Frame	224.0	68	292
Cab to Rear Axle	156.0	68	224
Effective Bumper to Back Of Cab	116.5	-48.5	68
Frame Length	327.6	-35.6	292
Front Axle to Back of Cab	68.0	0	68
Front of Frame to Axle	35.6	-35.6	0
Load Space	224.0	68	292
Overall Length	340.5	-48.5	292
Overhang	68.0	224	292
Pusher Offset #1	27.0	197	224
Pusher Offset #2	27.0	197	224
Pusher Offset #3	27.0	197	224
Tag Offset	27.0	224	251
Wheelbase	224	0	224

WE NEVER STOP WORKING FOR YOU

DuraPack® 5000

High-Compaction Rear Loader

Sourcewell Formerly NJPA
Awarded Contract
Contract # 091219-THC

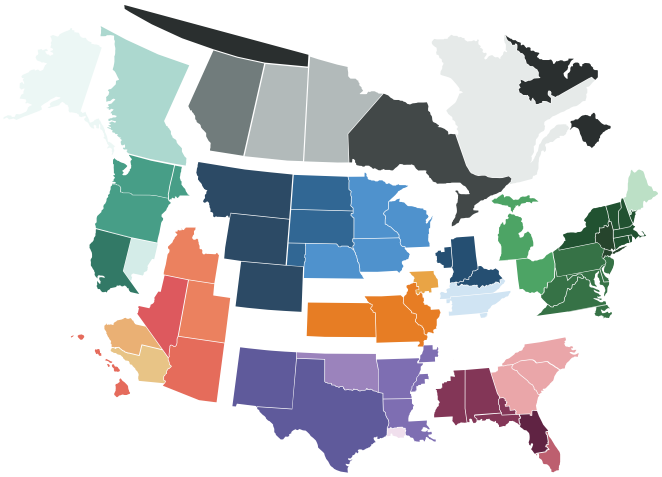
EXPEDITE THE PURCHASE OF YOUR HEIL® UNIT THROUGH SOURCEWELL

Sourcewell Cooperative Purchasing Program has awarded **Heil** a nationally bid contract for "Solid Waste and Recycling Collection Equipment with Related Equipment, Accessories, and Supplies." Through the **Heil** contract, Sourcewell members can purchase any of the **Heil** line of refuse and recycling equipment, including front-loading, side-loading, and rear-loading refuse collection vehicles, without having to create an RFP and send the project through a time-consuming duplicate bid process. By using the existing nationally bid contract, members can receive the products they need more quickly and cost effectively. Best of all, Sourcewell membership is free! Qualified agencies can join online via the Sourcewell purchasing website at www.sourcewell-mn.gov. To find out more about purchasing **Heil** equipment via the Sourcewell contract, please contact your local **Heil** Dealer at **www.heil.com/dealers**.

TRUST HEIL® CERTIFIED OEM PARTS

Heil Certified OEM parts are the most reliable replacement parts for **Heil** refuse collection vehicles. They're made following the exact specifications and production processes on the same assembly lines as the parts originally installed on the bodies. This means that they fit perfectly every time. **Heil** uses only the highest-quality materials for parts that last - minimizing costly downtime. For more information on parts, contact your **Heil** dealer. Visit: **www.heil.com/dealers** to find the dealer nearest you.

Dealer Network



RELY ON EXPERIENCED LOCAL SUPPORT

When you buy from **Heil**, you gain the aftermarket support of the industry's strongest network of dealers in North America. We stand behind our dealers, so you get the product support you need for the life of your products. Our dealers are also trained to help you find the best product for your particular route needs. To find the **Heil** dealer nearest you, visit: **www.heil.com/dealers**.

Connected Collections™

All **Heil** products are Connected Collections™ ready. This is part of our vision, focused on helping fleet owners make better decisions, faster. For more information on **ESG's Connected Collections**, contact your local Heil dealer or visit us online at www.heil.com/connected-collections

www.heil.com

COUNT ON THE LOWEST TCC

Helping you save money is our passion, and we apply tremendous resources to advance our product and service offerings to improve the profitability of your business and provide the lowest Total Cost of Collection and the maximum return on your investment. You can be confident that choosing **Heil** equipment brings a long-term partnership with the industry leader.

CONFIGURATION ASSISTANCE

Chassis layout drawings are available through your local **Heil** dealer. To find your dealer, visit **www. heil.com/dealers.**

Nexteligence® Connected-Tech Training

INDUSTRY-LEADING TRAINING

Heil has completely revamped their training programs with the addition of both the Heil Service Shack™ and our four-tiered Nexteligence® Connected-Tech Training Program. Now, customers can visit the **Heil Service Shack** on the **Heil** website to learn the latest techniques and view helpful service and training videos any time, as well as sign up for Connected-Tech courses to better train technicians on **Heil** Refuse Products. Ensure your shops are servicing your **Heil** products correctly; check out the **Heil** training offerings at **www.heil.com/nexteligence**.

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201 W. Main Street, Suite 300, Chattanooga, TN 37408 | 866.FOR.HEIL (866.367.4345) | Fax: 423.855.3478

Heil #091219-THC

Pricing for contract #091219-THC offers Sourcewell participating agencies the following discounts:

- 4% discount off MSRP for all products and services which would represent the ceiling price a member would pay to a Heil dealer, the exception to this would be the chassis
- 4% discount off MSRP for 3rd Eye products
- Discount does not apply to equipment rentals through those various entities

Please note: Due to the dramatic rise in material prices, Heil has implemented a 15% material surcharge on all units and options.

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Sourcewell

Solicitation Number: RFP#091219

CONTRACT

This Contract is between **Sourcewell**, 202 12th Street Northeast, P.O. Box 219, Staples, MN 56479 (Sourcewell) and **The Heil Co.**, 2030 Hamilton Place Blvd. #200, Chattanooga, TN 37421 (Vendor).

Sourcewell is a State of Minnesota local government agency and service cooperative created under the laws of the State of Minnesota (Minnesota Statutes Section 123A.21) that offers cooperative procurement solutions to its members. Participation is open to all levels of governmental entity, higher education, K-12 education, nonprofit, tribal government, and other public entities located in the United States and Canada.

Vendor desires to contract with Sourcewell to provide equipment, products, or services to Sourcewell and its Members (Members).

1. TERM OF CONTRACT

A. EFFECTIVE DATE. This Contract is effective upon the date of the final signature below.

B. EXPIRATION DATE AND EXTENSION. This Contract expires November 15, 2023, unless it is cancelled sooner pursuant to Article 24. This Contract may be extended up to one additional one-year period upon request of Sourcewell and with written agreement by Vendor.

C. SURVIVAL OF TERMS. Articles 11 through 16 survive the expiration or cancellation of this Contract.

2. EQUIPMENT, PRODUCTS, OR SERVICES

A. EQUIPMENT, PRODUCTS, OR SERVICES. Vendor will provide the Equipment, Products, or Services as stated in its Proposal submitted under the Solicitation Number listed above. Vendor's Equipment, Products, or Services Proposal (Proposal) is attached and incorporated into this Contract.

All Equipment and Products provided under this Contract must be new/current model. Vendor may offer close-out or refurbished Equipment or Products if they are clearly indicated in Vendor's product and pricing list. Unless agreed to by the Member in advance, Equipment or Products must be delivered as operational to the Member's site.

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This Contract offers an indefinite quantity of sales, and while substantial volume is anticipated, sales and sales volume are not guaranteed.

B. LAWS AND REGULATIONS. All Equipment, Products, or Services must comply fully with applicable federal laws and regulations, and with the laws of the state or province in which the Equipment, Products, or Services are sold.

C. WARRANTY. Vendor warrants that all Equipment, Products, and Services furnished are free from liens and encumbrances, and are free from defects in design, materials, and workmanship. In addition, Vendor warrants the Equipment, Products, and Services are suitable for and will perform in accordance with the ordinary use for which they are intended. Vendor's dealers and distributors must agree to assist the Member in reaching a resolution in any dispute over warranty terms with the manufacturer. Any manufacturer's warranty that is effective past the expiration of the Vendor's warranty will be passed on to the Member.

Notwithstanding the above, warranty issues related to the body and Heil factory-installed components shall be administered and resolved by The Heil Co. Warranty for third-party manufacturers such as the chassis chassis options or subsequently installed components shall be administered and addressed by the respective product manufacturer.

D. DEALERS AND DISTRIBUTORS. Upon Contract execution, Vendor will make available to Sourcewell a means to validate or authenticate Vendor's authorized Distributors/Dealers relative to the Equipment, Products, and Services related to this Contract. This list may be updated from time-to-time and is incorporated into this Contract by reference. It is the Vendor's responsibility to ensure Sourcewell receives the most current version of this list.

3. PRICING

All Equipment, Products, or Services under this Contract will be priced as stated in Vendor's Proposal.

Regardless of the payment method chosen by the Member, the total cost associated with any purchase option of the Equipment, Products, or Services must always be disclosed in the pricing quote to the applicable Member at the time of purchase.

When providing pricing quotes to Members, all pricing quoted must reflect a Member's total cost of acquisition. This means that the quoted cost is for delivered Equipment, Products, and Services that are operational for their intended purpose, and includes all costs to the Member's requested delivery location.

A. SHIPPING AND SHIPPING COSTS. All delivered Equipment and Products must be properly packaged. Damaged Equipment and Products may be rejected. If the damage is not readily apparent at the time of delivery, Vendor must permit the Equipment and Products to be

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returned within a reasonable time at no cost to Sourcewell or its Members. Members reserve the right to inspect the Equipment and Products at a reasonable time after delivery where circumstances or conditions prevent effective inspection of the Equipment and Products at the time of delivery.

B. Vendor must arrange for and pay for the return shipment on Equipment and Products that arrive in a defective or inoperable condition. Product returns shall only be available in the event Vendor is notified of a body problem in writing and has not resolved the issue within thirty (30) days after receipt of said Notice.

Sourcewell may declare the Vendor in breach of this Contract if the Vendor intentionally delivers substandard or inferior Equipment or Products. In the event of the delivery of nonconforming Equipment and Products, the Member will notify the Vendor as soon as possible and the Vendor will replace nonconforming Equipment and Products with conforming Equipment and Products that are acceptable to the Member.

C. SALES TAX. Each Member is responsible for supplying the Vendor with valid tax-exemption certification(s). When ordering, Members must indicate if it is a tax-exempt entity.

D. HOT LIST PRICING. At any time during this Contract, Vendor may offer a specific selection of Equipment, Products, or Services at discounts greater than those listed in the Contract. When Vendor determines it will offer Hot List Pricing, it must be submitted electronically to Sourcewell in a line-item format. Equipment, Products, or Services may be added or removed from the Hot List at any time through a Sourcewell Price and Product Change Form as defined in Article 4 below.

Hot List program and pricing may also be used to discount and liquidate close-out and discontinued Equipment and Products as long as those close-out and discontinued items are clearly identified as such. Current ordering process and administrative fees apply. Hot List Pricing must be published and made available to all Members.

4. PRODUCT AND PRICING CHANGE REQUESTS

Vendor may request Equipment, Product, or Service changes, additions, or deletions at any time. All requests must be made in writing by submitting a signed Sourcewell Price and Product Change Request Form to the assigned Sourcewell Contract Administrator. This form is available from the assigned Sourcewell Contract Administrator. At a minimum, the request must:

- Identify the applicable Sourcewell contract number
- Clearly specify the requested change
- Provide sufficient detail to justify the requested change
- Individually list all Equipment, Products, or Services affected by the requested change, along with the requested change (e.g., addition, deletion, price change)

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- Include a complete restatement of pricing documentation in Microsoft Excel with the effective date of the modified pricing, or product addition or deletion. The new pricing restatement must include all Equipment, Products, and Services offered, even for those items where pricing remains unchanged.

A fully executed Sourcewell Price and Product Request Form will be become an amendment to this Contract and be incorporated by reference.

5. MEMBERSHIP, CONTRACT ACCESS, AND MEMBER REQUIREMENTS

A. MEMBERSHIP. Membership in Sourcewell is open to public and nonprofit entities across the United States and Canada; such as municipal, state/province, K-12 and higher education, tribal government, and other public entities.

The benefits of this Contract should be available to all Members that can legally access the Equipment, Products, or Services under this Contract. A Member's authority to access this Contract is determined through its cooperative purchasing, interlocal, or joint powers laws. Any entity accessing benefits of this Contract will be considered a Service Member of Sourcewell during such time of access. Vendor understands that a Member's use of this Contract is at the Member's sole convenience and Members reserve the right to obtain like Equipment, Products, or Services from any other source.

Vendor is responsible for familiarizing its sales and service forces with Sourcewell membership requirements and documentation and will encourage potential members to join Sourcewell. Sourcewell reserves the right to add and remove Members to its roster during the term of this Contract.

B. PUBLIC FACILITIES. Vendor's employees may be required to perform work at government-owned facilities, including schools. Vendor's employees and agents must conduct themselves in a professional manner while on the premises, and in accordance with Member policies and procedures, and all applicable laws.

6. MEMBER ORDERING AND PURCHASE ORDERS

A. PURCHASE ORDERS AND PAYMENT. To access the contracted Equipment, Products, or Services under this Contract, Member must clearly indicate to Vendor that it intends to access this Contract; however, order flow and procedure will be developed jointly between Sourcewell and Vendor. Typically a Member will issue a purchase order directly to Vendor. Members may use their own forms for purchase orders, but it should clearly note the applicable Sourcewell contract number. Members will be solely responsible for payment and Sourcewell will have no liability for any unpaid invoice of any Member.

B. ADDITIONAL TERMS AND CONDITIONS. Additional terms and conditions to a purchase order may be negotiated between a Member and Vendor, such as job or industry-specific

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requirements, legal requirements (such as affirmative action or immigration status requirements), or specific local policy requirements. Any negotiated additional terms and conditions must never be less favorable to the Member than what is contained in Vendor's Proposal.

C. PERFORMANCE BOND. If requested by a Member, Vendor will provide a performance bond that meets the requirements set forth in the Member's purchase order. The cost of the bond premium shall be added to the cost of the Product.

D. SPECIALIZED SERVICE REQUIREMENTS. In the event that the Member requires service or specialized performance requirements (such as e-commerce specifications, specialized delivery requirements, or other specifications and requirements) not addressed in this Contract, the Member and the Vendor may enter into a separate, standalone agreement, apart from this Contract. Sourcewell, including its agents and employees, will not be made a party to a claim for breach of such agreement.

E. TERMINATION OF PURCHASE ORDERS. Members may terminate a purchase order, in whole or in part, immediately upon notice to Vendor in the event of any of the following events:

1. The Member fails to receive funding or appropriation from its governing body at levels sufficient to pay for the goods to be purchased;
2. Federal or state laws or regulations prohibit the purchase or change the Member's requirements; or
3. Vendor commits any material breach of this Contract or the additional terms agreed to between the Vendor and a Member.

F. GOVERNING LAW AND VENUE. The governing law and venue for any action related to a Member's purchase order will be determined by the Member making the purchase.

7. CUSTOMER SERVICE

A. PRIMARY ACCOUNT REPRESENTATIVE. Vendor will assign an Account Representative to Sourcewell for this Contract and must provide prompt notice to Sourcewell if that person is changed. The Account Representative will be responsible for:

- Maintenance and management of this Contract;
- Timely response to all Sourcewell and Member inquiries; and
- Business reviews to Sourcewell and Members, if applicable.

B. BUSINESS REVIEWS. Vendor must perform a minimum of one business review with Sourcewell per contract year. The business review will cover sales to members, pricing and

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contract terms, administrative fees, supply issues, customer issues, and any other necessary information.

8. REPORT ON CONTRACT SALES ACTIVITY AND ADMINISTRATIVE FEE PAYMENT

A. CONTRACT SALES ACTIVITY REPORT. Each calendar quarter, Vendor must provide a contract sales activity report (Report) to the Sourcewell Contract Administrator assigned to this Contract. A Report must be provided regardless of the number or amount of sales during that quarter (i.e., if there are no sales, Vendor must submit a report indicating no sales were made).

The Report must contain the following fields:

- Customer Name (e.g., City of Staples Highway Department);
- Customer Physical Street Address;
- Customer City;
- Customer State;
- Customer Zip Code;
- Customer Contact Name;
- Customer Contact Email Address;
- Customer Contact Telephone Number;
- Sourcewell Assigned Entity/Member Number;
- Item Purchased Description;
- Item Purchased Price;
- Sourcewell Administrative Fee Applied; and
- Date Purchase was invoiced/sale was recognized as revenue by Vendor.

B. ADMINISTRATIVE FEE. In consideration for the support and services provided by Sourcewell, the Vendor will pay an administrative fee to Sourcewell on all Equipment, Products, and Services provided to Members. The Vendor will submit a check payable to Sourcewell for the percentage of administrative fee stated in the Proposal multiplied by the total sales of all Equipment, Products, and Services purchased by Members under this Contract during each calendar quarter. Payments should note the Sourcewell-assigned contract number in the memo and must be mailed to the address above "Attn: Accounts Receivable." Payments must be received no later than forty-five (45) calendar days after the end of each calendar quarter.

Vendor agrees to cooperate with Sourcewell in auditing transactions under this Contract to ensure that the administrative fee is paid on all items purchased under this Contract.

In the event the Vendor is delinquent in any undisputed administrative fees, Sourcewell reserves the right to cancel this Contract and reject any proposal submitted by the Vendor in any subsequent solicitation. In the event this Contract is cancelled by either party prior to the Contract's expiration date, the administrative fee payment will be due no more than thirty (30) days from the cancellation date.

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9. AUTHORIZED REPRESENTATIVE

Sourcewell's Authorized Representative is its Chief Procurement Officer.

Vendor's Authorized Representative is the person named in the Vendor's Proposal. If Vendor's Authorized Representative changes at any time during this Contract, Vendor must promptly notify Sourcewell in writing.

10. ASSIGNMENT, AMENDMENTS, WAIVER, AND CONTRACT COMPLETE

A. ASSIGNMENT. Neither the Vendor nor Sourcewell may assign or transfer any rights or obligations under this Contract without the prior consent of the parties and a fully executed assignment agreement. Such consent will not be unreasonably withheld.

B. AMENDMENTS. Any amendment to this Contract must be in writing and will not be effective until it has been fully executed by the parties.

C. WAIVER. If either party fails to enforce any provision of this Contract, that failure does not waive the provision or the right to enforce it.

D. CONTRACT COMPLETE. This Contract contains all negotiations and agreements between Sourcewell and Vendor. No other understanding regarding this Contract, whether written or oral, may be used to bind either party.

E. RELATIONSHIP OF THE PARTIES. The relationship of the parties is one of independent contractors, each free to exercise judgment and discretion with regard to the conduct of their respective businesses. This Contract does not create a partnership, joint venture, master-servant, principal-agent, or any other relationship.

11. LIABILITY

Vendor must indemnify, save, and hold Sourcewell and its Members, including their agents and employees, harmless from any claims or causes of action, including attorneys' fees, arising out of the performance of this Contract by the Vendor or its agents or employees; this indemnification includes injury or death to person(s) or property alleged to have been caused by some defect in the Equipment, Products, or Services under this Contract to the extent the Equipment, Product, or Service has been used according to its specifications.

12. AUDITS

Sourcewell reserves the right to review the books, records, documents, and accounting procedures and practices of the Vendor relevant to this Contract for a minimum of six (6) years from the end of this Contract. This clause extends to Members as it relates to business conducted by that Member under this Contract.

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13. GOVERNMENT DATA PRACTICES

Vendor and Sourcewell must comply with the Minnesota Government Data Practices Act, Minnesota Statutes Chapter 13, as it applies to all data provided by or provided to Sourcewell under this Contract and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Vendor under this Contract.

If the Vendor receives a request to release the data referred to in this article, the Vendor must immediately notify Sourcewell and Sourcewell will assist with how the Vendor should respond to the request.

14. INTELLECTUAL PROPERTY

As applicable, Vendor agrees to indemnify and hold harmless Sourcewell and its Members against any and all suits, claims, judgments, and costs instituted or recovered against Sourcewell or Members by any person on account of the use of any Equipment or Products by Sourcewell or its Members supplied by Vendor in violation of applicable patent or copyright laws.

15. PUBLICITY, MARKETING, AND ENDORSEMENT

A. PUBLICITY. Any publicity regarding the subject matter of this Contract must not be released without prior written approval from the Authorized Representatives. Publicity includes notices, informational pamphlets, press releases, research, reports, signs, and similar public notices prepared by or for the Vendor individually or jointly with others, or any subcontractors, with respect to the program, publications, or services provided resulting from this Contract.

B. MARKETING. Any direct advertising, marketing, or offers with Members must be approved by Sourcewell. Materials should be sent to the Sourcewell Contract Administrator assigned to this Contract.

C. ENDORSEMENT. The Vendor must not claim that Sourcewell endorses its Equipment, Products, or Services.

16. GOVERNING LAW, JURISDICTION, AND VENUE

Minnesota law governs this Contract. Venue for all legal proceedings out of this Contract, or its breach, must be in the appropriate state court in Todd County or federal court in Fergus Falls, Minnesota.

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17. FORCE MAJEURE

Neither party to this Contract will be held responsible for delay or default caused by acts of God or other conditions that are beyond that party's reasonable control. A party defaulting under this provision must provide the other party prompt written notice of the default.

18. SEVERABILITY

If any provision of this Contract is found to be illegal, unenforceable, or void then both Sourcewell and Vendor will be relieved of all obligations arising under such provisions. If the remainder of this Contract is capable of performance, it will not be affected by such declaration or finding and must be fully performed.

19. PERFORMANCE, DEFAULT, AND REMEDIES

A. PERFORMANCE. During the term of this Contract, the parties will monitor performance and address unresolved contract issues as follows:

1. *Notification.* The parties must promptly notify each other of any known dispute and work in good faith to resolve such dispute within a reasonable period of time. If necessary, Sourcewell and the Vendor will jointly develop a short briefing document that describes the issue(s), relevant impact, and positions of both parties.
2. *Escalation.* If parties are unable to resolve the issue in a timely manner, as specified above, either Sourcewell or Vendor may escalate the resolution of the issue to a higher level of management. The Vendor will have thirty (30) calendar days to cure an outstanding issue.
3. *Performance while Dispute is Pending*. Notwithstanding the existence of a dispute, the Vendor must continue without delay to carry out all of its responsibilities under the Contract that are not affected by the dispute. If the Vendor fails to continue without delay to perform its responsibilities under the Contract, in the accomplishment of all undisputed work, any additional costs incurred by Sourcewell and/or its Members as a result of such failure to proceed will be borne by the Vendor.

B. DEFAULT AND REMEDIES. Either of the following constitutes cause to declare this Contract, or any Member order under this Contract, in default:

1. Nonperformance of contractual requirements, or
2. A material breach of any term or condition of this Contract.

Written notice of default and a reasonable opportunity to cure must be issued by the party claiming default. Time allowed for cure will not diminish or eliminate any liability for liquidated or other damages. If the default remains after the opportunity for cure, the non-defaulting party may:

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- Exercise any remedy provided by law or equity, or
- Terminate the Contract or any portion thereof, including any orders issued against the Contract.

20. INSURANCE

A. REQUIREMENTS. At its own expense, Vendor must maintain insurance policy(ies) in effect at all times during the performance of this Contract with insurance company(ies) licensed or authorized to do business in the State of Minnesota having an "AM BEST" rating of A- or better, with coverage and limits of insurance not less than the following:

1. Workers' Compensation and Employer's Liability.
Workers' Compensation: As required by any applicable law or regulation.
Employer's Liability Insurance: must be provided in amounts not less than listed below:
Minimum limits:
$500,000 each accident for bodily injury by accident
$500,000 policy limit for bodily injury by disease
$500,000 each employee for bodily injury by disease

2. *Commercial General Liability Insurance.* Vendor will maintain insurance covering its operations, with coverage on an occurrence basis, and must be subject to terms no less broad than the Insurance Services Office ("ISO") Commercial General Liability Form CG0001 (2001 or newer edition). At a minimum, coverage must include liability arising from premises, operations, bodily injury and property damage, independent contractors, products-completed operations including construction defect, contractual liability, blanket contractual liability, and personal injury and advertising injury. All required limits, terms and conditions of coverage must be maintained during the term of this Contract.
Minimum Limits:
$1,000,000 each occurrence Bodily Injury and Property Damage
$1,000,000 Personal and Advertising Injury
$2,000,000 aggregate for Products-Completed operations
$2,000,000 general aggregate

3. *Commercial Automobile Liability Insurance.* During the term of this Contract, Vendor will maintain insurance covering all owned, hired, and non-owned automobiles in limits of liability not less than indicated below. The coverage must be subject to terms no less broad than ISO Business Auto Coverage Form CA 0001 (2010 edition or newer).
Minimum Limits:
$1,000,000 each accident, combined single limit

4. *Umbrella Insurance*. During the term of this Contract, Vendor will maintain umbrella coverage over Workers' Compensation, Commercial General Liability, and Commercial Automobile.

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Minimum Limits:
$2,000,000

5. *Network Security and Privacy Liability Insurance*. During the term of this Contract, Vendor will maintain coverage for network security and privacy liability. The coverage may be endorsed on another form of liability coverage or written on a standalone policy. The insurance must cover claims which may arise from failure of Vendor's security resulting in, but not limited to, computer attacks, unauthorized access, disclosure of not public data – including but not limited to, confidential or private information, transmission of a computer virus, or denial of service.

Minimum limits:
$2,000,000 per occurrence
$2,000,000 annual aggregate

Failure of Vendor to maintain the required insurance will constitute a material breach entitling Sourcewell to immediately terminate this Contract for default.

B. CERTIFICATES OF INSURANCE. Prior to commencing under this Contract, Vendor must furnish to Sourcewell a certificate of insurance, as evidence of the insurance required under this Contract. Prior to expiration of the policy(ies), renewal certificates must be mailed to Sourcewell, 202 12th Street Northeast, P.O. Box 219, Staples, MN 56479 or sent to the Sourcewell Contract Administrator assigned to this Contract. The certificates must be signed by a person authorized by the insurer(s) to bind coverage on their behalf. All policies must include there will be no cancellation, suspension, non-renewal, or reduction of coverage without thirty (30) days' prior written notice to the Vendor.

Failure to request certificates of insurance by Sourcewell, or failure of Vendor to provide certificates of insurance, in no way limits or relieves Vendor of its duties and responsibilities in this Contract.

C. ADDITIONAL INSURED ENDORSEMENT AND PRIMARY AND NON-CONTRIBUTORY INSURANCE CLAUSE. Vendor agrees to name Sourcewell and its Members, including their officers, agents, and employees, as an additional insured under the Vendor's commercial general liability insurance policy with respect to liability arising out of activities, "operations," or "work" performed by or on behalf of Vendor, and products and completed operations of Vendor. The policy provision(s) or endorsement(s) must further provide that coverage is primary and not excess over or contributory with any other valid, applicable, and collectible insurance or self-insurance in force for the additional insureds.

D. WAIVER OF SUBROGATION. Vendor waives and must require (by endorsement or otherwise) all its insurers to waive subrogation rights against Sourcewell and other additional insureds for losses paid under the insurance policies required by this Contract or other insurance applicable to the Vendor or its subcontractors. The waiver must apply to all deductibles and/or self-insured retentions applicable to the required or any other insurance

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maintained by the Vendor or its subcontractors. Where permitted by law, Vendor must require similar written express waivers of subrogation and insurance clauses from each of its subcontractors.

E. UMBRELLA/EXCESS LIABILITY. The limits required by this Contract can be met by either providing a primary policy or in combination with umbrella/excess liability policy(ies).

F. SELF-INSURED RETENTIONS. Any self-insured retention in excess of $10,000 is subject to Sourcewell's approval.

21. COMPLIANCE

A. LAWS AND REGULATIONS. All Equipment, Products, or Services provided under this Contract must comply fully with applicable federal laws and regulations, and with the laws in the states and provinces in which the Equipment, Products, or Services are sold.

B. LICENSES. Vendor must maintain a valid status on all required federal, state, and local licenses, bonds, and permits required for the operation of the business that the Vendor conducts with Sourcewell and Members.

22. BANKRUPTCY, DEBARMENT, OR SUSPENSION CERTIFICATION

Vendor certifies and warrants that it is not in bankruptcy or that it has previously disclosed in writing certain information to Sourcewell related to bankruptcy actions. If at any time during this Contract Vendor declares bankruptcy, Vendor must immediately notify Sourcewell in writing.

Vendor certifies and warrants that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from programs operated by the State of Minnesota, the United States federal government, or any Member. Vendor certifies and warrants that neither it nor its principals have been convicted of a criminal offense related to the subject matter of this Contract. Vendor further warrants that it will provide immediate written notice to Sourcewell if this certification changes at any time.

23. PROVISIONS FOR NON-UNITED STATES FEDERAL ENTITY PROCUREMENTS UNDER UNITED STATES FEDERAL AWARDS OR OTHER AWARDS

Members that use United States federal grant or FEMA funds to purchase goods or services from this Contract may be subject to additional requirements including the procurement standards of the Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards, 2 C.F.R. § 200. Members may also require additional requirements based on specific funding specifications. Within this Article, all references to "federal" should be interpreted to mean the United States federal government. The following list only applies when

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a Member accesses Vendor's Equipment, Products, or Services with United States federal funds.

A. EQUAL EMPLOYMENT OPPORTUNITY. Except as otherwise provided under 41 C.F.R. § 60, all contracts that meet the definition of "federally assisted construction contract" in 41 C.F.R. § 60-1.3 must include the equal opportunity clause provided under 41 C.F.R. §60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 C.F.R. §, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 C.F.R. § 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." The equal opportunity clause is incorporated herein by reference.

B. DAVIS-BACON ACT, AS AMENDED (40 U.S.C. § 3141-3148). When required by federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. § 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 C.F.R. § 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-federal entity must report all suspected or reported violations to the federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations (29 C.F.R. § 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-federal entity must report all suspected or reported violations to the federal awarding agency. Vendor must be in compliance with all applicable Davis-Bacon Act provisions.

C. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT (40 U.S.C. § 3701-3708). Where applicable, all contracts awarded by the non-federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. § 3702 and 3704, as supplemented by Department of Labor regulations (29 C.F.R. § 5). Under 40 U.S.C. § 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. § 3704 are applicable to construction

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work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence. This provision is hereby incorporated by reference into this Contract. Vendor certifies that during the term of an award for all contracts by Sourcewell resulting from this procurement process, Vendor must comply with applicable requirements as referenced above.

D. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT. If the federal award meets the definition of "funding agreement" under 37 C.F.R. § 401.2(a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 C.F.R. § 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency. Vendor certifies that during the term of an award for all contracts by Sourcewell resulting from this procurement process, Vendor must comply with applicable requirements as referenced above.

E. CLEAN AIR ACT (42 U.S.C. § 7401-7671Q.) AND THE FEDERAL WATER POLLUTION CONTROL ACT (33 U.S.C. § 1251-1387). Contracts and subgrants of amounts in excess of $150,000 require the non-federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. § 7401- 7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. § 1251- 1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Vendor certifies that during the term of this Contract will comply with applicable requirements as referenced above.

F. DEBARMENT AND SUSPENSION (EXECUTIVE ORDERS 12549 AND 12689). A contract award (see 2 C.F.R. § 180.220) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 C.F.R. §180 that implement Executive Orders 12549 (3 C.F.R. § 1986 Comp., p. 189) and 12689 (3 C.F.R. § 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. Vendor certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation by any federal department or agency.

G. BYRD ANTI-LOBBYING AMENDMENT, AS AMENDED (31 U.S.C. § 1352). Vendors must file any required certifications. Vendors must not have used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any federal contract, grant, or any other award

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covered by 31 U.S.C. § 1352. Vendors must disclose any lobbying with non-federal funds that takes place in connection with obtaining any federal award. Such disclosures are forwarded from tier to tier up to the non-federal award. Vendors must file all certifications and disclosures required by, and otherwise comply with, the Byrd Anti-Lobbying Amendment (31 U.S.C. § 1352).

H. RECORD RETENTION REQUIREMENTS. To the extent applicable, Vendor must comply with the record retention requirements detailed in 2 C.F.R. § 200.333. The Vendor further certifies that it will retain all records as required by 2 C.F.R. § 200.333 for a period of three (3) years after grantees or subgrantees submit final expenditure reports or quarterly or annual financial reports, as applicable, and all other pending matters are closed.

I. ENERGY POLICY AND CONSERVATION ACT COMPLIANCE. To the extent applicable, Vendor must comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

J. BUY AMERICAN PROVISIONS COMPLIANCE. To the extent applicable, Vendor must comply with all applicable provisions of the Buy American Act. Purchases made in accordance with the Buy American Act must follow the applicable procurement rules calling for free and open competition.

K. ACCESS TO RECORDS (2 C.F.R. § 200.336). Vendor agrees that duly authorized representatives of a federal agency must have access to any books, documents, papers and records of Vendor that are directly pertinent to Vendor's discharge of its obligations under this Contract for the purpose of making audits, examinations, excerpts, and transcriptions. The right also includes timely and reasonable access to Vendor's personnel for the purpose of interview and discussion relating to such documents.

L. PROCUREMENT OF RECOVERED MATERIALS (2 C.F.R. § 200.322). A non-federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 C.F.R. § 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

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24. CANCELLATION

Sourcewell or Vendor may cancel this Contract at any time, with or without cause, upon sixty (60) days' written notice to the other party. However, Sourcewell may cancel this Contract immediately upon discovery of a material defect in any certification made in Vendor's Proposal. Termination of this Contract does not relieve either party of financial, product, or service obligations incurred or accrued prior to termination.

Sourcewell

By: DocuSigned by: Jeremy Schwartz C0FD2A139D06489...
Jeremy Schwartz
Title: Director of Operations & Procurement/CPO
Date: 11/11/2019 | 4:17 PM CST

The Heil Co.

By: DocuSigned by: George Paturalski 49D840C627CF45F...
George Paturalski
Title: Assistant Secretary
Date: 12/6/2019 | 1:45 PM PST

Approved:

By: DocuSigned by: Chad Coauette 7E42B8F817A64CC...
Chad Coauette
Title: Executive Director/CEO
Date: 11/11/2019 | 6:44 PM CST

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RFP 091219 - Mobile Refuse Collection Vehicles with Related Equipment, Accessories, and Services

Vendor Details

Company Name:	The Heil Co.
Does your company conduct business under any other name? If yes, please state:	(Heil)
Address:	2030 Hamilton Place Blvd, #200 Chattanooga, TN 37421
Contact:	Burgess Lane
Email:	blane@doveresg.com
Phone:	256-478-0425
HST#:	363896843

Submission Details

Created On:	Thursday July 11, 2019 09:28:35
Submitted On:	Wednesday September 11, 2019 09:59:56
Submitted By:	Burgess Lane
Email:	blane@doveresg.com
Transaction #:	86955ac5-f190-4f28-b35f-31bdbabd60c1
Submitter's IP Address:	74.127.76.220

Specifications

Proposer Identity & Authorized Representatives

Line Item	Question	Response *	
1	Proposer Legal Name (and applicable d/b/a, if any):	The Heil Co. (“Heil")	*
2	Proposer Address:	2030 Hamilton Place Blvd, #200 Chattanooga, TN 37421	*
3	Proposer website address:	www.heil.com	*
4	Proposer's Authorized Representative (name, title, address, email address & phone) (The representative must have authority to sign the “Proposer’s Assurance of Compliance” on behalf of the Proposer):	Dave Young Vice President - Sales dyoung@doveresg.com 423-855-6353	*
5	Proposer's primary contact for this proposal (name, title, address, email address & phone):	Burgess Lane Ready Truck Manager blane@heil.com 256-304-2218	*
6	Proposer's other contacts for this proposal, if any (name, title, address, email address & phone):	Larry Angel General Manager Ready Trucks langel@heil.com 423-242-2967 Jim Whitlow Ready Truck Business Analyst jwhitlow@heil.com 256-845-8355	

Company Information and Financial Strength

Line Item	Question	Response *	
7	Provide a brief history of your company, including your company’s core values, business philosophy, and industry longevity related to the requested equipment, products or services.	Formed in 1901 by Julius P. Heil, Heil is the world’s premier manufacturer of ultra-durable, highly productive mobile refuse collection vehicles. Our product offering encompasses front loaders, rear loaders, side loaders, and multi-compartment vehicles, alternative fuels as well as special packages for organics. As the industry’s leading provider of mobile collection solutions, we operate with a clearly defined mission, vision, set of core values, and set of strategic priorities: Mission: Process, transport, and transform the solid waste stream into sustainable resources that benefit our customers and communities. Vision: Be the undisputed global leader in people, performance, and customer value in the solid waste and recycling industry. Core Values: • Collaborative Entrepreneurial Spirit • Winning Through Customers • High Ethical Standards, Openness, and Trust • Expectations for Results • Respects and Values People Strategic Priorities: • Safety • Quality • On-Time Delivery • Productivity Improvement In addition to the wide array of custom-configured refuse bodies, HEIL offers two innovative programs to assist customers with updating or enhancing their refuse collection fleets quickly. Ready Trucks Program For customers who need to grow their fleet quickly or replace tired trucks and would like to purchase a new Heil refuse collection vehicle, we offer our Ready Trucks Program. This Program enables customers to choose a heavy-duty unit from stock, equipped with our most requested options, and receive same-day shipping. For those customers who would like to make slight modifications to a stock unit, we offer the ability to customize a unit in inventory and have it ship within 60 calendar days as part of our 60-day Shipping Guarantee.	

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		We offer a large variety of chassis inventory for mounting Heil refuse collection bodies. At any given time, we either stock or have immediate access to 500 to 700 chassis, both conventional and cab-over engine models. With chassis production lead times currently as long as four (4) months and often as long as twelve (12) months in recent years, having chassis on hand will enable Heil to offer Sourcewell Members immediate access to the majority of our refuse collection vehicles. Having such a large product offering requires a substantial number of different chassis models. The table below demonstrates our extensive offering of both diesel and compressed natural gas (CNG) models: Chassis Manufacturer Cab-Over Conventional Autocar X X Crane Carrier X Freightliner X International X Hino X X Kenworth X Mack X X Peterbilt X X (Cab-over models are primarily used for Heil front loaders, automated side loaders and, to a les Appendix A. You will note that we are offering in excess of 200 different chassis specifications Heil Rental Programs Heil has relationships with Big Truck Rental, Rush Rentals and Premier Tr purchasing vehicles for a fleet. By renting, municipal customers can: • Start a new pickup or collection route due to annexation without the typical upfront investment. • Kick off a new route or relationship without the possible strain on cash flow. • Replace a unit that goes down unexpectedly or is in for service, in most cases within 24 hours. • Manage an emergency storm cleanup or another sudden situation where time is of the essence and expansion of service may need to be temporary, such as seasonal leaf and brush collection. • Determine which front, side or rear loader is the right solution for an application by testing a rental unit before buying. • Please see Appendix – BTR for Big Truck Rental pricing • Please see Appendix – Rush for Rush Rental pricing • Please see Appendix – Premier 1 and Premier 2 for Premier Truck Rental pricing Parts Central Parts Central offers Heil Certified OEM parts and a variety of aftermarket parts manufactured by Heil. Heil Certified OEM Parts are the most reliable replacement parts for Heil refuse collection vehicles. They're made following the exact specifications and production processes on the same assembly lines as the parts originally installed on the vehicles. This means that they fit perfectly every time. Heil uses only the highest-quality materials for parts that last, minimizing costly downtime. Parts Central also offers the most requested aftermarket parts for Heil and other makes of refuse collection vehicles. Our aftermarket parts are designed and manufactured to strict standards and are backed by more than 118 years of industry experience and quality good enough to carry the Heil name. Most commonly requested parts are available for immediate, same-day delivery through a local authorized Heil Dealer. If customers require a part that's not on the shelf locally, the dealer can expedite delivery from our main Parts Central warehouse in Fort Payne, Alabama. Orders for in-stock parts placed with the warehouse prior to 5:00 p.m. Eastern Standard Time will be shipped overnight. Even those hard-to-find parts for older refuse collection vehicles are often available through local Dealers for next-day delivery.
8	Provide a detailed description of the products and services that you are offering in your proposal.	Our product line consists of a series of commercial and residential equipment. They are divided into 9 sub categories: a) Front Loaders Half/Pack® Frontload Garbage Trucks. Heil's Half/Pack has consistently delivered proven performance and continues to set the standard for front loaders. The Half/Pack is built for a long, reliable lifespan. Please see Appendix - Half Pack for more information regarding this product. Also, you may click the link below to view examples of this offering: https://www.heil.com/products/front-end-loaders/half-pack HALF/PACK® FREEDOM™ FRONT LOAD GARBAGE TRUCKS. Heil's Half/Pack® Freedom front load garbage truck is the lightweight solution for commercial and residential refuse hauling routes, able to carry up to 11 tons of legal payload in its 28 yd. body. Please see

Appendix – Half Pack Freedom for more information regarding this product. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/front-end-loaders/half-pack-freedom

HALF/PACK® COMMERCIAL FRONT LOAD GARBAGE TRUCK WITH ODYSSEY™ HYDRAULIC CONTROLS. This front loader features a refined hydraulic and electronic control system for maximum efficiency, reliability, and precise control. The Heil® Commercial Half/Pack® garbage truck with Odyssey™ Hydraulic Controls also has a single, easy-to-use joystick that requires minimal effort to operate, which saves time and increases productivity. Please see Appendix – Half Pack Commercial with Odyssey Controls for more information regarding this product. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/front-end-loaders/half-pack-commercial-odyssey

HALF/PACK® SIERRA™ FRONT LOAD GARBAGE TRUCKS. At 17,050 lbs (16% lighter than our standard Half/Pack® Front Loader), the Heil® Sierra™ front load garbage truck is a mid-weight solution for commercial and residential refuse routes that can carry more than 10 tons of legal payload in its 28 yd frontload hopper. Whether you haul commercial or residential refuse, the Half/Pack® Sierra™ is simply the best light-weight front loader, hands down. Please see Appendix – Half Pack Sierra for more information regarding this product. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/front-end-loaders/half-pack-sierra HALF/PACK® AUTOMATED RESIDENTIAL FRONT LOAD GARBAGE TRUCKS. With major
productivity enhancements, this game-changing automated front load garbage truck provides savings on residential refuse routes by eliminating high-maintenance items. For the most dependable Residential Front Loader in the business, you can count on the Heil® Half/Pack®. Please see Appendix – Half Pack Automated Residential for more information regarding this product. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/automated-front-loaders

b) Rear Loaders POWERTRAK® COMMERCIAL PLUS HIGH CAPACITY REAR LOAD GARBAGE TRUCKS. The
Heil® PowerTrak® PLUS High Capacity Rear Load Garbage Truck's patented design mounts the tag axle to the chassis frame rail, making it more structurally sound than models with the tag axle integrated into the tailgate, and an optional pusher axle can be added to carry an even greater legal payload. Please see Appendix – PTC Plus for more information regarding this product. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/rear-loaders/powertrak-commercial-plus PT 1000™ SINGLE AXLE REAR LOAD GARBAGE TRUCKS. With its 15-second cycle time, reload time of less than 6 seconds and its and large, 3 yd3 capacity hopper, this robust rear load garbage truck is the key to optimizing productivity on residential and commercial routes. Please see Appendix – PT1000 for more information regarding this product. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/rear-loaders/pt-1000

DURAPACK® 5000 REAR LOAD GARBAGE TRUCKS. This tough and reliable high-compaction rear load garbage truck has a unique swing link design, along with the waste industry's largest capacity hopper. A large 3.94 yards – and compaction up to 1,000 lbs per yd3 for increased productivity on your commercial and residential trash routes. Please see Appendix – DP5000 for more information regarding this product. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/rear-loaders/durapack-5000 POWERTRAK® COMMERCIAL REAR LOAD GARBAGE TRUCKS. This powerful rear load garbage truck body has high-pressure hydraulics and dual-track design to provide an awesome compaction of up to 1,200 lbs per yard. The PowerTrak® 3.64 yd hopper handles construction, demolition, and bulk waste better than any commercial rear loader in its class. Please see Appendix – PTC for more information regarding this product. Also, please click this link below to view examples of this offering:
https://www.heil.com/products/rear-loaders/powertrak-commercial

NON-CDL MINI REAR LOAD GARBAGE TRUCKS. Don't let the size fool you. The beauty of this highly maneuverable Non-CDL Rear Load Garbage Truck is its narrow, compact and lightweight design, making it ideal for commercial or residential waste hauling routes. Operators don't need a commercial driver's license (CDL) and the vehicle is exempt from Federal Excise Tax (FET). And the simple but effective swing link design means no slides, tracks or rollers, just compaction. Looking for the best Non-CDL Rear Load Garbage Truck Body on the market? Check out the Heil® Mini Rear Loader. Please see Appendix – Mini REL for more information regarding this product. Also, please click this link below to view examples of this offering:
https://www.heil.com/products/rear-loaders/mini-rear-loader c)

Side Loaders

LIBERTY™ AUTOMATED SIDELOAD GARBAGE TRUCKS. The patented Python™ automated sideload garbage truck arm has a muscular, 9-foot reach, an 8-second cycle time and can lift up to 800 lbs. The incredibly lightweight Liberty™ automated side loader is perfect for residential collections. And the constant pack body – which is the lightest in the industry, has a patented paddle packer that continuously sweeps the hopper, eliminating the need to stop

and pack the load. Please see Appendix – Liberty for more information regarding this product. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/automated-side-loaders/liberty

DURAPACK® PYTHON® AUTOMATED SIDE LOAD GARBAGE TRUCKS. The patented Heil® Python® Side Load Automated Arm has a 9-foot reach, an 8-second cycle time and can lift up to 800 lbs, making it a strong and fast performer on any residential refuse route. And the DuraPack® Sideload body is the industry standard when it comes to dependability and toughness. Please see Appendix – Python for more information regarding this product. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/automated-side-loaders/durapack-python

RAPID RAIL® AUTOMATED SIDE LOAD GARBAGE TRUCKS. The Rapid Rail® Automated Side Loader garbage truck body has a 1,600 pound lift capacity, and allows for residential, commercial and multi-family refuse collection. It can handle 30-400 gallon refuse containers all day long with ease. The powerful arm has virtually zero kick out allowing operation in the tightest of alleys, and an 8-second cycle time means industry-leading productivity, all in combination with the lightest weight side loader in the industry. Please see Appendix – Rapid Rail for more information regarding this product. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/automated-side-loaders/rapid-rail

DURAPACK® RAPID RAIL® SIDELOAD GARBAGE TRUCKS. The DuraPack® Rapid Rail® Autom
DuraPack® high- compaction sideload body makes for a reliable, tough RCV. Please see Appe
https://www.heil.com/products/automated-side-loaders/durapack-rapid-rail

MULTIPACK® AUTOMATED SIDE LOAD GARBAGE TRUCKS. Heil® MultiPack® Sideload Garbage Truck Bodies combine the durable Heil® DuraPack®, the superior Python® automated arm and the proven DuraPack® 5000 refuse tailgate. It's the only trash truck in the industry that can handle rear loader, side loader, and even commercial waste routes single-handedly. *
Please see Appendix – Multipack for more information regarding this product. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/automated-side-loaders/multipack

d) Multi-Compartment Vehicles

DURAPACK® 4060 SPLIT BODY REAR LOAD GARBAGE TRUCKS. The Heil® DuraPack® 4060 Split Body Rear Load Garbage Trucks are a win-win, allowing collection of multiple residential trash streams or recyclables. With the DuraPack® 4060 split body rear loader, one truck can do the work of two. And the reduced weight body means enhanced fuel economy and larger payloads on the route. Please see Appendix – 4060 for more information regarding this product. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/rear-loaders/durapack-4060

e) CNG Capabilities

CNrG™ TAILGATE.The Heil® innovative, fully integrated CNrG™ tailgate fuel delivery system will revolutionize the way you use CNG garbage trucks. Please see Appendix – CNrG for more information. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/cng-capabilities/cnrg-tailgate CNG OPTIONS FOR GARBAGE TRUCKS. Heil® makes it easier than ever to realize the savings from CNG garbage trucks with our factory-direct CNG program. Please see Appendix – Heil CNG for more information. Also, please click the link below to view examples of this offering:
https://www.heil.com/products/cng-capabilities/cng-options f)

Organics

ORGANIC WASTE COLLECTION TRUCKS AND EQUIPMENT. When it comes to waste stream diversion, one of the first targets is removing organic waste from the landfill. That's where Heil comes in, with our Organics Waste Collection trucks and equipment. Whether your route is equipped with the PT-1000 or the iconic Heil® Rapid Rail®, we have organics processing options that allow you to meet your organics diversion targets. Please click the link below to view examples of this offering:
https://www.heil.com/organics

g) Parts Central

Heil® Certified OEM Parts are the most reliable replacement parts for Heil® refuse trucks.

These parts are made following the exact specifications and production processes on the same assembly lines as the parts originally installed on the vehicles. This means they fit perfectly every time. Heil® uses only the highest-quality materials for parts that last.

Parts Central also offers the most requested aftermarket parts for Heil and other makes of garbage truck bodies. Our aftermarket parts are designed and manufactured to strict standards and are backed by more than 100 years of industry experience.

High-volume parts that are frequently requested are available for immediate, same-day delivery through your local Authorized Heil® Dealer. Orders for in-stock parts placed with Parts Central before 5 p.m. ET will be shipped overnight. Please click below to view examples of this offering:

https://www.heil.com/products/parts-central h) Bayne

Thinline Premium Lift Systems

Mobile Refuse Products. Bayne's diverse line lifters for mobile refuse truck lifters is second to none. Our lifters are the most reliable solution to your waste handling needs, and we offer complete solutions for almost any application or budget. Please see Appendix – Bayne for more information regarding this product. Also, please click below to view examples of this offering:

https://www.baynethinline.com/products/mobile_refuse_products

i) Third Eye

Refuse Fleet Solutions. Refuse collection can be tricky business. Knowing that you've serviced a home or business is important. So is doing it productively and safely every time. 3rd Eye on- board camera systems constantly monitor your driver as well as their environment to ensure the safe operation of their vehicle. It also allows fleet owners immediate verification of service and video validation of overfilled containers – which can lead to more revenue / increased service frequency. 3rd Eye is the most technologically advanced refuse fleet management solution for the waste industry, trusted by companies all over the United States, just like yours. From Enhance Vehicle Behavioral Analytics™, 3rd Eye Digital, 3rd Eye Mobile, Collision Avoidance Radar and more, 3rd Eye has the most comprehensive refuse fleet management solutions on the market. Please see Appendix – 3rd Eye for more information regarding this product. Also, please click the link below to view examples of this offering:

https://www.3rdeyecam.com/refuse-fleet-management-systems/

The attached Proposal is tendered in compliance with and conforms to the bid specification requirements of Sourcewell as set forth in solicitation #091219 identified with an initial submittal date of September 11, 2019. However, for complete clarity and transparency, the pricing and performance commitments contained herein are tendered to Sourcewell predicated on a mutual understanding and agreement on the following points of clarification:

1. Warranty issues related to the body and Heil factory-installed components shall be administered and resolved by The Heil Co. Warranty for 3rd party manufacturers such as the chassis, chassis options, or subsequently installed components shall be administered and addressed by the respective product manufacturer.

2. Product returns shall only be available in the event Heil is notified of a body problem in writing and has not resolved the issue within thirty (30) days after receipt of said Notice.

3. Consistent with section 10B of this Agreement, any supplemental terms or conditions on Member-supplied transactional paperwork (such as a Purchase Order) shall be null and void unless an Amendment to this Agreement is executed between Supplier and Member.

4. In the event a Member requires a Performance Bond from Supplier, the cost of the bond premium shall be added to the cost of the Product.

5. In relation to section 12. Audits, audits are restricted to pricing and invoicing to verify our compliance with the contract.

6. In order to avoid any confusion concerning the point that the Agreement governs the sale in section 6F, and any Purchase Order terms do not apply per section 10B, we would like to clarify that all actions at law would take place in Todd County or Fergus Falls, MN.

7. Regarding section 20 A.5, our products and services do not fall within this category.

8. Regarding section 20 B, we do not provide copies of our insurance policies, but do provide the required Certificate of Insurance to demonstrate our proof of insurance.

9	What are your company's expectations in the event of an award?	As a company, we strive to live out the values we espouse of respecting people, maintaining th our product offerings and processes to provide the most extensive and complete portfolio of fir
10	Demonstrate your financial strength and stability with meaningful data. This could include such items as financial statements, SEC filings, credit and bond ratings, letters of credit, and detailed reference letters. Upload supporting documents (as applicable) in the document upload section of your response.	Please see Appendix B of this Proposal for a complete 2018 Dover Annual Report. Heil is an operating company within the Dover Company structure. https://investors.dovercorporation.com/annual-reports
11	What is your US market share for the solutions that you are proposing?	Although Heil is the leader in the US, we do not publish market share numbers.
12	What is your Canadian market share, if any?	Heil does not publish market shares.
13	Has your business ever petitioned for bankruptcy protection? If so, explain in detail.	No. We've never been subject of a bankruptcy action.
14	How is your organization best described: is it a ma your written authorization to act as a distributor/dea with your sales and service force and with your dea	a. Heil is a manufacturer and our dealer network is independently owned. b. Heil offers a case by case system of sales and marketing in the global market. In general, we employee our Dealer Network to cover cities and counties within all 50 states in the US and 7 Canadian provinces. Secondly, we employ Key Account Representatives where the volume of business warrants. Thirdly, we employ Regional Sales Managers to manage and coordinate the activities. All these individuals are employed by Heil, as follows: 1) Dealer Sales Representatives – Employed by Heil Dealers and they represent Heil from a Contract standpoint when quoting or selling Heil equipment to Sourcewell members. 2) Key Account Representatives – Employed by Heil 3) Regional Sales Managers – Employed by Heil
15	If applicable, provide a detailed explanation outlining the licenses and certifications that are both required to be held, and actually held, by your organization (including third parties and subcontractors that you use) in pursuit of the business contemplated by this RFP.	State of Tennessee - Motor Vehicle Manufacturer/Distributor License ID Number 00005771 Hamilton County, Tennessee - Business License License Number 052431 City of Chattanooga, Tennessee - Business Tax License State Tax Account # 501133955 Local Business Tax Account # 30101 The Heil Co. is an ISO-certified manufacturer.
16	Provide all "Suspension or Disbarment" information that has applied to your organization during the past ten years.	None

17	Within this RFP category there may be subcategories of solutions. List subcategory titles that best describe your products and services.	Our product line consists of a series of commercial and residential equipment. They are divided into 9 sub categories: Front Loaders Rear Loaders Side Loaders Multi-Compartment Vehicles CNG Capabilities Organics Parts Central Bayne Thinline Premium Lift Systems Third Eye	*

Industry Recognition & Marketplace Success

Line Item	Question	Response *	
18	Describe any relevant industry awards or recognition that your company has received in the past five years	Heil holds more than 200 industry patents for solid waste and recycling innovations. We are al organizations: a. of Scrap Recycling Industries (ISRI) c. National Association for Information Destruction (NAID (WASTEC) In addition to these industry awards, we have the following recognitions: NWRA – 2014 Hall of fame induction – John Curotto, President, Curotto-Can, (subsidiary) NWRA – 2014 Hall of Fame induction – Bill Wilkerson, VP Sales and Marketing, Marathon (sister company) NJPA Pioneer Award - 2017 – Larry Angel – General Manager Ready Trucks Pat Carroll, Heil President, is a member of the: a. Board of Governors of WASTEC b. Board of Directors of Environmental Research and Educational Foundation (EREF)	*
19	What percentage of your sales are to the governmental sector in the past three years	22%	*
20	What percentage of your sales are to the education sector in the past three years	Less than 1% as they generally do not pick up their own garbage.	*
21	List any state or cooperative purchasing contracts that you hold. What is the annual sales volume for each of these contracts over the past three years?	While Heil does not hold any other cooperative purchasing contracts, we do sell refuse trucks to our Dealer Network who utilize other procurement contracts including HGAC, Florida Sheriff's Association, and the Texas Buy Board.	*
22	List any GSA contracts that you hold. What is the annual sales volume for each of these contracts over the past three years?	We do not have a GSA contract	*

References/Testimonials

Line Item 23.

Entity Name *	Contact Name *	Phone Number *	
City of Portsmouth	Kenny Strickland stricklandk@portsmouthva.gov	757-393-8629	*
City of Franklin VA	Russell Pace rpace@franklinva.com	757-562-8562	*
Dare County	Shanna Fullmer shanna@darenc.com	252-423-0136	*
City of Norfolk	Rob Arnold robert.arnold@norfolk.gov	757-441-5813	
University of Maryland	Bill Guididas wguidida@umd.edu	301-405-3293	

Top Five Government or Education Customers

Line Item 24. Provide a list of your top five government, education, or non-profit customers (entity name is optional), including entity type, the state or province the entity is located in, scope of the project(s), size of transaction(s), and dollar volumes from the past three years.

Entity Name	Entity Type *	State / Province *	Scope of Work *	Size of Transactions *	Dollar Volume Past Three Years *	
City of New York City	Government	New York - NY	724 Refuse Trucks	724	$68 million	*
City of El Paso, TX	Government	Texas - TX	50 Refuse Trucks	50	$5 million	*
City of Austin, TX	Government	Texas - TX	49 Refuse Trucks	49	$5.7 million	*
City of Columbus, GA	Government	Georgia - GA	40 Refuse Trucks	40	$2.7 million	*
Metro Nashville, TN	Government	Tennessee - TN	38 Refuse Trucks	38	$2.5 million	*

Ability to Sell and Deliver Service Nationwide

Describe your company's capability to meet the needs of Sourcewell Members across the US, and Canada if applicable.Your response should address in detail at least the following areas: locations of your network of sales and service providers, the number of workers (full-time equivalents) involved in each sector, whether these workers are your direct employees (or employees of a third party), and any overlap between the sales and service functions.

Line Item	Question	Response *	
25	Sales force.	Heil's dealer network consists of 34 dealers located within North America. All dealer locations that support the Heil brand can provide customers with road service, if needed, and all dealers offer onsite service at customer locations. In addition, we have 8 Regional Managers that support the Heil Dealers in their respective territories to help expedite and facilitate solutions to meet the member's needs. Please see Appendix C for a map of our dealer locations and service locations. Heil Region Name Regional Manager NameLocation % Focus on Heil Sales & Services Northeast Jim Blanchard Boston, MA 100% North Atlantic Dennis Fallon Pittsburg, PA 100% Southeast Randy Wells Fort Payne, AL 100% Central Joe Howard Houston, TX 100% Midwest Bob McHugh Chattanooga, TN 100% West Bill Engstrom Hurricane, UT 100% Northwest Mike Tucker Denver, CO 100% Canada Craig Thomas St. Louis, MO 100%	*

26	Dealer network or other distribution methods.	Heil Dealer List: Heil Dealer Name City State Heil Region Heil of Texas - Irving, TX Irving TX Central Heil of Texas - San Antonio, TX San Antonio TX Central Ingram Equipment Company, LLC - Pelham, AL Pelham AL Southeast Ingram Equipment Company, LLC - Theodore, AL Theodore AL Southeast International Trucks of Hawaii - Kapolei, O'ahu, HI Kapolei, O'ahu HI West Kois Brothers Equipment Company, Inc. - Commerce City, CO Commerce City CO Northwest Kois Brothers Equipment Company, Inc. - Billings, MT Billings MT Northwest Kois Brothers Equipment Company, Inc. - Great Falls, MT Great Falls MT Northwest Armor Equipment - Arnold, MO Arnold MO Midwest Balar Equipment Corporation - Phoenix, AZ Phoenix AZ West Bell Equipment Company - Lake Orion, MI Lake Orion MI North Atlantic Bell Equipment Company - Gahanna, OH Gahanna OH North Atlantic Bob's Services - Anchorage, AK Anchorage AK Northwest Bodyworks Equipment, Inc. - Monrovia, CA Monrovia CA West MacQueen Equipment, Inc. - Menomonee Falls, WI Menomonee Falls WI Midwest Carolina Environmental Systems, Inc. - Kernersville, NC Kernersville NC Southeast Carolina Environmental Systems, Inc. - Greenville, SC Greenville SC Southeast Carolina Environmental Systems, Inc. - Austell, GA Austell GA Southeast Central Indiana Truck Equipment (CITE) - Indianapolis, IN Indianapolis IN Midwest Cyncon Equipment Company - Rush, NY Rush NY Northeast Heil of Texas - Houston, TX Houston TX Central Stringfellow, Inc - Nashville, TN Nashville TN Midwest Stringfellow, Inc - Chattanooga, TN Chattanooga TN Midwest Sunbelt Hydraulics and Equipment, Inc. - Pompano Beach, FL Pompano Beach FL Southeast Tampa Crane and Body, Inc. - Tampa, FL Tampa FL Southeast MacQueen Equipment, Inc. - Ankeny, IA Ankeny IA Midwest United Engines, LLC - Oklahoma City, OK Oklahoma City OK Central Utility Truck Equipment Company (UTEC) - Lake Charles, LA Lake Charles LA Central Vasso Waste Systems, Inc. - Brooklyn, NY Brooklyn NY Northeast Fer-Marc Equipment, Ltd. - Regina, SK Regina SK Canada Ray Max Equipment Sales - Calgary, Alberta, AB Calgary, Alberta AB Canada Saniquip, Inc Riguad QC Canada Vimar Equipment, LTD Burnaby BC Canada Binzz Inc. - Campbellville, ON Brampton ON Canada Legacy Equipment Company - Salt Lake City, UT Salt Lake City UT Northwest MacQueen Equipment, Inc. - St. Paul, MN St. Paul MN Midwest Maine Equipment Company, Inc - Hermon, ME Hermon ME Northeast Mid-Atlantic Waste Systems - Easton, MD Easton MD North Atlantic Mid-Atlantic Waste Systems - Salem, VA Salem VA North Atlantic Mid-Atlantic Waste Systems - Chesapeake, VA Chesapeake VA North Atlantic Mid-Atlantic Waste Systems - New Castle, PA New Castle DE North Atlantic Mid-Atlantic Waste Systems - Clinton, MD Clinton MD North Atlantic Mid-Atlantic Waste Systems - Pittsburgh, PA Cheswick PA North Atlantic MacQueen Equipment, Inc. - Lincoln, NE Lincoln NE Midwest Northern Truck Equipment Corporation - Sioux Falls, SD Sioux Falls SD Midwest Northern Truck Equipment Corporation - Fargo, ND Fargo ND Midwest Northern Truck Equipment Corporation - Rapid City, SD Rapid City SD Midwest Preferred Truck & Equipment Repairs, Inc. - Sacramento, CA Sacramento CA West River City Hydraulics, Inc. - Sherwood, AR Sherwood AR Central River City Hydraulics, Inc. - Baton Rouge, LA Baton Rouge LA Central River City Hydraulics, Inc. - Memphis, TN Memphis TN Central Ruckstell California Sales Company, Inc - Fresno, CA Fresno CA West EJ Equipment - Addison, IL Addison IL Midwest Action Fleet Repair - North Las Vegas, NV North Las Vegas NV West Environmental Equipment Sales & Service, LLC Sutton MA Northeast Armor Equipment - Olathe, KS Olathe KS Midwest Heil of Texas - El Paso, TX El Paso TX Central EJ Equipment - Manteno, IL Manteno IL Midwest Preferred Truck & Equipment Repairs, Inc. - Livermore, CA Livermore CA West
27	Service force.	Our Heil Dealer Network comprises 60 locations to service customers. In addition to these dealer technicians, Heil also has 8 Field Service Technicians that are also available to service members if the need requires it. Support for our customers is a priority and we make it as easy as possible through our dealer locator on the Heil website, easy to access email for Heil Tech Support as well as the Heil Tech Support phone number. Please click the link below to see the ease of access: https://www.heil.com/support

28	Describe in detail the process and procedure of your customer service program, if applicable. Include your response-time capabilities and commitments, as well as any incentives that help your providers meet your stated service goals or promises.	Heil Environmental has dedicated Customer Care and Support for new refuse equipment sales on site as well as through our extensive US dealer network. Heil also offers OEM part sales and support through Heil Parts Central. For new unit sales, Heil's release management process provides firm commitment dates on standard orders within 72 hours. All Heil products are manufactured and inspected throughout the build process building quality into every Heil product from the start. Quality Control reviews every unit before shipment to ensure every product is 100% accurate to the customer's request and order submission. OEM part sales are available through Heil Parts Central's 24-hours a day e-commerce website al Representatives for these products as well. At Heil we pride ourselves on customer satisfaction	*
29	Identify any geographic areas of the United States that you will NOT be fully serving through the proposed contract.	Heil is fully prepared and uniquely capable of servicing ALL Sourcewell Member geographic areas and market segments under this contract in the United States, Canada, and internationally.	*
30	Identify any Sourcewell Member sectors (i.e., government, education, not-for-profit) that you will NOT be fully serving through the proposed contract. Explain in detail. For example, does your company have only a regional presence, or do other cooperative purchasing contracts limit your ability to promote another contract?	There will be no exclusions of Sourcewell Members from our contract related to this RFP. Heil is fully prepared and uniquely capable of servicing ALL Sourcewell Member segments.	*
31	Define any specific contract requirements or restrictions that would apply to our Members in Hawaii and Alaska and in US Territories.	The requirements for shipping a piece of equipment via an ocean-going vessel will vary depending on the port of departure and the port of delivery. In some cases, full or partial payment of equipment may be required prior to loading onto the shipping vessel or exiting port after loaded.	*

Marketing Plan

Line Item	Question	Response *	
32	Describe your marketing strategy for promoting this contract opportunity. Upload representative samples of your marketing materials (if applicable) in the document upload section of your response.	Heil is very aggressive in our marketing of the opportunities provided us by our association with Sourcewell. We have one of the nation's largest dealer networks – and work with them, provide training and guidance regarding how to best take advantage of our Sourcewell contract. In addition, we use our in-house video production team to further enhance both the brand – and the strength of partnering with Sourcewell through both our Sourcewell video testimonial – and through our popular ReadyTruck video series – which plugs Sourcewell during every episode. Both of these channels are popular and viewed by our following. These can also be found on our website – which garners more traffic than any of our competitors [based on Moz and Google Analytics reporting]. In addition, we display our Sourcewell contract proudly on our website, as well as on all of our eBrochures.	*
33	Describe your use of technology and digital data (e.g., social media, metadata usage) to enhance marketing effectiveness.	Effective SEO is a key component of all of ESG's web properties and Heil, Marathon, and 3rd Eye all have robust social media strategies that highlight wins, customers, and information pertinent to the waste industry. We are leading all of our competitors in our SEO search metrics as can be seen in the attached charts. We have always looked at our SEO strategy as a "discipline" vs. a process – and we feel that our dominance in this area is a testament to that. Combined with this strategy are tools that monitor our website traffic and provide very granular metrics regarding who is on our site, what they are looking for – and how often they visit. This information is then automatically delivered to our sales teams to ensure they track the lead through revenue generation.	*
34	In your view, what is Sourcewell's role in pr Sourcewell- awarded contract into your sale	Sourcewell is seen has a valuable partner in the implementation and success of this contract. As such, we believe that Sourcewell's role as a joint partner in all marketing collaterals is essential. As part of our partnership, Heil will be responsible for increasing Sourcewell awareness and the inherent benefits of the contract through our various dealer sales meetings, national Heil sales meetings and any trade shows in which we participate. In exchange, we would expect that Sourcewell will promote Heil on the Sourcewell website, in the quarterly Newsletter, in all Sourcewell literature, and at all applicable marketing resources and publications.	*
35	Are your products or services available throu e- procurement system and how governmen	No. Due to the many options that are offered on both body and chassis and the electronic interactions that have to occur between the two units, we feel it prudent to involve our Dealer Representatives that are trained to know what will work together and what will not. It is too complicated to just select options and hope it will work, and this will help protect the member's procurement teams who may not be as knowledgeable regarding product options and applications by utilizing the trained staff at our dealer locations.	*

Value-Added Attributes

Line Item	Question	Response *	

36	Describe any product, equipment, maintenance, or operator training programs that you offer to Sourcewell Members. Include details, such as whether training is standard or optional, who provides training, and any costs that apply.	Heil offers a wide array of custom training programs that keeps our sales management and Dealer sales force up to speed on our products. From selling techniques, technical product and operator trainings, to product maintenance schools, every aspect of selling and promoting our vehicles is covered. We have been extremely successful with these programs and will be offering them again to our Sourcewell members to further their education on mobile refuse collection vehicles. They consist of: • In-person training sessions. They are performed in our Fort Payne, Alabama and Vernon, Alabama production facilities. The proximity of the factory makes it easier for the Sourcewell Members to fully comprehend what separates our mobile refuse vehicles from our competitors. • Mobile training trailers that travel throughout the United States. These two unique and first in the industry mobile classrooms bring education directly to our customers. As a customer-oriented company, we believe this type of training eliminates travel time, job downtime, and related costs for course attendees. In fact, they can be set up onsite at a customer or Dealer location and are equipped with the latest technology to deliver customer-specific content in air-conditioned comfort. • Heil Service Shack video trainings available to our Sourcewell members in the form videos posted on our various social media sites. These are available in English, Spanish and French Canadian. Follow the links below for examples: English https://vimeo.com/281281938/636d4ccd22 French Canadian https://vimeo.com/281969922 Spanish https://vimeo.com/274579697	*
37	Describe any technological advances that your proposed products or services offer.	• Safety via cameras and radar with the ability to record all cameras on the truck (when installed with 3rd Eye's Hurricane Gateway) • Asset utilization: be able to record and track the hours and location of your assets • Equipment behavior: know that status of your garbage truck's hopper, compactor and ancillary equipment in real time • On Road / Off Road: know when your assets are on highway and when they are not • Integrating lightweight composites into non-critical areas of our refuse collection bodies to produce the lightest weight refuse collection vehicle on the market today with the largest legal payload – 11+ tons. • Adding the Heil Overweight Prevention System™ (HOPS™) to our refuse collection vehicles to monitor vehicle weight while on route. HOPS uses axle transducer scales, accurate to within 2%, to determine the vehicle's gross weight. When the unit approaches its maximum allowable weight, the driver receives audible and visual signals inside the cab. When the unit reaches its maximum allowable weight, the system prevents the operator from collecting any more cans. This helps ensure full loads, minimizes exposure to overweight fines, and extends the life of the vehicle. • Heil's Automated Front Loader with Odyssey controls and hydraulics launched in mid-2013 redefining automated and bulk refuse collection levels. Pressure compensated piston pump, positions sensing cylinders and control logic drove weight out of the product while significantly reducing complexity, increasing reliability resulting in industry leading uptime and lowest Total Cost of Ownership. • No other residential front loader garbage truck features the Half/Pack® smart design, with all of its systems working together to reduce the total cost of operation. It's more efficient, easier to operate, easier to service, and less likely to need service in the first place. • The Half/Pack® Freedom™ frontload trash truck weighs only 15,700 pounds, which is 19% lighter than a standard Half/Pack® and 1,350 pounds lighter than the lightweight Half/Pack® Sierra™. The Freedom™ can carry up to 11 tons of legal payload in its 28 cubic yard front load body – the largest legal payload – and features a 12 cubic yard hopper and a frontload arm lifting capacity of 8,000 pounds. To ensure the Half/Pack® Freedom™ front loader maintains its long-term durability, we have added an innovative load-control system to the unit called the Heil® Optimal Payload System™ or HOPS™. • The Heil® Half/Pack® front-load garbage truck with Odyssey™ hydraulic controls has a single, easy-to-use joystick that maximizes ergonomics by requiring minimal effort to operate and increases productivity. It is also equipped with an Insight Display, an in-cab display that provides real-time feedback, as well as optimal operator control.	*

38	Describe any “green” initiatives that relate to your company or to your products or services, and include a list of the certifying agency for each.	As a leader in the solid waste and recycling industry, Heil maintains a corporate mission to provide customers with innovative solutions for processing, transporting, and transforming the solid waste stream into sustainable resources that benefit both our customers and our communities. To that end, we strive to incorporate —green practices into our company processes as well as into our products. Here are some examples: • We have installed a CNG fueling station at our Fort Payne, Alabama production facility to meet the fueling needs of refuse collection units leaving the plant as well as to support the fueling of privately owned CNG-powered vehicles in the local community. • As part of our manufacturing process we install CNG fuel systems on many new customer trucks while meeting the growing demand for gas fueling applications. In Heil production facilities, we: • Recycle 100% of the scrap steel used to make our products • Use a low VOC electrostatic paint process to paint our lifters, refuse collection bodies, compactors, and balers • Actively recycle cardboard, aluminum, plastic, office paper, and wooden pallets • Our green products include: • Use of hybrid and CNG-fueling systems on our Heil refuse collection bodies • Building innovative, lightweight Heil refuse collection units that reduce costs associated with fuel, tires, and brakes • Our patented Odyssey™ hydraulic control technology delivers waste industry-leading productivity with the lowest total cost of ownership, helping refuse haulers make more money on the route. This system is designed to help operators finish routes up to 20% faster, deliver measurable fuel savings while reducing wear on the lift assembly, chassis, engine, and transmission. Plus, it greatly reduces noise pollution. • As a Dover company, Heil supports Dover Corporation’s —Sustainability Policy, a long-term commitment to operational excellence that will reduce greenhouse gas emissions, the use of volatile organic compounds (VOC), metal and cardboard consumption, and landfill utilization across the enterprise. • Specifically, Dover has committed to reduce greenhouse gas emissions and energy consumption by 20% each by the year 2020. Many Dover operating companies have already achieved significant energy and energy cost reductions in their operations. Launched in 2012, Dover's Energy Efficiency Captain Program has created a knowledge sharing community of operating company professionals to discuss energy efficiency and sustainability initiatives at their facilities. Initial findings from 2012 data indicate that 39 energy efficiency projects were implemented, with over 8,000 MWh in savings. To learn more, please click the following link: https://www.dovercorporation.com/about-us/sustainability/intensity-goals	*
39	Identify any third-party issued eco-labels, ratings or certifications that your company has received for the equipment or products included in your Proposal related to energy efficiency or conservation, life-cycle design (cradle-to-cradle), or other green/sustainability factors.	Heil is continually innovating toward solving all sorts of hard problems that enable our customers to be more safe and efficient. One example of this is the way Odyssey controls help to conserve energy through smart hydraulic power management. By providing the right amount of power only when it is needed, energy is conserved. Specifically, utilizing a variable displacement pump combined with a load sensing hydraulic valve and proportional control system, operators get the finesse and power they need while fuel economy improves. Moreover, in our more conventional designs, complete disengagement of the hydraulic pump, via a hot shift pto, eliminates parasitic loss which also improves fuel efficiency. One of the more substantial efficiency improvements with the Odyssey comes from system productivity. The entire system efficiency plays a major role in fuel usage when viewed from the perspective of ‘cans-per-gallon’. The Odyssey design takes seconds off of packer and auto-lift cycles. Combine this with the inherent ergonomics and maneuverability of the Curotto Can and the unit finishes the route substantially faster than conventional RCVs. Of vital importance is the fact that when the key switch is off, there is 100% fuel savings. The culmination of these highly engineered features results in a product that has the potential to save hours a week in operational costs. All things being equal, if a route is completed in 9 hours verses 10; there is a 10% fuel savings. Energy conservation is of critical importance to all stakeholders in the RCV industry. Heil recognizes this and has responded with a highly engineered product that lives up to the Heil legacy. This has been accomplished through the designs, measurements and analysis reflected here, and is meant to help end users succeed in their social, financial and environmental goals.	*
40	Describe any Women or Minority Business Entity (WMBE), Small Business Entity (SBE), or veteran owned business certifications that your company or hub partners have obtained. Upload documentation of certification (as applicable) in the document upload section of your response.	As an operating entity of a public company, Heil is not certified as a WMBE or SBE business entity. However, five of our dealers are certified as WMBE business entities: Heil of Texas, River City Hydraulics, Ingram Equipment, UTEC, and Fer-Marc Equipment.	*

41	What unique attributes does your company, your products, or your services offer to Sourcewell Members? What makes your proposed solutions unique in your industry as it applies to Sourcewell members?	• The ability to be a single source provider for equipment, parts and service under this contract • Offer a full range of RCV products - Front Loader, Automated Front Loader, Side Loader and Rear Loader. • Localized parts inventories at your Dealer Locations for all models • All RCV's offered are manufactured in the US and comply with current ANSI and FMVSS requirements • 60 authorized US and Canada Dealer locations capable of providing complete Sales, Parts & Service • All Dealers routinely evaluated to ensure they are providing superior quality and service • Directly employ 8 technicians who provide factory and field support for all products offered, with access to over 650 engineering and manufacturing personnel • Own well over 200 patents • All warranty handled direct without pass through to an outside supplier or manufacturer • Preventative maintenance programs available • Complete service, operator, factory and field training available for authorized Dealers and customers across all product lines • Offer on-site alternative fuel system installation • On-site alternative fuel filling station • On the ground, completed and ready to go factory RCV inventory program with equipment available for immediate delivery • Rental program to fulfill equipment needs prior to completing a Sourcewell transaction • Factory and Dealer demos available for on route demonstrations • Utilize multiple software tools to collect data and analyze route information to offer best-product solutions and optimize Total Cost of Ownership for varying user conditions • Sales, parts and service marketing programs available to Dealers for all products	*
42	Identify your ability and willingness to provide your products and services to Sourcewell member agencies in Canada.	Heil is uniquely capable and fully prepared to service Sourcewell Members in Canada and around the globe. We have 5 dealers in the Canadian Provinces with many representatives who are bilingual where applicable, as well as a widespread network of representation around the world in various countries, all of whom are managed by Heil Export Sales Team. Heil is also the preferred supplier of refuse collection bodies to many the largest waste management companies that currently serve the Canadian market as well as Canada's largest rental fleet.	*

Warranty

Describe in detail your manufacturer warranty program, including conditions and requirements to qualify, claims procedure, and overall structure. You may upload representative samples of your warranty materials (if applicable) in the document upload section of your response in addition to responding to the questions below.

Line Item	Question	Response *	
43	Do your warranties cover all products, parts, and labor?	The initial 1-year standard warranty coverage includes parts and labor for 12 months or 2000 hours. In addition to the 1-year standard warranty, there are also various extended warranty packages that may be purchased depending on the needs of the individual member.	*
44	Do your warranties impose usage restrictions or other limitations that adversely affect coverage?	Heil® Certified OEM Parts are the most reliable replacement parts for Heil® refuse trucks. These parts are made following the exact specifications and production processes on the same assembly lines as the parts originally installed on the vehicles. This means they fit perfectly every time. Heil® uses only the highest-quality materials for parts that last, therefore, OEM parts must be used to continue warranty coverage. Heil does not assume any liability for warranty considerations due to any improper use, operation beyond rated equipment/component capacity, substitution of parts that are not Heil-approved, or any alteration or repair by others in such a manner that affects the product operation or integrity.	*
45	Do your warranties cover the expense of technicians' travel time and mileage to perform warranty repairs?	Although we do not cover the expense of travel time and mileage for warranty repairs, the Heil Warranty Request Order Form (referred to as the WRO Form) is used to request approval for policy adjustment of warranty coverage requesting unusual or non-standard repair(s) and exceptions such as these may be considered.	*
46	Are there any geographic regions of the United States (and Canada, if applicable) for which you cannot provide a certified technician to perform warranty repairs? How will Sourcewell Members in these regions be provided service for warranty repair?	Heil is fully prepared and uniquely capable of servicing ALL Sourcewell member geographic areas and market segments under this contract in the United States and Canada. The first level of service would be through the Authorized Heil Dealer network, and if required, the Field Service team within our Heil Technical Support Group.	*
47	Will you cover warranty service for items made by other manufacturers that are part of your proposal, or are these warranties issues typically passed on to the original equipment manufacturer?	Yes. Heil pays warrantable claims and then we work internally with our suppliers toward recovery where applicable.	*
48	What are your proposed exchange and return programs and policies?	OEM parts purchased from the Heil Dealer through Parts Central can sometimes be considered for return or exchange depending on certain criteria, such as being a current production part, and are evaluated on a case by case basis. Cylinders, when applicable, ship back to cylinder OEM for evaluation. Non-cylinder claims may require return to Heil and is determined through the warranty and repair process.	*
49	Describe any service contract options for the items included in your proposal.	Each dealer in our extensive network establishes the pricing for and manages service contracts on a localized basis for our customers based on their individual needs.	*

Payment Terms and Financing Options

Line Item	Question	Response *	
50	What are your payment terms (e.g., net 10, net 30)?	Heil's payment terms are Net 30.	*
51	Do you provide leasing or financing options, especially those options that schools and governmental entities may need to use in order to make certain acquisitions?	Yes. Since March of 2017, Heil has been partnered with DLL Financial Solutions to offer value-added retail financing and leasing programs. With over 35 years of proven vendor finance experience, DLL provides flexible finance solutions to customers around the globe. They are a reliable name and fully support all Heil US and Canadian dealers. DLL does offer flexible tax-exempt equipment financing solutions as well as Tax-exempt Municipal Lease Purchase options for State and local governments, public school districts and public colleges and universities. In addition to this, Heil has a good working relationship with the team at National Cooperative Leasing and are very willing to work with them also.	*
52	Briefly describe your proposed order process. Include enough detail to support your ability to report quarterly sales to Sourcewell as described in the Contract template. For example, indicate whether your dealer network is included in your response and whether each dealer (or some other entity) will process the Sourcewell Members' purchase orders.	All orders for Heil products will be handled by each Member's local Heil Dealer, except for those sales territories where products are sold direct via our internal sales team. For those orders, the Member will work directly with the Heil Regional Manager for the territory who will handle the entire order process. From time to time the situation may arise where we can authorize another entity working in conjunction with our Heil dealer to offer the member a proposal using our contract. An example of this might be where a license is needed to sell a chassis in a certain location, but our Heil dealer is selling a turn key solution to the Sourcewell member. In this example, the purchase order might be issued to an entity not listed as a Heil dealer, but the Heil dealer is initiating the proposal to the Sourcewell member and providing the member with a simple, single purchase order solution. The Heil website (www.heil.com) can be accessed 24 hours per day, seven days per week. The site offers an interactive listing of authorized Heil dealers Members can use to find their local Sourcewell dealer/representative, who they will call directly to answer questions or to place an order. The Heil representative responsible for the territory of a Sourcewell member will work directly with them to identify the member's equipment needs. Once all equipment requirements have been determined, the representative will accept a PO directly from the Sourcewell member, complete all necessary paperwork, and place the member's order with Heil.	*
53	Do you accept the P-card procurement and payment process? If so, is there any additional cost to Sourcewell Members for using this process?	With all orders for Heil products being handled by the local Heil Dealer, payments are made directly to the respective dealer. Due to expense associated with fees related to a capital expense of this size, P-Card payments are not feasible. We believe this better serves the Sourcewell members in keeping costs lower.	*

Pricing and Delivery

Provide detailed pricing information in the questions that follow below. Keep in mind that reasonable price and product adjustments can be made during the term of an awarded Contract as desribed in the RFP, the template Contract, and the Sourcewell Price and Product Change Request Form.

Line Item	Question	Response *	
54	Describe your pricing model (e.g., line-item discounts or product- cat materials (if applicable) in the document upload section of your resp	Heil maintains individual MSRP Price Lists for each of our equipment product offerings and would use a "Percentage Discount from Catalog" model for pricing our products under this contract. For the 12,000 plus available parts offered, the pricing is also a "Percentage Discount" model. We have included copies of our MSRP equipment (See Appendix D) and parts pricing (See Appendix E for Heil Parts Pricing, Appendix F for Bayne Parts Pricing and Appendix G for Curotto Can Parts Pricing). Within the MSRP Price Guide, the Sourcewell member will find each product offered at various body sizes along with multiple options available to the member to meet their specific requirement. Due to the many options that are offered on both body and chassis and the electronic interactions that occur between the two units, we feel it prudent to involve our Dealer Representatives that are trained to know what will work together and what will not. Once the member has met with and defined a body and chassis specification that they desire, the Heil Dealer will provide them a quote that would contain the itemized list of the body with options and a total price. If the member wanted to verify that the quote was compliant to the contract, they would be able to compare the two documents to ensure they are not paying more than the 4% off MSRP.	*

55	Quantify the pricing discount represented by the pricing proposal in this response. For example, if the pricing in your response represents a percentage discount from MSRP or list, state the percentage or percentage range.	If awarded a contract, we would offer Sourcewell Members a discount of 4% off MSRP for all products and services which would represent the ceiling price a member would pay to a Heil Dealer although the exception to this would be the chassis. See Appendix A for Chassis Specs and Pricing. Note, this discount does not apply to equipment rentals through those various entities. The rental pricing submitted has already taken this discount.	*
56	Describe any quantity or volume discounts or rebate programs that you offer.	Although Heil does not offer volume rebate programs, since our pricing is a ceiling-based approach for the Sourcewell member, a specific opportunity consisting of a high volume of units would certainly be reviewed.	*
57	Propose a method of facilitating “sourced” products or related services, which may be referred to as “open market” items or “nonstandard options”. For example, you may supply such items “at cost” or “at cost plus a percentage,” or you may supply a quote for each such request.	In general, we do not source goods outside of our published price guides, so we are able to use the benefit of the Heil Dealer network to handle these nonstandard options that are requested by the members. The Sourcewell member will specify what product or service that is not included in our published price guides and we then review those items to ensure they have provided a line item quote to the member for each request. Similarly, the situation may arise where the member has a chassis specification that our turnkey solutions do not completely satisfy. In these situations, we will request a copy of the chassis specification desired and compare it to our standard specifications. We would consider these differences to be nonstandard options and would make sure that the difference in price would not exceed 10% of the total value of a turnkey package solution. Also, these non-standard options could include fuel delivery systems. For example, the installation of a LNG (Liquid Natural Gas) engine could be quoted by the Heil dealer, and as a non-standard option, the pricing should not exceed the 10% of the turnkey package threshold per option. It is feasible that a combination of expensive options such as a LNG fuel system and body scales could exceed the 10% sourced good threshold combined, but not individually.	*
58	Identify any element of the total cost of acquisition that is NOT included in the pricing submitted with your response. This includes all additional charges associated with a purchase that are not directly identified as freight or shipping charges. For example, list costs for items like pre-delivery inspection, installation, set up, mandatory training, or initial inspection. Identify any parties that impose such costs and their relationship to the Proposer.	Total Cost of Acquisition costs are included in the pricing we have submitted with this Proposal. Freight or shipping charges would be identified by line item as such on the quotation to the member from the associated Heil dealer as well as any member requested additions.	*
59	If freight, delivery, or shipping is an additional cost to the Sourcewell Member, describe in detail the complete freight, shipping, and delivery program.	Due to varying customer locations and shipping preferences, freight is an additional cost not included in the price guide submitted in Appendix D. Freight/delivery is included in the final pricing for every Sourcewell order. The current cost for Heil arranged shipping to the local Heil dealer, including Canada, is detailed in the “Heil Drive Away Price List” attachment submitted in Appendix H. For destinations not falling within the continental United States, the units will be delivered to the port of exit via a Heil or customer arranged delivery service and shipped via barge or ocean-going vessel to the destination.	*
60	Specifically describe freight, shipping, and delivery terms or programs available for Alaska, Hawaii, Canada, or any offshore delivery.	Shipments to Member Agencies in Alaska and Hawaii would be handled by the local Heil Dealer who is well-versed in economically coordinating these types of shipments. Shipping requirements vary by type of product, product dimensions, and weight. For example, a refuse collection vehicle can be driven to the port of export, then shipped via container to its port of destination, and then driven to the local dealer who would perform the necessary inspections and facilitate delivery to the customer. For all product orders shipping to Alaska or Hawaii, all costs for shipping would be calculated and quoted to the customer at time of order. Shipments to our Canadian Heil Dealers are included in the Heil Drive Away Price list in Appendix H. Returns are treated the same for Hawaii and Alaska as for the other 48 states.	*
61	Describe any unique distribution and/or delivery methods or options offered in your proposal.	Heil’s Network comprising 34, well trained, entrepreneurial Dealers at 60 locations around the U.S. and Canada, set Heil apart in size, personnel, experience and customer focus. This network coupled with Heil’s product innovation pipeline and factory support makes the Heil brand, sales and customer service channels unique to the refuse collection vehicle market.	*

Pricing Offered

Line Item	The Pricing Offered in this Proposal is: *	Comments
62	c. better than the Proposer typically offers to GPOs, cooperative procurement organizations, or state purchasing departments.	Option C best describes the pricing that is offered in our proposal. Heil does not hold any other cooperative purchasing contracts, nor do we have a GSA account. Our product offerings are sold through our Heil Dealer network to the individual Sourcewell members. This proposal sets a ceiling price and therefore allows the dealer to work individually with the member to get them the best price possible.

Audit and Administrative Fee

Line Item	Question	Response *	
63	Specifically describe any self-audit process or program that you plan to employ to verify compliance with your proposed Contract with Sourcewell. This process includes ensuring that Sourcewell Members obtain the proper pricing, that the Vendor reports all sales under the Contract each quarter, and that the Vendor remits the proper administrative fee to Sourcewell.	Heil's self-audit process for all Sourcewell transactions will begin as soon as an order is submitted. Orders will be reviewed immediately by multiple departments to ensure all necessary documents are submitted, and complete. Prior to submitting quarterly fees to Sourcewell, the final invoice to each Sourcewell member will be reviewed to make certain the Sourcewell fee amount is in alignment with the final invoice to the Sourcewell member. In addition to Heil's Customer Care team retaining all documents submitted with the original order, Heil will retain a copy of the final customer invoice, other applicable documents and reports.	*
64	Identify a proposed administrative fee that you will pay to Sourcewell for facilitating, managing, and promoting the Sourcewell Contract in the event that you are awarded a Contract. This fee is typically calculated as a percentage of Vendor's sales under the Contract or as a per-unit fee; it is not a line-item addition to the Member's cost of goods. (See the RFP and template Contract for additional details.)	Heil proposes an administrative fee payable to Sourcewell of 1% of the purchase price on all products, including chassis.	*

Industry Specific Questions

Line Item	Question	Response *	
65	If you are awarded a contract, provide a few examples of internal metrics that will be tracked to measure whether you are having success with the contract.	The internal metrics that we currently utilize to measure success are related to total units sold on the contract versus a goal. We set our goal each year based on our company annual operating plan, then we measure throughout the year to be sure we are staying on target or looking for ways to address areas where we are exceeding or missing our goal. We also track the number of units sold off the contract that are turnkey solutions versus non-turnkey solutions.	*
66	If your proposal does not include the chassis as a turnkey solution, propose, in detail, the process you or your dealer will follow to assist the Sourcewell member to acquire the chassis.	Heil does offer a full turnkey solution, but as noted in Question 57 regarding "sourced" products, the situation may arise where the member has a chassis specification that our turnkey solutions do not completely satisfy. In these situations, we will request a copy of the chassis specification desired and compare it to our standard specifications. We would consider these differences to be nonstandard options and would make sure that the difference in price would not exceed 10% of the total value of a turnkey package solution. Similarly, chassis OEMs generally make model changes in the middle of the year and some customers prefer the newer models. We would follow the same process of comparing the chassis specifications for the current year model versus the newest model and ensure that the difference in price would not exceed 10% of the total value of a turnkey package solution.	*

67	Explain key designs or processes your company takes to provide and promote safe operation of your equipment.	For many years, the Heil company has been an active participant in the development and maintenance of the ANSI Z245.1 – Mobile Equipment safety standard which governs our industry. The chairman of this committee is a Heil Director of Engineering, and ESG is a voting corporate member of the main ANSI council with many representatives across multiple ANSI standard subcommittees. All Heil designs are compliant with ANSI 245.1, and each design change is evaluated against this standard by way of our disciplined and documented engineering change process. However, ANSI is not the only standard with which Heil ensures compliance. The company is diligent to comply with all relevant standards that cover our products. This includes: FMVSS, SAE, ISO, and NFPA52 just to name a few. Safety is our first priority and is daily topic in our daily work and conversations, followed by quality and on-time delivery. Heil also has a long-standing and extensive training program to help our customers and their end-user customers understand the required safety and maintenance practices. This is supported by way of factory training, on-site training, and on-line video resources. Heil adheres to a high standard of business ethics and is a socially responsible company committed to the safe design, manufacture, operation and service of its innovative products. *
68	Explain how your equipment in this category reduces down-time for the purchasing entity.	Front Loaders • Streetwise Hydraulics, the Heil® exclusive "clean front head," relocates the hydraulic body valve from the front head to under the side of the refuse body. This design reduces the influence of exhaust heat on the hydraulic components, as well as improving access to the valve bodies. This improves safety and reliability while reducing downtime. • The Cortex controller with Insight Display - the brain or our system - is a rugged mobile controller that delivers intelligence and precision. Utilizing a mobile controller and placing it in a protected location gives us the intelligence we need and the durability our customers demand. • The Heil® Half/Pack®front-load garbage truck with Odyssey™ hydraulic controls has interlocking cross-members and long-members that form a rock solid foundation for the body, delivering unmatched durability and longevity. This allows for more uptime, longer equipment life, and a higher resale value. A load-sensing piston pump controls hydraulic flow, intelligently delivering proper oil amounts as required. This increases efficiency, reduces fuel consumption, decreases hydraulic system temperatures, and contributes to low Total Cost of Ownership. • Equipped with an Insight Display, an in-cab display that provides real-time feedback, as well as optimal operator control. The operator can look to one place for all of the information needed on the body of the truck. Also, the Insight display offers maintenance personnel advanced troubleshooting features. This not only makes the operator more efficient but also reduces downtime and maintenance. • Heil® continues to set the standard for front loader refuse trucks with the evolution of innovative new features that enhance functionality. Our patented Shur-Lock™ tailgate locks, double-walled and lapped hopper sides, and an industry-leading interlaced ladder subfloor foundation mean that your Half/Pack® front loader is built for a long, reliable lifespan. • Zinc Plated tubes – The use of zinc plated tubes eliminates corrosion, therefore reducing hydraulic leaks and prevents the need to replace components over the life of the truck. This reduces maintenance and downtime costs. • Hydraulic Tube Covers – Protects the tubes and hoses on the arms from damage • Illuminated Push Button Controls – Fully sealed and potted, easy to read and understand push button controls for body and lighting functions reduce down time by increasing reliability Rear Loaders • The patented dual-track packing system is the heart of the PowerTrak® design. Other rear load garbage trucks move shoes or rollers along a single track during sweep and pack cycles. This requires the top cylinder to operate at a sharp angle of resistance, causing intense friction that robs power and speed and increases wear on shoes and tracks. The PowerTrak® Commercials' revolutionary dual-track system gives the top cylinder its own track, significantly reducing the angle of resistance. This reduces friction and increases cycle times because more pressure is exerted directly onto the load, giving you incredibly long life from the aluminum/bronze alloy slide shoes. • The DuraPack® 5000 features the Heil® DP body, the only fully welded, interlaced subframe in a refuse collection truck. With formed channels for extra strength, high tensile strength steel to maximize performance at a minimum weight, and full welding for superior resistance to corrosion and cracking, the DuraPack® 5000 is a sturdy rear loader with the stamina to absorb years of tough refuse hauling. In addition, the Cortex controllers with Insight Display – has been integrated into the electric system to reduce downtime. By utilizing this mobile controller and placing it in protected locations, the unit becomes more reliable and with more consistent interfaces with chassis electrical systems becomes easier to diagnose and keep on route. Side Loaders • The Python® side load arm features cushioned cylinders for action that's smooth, saving wear and tear on the lift arm and the chassis. • The Heil® Operate-in-Gear-at-Idle System comes standard on the DuraPack® Python®. It is designed to reduce wear on the lift assembly, chassis, engine, and transmission.

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- The DuraPack® Rapid Rail® automated sideloader also features Cortex with Insight Display. The "brain" of our system is a rugged mobile controller that provides the intelligence and precise control of our unit demands. Utilizing a mobile controller and placing it in a protected location gives us the intelligence we need and the durability our customers require. This allows for less downtime and ease of service.

- The Heil® Liberty™ Automated Sideloader integrates our time-tested Continuous Pack body with the patented technology of the Python arm. The Continuous Pack body has been a customer favorite for more than 35 years. Our patented paddle packer design continuously sweeps the hopper, so there's no need to stop and pack the load. And, because there's no packer panel to slide into the body, the need for shoes, guide tracks, guide rails, and internal body parts is eliminated *

Multi-Compartment Vehicles

- The DuraPack 4060 split-body rear loader utilizes a 40/60 two-compartment split body. Also, the DuraPack® 4060 features independent hydraulic systems enabling the pressure to be adjusted for each compartment based on the type of waste being collected

CNG Capabilities

- CNrG™ offers a lower profile, enabling CNG-equipped front load and side load garbage trucks to make height-sensitive routes previously closed to them. And its smart design makes it road-ready from day one and reduces the need for maintenance and the associated costs. The fully integrated CNrG™ lifts as a regular tailgate and simplifies maintenance and fueling infrastructure. The CNrG™ tailgate structure received rigorous stress analysis and testing, simulating 15 years of operation.

Organics

- The PT 1000® can be equipped with optional features which include: an extended hopper sill, a hopper drain with shut-off valve, extended tailgate seal, body access door seal, an extended body front head plate, and sumps. The one-piece body sidewall is easier to wash and maintain, resists rust and corrosion, and is competitively priced for adding organics collection to your fleet.

- RAPIDRAIL®. Heil is now adding an Automated Organics Collection Side Load garbage truck to our unit portfolio. Rapid Rail has been specifically designed to meet the needs of organic waste collection. The Rapid Rail is equipped to be the optimal Automated Side Loader to collect organics in both the Residential and Commercial Market. The liquid-tight tailgate seal, floor mounted sealed bearing packer design, and now with optional reduced packer sweep functionality of the packer paddle make the Rapid Rail the high lift capacity, low compaction automated solution for organics collection. Available only in a dumping model to ensure optimal payload removal of the "solid organics" with an optional 3" hopper drain valve that will allow for liquid removal at specified locations.

Parts Central

- Heil® Certified OEM Parts are the most reliable replacement parts for Heil® refuse trucks. These parts are made following the exact specifications and production processes on the same assembly lines as the parts originally installed on the vehicles. This means they fit perfectly every time. Heil® uses only the highest-quality materials for parts that last. Parts Central also offers the most requested aftermarket parts for Heil and other makes of garbage truck bodies. Our aftermarket parts are designed and manufactured to strict standards and are backed by more than 100 years of industry experience. High-volume parts that are frequently requested are available for immediate, same-day delivery through your local Authorized Heil® Dealer. Orders for in-stock parts placed with Parts Central before 5 p.m. ET will be shipped overnight.

Bayne Thinline Premium Lift Systems

- Bayne's actuated lifters for mobile refuse applications feature the patented Thinline® rack and pinion rotary actuator for superior lifting capacity and outstanding reliability. These lifters, also known as cart tippers, are specifically designed to improve the efficiency of your refuse collection operation and minimize your fleet downtime.

Third Eye

- 3rd Eye has developed the industry leading back up truck camera systems designed to withstand shock and vibrations up to 10G, repel water intrusion, salt and handle extreme temperatures.

Dealer Network Advantage

- Our Heil Dealer Network comprises 60 locations to service customers. In addition to these dealer technicians, Heil also has 8 Field Service Technicians that are also available to service members if the need requires it. Support for our customers is a priority and we make it as

		easy as possible through our dealer locator on the Heil website, easy to access email for Heil Tech Support as well as the Heil Tech Support phone number. By utilizing the local Heil dealer network, we are able to have technicians in the vicinity to the member arrive on site quicker and further reduce the downtime. In the event that the asset must be brought into the dealership, the various locations throughout the country reduce the amount of miles that are needed to be towed to an authorized Heil dealer.	
69	Describe how the equipment you propose simplifies the operation for end-users.	One example is our patented Odyssey™ hydraulic control technology delivers waste industry- lea the links below of some of our customers explaining how our products simplify their operations: Environmental: viewable at https://vimeo.com/318776652 E.L Harvey: viewable at https://vimeo.com/292412920 JJ's Waste and Recycling: viewable at https://vimeo.com/315331275 Another example is our DuraPack® Python® automated side loader. The DuraPack® Python® automated side load garbage truck combines two proven products in one high-performance package — the DuraPack® refuse body, which is famous for its toughness and productivity, and the patented Python® automated arm, which is faster, smoother, and longer lasting than any other. The DuraPack® Python® arm has an 8-second lift cycle. That can save you up to 4 seconds per stop – and up to 1 hour per day – delivering a fiscal savings of more than $15,000 per trash truck every year! You don't have to wait for the hopper to catch up with a load, either, because the Python® follower panel enables continuous dumping. Twin packing cylinders deliver outstanding payloads, so you can collect more homes with fewer trips to the disposal site. The Python® side load arm features cushioned cylinders for action that's smooth, saving wear and tear on the lift arm and the chassis. The Python® unique lift geometry also prevents spillage and enables the arm to return refuse carts with the lids closed every time. The Heil® Operate-in-Gear-at-Idle System comes standard on the DuraPack® Python®. It is designed to reduce wear on the lift assembly, chassis, engine, and transmission. Concerning our rearloading trucks, with over 20,000 built and nearly 30 years of reliability, the Heil® DuraPack® 5000 high-compaction rear load garbage truck has become the mainstay of refuse collection fleets. From small independent haulers to the world's largest municipal fleet, you simply can't find a better rear load body. Engineered to last. The DuraPack® 5000 features the Heil® DP body, the only fully welded, interlaced subframe in a refuse collection truck. With formed channels for extra strength, high tensile strength steel to maximize performance at a minimum weight, and full welding for superior resistance to corrosion and cracking, the DuraPack® 5000 is a sturdy rear loader with the stamina to absorb years of tough refuse hauling. Now with the inclusion of the cortex controllers and insight display with integrated controls, the operator has more control and information at their fingertips. Heil's new Semi-Autonomous optional control package allows for single button operation that will reduces operator inputs by 82% when dumping FEL containers. It also greatly reduces driver training time in some cases by 35% while increasing on route productivity of most drivers by up to 30%.	*
70	Provide examples from your product offering that are unique in the industry.	• The PowerTrak® Commercial PLUS high-compaction tag axle rear loader enables you to maximize productivity by carrying the largest legal refuse loads — up to 1,200 pounds per cubic yard! The Heil® patented design mounts the tag axle to the chassis frame rail, making it more structurally sound than refuse collection trucks with the tag axle integrated into the tailgate. • The MultiPack® is ideal for waste routes with "unlimited-at-the-curb" contracts. It's also the perfect unit for those ugly "surprises" that unexpectedly end up next to a customer's trash cart on collection day. Plus, while other garbage truck body manufacturers may offer multi-function trucks, only the Heil® MultiPack® is "totally functional" in both modes of operation because it can pick up a completely manual or automated route. • 3rd Eye Enhance Vehicle Behavioral Analytics (VBA™) encompasses the entire suite of camera, monitor, video, data, radar, and ELD solutions. This comprehensive package is offered ala carte to allow fleet owners to choose the systems that make sense for their current application with the built in upgrade path if and when it's needed. 3rd Eye puts fleet owners in the driver's seat with proven applications that help them to make better decisions to deliver the lowest total cost of ownership. 3rd Eye provides engineered body-system-sensor systems that provide real-time status and feedback for both chassis and body-related functions. Fleet owners know critical operational metrics, such as fuel consumption, operational temperatures and pressures – as well as when hydraulics are being utilized and the position of hydraulically operated body systems. This allows fleet owners to know when fuel is being used to move the vehicle vs. when the vehicle is using fuel to perform a body function [like compacting a load of garbage or lifting a man bucket]. Geo sensors allow fleet owners to know when assets are operating on road vs. off road. For the first time, fleet owners have the ability to request tax rebates for the Heavy Highway Use Tax, for fuel used during non-use fuel consumption. • Heil's new Semi-Autonomous optional control package allows for single button operation that will reduces operator inputs by 82% when dumping FEL containers. It also greatly reduces driver training time in some cases by 35% while increasing on route productivity of most drivers by up to 30%.	*

71	If an hybrid/electric chassis option is not a part of your product offering, provide information on when a hybrid/electric option may be part of your offering.	While Heil is not a chassis manufacturer, we have proven that we have product offerings that can be utilized on fully electric chassis. This year (2019), Mack Trucks unveiled its Mack® LR battery electric vehicle (BEV) at Waste Expo with a Heil DURAPACK® 5000 Rear Loader. Please click the link below for more information: https://www.macktrucks.com/mack-news/2019/mack-trucks-unveils-fully-electric-mack-lr--refuse-demonstration-model/	*
72	Describe any safety innovations on your equipment that are either exclusive or that you have introduced into the marketplace.	• The Heil Co. ("Heil") was founded in 1901 and has been an industry leader and design innovator for decades in the solid waste industry. Heil product designs comply with all safety standards and regulations applicable to our industry, and we actively innovated to improve the protection of our entire value chain, from suppliers to our customers, their customers, and the at-large population that is proximate to our machines every single day. Heil has the widest product line in the industry, including front loaders, side loaders, and rear loaders with a variety of sizes and configurations to match a multitude of on-the-street collection applications. As just one example, the Heil Odyssey Automated Front Loader allows operators to keep their eyes facing forward because the work is in front of them – in the same direction the truck is moving. This design includes features like smooth coordinated lift cycles, multiple patents like the gravity latch used to ensure the arm lift arm is secure during a dump cycle, and a combination of safety interlocks that prevent unsafe movement. Furthermore, Heil is leading the way into the future of automation by enhancing designs with smart sensors and features which relieve some of the in-cab motion stress that operators feel on a daily basis. It may be as simple as an ergonomic arm rest and multi-function joystick, or as complex as motion control design iterations that result in the lowest cab shake possible. Through a rigorous Voice of Customer program, Heil makes active outreach efforts to listens to its customers and innovates to continuously improve the safety and ergonomics of our equipment. • The 3rd Eye family of Integrated Collision Avoidance Radar Systems offer cutting-edge solutions to protect both your drivers, your assets, and those in close proximity to your vehicle. 3rd Eye Vehicle Radar Systems assist drivers by notifying them of other vehicles as well as obstacles they may not see. Vehicles operating 3rd Eye radar systems routinely report fewer accidents and near misses and, combined with 3rd Eye camera systems – provide an added level of safety and protection that adds peace of mind – as well as providing documentary evidence to protect companies from false claims of property damage or injury. 3rd Eye collision avoidance radar systems utilize your existing 3rd Eye Mobile camera cables for easy installation.	*

Exceptions to Terms, Conditions, or Specifications Form

Only those Proposer Exceptions to Terms, Conditions, or Specifications that have been accepted by Sourcewell have been incorporated into the contract text.

Documents

Ensure your submission document(s) conforms to the following:

1. Documents in PDF format are preferred. Documents in Word, Excel, or compatible formats may also be provided.

2. Documents should NOT have a security password, as Sourcewell may not be able to open the file. It is your sole responsibility to ensure that the uploaded document(s) are not either defective, corrupted or blank and that the documents can be opened and viewed by Sourcewell.

3. Sourcewell may reject any response where any document(s) cannot be opened and viewed by Sourcewell.

4. If you need to upload more than one (1) document for a single item, you should combine the documents into one zipped file. If the zipped file contains more than one (1) document, ensure each document is named, in relation to the submission format item responding to. For example, if responding to the Marketing Plan category save the document as "Marketing Plan."

- Financial Strength and Stability - Appendix B - 2018 Dover Annual Report.pdf - Thursday September 05, 2019 10:23:51
- Marketing Plan/Samples - Appendix - Marketing samples.zip - Friday September 06, 2019 14:21:37
- WMBE/MBE/SBE or Related Certificates (optional)
- Warranty Information (optional)
- Pricing - Appendix - Price lists.zip - Monday September 09, 2019 10:55:49
- Additional Document - Chassis Specifications.zip - Friday September 06, 2019 14:24:44

8. H.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Jenny Niemann, Climate Program Manager
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration and Approval of Grant Agreement: Grant agreement between the U.S. Department of Housing and Urban Development and the City of Flagstaff for the Flagstaff Home Energy Retrofit Program for low-income and vulnerable families.

STAFF RECOMMENDED ACTION:

Approve the U.S. Department of Housing and Urban Development grant for FY2022 Economic Development Initiative, Community Project Funding Grant (B-22-CP-AZ-0018), in the amount of $750,000 for the Flagstaff Home Energy Retrofit Program for low-income and vulnerable families.

Executive Summary:

The U.S. Department of Housing and Urban Development (HUD) has approved Community Project Funding for the FY2022 Economic Development Initiative, Community Project Funding (CPF) /congressionally directed spending grant, as funded by the Congress in the Consolidated Appropriations Act, 2022 (PL 117-103) (the Act) and as described in the Explanatory Statement accompanying the Act.

This CPF grant funding will be used to provide home energy retrofits to residents through the Flagstaff Home Energy Retrofit Program. The program aims to help low-income and vulnerable households make home investments that will save energy, lower utility bills, improve health, and reduce greenhouse gas emissions.

This program will build on a former energy retrofit program run by the City of Flagstaff from 2011 – 2014, funded partly by the Energy Efficiency Conservation Block Grant program. The City will use the framework from the past award-winning program to rapidly develop a revamped program that focuses specifically on low-income and vulnerable households and home electrification.

The program will be managed by City of Flagstaff staff in collaboration with local contractors and other regional partners. Administrative tasks include application intake, verifying requested repairs, procurement, verifying completion, contractor payment, and file documentation. The City will contract with local contractors to make the repairs. Retrofits will be subsidized at a sliding scale based on income, with subsidies covering most or all of the cost of retrofits for most families.

The program will provide up to 80 home retrofits, serving low-income and vulnerable households in Flagstaff. This program targets low-income and vulnerable households due to the persistent high energy burdens faced by these groups.

- Low-income is defined using the HUD low-income limits. They are defined as households with incomes less than 80% of the Flagstaff area median income (AMI) in the past year.

- Vulnerable families are defined as those families that face additional risk of housing insecurity and climate change. Examples include having a family member with a disability or health condition, a history of housing insecurity, or children in the household. This is a broad definition that will be refined as the program is developed.

The program will be available for both owner- and renter-occupied units and will seek to serve all housing types (single-family and multi-family housing).

Financial Impact:

Total cost to implement this program is estimated at $763,936.00.

- The City of Flagstaff will receive $750,000 in funding from the U.S. Department of Housing and Urban Development.
- The City will contribute staff time to manage the program, totaling approximately $13,936.00.

In the future, the City may wish to further supplement this program in order to reach more residents and/or accelerate the implementation of this program. Any supplemental program funding will be requested via the fiscal year budget process.

This grant is proposed to be budgeted as part of the FY2023-24 budget in account 214-12-170-6368-0-4290.

Policy Impact:

Implementation of the Flagstaff Home Retrofit Program, primarily funded through this grant, will:

- Directly support Flagstaff residents in making energy-efficient improvements to their home, resulting in improvements to comfort, healthier indoor air quality, and lower utility expenses.
- Enable low-income and vulnerable Flagstaff households to more actively participate in energy efficiency programs and better distribute the benefits of City climate action across the community.
- Reduce greenhouse gas emissions from participating homes, contributing to the City's Carbon Neutrality Goals.

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

Priority Based Budget Key Community Priorities and Objectives

- Inclusive & engaged community: Promote environmental justice and the fair distribution of environmental benefits.
- Environmental Stewardship: implement sustainable building practices, enhance waste diversion programs, alternative energy programs & multi-modal transportation options.

Carbon Neutrality Plan

- ES-3: Design targeted climate policies and programs to serve disproportionately impacted communities first.
- RS-3: Support fuel switching in existing residential and commercial buildings.
- BE-3: Reduce energy use in existing buildings.

Regional Plan

- Goal: E&C.2: Achieve carbon neutrality for the Flagstaff community by 2030.
- Policy E&C.2.1. Encourage the reduction of all energy consumption, especially fossil-fuel generated energy, in public, commercial, industrial, and residential sectors.

Has There Been Previous Council Decision on This:

There has not been a previous council decision on this specific grant. The Council adopted the Carbon Neutrality Plan in June 2021 and adopted revisions in December 2022.

Options and Alternatives:

- Approve the grant agreement to complete home energy retrofits.
- Do not approve the grant agreement and decline grant.

Attachments: Grant agreement
Award Letter

FY 2022 COMMUNITY PROJECT FUNDING
GRANT AGREEMENT NO. B-22-CP-AZ-0018

Grantee Name: City of Flagstaff
Grantee Address: 211 West Aspen Avenue Flagstaff, AZ 86001
Grantee's Unique Entity Identifier (UEI): XMMUMPKTLVQ3
Federal Award Identification Number (FAIN) B-22-CP-AZ-0018
Assistance Listing Number and Name 14.251 Economic Development Initiative, Community Project Funding, and Miscellaneous Grants
Period of Performance/Budget Period Start Date Date of grant obligation
Period of Performance/Budget Period End Date August 31, 2030

This Grant Agreement between the Department of Housing and Urban Development (HUD) and City of Flagstaff (the Grantee) is made pursuant to the authority of the Consolidated Appropriations Act, 2022 (Public Law 117-103); and the Explanatory Statement for Division L of that Act, 2022, which was printed in the House section of the Congressional Record on March 9, 2022 (Explanatory Statement); This Grant Agreement includes and incorporates the Grantee's assurances and certifications, which are attached as Appendix 9.

In reliance upon and in consideration of the mutual representations and obligations under this Grant Agreement, HUD and the Grantee agree as follows:

ARTICLE I. Definitions

The definitions at 2 CFR 200.1 apply to this Grant Agreement, except where this Grant Agreement specifically states otherwise.

Grant obligation, for the purpose of this Grant Agreement, refers to the date the designated HUD official signs this Grant Agreement.

Grantee, for the purpose of this Grant Agreement, may also be referred to as "recipient."

ARTICLE II. Total Grant Amount

Subject to the provisions of the Grant Agreement, HUD will make grant funds in the amount of $750,000 available to the Grantee.

ARTICLE III. Award-Specific Requirements

A. Federal Award Description. The Federal funds provided under this Grant Agreement (Grant Funds) must be used for the Grantee's "project" as identified in the table included in the Explanatory Statement and as further described in the project narrative in Appendix 1 to this Grant Agreement. The project narrative in Appendix 1 may be amended in accordance with conditions under 2 CFR 200.308, provided that the Grantee does not change its project in a manner that would conflict with the express language of the Explanatory Statement.

B. Approved Budget. The Grantee's approved budget in Appendix 2 to this Grant Agreement is the most recent line-item budget submitted by the Grantee and approved by HUD for this project. The Grantee may change the amounts budgeted for each activity only as provided by 2 CFR 200.308 and this Grant Agreement.

C. Changes to Project Narrative or Budget. To request HUD's approval for a change in the project narrative or budget, the Grantee must submit a formal letter to the Director of HUD's Office of Economic Development - Congressional Grants Division through the assigned Grant Officer. The letter, submitted by email to the assigned Grant Officer, must include both justification for the change and a revised line-item budget that includes the requested change. The Grantee is prohibited from changing its budget in a manner that would conflict with the express language of the Explanatory Statement or the cost limitations provided in Article III, paragraphs C and D of this Grant Agreement. The assigned Grant Officer for this grant is provided in the Award Letter for this grant and found on HUD's website.

The HUD Office of Economic Development – Congressional Grants Division will notify the Grantee in writing, by email, whether HUD approves or disapproves the change and revised budget. If approved, the Grantee must update its budget information in Disaster Recovery Grant Reporting (DRGR) before the Grantee expends Grant Funds in accordance with an approved change.

D. Unless explicitly stated in the Explanatory Statement and documented in the approved budget in Appendix 2, no more than 20 percent of the total grant amount may be used for planning and management development costs, as described under 24 CFR 570.205, or administrative costs, as described under 24 CFR 570.206. Program income and eligible activities identified in the description of the Grantee's "project" in the Explanatory Statement are not subject to this spending limit.

This Grant Agreement is not otherwise subject to the Community Development Block Grant regulations at 24 CFR part 570 or Title I of the Housing and Community Development Act of 1974.

E. The Grantee may not use any grant funds to reimburse costs incurred before the date HUD signed this Grant Agreement.

F. As authorized under 2 CFR 200.307(e)(2), program income must be used for the purposes and under the conditions of this Grant Agreement. In accordance with 2 CFR 200.307(b), costs incidental to the generation of program income may be deducted from gross income to determine program income, provided these costs have not been charged to the grant.

G. The Grantee must use the Grant Funds only for costs (including indirect costs) that meet the applicable requirements in 2 CFR part 200 (including appendices). The Grantee's indirect cost rate information is as provided in Appendix 3 to this Grant Agreement. Unless the Grantee is an Institution of Higher Education,

the Grantee must immediately notify HUD upon any change in the Grantee's indirect cost rate during the Period of Performance, so that HUD can amend the Grant Agreement to reflect the change if necessary. Consistent with 2 CFR Part 200,

Appendix III (C.7), if the Grantee is an Institution of Higher Education and has a negotiated rate in effect on the date this Grant Agreement is signed by HUD, the Grantee may use only that rate for its indirect costs during the Period of Performance.

H. The Grantee must comply with any specific award conditions that HUD may attach to this Grant Agreement as provided by 2 CFR 200.208. If applicable, these conditions will be listed or added as Appendix 5 to this Grant Agreement.

I. The Grantee is responsible for managing the project and ensuring the proper use of the Grant Funds. The Grantee is also responsible for ensuring the completion of the project, the grant closeout, and compliance with all applicable federal requirements.

The Grantee may subaward all or a portion of its funds to one or more subrecipients, as identified in the Project Narrative (Appendix 1) or as may be approved by HUD in accordance with 2 CFR 200.308. Subawards are subject to the requirements that apply to pass-through entities under 2 CFR Part 200, including 2 CFR 200.332, and other requirements provided by this Grant Agreement. The Grantee is responsible for ensuring each subrecipient complies with all requirements under this Grant Agreement, including the general federal requirements in Article IV.

ARTICLE IV. General Federal Requirements

A. If the Grantee is a unit of general local government, a State, an Indian Tribe, or an Alaskan Native Village, the Grantee is the Responsible Entity (as defined in 24 CFR part 58) and agrees to assume all of the responsibilities for environmental review and decision-making and action, as specified and required in regulations issued by the Secretary pursuant to the Multifamily Housing Property Disposition Reform Act of 1994 and published in 24 CFR Part 58.

B. If the Grantee is a housing authority, redevelopment agency, academic institution, hospital or other non-profit organization, the Grantee shall request the unit of general local government, Indian Tribe or Alaskan Native Village, within which the project is located and which exercises land use responsibility, to act as Responsible Entity and assume all of the responsibilities for environmental review and decision-making and action as specified in paragraph A above, and the Grantee shall carry out all of the responsibilities of a grantee under 24 CFR Part 58.

C. After Grantee's receipt of the Letter of Invitation for this grant, neither the Grantee nor any of its contractors, subrecipients and other funding and development partners may commit or expend grant funds or local funds for project activities (other than for planning, management, development and administration activities)

until one of the following occurs: (i) the Responsible Entity has completed the environmental review procedures required by 24 CFR part 58, and HUD has approved the environmental certification and given a release of funds; (ii) the Responsible Entity has determined that the activities are exempt under 24 CFR 58.34 or are categorically excluded and not subject to compliance with environmental laws under 24 CFR 58.35(b); or (iii) HUD has performed an environmental review under 24 CFR part 50 and has notified Grantee in writing of environmental approval of the activities.

D. Following completion of the environmental review process, the Grantee (recipient) shall exercise oversight, monitoring, and enforcement as necessary to assure that decisions and mitigation measures adopted through the environmental review process are carried out during project development and implementation.

E. The Grantee must comply with the generally applicable HUD and CPD requirements in 24 CFR Part 5, subpart A, including all applicable fair housing, and civil rights requirements. If the Grantee is a Tribe or a Tribally Designated Housing Entity (TDHE) as established under 24 CFR 1000.206, the Grantee must comply with the nondiscrimination requirements in 24 CFR 1000.12 in lieu of the nondiscrimination requirements in 24 CFR 5.105(a). The Grantee must report data on the race, color, religion, sex, national origin, age, disability, and family characteristics of persons and households who are applicants for, participants in, or beneficiaries or potential beneficiaries of the Grantee's project, consistent with the instructions and forms provided by HUD in order to carry out its responsibilities under the Fair Housing Act, Executive Order 11063, Title VI of the Civil Rights Act of 1964, and Section 562 of the Housing and Community Development Act of 1987 (e.g. HUD-27061).

F. The Grantee must comply with the Uniform Administrative Requirements, Cost Principles, and Audit Requirements in 2 CFR part 200, as may be amended from time to time. If 2 CFR part 200 is amended to replace or renumber sections of part 200 that are cited specifically in this Grant Agreement, the part 200 requirements as renumbered or replaced by the amendments will govern the obligations of HUD and the Grantee after those amendment become effective.

G. The Grantee must comply with the Award Term in Appendix A to 2 CFR Part 25 ("System for Award Management and Universal Identifier Requirements") and the Award Term in Appendix A to 2 CFR Part 170 ("Reporting Subawards and Executive Compensation"), which are hereby incorporated into and made part of this Grant Agreement.

H. If the Total Grant Amount, as provided in Article II of this Grant Agreement, is greater than $500,000, the Grantee must comply with the Award Term and Condition for Grantee Integrity and Performance Matters in Appendix 4 to this Grant Agreement.

I. Unless the Grantee is exempt from the Byrd Amendment as explained below, the Grantee must comply with the provisions of Section 319 of Public Law 101-121, 31 U.S.C. 1352, (the Byrd Amendment) and 24 CFR Part 87, which prohibit recipients of Federal contracts, grants, or loans from using appropriated funds for lobbying the executive or legislative branches of the Federal Government in connection with a specific contract, grant, loan, or cooperative agreement. The Grantee must include in its award documents for all sub-awards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements), the requirements for the certification required by Appendix A to 24 CFR Part 87 and for disclosure using Standard Form- LLL (SF-LLL), "Disclosure of Lobbying Activities." In addition, the Grantee must obtain the executed certification required by Appendix A and an SF-LLL from all covered persons. "Person" is as defined by 24 CFR Part 87. Consistent with these requirements, the Grantee must sign the certification that is included in Appendix 8 and return it to HUD with this signed agreement.

Federally recognized Indian tribes and TDHEs established by Federally recognized Indian tribes as a result of the exercise of the tribe's sovereign power are excluded from coverage of the Byrd Amendment. State-recognized Indian tribes and TDHEs established only under state law must comply with this requirement.

J. The Grantee must comply with drug-free workplace requirements in Subpart B of 2 CFR Part 2429, which adopts the governmentwide implementation (2 CFR Part 182) of sections 5152-5158 of the Drug-Free Workplace Act of 1988, Pub. L. 100-690, Title V, Subtitle D (41 U.S.C. 701-707).

K. The Grantee must comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (URA) as implemented by regulations at 49 CFR Part 24. The URA applies to acquisitions of real property and relocation occurring as a direct result of the acquisition, rehabilitation, or demolition of real property for Federal or Federally funded programs or projects. Real property acquisition that receives Federal financial assistance for a program or project, as defined in 49 CFR 24.2, must comply with the acquisition requirements contained in 49 CFR part 24, subpart B. Unless otherwise specified in law, the relocation requirements of the URA and its implementing regulations at 49 CFR part 24, cover any displaced person who moves from real property or moves personal property from real property as a direct result of acquisition, rehabilitation, or demolition for a program or project receiving HUD financial assistance

L. If grant funds are used for purchase, lease, support services, operation, or work that may disturb painted surfaces, of pre-1978 housing, you must comply with the lead-based paint evaluation and hazard reduction requirements of HUD's lead- based paint rules (Lead Disclosure; and Lead Safe Housing (24 CFR part 35)), and EPA's lead- based paint rules (e.g., Repair, Renovation and Painting; Pre-Renovation Education; and Lead Training and Certification (40 CFR part 745)).

M. The Grantee must comply with Section 3 of the Housing and Urban Development Act of 1968 (Section 3), 12 U.S.C. 1701u, and HUD's regulations at 24 CFR Part 75, as applicable, including the reporting requirements in 24 CFR 75.25. Grants made to Tribes and TDHEs are subject to Indian Preference requirements in Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 5307(b)). As stated in 24 CFR 75.3(c), grants to Tribes and TDHEs are subject to Indian Preference requirements in lieu of Section 3. Grantees that are not exempt from Section 3 must submit annual reports of Section 3 accomplishment Performance Measures in DRGR in January of the calendar year. This report reflects Section 3 accomplishments for the previous calendar year.

N. The Grantee must not use any Grant Funds to support any Federal, state, or local project that seeks to use the power of eminent domain, unless eminent domain is employed only for a public use. Public use includes use of funds for mass transit, railroad, airport, seaport, or highway projects, and utility projects which benefit or serve the general public (including energy-related, communication-related, water-related, and waste water-related infrastructure), other structures designated for use by the general public or with other common-carrier or public-utility functions that serve the general public and are subject to regulation and oversight by the government, and projects for the removal of an immediate threat to public health and safety or brownfields, as defined in the Small Business Liability Relief and Brownfields Revitalization Act (Pub. L. 107-118). Public use does not include economic development that primarily benefits private entities.

O. The Grantee must not use any Grant Funds to maintain or establish a computer network that does not block the viewing, downloading, and exchanging of pornography. This requirement does not limit the use of funds necessary for any Federal, State, tribal, or local law enforcement agency or any other entity carrying out criminal investigations, prosecution, or adjudication activities.

P. The Grantee must comply with the requirements of the Build America, Buy America (BABA) Act, 41 USC 8301 note, if applicable to the Grantee's project. Pursuant to HUD's Notice, "General Applicability Waiver of Build America, Buy America Provisions as Applied to Recipients of HUD Federal Financial Assistance" (87 FR 26219), any funds obligated by HUD and the Grantee on or after November 14, 2022, are subject to BABA requirements, unless excepted by a waiver.

For Tribal recipients/Grantees, including Tribes and TDHEs, HUD's Notice, "General Applicability Waiver of Build America, Buy America Provisions as Applied to Tribal Recipients of HUD Federal Financial Assistance" (87 FR 26221), establishes that any funds obligated by HUD and the Grantee on or after May 14, 2023, are subject to BABA requirements, unless excepted by a waiver.

Additional information on BABA will be available at https://www.hud.gov/program_offices/general_counsel/BABA

Q. The Grantee must administer its Grant Funds in accordance with the Conflict of Interest requirements set forth in Appendix 6 of this Grant Agreement.

R. The Grantee must comply with the governmentwide debarment and suspension requirements in 2 CFR part 180 as incorporated and supplemented by HUD's regulations at 2 CFR Part 2424.

S. The Grantee must comply with the award term and condition regarding trafficking in persons in Appendix 7 of this Grant Agreement.

ARTICLE V. Drawdown Requirements

A. The Grantee may not draw down grant funds until HUD has received and approved any certifications and disclosures required by 24 CFR 87.100 concerning lobbying, if applicable.

B. The Grantee must use HUD's Disaster Recovery Grant Reporting (DRGR) system to draw down grant funds and report to HUD on activities.

C. The Grantee must enter activity and budget information in DRGR that is consistent with the activities and budget HUD approved under this Grant Agreement and complies with HUD's instructions for entering information in DRGR found in the document titled "Grant Award Instructions" that accompanies the Grant Agreement.

D. The Grantee must only enter activities in DRGR that are described in the Approved Budget (Appendix 2).

E. The Grantee must expend all Grant funds in accordance with the activity and budget information in DRGR.

F. Each drawdown of grant funds constitutes a representation by the Grantee that the funds will be used in accordance with this Grant Agreement.

G. The Grantee must use DRGR to track the use of program income and must report the receipt and use of program income in the reports the Grantee submits to HUD under Article IV of this Grant Agreement. The Grantee must expend program income before drawing down grant funds through DRGR.

H. Notwithstanding any other provision of this grant agreement, HUD will not be responsible for payment of any grant funds after the date Treasury closes the account in accordance with 31 U.S.C. § 1552. Because Treasury may close the account up to one week before the September 30 date specified by 31 U.S.C. § 1552, the grantee is advised to make its final request for payment under the grant no later than September 15, 2030.

ARTICLE VI. Program-Specific Reporting Requirements.

In addition to the general reporting requirements that apply under other provisions of this Agreement, the following program-specific reporting requirements apply to the Grantee:

A. The Grantee must submit a performance report in DRGR on a semi-annual basis and must include a completed Federal financial report as an attachment to each performance report in DRGR. Performance reports shall consist of a narrative of work accomplished during the reporting period. During the Period of Performance, the Grantee must submit these reports in DRGR no later than 30 calendar days after the end of the 6-month reporting period. The first of these reporting periods begins on the January or June after the date this Grant Agreement is signed by HUD.

B. The performance report must contain the information required for reporting program performance under 2 CFR 200.329(c)(2) and (d), including a comparison of actual accomplishments to the objectives indicated in the Grantee's project narrative, the reasons why established goals were not met, if appropriate, and additional pertinent information including, when appropriate, analysis and explanation of cost overruns or high unit costs.

C. The performance reports must contain the information required for reporting program performance under 2 CFR 200.329(c)(2) and (d), including a comparison of actual accomplishments to the objectives indicated in the Grantee's Project Narrative (Appendix 1), the reasons for slippage if established objectives were not overruns.

D. Financial reports must be submitted using DRGR or such future collections HUD may require and as approved by OMB and listed on the Grants.gov website https://www.grants.gov/web/grants/forms/post-award-reporting-forms.html

E. The performance and financial reports will undergo review and approval by HUD. If a report submission is insufficient, HUD will reject the report in DRGR and identify the corrections the Grantee must make.

F. No drawdown of funds will be allowed through DRGR while the Grantee has an overdue performance or financial report.

G. The Grantee must report and account for all property acquired or improved with Grant Funds as provided by 2 CFR part 200 using the applicable common forms approved by OMB and provided on the Grants.gov website https://www.grants.gov/web/grants/forms/post-award-reporting-forms.html

This reporting obligation includes submitting status reports on real property at least annually as provided by 2 CFR 200.330, accounting for real and personal property acquired or improved with Grant Funds as part of Project Closeout, and promptly submitting requests for disposition instructions as provided by 2 CFR 200.311(c), 200.313(e), and 200.314(a).

ARTICLE VII. Project Closeout.

A. The grant will be closed out in accordance with 2 CFR part 200, as may be amended from time to time, except as otherwise specified in this Grant Agreement.

B. The Grantee must submit to HUD a written request to closeout the grant no later than 30 calendar days after the Grantee has drawn down all Grant funds and completed the activities described in the Project Narrative (Appendix 1). HUD will then send the Closeout Agreement and Closeout Certification to the Grantee.

C. At HUD's option, the Grantee may delay initiation of project closeout until the resolution of any findings as a result of the review of semi-annual activity reports in DRGR. If HUD exercises this option, the Grantee must promptly resolve the findings.

D. The Grantee recognizes that the closeout process may entail a review by HUD to determine compliance with the Grant Agreement by the Grantee and all participating parties. The Grantee agrees to cooperate with any HUD review, including reasonable requests for on-site inspection of property acquired or improved with Grant Funds. E. No later than 120 calendar days after the Period of Performance, Grantee shall provide to HUD the following documentation:

1. A Certification of Project Completion.

2. A Grant Closeout Agreement.

3. A final financial report giving the amount and types of project costs charged to the grant (that meet the allowability and allocability requirements of 2 CFR part 200, subpart E); a certification of the costs; and the amounts and sources of other project funds.

4. A final performance report providing a comparison of actual accomplishments with each of the project commitments and objectives in the approved application, the reasons for slippage if established objectives were not met and additional pertinent information including explanation of significant cost overruns.

5. A final property report, if specifically requested by HUD at the time of closeout.

ARTICLE VIII. Default.

A default under this Grant Agreement shall consist of any use of grant funds for a purpose other than as authorized by this Grant Agreement, any noncompliance with statutory, regulatory, or other requirements applicable to the Grant Funds, any other material breach of this Grant Agreement, or any material misrepresentation in the Grantee's submissions to HUD in anticipation of this award. If the Grantee fails to comply with the terms and conditions of the Grant Agreement, HUD may adjust specific conditions of this Grant Agreement as described in 2 CFR part 200, as may be amended from time to time. If HUD determines that noncompliance cannot be remedied by imposing additional conditions, HUD may take one or more of the remedies for noncompliance described in 2 CFR part 200, as may be amended from time to time. HUD may also terminate all or a part of this award as provided by 2 CFR 200.340 and other applicable provisions of 2 CFR part 200, as may be amended from time to time. Nothing in this Grant Agreement shall be construed as creating or justifying any claim against the federal government or the Grantee by any third party.

ARTICLE IX. HUD Contact Information.

Except where this Grant Agreement specifically states otherwise, all requests, submissions, and reports the Grantee is required to make to HUD under this Grant Agreement must be made in writing via email CPFGrants@hud.gov

This agreement is hereby executed on behalf of the parties as follows:

GRANTEE

_____

(Name of Organization)

BY: _____
(Signature of Authorized Official)

_____
(Typed Name and Title of Authorized Official)

_____
(Date)

HUD

BY: _____
Robin J. Keegan,
Deputy Assistant Secretary for Economic Development

_____
(Date)

APPENDIX 1 – Project Narrative

APPENDIX 2 – Approved Budget

APPENDIX 3 – Grantee's Indirect Cost Rate Information

OPTION 1: The Grantee will not use an indirect cost rate to charge its indirect costs to the grant. [This option must be checked if the Grantee has not provided its indirect cost rate information to HUD as specified in the Community Project Funding Grant Guide.]

OPTION 2: The Grantee is authorized to use the indirect cost rate(s) identified in the table below to charge its indirect costs to the grant, provided that each rate identified meets the applicable requirements under 2 CFR part 200 (including appendices).

Agency/Dept./Major Function	Indirect cost rate	Direct Cost Base
_____	_____%	_____
_____	_____%	_____

[This schedule must include each indirect cost rate that will be used to calculate the Grantee's indirect costs under the grant. The schedule must also specify the type of direct cost base to which each included rate applies (for example, Modified Total Direct Costs (MTDC)). Do not include indirect cost rate information for subrecipients.

For government entities, enter each agency or department that will carry out activities under the grant, the indirect cost rate applicable to each department/agency (including if the de minimis rate is used per 2 CFR 200.414), and the type of direct cost base to which the rate will be applied.

For nonprofit organizations that use the Simplified Allocation Method for indirect costs or elects to use the de minimis rate of 10% of Modified Total Direct Costs in accordance with 2 CFR 200.414, enter the applicable indirect cost rate and type of direct cost base in the first row of the table.

For nonprofit organizations that use the Multiple Allocation Base Method, enter each major function of the organization for which a rate was developed and will be used under the grant, the indirect cost rate applicable to that major function, and the type of direct cost base to which the rate will be applied.]

APPENDIX 4 –
Award Term and Condition for Grantee Integrity and Performance Matters

Reporting of Matters Related to Grantee Integrity and Performance

1. General Reporting Requirement
If the total value of the Grantee's currently active grants, cooperative agreements, and procurement contracts from all Federal awarding agencies exceeds $10,000,000 for any period of time during the period of performance of this Federal award, then during that period of time the Grantee must maintain the currency of information reported to the System for Award Management (SAM) that is made available in the designated integrity and performance system (currently the Federal Awardee Performance and Integrity Information System (FAPIIS)) about civil, criminal, or administrative proceedings described in paragraph 2 of this award term and condition. This is a statutory requirement under section 872 of Public Law 110-417, as amended (41 U.S.C. 2313). As required by section 3010 of Public Law 111-212, all information posted in the designated integrity and performance system on or after April 15, 2011, except past performance reviews required for Federal procurement contracts, will be publicly available.

2. Proceedings About Which Grantee Must Report
During any period of time when the Grantee is subject to the requirement in paragraph 1 of this award term and condition, the Grantee must submit the information required about each proceeding that:

a. Is in connection with the award or performance of a grant, cooperative agreement, or procurement contract from the Federal Government;

b. Reached its final disposition during the most recent five-year period; and

c. Is one of the following:

(1) A criminal proceeding that resulted in a conviction, as defined in paragraph 5 of this award term and condition;

(2) A civil proceeding that resulted in a finding of fault and liability and payment of a monetary fine, penalty, reimbursement, restitution, or damages of $5,000 or more;

(3) An administrative proceeding, as defined in paragraph 5. of this award term and condition, that resulted in a finding of fault and liability and the Grantee's payment of either a monetary fine or penalty of $5,000 or more or reimbursement, restitution, or damages in excess of $100,000; or

(4) Any other criminal, civil, or administrative proceeding if:

(i) It could have led to an outcome described in paragraph 2.c.(1), (2), or (3) of this award term and condition;

(ii) It had a different disposition arrived at by consent or compromise with an acknowledgment of fault on the Grantee's part; and

(iii) The requirement in this award term and condition to disclose information about the proceeding does not conflict with applicable laws and regulations.

3. Reporting Procedures
During any period of time when the Grantee is subject to the requirement in paragraph 1 of this award term and condition, the Grantee must enter in the SAM Entity Management area the information that SAM requires about each proceeding described in paragraph 2 of this award term and condition. The Grantee does not need to submit the information a second time under assistance awards that the Grantee received if the Grantee already provided the information through SAM because the Grantee was required to do so under Federal procurement contracts that the Grantee was awarded.

4. Reporting Frequency
During any period of time when the Grantee is subject to the requirement in paragraph 1 of this award term and condition, the Grantee must report proceedings information through SAM for the most recent five-year period, either to report new information about any proceeding(s) that the Grantee has not reported previously or affirm that there is no new information to report. If the Grantee has Federal contract, grant, and cooperative agreement awards with a cumulative total value greater than $10,000,000, the Grantee must disclose semiannually any information about the criminal, civil, and administrative proceedings.

5. Definitions
For purposes of this award term and condition:

a. Administrative proceeding means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative proceedings, Civilian Board of Contract Appeals proceedings, and Armed Services Board of Contract Appeals proceedings). This includes proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include audits, site visits, corrective plans, or inspection of deliverables.

b. Conviction, for purposes of this award term and condition, means a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of nolo contendere.

c. Total value of currently active grants, cooperative agreements, and procurement contracts includes—

(1) Only the Federal share of the funding under any Federal award with a cost share or match requirement; and

(2) The value of all expected funding increments under a Federal award and options, even if not yet exercised.

APPENDIX 5 – Specific Award Conditions

[NONE]

APPENDIX 6 – Conflict of Interest Requirements

1. *Conflicts Subject to Procurement Regulations.* When procuring property or services, the grantee and its subrecipients shall comply with the applicable conflict-of-interest rules in 2 CFR 200.317 and 2 CFR 200.318(c). In all cases not governed by 2 CFR 200.317 and 2 CFR 200.318(c), the Grantee and its subrecipients must follow the requirements contained in paragraphs 2-5 below.

2. *General prohibition*. No person who is an employee, agent, consultant, officer, or elected or appointed official of the Grantee or subrecipient and who exercises or has exercised any functions or responsibilities with respect to assisted activities, or who is in a position to participate in a decision making process or gain inside information with regard to such activities, may obtain a financial interest or benefit from the activity, or have a financial interest in any contract, subcontract, or agreement with respect thereto, or the proceeds thereunder, either for himself or herself or for those with whom he or she has immediate family or business ties, during his or her tenure or for one year thereafter. Immediate family ties include (whether by blood, marriage or adoption) the spouse, parent (including a stepparent), child (including a stepchild), sibling (including a stepsibling), grandparent, grandchild, and in-laws of a covered person.

3. *Exceptions*. HUD may grant an exception to the general prohibition in paragraph (ii) upon the Grantee's written request and satisfaction of the threshold requirements in paragraph (iv), if HUD determines the exception will further the Federal purpose of the award and the effective and efficient administration of the Grantee's project, taking into account the cumulative effects of the factors in paragraph (v).

4. *Threshold requirements for exceptions*. HUD will consider an exception only after the Grantee has provided the following documentation:

> *a.* A disclosure of the nature of the conflict, accompanied by an assurance that there has been public disclosure of the conflict and a description of how that disclosure was made; and
>
> *b.* An opinion of the Grantee's attorney that the interest for which the exception is sought would not violate state or local law.

5. *Factors to be considered for exceptions.* In determining whether to grant a requested exception after the Grantee has satisfactorily met the threshold requirements in paragraph (iii), HUD will consider the cumulative effect of the following factors, where applicable:

> *a.* Whether the exception would provide a significant cost benefit or an essential degree of expertise to the program or project that would otherwise not be available;
>
> *b.* Whether an opportunity was provided for open competitive bidding or negotiation;

c. Whether the person affected is a member of a group or class of low- or moderate-income persons intended to be the beneficiaries of the assisted activity, and the exception

will permit such person to receive generally the same interests or benefits as are being made available or provided to the group or class;

d. Whether the affected person has withdrawn from his or her functions or responsibilities, or the decision-making process regarding the assisted activity in question;

e. Whether the interest or benefit was present before the affected person was in a position as described in paragraph (ii);

f. Whether undue hardship will result either to the Grantee or the person affected when weighed against the public interest served by avoiding the prohibited conflict; and

g. Any other relevant considerations.

6. *Disclosure of potential conflicts of interest.* The Grantee must disclose in writing to HUD any potential conflict of interest.

APPENDIX 7 – Award Term and Condition Regarding Trafficking in Persons

The following award term and condition, which is required by 2 CFR part 175, applies as written:

a. Provisions applicable to a grantee that is a private entity.

1.You as the grantee, your employees, subrecipients under this award, and subrecipients' employees may not—

i. Engage in severe forms of trafficking in persons during the period of time that the award is in effect;

ii. Procure a commercial sex act during the period of time that the award is in effect; or

iii. Use forced labor in the performance of the award or subawards under the award.

2.We as the Federal awarding agency may unilaterally terminate this award, without penalty, if you or a subrecipient that is a private entity:

i. Is determined to have violated a prohibition in paragraph a.1 of this award term; or

ii. Has an employee who is determined by the agency official authorized to terminate the award to have violated a prohibition in paragraph a.1 of this award term through conduct that is either—

A. Associated with performance under this award; or

B. Imputed to you or the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR Part 180, "OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," as implemented by HUD at 2 CFR 2424.

b. Provision applicable to a grantee other than a private entity.
We as the Federal awarding agency may unilaterally terminate this award, without penalty, if a subrecipient that is a private entity—

1. Is determined to have violated an applicable prohibition in paragraph a.1 of this award term; or

2. Has an employee who is determined by the agency official authorized to terminate the award to have violated an applicable prohibition in paragraph a.1 of this award term through conduct that is either:

i. Associated with performance under this award; or

ii. Imputed to the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, "OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," as implemented by HUD at 2 CFR 2424.

c. Provisions applicable to any grantee.

1. You must inform us immediately of any information you receive from any source alleging a violation of a prohibition in paragraph a.1 of this award term.

2. Our right to terminate unilaterally that is described in paragraph a.2 or b of this section:

i. Implements section 106(g) of the Trafficking Victims Protection Act of 2000 (TVPA), as amended (22 U.S.C. 7104(g)), and

ii. Is in addition to all other remedies for noncompliance that are available to us under this award.

3. You must include the requirements of paragraph a.1 of this award term in any subaward you make to a private entity.

d. Definitions. For purposes of this award term:

1."Employee" means either:

i. An individual employed by you or a subrecipient who is engaged in the performance of the project or program under this award; or

ii. Another person engaged in the performance of the project or program under this award and not compensated by you including, but not limited to, a volunteer or individual whose services are contributed by a third party as an in-kind contribution toward cost sharing or matching requirements.

2. "Forced labor" means labor obtained by any of the following methods: the recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.

3. “Private entity”:

i. Means any entity other than a State, local government, Indian tribe, or foreign public entity, as those terms are defined in 2 CFR 175.25.

ii. Includes:

A. A nonprofit organization, including any nonprofit institution of higher education, hospital, or tribal organization other than one included in the definition of Indian tribe at 2 CFR 175.25(b).

B. A for-profit organization.

4. “Severe forms of trafficking in persons,” “commercial sex act,” and “coercion” have the meanings given at section 103 of the TVPA, as amended (22 U.S.C. 7102).

APPENDIX 8 – Grantee's Assurances and Certifications

Included under this Appendix 9 are:

- ☐ Grantee's Certification Regarding Lobbying
- ☐ Grantee's Standard Form SF 424 B, Assurances for Nonconstruction Programs
- ☐ Grantee's Standard Form SF 424 D, Assurances for Construction Programs.
- ☐ Grantee's Standard Form SF- LLL Disclosure of Lobbying Activities
- ☐ Grantee's Request for Release of Funds Form 7015.15 and Certification

Certification Regarding Lobbying

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

_____
(Signature of Authorized Official)

_____
(Typed Name and Title of Authorized Official)

_____
(Date)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D.C. 20410-1000

OFFICE OF COMMUNITY PLANNING AND DEVELOPMENT

February 28, 2023

Mr. Greg Clifton
City Manger
City of Flagstaff
211 West Aspen Avenue
Flagstaff, AZ 86001
Email: greg.clifton@flagstaffaz.gov

Dear Mr. Clifton:

The Department of Housing and Urban Development (HUD) is pleased to announce the approval of your project narrative and budget for the purposes of issuing a grant agreement for the following FY2022 Economic Development Initiative, Community Project Funding/congressionally directed spending grant (hereafter, CPF grant), as funded by the Congress in the Consolidated Appropriations Act, 2022 (PL 117-103) (the Act) and as described in the Explanatory Statement accompanying the Act.

Grantee:	City of Flagstaff
Project Description:	Home energy retrofit program for low-income and vulnerable families
Grant Amount:	$750,000
Grant Number.:	B-22-CP-AZ-0018

This letter transmits the following documents and guidance that you will need to activate and administer your FY 2022 CPF grant.

Grant Agreement for this Award: The Grant Agreement references the provisions, regulations, and requirements for this award**.** Please read this Grant Agreement carefully and note any attachments which have appendices or special conditions that apply to this grant. The Authorized Representative for grantee must sign and date the Grant Agreement. Please retain a "copy" (either electronic and/or printed) of the signed and dated document for your records pending receipt of the countersigned copy from HUD.

Assistance Award/Amendment - HUD Form 1044: The HUD Form 1044 is used to collect and communicate certain grantee and HUD specific information. Please read the HUD Form 1044 carefully, noting the reference to the HUD Government Technical Representative in block 9 (your Grant Officer). The Authorized Representative (Official) for grantee must sign and date the form. Please retain a "copy" (either electronic and/or printed) of the signed document for your records pending receipt of the countersigned copy from HUD.

Direct Deposit Sign-Up Form - Standard Form 1199A: This form is used to collect the information necessary to establish an account for the grantee in HUD's financial system. The form is to be completed by you and your financial institution.

Grant Award Instructions: This document will provide guidance and instructions for administering your CPF grant. HUD's Congressional Grants Division uses the Disaster Recovery Grants Reporting (DRGR) system for the financial management of these grant funds and periodic reporting of project status and accomplishments for this grant. The Grant Award Instructions provide guidance for various grant administration related actions. Please refer to this document as it includes important information and forms for accessing DRGR, as well as other information concerning reporting requirements.

Please ensure that following forms are complete. Return them together as noted below:

1. Signed and dated Grant Agreement;
2. Signed and dated Assistance Award/Amendment Form HUD 1044;
3. Completed Direct Deposit Sign-Up Form Standard Form SF1199A (to be completed by you and your financial institution);
4. Evidence of the ABA number for your depository account, such as a VOIDED blank check, a deposit slip or similar documentation.

You will be able to draw down funds upon completion of the following actions:

1. HUD has processed all grant award documents;
2. HUD has forwarded you the DRGR Access Instructions; and
3. After the required certifications and environmental review have been accepted by HUD for the project portion of your grant. Although funds for planning and management development or administration costs may be available prior in advance of a completed environmental review.

Please forward these documents, within 60 days from receipt of this letter, to Rommel Calderwood , who is the Government Technical Representative serving as the Grant Officer for this grant. These documents must be sent to your Grant Officer via the CPFGrants@hud.gov mailbox, with a "cc" to the Grant Officer's email address. **Please review the Grant Award Instructions for guidance on how to encrypt and send this sensitive information.**

Please be sure that the email subject line reads as follows:
Grant Number: Grantee Name: FY2022 Community Project Funding Grant: Grant Award Materials

If you have any questions regarding these documents or procedures, please contact Rommel Calderwood , in the CPD Congressional Grants Division at Rommel.Calderwood@hud.gov.

The Department of Housing and Urban Development looks forward to working with you on this project.

Sincerely,

Robin J. Keegan
Deputy Assistant Secretary
Economic Development

ATTACHMENTS:
Grant Agreement
HUD Form 1044
Standard Form 1199A
FY2022 CPF Grant Award Instructions

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Paul Lasiewicki, Deputy Police Chief
Co-Submitter:	Mark Wilson, Deputy Fire Chief
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration and Approval of Contract: Cooperative Purchase Contract with Motorola Solutions, Inc. in the amount of $2,111,544.29 for radio equipment, setup, accessories, and service for numerous City departments.

STAFF RECOMMENDED ACTION:

1. Approve the Cooperative Purchase Contract with Motorola Solutions, Inc. in the amount of $2,111,544.29 for radio equipment, setup, accessories, and service for numerous City departments in need of radio replacements; and
2. Authorize the City Manager to execute all necessary documents.

Executive Summary:

This is a request to spend $2,111,544.29 to purchase a total of 52 Motorola APX 8000 portable radios, 25 APX 8000 base chargers, 39 Motorola APX 1500 portable radios, 6 Motorola APX 900, and 159 Motorola APX 8500 mobile radios to fill the current needs of numerous departments within the City, including, Emergency Management, PROSE, Public Works, Police, and Fire.

The purchase has been made in bulk to receive financial benefits such as credits for trade-ins and other applicable rebates/discounts.

Financial Impact:

In fiscal year 2022-2023, the City budgeted $2,600,000 in account 001-09-402-1310-1-4407 for the replacement of radios and equipment. The $2,111,544.29 is the sum total cost for the purchase of radios, chargers, 5-year service agreement, programming, lapel microphones, and chargers.

The costs assigned to each City Department are as follows: Emergency Management - $19,057.43, PROSE - $140,349.06, Public Works - $316,131.42, Police - $592,961.52, and Fire - $1,043,044.86. Itemized quotes have been attached.

Policy Impact:

The decision to purchase or to not purchase new radios should have no impact on any City policies.

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

High Performing Governance. Replacing outdated and unsupported radios and radio equipment will improve the ability for City employees to effectively communicate with one another. This improves efficiency. Although there are older radios still in use by City employees that function adequately for non-emergency situations, many of these radios have outlived their warranties and service agreements or are off-brand models not covered for service under City contracts. These older radios will be bought and recycled by Motorola as part of the purchase agreement.

Safe and Healthy Community. The ability to reliably communicate is crucial to public safety. Police use their radios all day, every day to relay information to one another and to communicate with the 911 Call Center who is often in direct contact with victims of crimes. Fire fighters rely on radio communication to adjust for vision obstruction during responses to fires. Serviceability and reliability are essential to maintaining an adequate public safety radio system.

Environmental Stewardship. The City of Flagstaff participates in coordinated efforts with neighboring jurisdictions to manage several natural and human-caused emergency events (fires, floods) requiring quality, reliable communication every year. A dependable radio system with quality radios and radio equipment is an absolute necessity in managing large emergencies.

Has There Been Previous Council Decision on This:

Yes, in 2011 Council approved the purchase of radios and radio equipment.
In 2018 Council approved the upgrade to the Public Safety Radio system.
In 2022 Council approved $2.6M for the purchase of public safety communication equipment.

Options and Alternatives:

1. Approve the Cooperative Purchase Agreement with Motorola Solutions, Inc. in the amount of $2,111,544.29 utilizing the State of Arizona cooperative contract CTR046830; or
2. Direct staff to conduct an independent solicitation for the necessary radio equipment, setup, accessories, and service for numerous City departments. This option is not recommended by staff as it will delay an important purchase and would risk a failure in necessary communication due to outdated and unserviceable radios.

Background/History:

The City last made a radio and radio equipment purchase in 2011, putting most of the new radios into service in 2012. As such, the current radios used by City personnel are approximately 10-years old. When the radios were purchased, they had a 7-year recommended life span. The current radios are no longer supported for minor or major repairs. While most of these radios remain operational, any failure would put that unit out of operation permanently. In July of 2022, the City Council approved $2.6M in funding to replace the outdated and unsupported radios.

FPD, FFD, and NAU (who acts as the radio system's steward) collaborated to find the best value radios to replace those deemed outdated and unserviceable. In August 2022, City staff met with representatives from Motorola Solutions, Inc. to discuss replacement. In January of this year, Motorola representatives met with Purchasing staff and negotiated a quote to provide replacement radios and radio equipment for the City for a total cost of $2,111,544.29, utilizing the State of Arizona cooperative contract CTR046830.

Purchasing staff reviewed the State's cooperative contract and determine it to be current and applicable to the purchase of the radio equipment, setup, accessories, and service.

Key Considerations:

The City has been using Motorola radios and radio equipment for decades without any obvious problems with the units themselves or related equipment. Motorola Solutions, Inc. has exhibited excellent customer service; they employ extremely responsive and highly competent service representatives who strive to apply their knowledge of their products to identify and solve problems rather than to simply address complaints.

The Motorola radios being considered for purchase are high quality radios. With very few moving parts, rugged solid-state hardware, very tough casing material, and robust design the replacement radios are practically indestructible. As such, the replacement radios you are being asked to approve for purchase are very reliable.

The majority of the portable radios being replaced are Motorola model APX-6000s. The radios will be replaced (if the purchase if approved) by Motorola model APX-8000s. Another key consideration in the decision whether to approve this purchase is the fact that the batteries for these two radio systems (the 6000s & the 8000s) are interchangeable; which means that replacement (spare) batteries and battery chargers already owned by the City can be re-used.

Community Benefits and Considerations:

With better communication equipment the community gets better service. For organizations, like the City, that depend on reliable communication, a robust bank of radios is an absolute necessity. The Motorola radios being considered for purchase are among the most reliable in their market. As it relates to radio systems, more reliability means more efficiency; and more efficiency means a better value for our citizens' tax dollars, making us better stewards of our command. Equipment that improves our City employees' ability to communicate effectively makes for a more effective city government.

Attachments: Cooperative Purchase Contract
Exhibit A Fire, PD & City
Exhibit A - Emergency Mgt
Exhibit Bb - Agency Contract

COOPERATIVE PURCHASE CONTRACT
Contract No. 2023-107

This Cooperative Purchase Contract is made and entered into this _____ day of _____, 20_____by and between the City of Flagstaff, Arizona, a political subdivision of the State of Arizona ("City") and Motorola Solutions, Inc., a Delaware Corporation ("Contractor").

RECITALS:

A. The State of Arizona, Procurement Department, Public Sector conducted a competitive and open procurement process through Request for Proposal Solicitation No. ADSPO19-00008376 that resulted in Contract No. CTR046830 with Contractor ("Agency Contract"); and

B. Contractor is a dealer as described in the Agency Contract; and

C. The City has authority to enter into a cooperative purchase contract with Contractor utilizing the Agency Contract.

AGREEMENT:

NOW THEREFORE, in consideration for the mutual promises contained herein, the parties agree as follows:

1. Materials and or Services Purchased: Contractor shall provide to City the materials and or services, as specified in the Scope of Work, attached as *Exhibit A,* or the Purchase Order(s) submitted by the City in accordance with the Agency Contract. General description of materials and or services being purchased:

Motorola radio equipment, setup, accessories, and service

2. Payment: Payment to the Contractor for the materials and or services provided will be **two million one hundred eleven thousand five hundred forty-four dollars and twenty-nine cents ($2,111,544.29)**; made in accordance with the price list and terms set forth in the Agency Contract.

3. Terms and Conditions of Agency Contract Apply: All provisions of the Agency Contract documents, including any amendments, are incorporated in and shall apply to this Contract as though fully set forth herein. The Agency Contract documents are set forth in ***Exhibit B*** attached hereto and incorporated by reference. Contractor is responsible for promptly notifying City in writing of any changes to the Agency Contract, including, specifically changes in price for the materials.

4. Certificates of Insurance: All insurance provisions of the Agency Contract shall apply, including any requirement to name the City as an additional insured. Prior to commencing performance under this Contract, Contractor shall furnish City with a copy of the current Certificate of Insurance required by the Agency Contract.

5. Term: This Cooperative Purchase Contract shall commence upon execution by the parties and shall continue until expiration or termination of the underlying Agency Contract, unless sooner terminated by City in writing.

6. Renewal: This Cooperative Purchase Contract shall be automatically renewed if the underlying Agency Contract is renewed, for the same renewal period, unless City provides advance written notice to Contractor of its intention to non-renew.

Motorola Solutions, Inc.:

By:_____

Title:_____

CITY OF FLAGSTAFF

By:_____

Title:_____

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney's Office

EXHIBIT A
QUOTES (attached)

1. PW Full Order Parks/PROSE/Fleet/Solid Waste (dated February 10, 2023)
2. Emergency MGMT APX 8000 XE (dated February 8, 2023)

EXHIBIT B
AGENCY CONTRACT

1. Motorola Solutions, Inc.: Offer & Acceptance, Agency Contract CTR046830 Award Request for Proposal Solicitation No. ADSPO19-00008376

MOTOROLA SOLUTIONS







FLAGSTAFF, CITY OF

Flagstaff FD 100 APX 8000 XE

The design, technical, pricing, and other information (" Information ") furnished with this submission is confidential proprietary information of Motorola Solutions, Inc. or the Motorola Solutions entity providing this quote (" Motorola ") and is submitted with the restriction that it is to be used for evaluation purposes only. To the fullest extent allowed by applicable law, the Information is not to be disclosed publicly or in any manner to anyone other than those required to evaluate the Information without the express written permission of Motorola.
MOTOROLA, MOTO, MOTOROLA SOLUTIONS, and the Stylized M Logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC and are used under license. All other trademarks are the property of their respective owners. © 2020 Motorola Solutions, Inc. All rights reserved.

MOTOROLA SOLUTIONS

02/10/2023

FLAGSTAFF, CITY OF
419 N MOGOLLON ST
FLAGSTAFF, AZ 86001

RE: Motorola Quote for PW FULL ORDER PARKS/PROSE,FLEET,SOLID WASTE
Dear Emily Markel,

Motorola Solutions is pleased to present FLAGSTAFF, CITY OF with this quote for quality communications equipment and services. The development of this quote provided us the opportunity to evaluate your requirements and propose a solution to best fulfill your communications needs.

This information is provided to assist you in your evaluation process. Our goal is to provide FLAGSTAFF, CITY OF with the best products and services available in the communications industry. Please direct any questions to Douglas Buxbaum at Doug.Buxbaum@motorolasolutions.com.

We thank you for the opportunity to provide you with premier communications and look forward to your review and feedback regarding this quote.

Sincerely,

Douglas Buxbaum

MOTOROLA SOLUTIONS

QUOTE-1603380
Flagstaff FD 100 APX 8000 XE

Billing Address:
FLAGSTAFF, CITY OF
419 N MOGOLLON ST
FLAGSTAFF, AZ 86001
US

Quote Date:07/10/2022
Expiration Date:02/28/2023
Quote Created By:
Douglas Buxbaum
Doug.Buxbaum@
motorolasolutions.com

End Customer:
FLAGSTAFF, CITY OF
Mark Wilson
mwilson@flagstaffaz.gov

Contract: 21069 - STATE OF AZ

Line #	Item Number	Description	Qty	List Price	Sale Price	Ext. Sale Price
	APX™ 8000 Series	APX8000HXE				
1	H91TGD9PW4AN	APX 8000H ALL BAND PORTABLE MODEL 1.5	100	$7,695.00	$5,617.35	$561,735.00
1a	Q806CB	ADD: ASTRO DIGITAL CAI OPERATION	100	$567.00	$413.91	$41,391.00
1b	Q361AN	ADD: P25 9600 BAUD TRUNKING	100	$330.00	$240.90	$24,090.00
1c	QA02006AD	ENH: APX8000HXE RUGGED RADIO	100	$880.00	$642.40	$64,240.00
1d	QA00580AA	ADD: TDMA OPERATION	100	$495.00	$361.35	$36,135.00
1e	QA05509AA	DEL: DELETE UHF BAND	100	-$800.00	-$584.00	-$58,400.00
1f	Q887AU	ADD: 5Y ESSENTIAL SERVICE	100	$306.00	$306.00	$30,600.00
1g	Q498AU	ENH: ASTRO 25 OTAR W/ MULTIKEY	100	$814.00	$594.22	$59,422.00
1h	H38BS	ADD: SMARTZONE OPERATION	100	$1,650.00	$1,204.50	$120,450.00
1i	Q629AH	ENH: AES ENCRYPTION AND ADP	100	$523.00	$381.79	$38,179.00
1j	QA01427AG	ALT: APX8000/XE HOUSING GREEN	100	$28.00	$20.44	$2,044.00

Any sales transaction following Motorola's quote is based on and subject to the terms and conditions of the valid and executed written contract between Customer and Motorola (the ""Underlying Agreement"") that authorizes Customer to purchase equipment and/or services or license software (collectively ""Products""). If no Underlying Agreement exists between Motorola and Customer, then Motorola's Standard Terms of Use and Motorola's Standard Terms and Conditions of Sales and Supply shall govern the purchase of the Products.
Motorola Solutions, Inc.: 500 West Monroe, United States - 60661 ~ #: 36-1115800

Line #	Item Number	Description	Qty	List Price	Sale Price	Ext. Sale Price
1k	QA01648AA	ADD: HW KEY SUPPLEMENTAL DATA*	100	$6.00	$4.38	$438.00
2	NNTN8844A	CHARGER, MULTI-UNIT, IMPRES 2, 6-DISP, NA/LA-PLUG, ACC USB CHGR	8	$1,420.20	$1,036.75	$8,294.00
3	PMNN4579A	BATT IMPRES 2 LI-ION IP68 3850T	5	$178.50	$130.31	$651.55
4	Trade-In	Expiration Date: 02/28/2023	1	-$48,000.00	-$48,000.00	-$48,000.00
5	PMMN4106D	AUDIO ACCESSORY-REMOTE SPEAKER MICROPHONE,XE500 REMOTE SPKR MIC WITH CHANNEL KNOB, HIGH IMPACT GREEN	85	$665.28	$485.65	$41,280.25
6	NNTN7624C	CHARGER,CHR IMP VEH EXT NA/EU KIT	5	$509.76	$372.12	$1,860.60
	APX™ 1500 Enhanced					
7	M36URS9PW1BN	APX1500 ENHANCED 7/800 MHZ MOBILE	8	$1,858.00	$1,356.34	$10,850.72
7a	G24AX	ENH: 3 YEAR ESSENTIAL SVC	8	$216.00	$216.00	$1,728.00
7b	GA01574AA	ENH: AES 256 SW ENCRYPTION	8	$523.00	$381.79	$3,054.32
7c	QA01648AA	ADD: HW KEY SUPPLEMENTAL DATA*	8	$6.00	$4.38	$35.04
7d	W665BF	ADD: BASE STATION OP APX	8	$77.00	$56.21	$449.68
7e	GA00235AA	ADD: NO GPS ANTENNA NEEDED APX	8	$0.00	$0.00	$0.00
7f	G66BF	ADD: DASH MOUNT O2 APXM	8	$138.00	$100.74	$805.92
7g	GA00580AA	ADD: TDMA OPERATION	8	$495.00	$361.35	$2,890.80
7h	G142AD	ADD: NO SPEAKER APX	8	$0.00	$0.00	$0.00
7i	GA00804AA	ADD: APX O2 CH (GREY)	8	$541.00	$394.93	$3,159.44
7j	G89AC	ADD: NO RF ANTENNA NEEDED	8	$0.00	$0.00	$0.00
7k	GA01339AA	ENH: SW P25 TRUNKING	8	$1,177.00	$859.21	$6,873.68

Any sales transaction following Motorola's quote is based on and subject to the terms and conditions of the valid and executed written contract between Customer and Motorola (the ""Underlying Agreement"") that authorizes Customer to purchase equipment and/or services or license software (collectively ""Products""). If no Underlying Agreement exists between Motorola and Customer, then Motorola's Standard Terms of Use and Motorola's Standard Terms and Conditions of Sales and Supply shall govern the purchase of the Products.

Motorola Solutions, Inc.: 500 West Monroe, United States - 60661 ~ #: 36-1115800

Line #	Item Number	Description	Qty	List Price	Sale Price	Ext. Sale Price
7l	G444AH	ADD: APX CONTROL HEAD SOFTWARE	8	$0.00	$0.00	$0.00
7m	W382AM	ADD: CONTROL STATION DESK GCAI MIC	8	$186.00	$135.78	$1,086.24

Subtotal $955,344.24

$87,700.62

Grand Total $1,043,044.86(USD)

Notes:

- Additional information is required for one or more items on the quote for an order.

Any sales transaction following Motorola's quote is based on and subject to the terms and conditions of the valid and executed written contract between Customer and Motorola (the ""Underlying Agreement"") that authorizes Customer to purchase equipment and/or services or license software (collectively ""Products""). If no Underlying Agreement exists between Motorola and Customer, then Motorola's Standard Terms of Use and Motorola's Standard Terms and Conditions of Sales and Supply shall govern the purchase of the Products.

Motorola Solutions, Inc.: 500 West Monroe, United States - 60661 ~ #: 36-1115800

MOTOROLA SOLUTIONS

QUOTE-2034113
Flagstaff PD 6000/8000/4500/8500
Quote

Billing Address:
FLAGSTAFF, CITY OF
419 N MOGOLLON ST
FLAGSTAFF, AZ 86001
US

Quote Date:02/01/2023
Expiration Date:02/28/2023
Quote Created By:
Douglas Buxbaum
Doug.Buxbaum@
motorolasolutions.com

End Customer:
FLAGSTAFF, CITY OF
Dan Musselman
DMusselman@coconino.az.gov

Contract: 21069 - STATE OF AZ

Line #	Item Number	Description	Qty	List Price	Sale Price	Ext. Sale Price
	APX™ 8000 Series	APX8000				
1	H91TGD9PW6AN	APX 8000 ALL BAND PORTABLE MODEL 2.5	16	$7,108.00	$5,188.84	$83,021.44
1a	Q806CB	ADD: ASTRO DIGITAL CAI OPERATION	16	$567.00	$413.91	$6,622.56
1b	Q361AN	ADD: P25 9600 BAUD TRUNKING	16	$330.00	$240.90	$3,854.40
1c	Q58AL	ADD: 3Y ESSENTIAL SERVICE	16	$184.00	$184.00	$2,944.00
1d	QA00580AA	ADD: TDMA OPERATION	16	$495.00	$361.35	$5,781.60
1e	QA05509AA	DEL: DELETE UHF BAND	16	-$800.00	-$584.00	-$9,344.00
1f	Q498AU	ENH: ASTRO 25 OTAR W/ MULTIKEY	16	$814.00	$594.22	$9,507.52
1g	H38BS	ADD: SMARTZONE OPERATION	16	$1,650.00	$1,204.50	$19,272.00
1h	Q629AH	ENH: AES ENCRYPTION AND ADP	16	$523.00	$381.79	$6,108.64
1i	QA01648AA	ADD: HW KEY SUPPLEMENTAL DATA*	16	$6.00	$4.38	$70.08
2	PMNN4486A	BATT IMPRES 2 LIION R IP67 3400T	16	$188.27	$99.00	$1,584.00

Any sales transaction following Motorola's quote is based on and subject to the terms and conditions of the valid and executed written contract between Customer and Motorola (the ""Underlying Agreement"") that authorizes Customer to purchase equipment and/or services or license software (collectively ""Products""). If no Underlying Agreement exists between Motorola and Customer, then Motorola's Standard Terms of Use and Motorola's Standard Terms and Conditions of Sales and Supply shall govern the purchase of the Products.
Motorola Solutions, Inc.: 500 West Monroe, United States - 60661 ~ #: 36-1115800

Line #	Item Number	Description	Qty	List Price	Sale Price	Ext. Sale Price
3	RLN4941A	REC ONLY EARPIECE W/ TRANSLUCET TUBE	16	$76.76	$56.03	$896.48
4	NNTN8860A	CHARGER, SINGLE-UNIT, IMPRES 2, 3A, 115VAC, US/NA	16	$169.56	$123.78	$1,980.48
5	RLN6554A	APX WIRELESS RSM W/ DUC US/NA/JP/TW	16	$324.00	$236.52	$3,784.32
	APX™ 8500					
6	M37TSS9PW1AN	APX8500 ALL BAND MP MOBILE	55	$5,667.00	$4,136.91	$227,530.05
6a	GA00580AA	ADD: TDMA OPERATION	55	$495.00	$361.35	$19,874.25
6b	GA01513AB	ADD: ALL BAND MOBILE ANTENNA (7/8/V/U)	55	$105.00	$76.65	$4,215.75
6c	G51AT	ENH:SMARTZONE	55	$1,650.00	$1,204.50	$66,247.50
6d	G78AT	ENH: 3 YEAR ESSENTIAL SVC	55	$288.00	$288.00	$15,840.00
6e	GA05509AA	DEL: DELETE UHF BAND	55	-$800.00	-$584.00	-$32,120.00
6f	GA01606AA	ADD: NO GPS/WI-FI ANTENNA NEEDED	55	$0.00	$0.00	$0.00
6g	G298AS	ENH: ASTRO 25 OTAR W/ MULTIKEY	55	$814.00	$594.22	$32,682.10
6h	B18CR	ADD: AUXILIARY SPKR 7.5 WATT APX	55	$66.00	$48.18	$2,649.90
6i	G843AH	ADD: AES ENCRYPTION AND ADP	55	$523.00	$381.79	$20,998.45
6j	G444AH	ADD: APX CONTROL HEAD SOFTWARE	55	$0.00	$0.00	$0.00
6k	G67EH	ADD: REMOTE MOUNT E5 MP	55	$327.00	$238.71	$13,129.05
6l	GA01517AA	DEL: NO J600 ADAPTER CABLE NEEDED	55	$0.00	$0.00	$0.00
6m	G806BL	ENH: ASTRO DIGITAL CAI OP APX	55	$567.00	$413.91	$22,765.05
6n	GA01670AA	ADD: APX E5 CONTROL HEAD	55	$717.00	$523.41	$28,787.55

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Motorola Solutions, Inc.: 500 West Monroe, United States - 60661 ~ #: 36-1115800

Line #	Item Number	Description	Qty	List Price	Sale Price	Ext. Sale Price
6o	W22BA	ADD: STD PALM MICROPHONE APX	55	$79.00	$57.67	$3,171.85
6p	G361AH	ENH: P25 TRUNKING SOFTWARE APX	55	$330.00	$240.90	$13,249.50
7	Trade-In	Expiration Date: 02/28/2023	1	-$32,000.00	-$32,000.00	-$32,000.00
Subtotal						$543,104.52
						$49,857.00
Grand Total						$592,961.52(USD)

Notes:

- Additional information is required for one or more items on the quote for an order.

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Motorola Solutions, Inc.: 500 West Monroe, United States - 60661 ~ #: 36-1115800

MOTOROLA SOLUTIONS

QUOTE-2045549
PW FULL ORDER PARKS/
PROSE,FLEET,SOLID WASTE

Billing Address:
FLAGSTAFF, CITY OF
419 N MOGOLLON ST
FLAGSTAFF, AZ 86001
US

Quote Date:02/10/2023
Expiration Date:05/11/2023
Quote Created By:
Douglas Buxbaum
Doug.Buxbaum@
motorolasolutions.com

End Customer:
FLAGSTAFF, CITY OF
Emily Markel
emarkel@flagstaffaz.gov

Contract: 21069 - STATE OF AZ
CTR046830

Line #	Item Number	Description	Qty	List Price	Sale Price	Ext. Sale Price
	APX™ 1500 Enhanced					
1	M36URS9PW1BN	APX1500 ENHANCED 7/800 MHZ MOBILE	94	$1,858.00	$1,356.34	$127,495.96
1a	G24AX	ENH: 3 YEAR ESSENTIAL SVC	94	$216.00	$216.00	$20,304.00
1b	QA01648AA	ADD: HW KEY SUPPLEMENTAL DATA*	94	$6.00	$4.38	$411.72
1c	GA00235AA	ADD: NO GPS ANTENNA NEEDED APX	94	$0.00	$0.00	$0.00
1d	G66BF	ADD: DASH MOUNT O2 APXM	94	$138.00	$100.74	$9,469.56
1e	GA00580AA	ADD: TDMA OPERATION	94	$495.00	$361.35	$33,966.90
1f	B18CR	ADD: AUXILIARY SPKR 7.5 WATT APX	94	$66.00	$48.18	$4,528.92
1g	GA00804AA	ADD: APX O2 CH (GREY)	94	$541.00	$394.93	$37,123.42
1h	GA01339AA	ENH: SW P25 TRUNKING	94	$1,177.00	$859.21	$80,765.74
1i	G444AH	ADD: APX CONTROL HEAD SOFTWARE	94	$0.00	$0.00	$0.00
1j	G335AW	ADD: ANT 1/4 WAVE 762-870MHZ	94	$15.00	$10.95	$1,029.30

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Motorola Solutions, Inc.: 500 West Monroe, United States - 60661 ~ #: 36-1115800

Line #	Item Number	Description	Qty	List Price	Sale Price	Ext. Sale Price
1k	W22BA	ADD: STD PALM MICROPHONE APX	94	$79.00	$57.67	$5,420.98
1l	G193AK	ADD: ADP ONLY (NON-P25 CAP COMPLIANT) (US ONLY)	94	$0.00	$0.00	$0.00
	APX™ 900					
2	H92UCF9PW6AN	APX 900 7/800 MHZ MODEL 2 PORTABLE	28	$1,898.00	$1,385.54	$38,795.12
2a	QA04096AA	ENH: P25 TRUNKING	28	$1,177.00	$859.21	$24,057.88
2b	QA01648AA	ADD: HW KEY SUPPLEMENTAL DATA*	28	$6.00	$4.38	$122.64
2c	Q667BB	ADD: ADP ONLY (NON-P25 CAP COMPLIANT) (US ONLY)	28	$0.00	$0.00	$0.00
2d	QA00580AF	ADD: TDMA OPERATION	28	$495.00	$361.35	$10,117.80
2e	H885BK	ADD: 3Y ESSENTIAL SERVICE	28	$133.00	$133.00	$3,724.00
3	PMPN4576A	CHARGER,CHGR DESKTOP SINGLE UNIT IMPRES EXT PS US/NA/TW	28	$82.08	$59.92	$1,677.76
4	Trade-In	Expiration Date: 03/31/2023	1	-$19,800.00	-$19,800.00	-$19,800.00
	APX™ 1500 Enhanced					
5	M36URS9PW1BN	APX1500 ENHANCED 7/800 MHZ MOBILE	10	$1,858.00	$1,356.34	$13,563.40
5a	G24AX	ENH: 3 YEAR ESSENTIAL SVC	10	$216.00	$216.00	$2,160.00
5b	QA01648AA	ADD: HW KEY SUPPLEMENTAL DATA*	10	$6.00	$4.38	$43.80
5c	W665BF	ADD: BASE STATION OP APX	10	$77.00	$56.21	$562.10
5d	G91AF	ADD: CNTRL STATION PWR SUPPLY	10	$296.00	$216.08	$2,160.80
5e	GA00235AA	ADD: NO GPS ANTENNA NEEDED APX	10	$0.00	$0.00	$0.00
5f	G66BF	ADD: DASH MOUNT O2 APXM	10	$138.00	$100.74	$1,007.40
5g	GA00580AA	ADD: TDMA OPERATION	10	$495.00	$361.35	$3,613.50
5h	G142AD	ADD: NO SPEAKER APX	10	$0.00	$0.00	$0.00

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Motorola Solutions, Inc.: 500 West Monroe, United States - 60661 ~ #: 36-1115800

Line #	Item Number	Description	Qty	List Price	Sale Price	Ext. Sale Price
5i	GA00804AA	ADD: APX O2 CH (GREY)	10	$541.00	$394.93	$3,949.30
5j	G89AC	ADD: NO RF ANTENNA NEEDED	10	$0.00	$0.00	$0.00
5k	GA01339AA	ENH: SW P25 TRUNKING	10	$1,177.00	$859.21	$8,592.10
5l	G444AH	ADD: APX CONTROL HEAD SOFTWARE	10	$0.00	$0.00	$0.00
5m	G193AK	ADD: ADP ONLY (NON-P25 CAP COMPLIANT) (US ONLY)	10	$0.00	$0.00	$0.00
5n	W382AM	ADD: CONTROL STATION DESK GCAI MIC	10	$186.00	$135.78	$1,357.80
6	PMMN4099CL	AUDIO ACCESSORY-REMOTE SPEAKER MICROPHONE,IP68 REMOTE SPEAKER MICROPHONE,3.5MM,UL	18	$142.56	$104.07	$1,873.26

Subtotal $418,095.16

Estimated Tax $38,385.32

Grand Total $456,480.48(USD)

Notes:

- Additional information is required for one or more items on the quote for an order.

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Motorola Solutions, Inc.: 500 West Monroe, United States - 60661 ~ #: 36-1115800

MOTOROLA SOLUTIONS







FLAGSTAFF, CITY OF

Emergency MGMT APX 8000 XE

02/08/2023

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MOTOROLA SOLUTIONS

QUOTE-2043161
Emergency MGMT APX 8000 XE

Billing Address:
FLAGSTAFF, CITY OF
211 W ASPEN
FLAGSTAFF, AZ 86001
US

Quote Date:02/08/2023
Expiration Date:04/30/2023
Quote Created By:
Douglas Buxbaum
Doug.Buxbaum@
motorolasolutions.com

End Customer:
FLAGSTAFF, CITY OF
Mark Wilson
mwilson@flagstaffaz.gov

Contract: 21069 - STATE OF AZ

Line #	Item Number	Description	Qty	List Price	Sale Price	Ext. Sale Price
	APX™ 8000 Series	APX8000XE				
1	H91TGD9PW5AN	APX 8000 ALL BAND PORTABLE MODEL 1.5	2	$6,863.00	$5,009.99	$10,019.98
1a	QA01648AA	ADD: HW KEY SUPPLEMENTAL DATA	2	$6.00	$4.38	$8.76
1b	Q806CB	ADD: ASTRO DIGITAL CAI OPERATION	2	$567.00	$413.91	$827.82
1c	Q361AN	ADD: P25 9600 BAUD TRUNKING	2	$330.00	$240.90	$481.80
1d	QA02006AC	ENH: APX8000XE RUGGED RADIO	2	$880.00	$642.40	$1,284.80
1e	QA00580AA	ADD: TDMA OPERATION	2	$495.00	$361.35	$722.70
1f	QA05509AA	DEL: DELETE UHF BAND	2	-$800.00	-$584.00	-$1,168.00
1g	Q887AU	ADD: 5Y ESSENTIAL SERVICE	2	$306.00	$306.00	$612.00
1h	Q498AU	ENH: ASTRO 25 OTAR W/ MULTIKEY	2	$814.00	$594.22	$1,188.44
1i	H38BS	ADD: SMARTZONE OPERATION	2	$1,650.00	$1,204.50	$2,409.00
1j	Q629AH	ENH: AES ENCRYPTION AND ADP	2	$523.00	$381.79	$763.58

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Motorola Solutions, Inc.: 500 West Monroe, United States - 60661 ~ #: 36-1115800

Line #	Item Number	Description	Qty	List Price	Sale Price	Ext. Sale Price
2	PMMN4099CL	AUDIO ACCESSORY-REMOTE SPEAKER MICROPHONE,IP68 REMOTE SPEAKER MICROPHONE,3.5MM,UL	2	$142.56	$104.07	$208.14
3	NNTN8860A	CHARGER, SINGLE-UNIT, IMPRES 2, 3A, 115VAC, US/NA	1	$169.56	$123.78	$123.78

Subtotal $17,482.80

$1,574.63

Grand Total $19,057.43(USD)

Notes:

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Motorola Solutions, Inc.: 500 West Monroe, United States - 60661 ~ #: 36-1115800

Public Communication Equipment and Services

CTR046830

Motorola Solutions Inc.

This contract is for public communication equipment and services for all State of Arizona Agencies, Boards and Commissions including members of the State of Arizona Purchasing Cooperative. The sections awarded include:

- **2-Way Radios**
- **Digital Microwave Terminals**
- **LMR Base Station Antennas, Microwave Antennas**
- **Radio Dispatch Consoles**
- **Back-up Batteries**
- **Prefab Communications Shelter**
- **Service**

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- **Offer and Acceptance**
- **Part 2: Scope, Pricing and Terms and Conditions (Rev 2)**
- **3-C Proposed Subcontracts**
- **5-B Conformance Statement**
- **Exceptions**
- **BAFO Change Log**

The solicitation for this contract was ADSPO19-00008376 and was started in ProcureAZ. The solicitation file can be found in APP under BPM001941.

Attachment 1
Offer and Acceptance Form

SUBMISSION OF OFFER: Undersigned hereby offers and agrees to provide Biometric Products and Services to in compliance with the Solicitation indicated above and our Offer indicated by the latest dated version below:

Initial Offer:	1. **September 4, 2018** (date)	LM (initial)						
Revised Offers:	2. x (date #1)	(initial)	3. x (date #1)	(initial)	4. x (date #1)	(initial)		
	5. x (date #4)	(initial)	6. x (date #5)	(initial)	7. x (date #6)	(initial)		
Best and Final Offer:	8. **September 16, 2019** (date)	LM (initial)						

Motorola Solutions, Inc.
Offeror company name

Signature of person authorized to sign Offer — Initials

2900 S. Diablo Way Ste 150
Address

Larry Mabry MSSSI Vice President & Director Sales
Printed name and title

Tempe, AZ 85282
City | State | ZIP

Walter Whatley Senior Account Executive
Contact name and title

36-1115800
Federal tax identifier (EIN or SSN)

Walter.whatley@motorolasolutions.com 520-457-8604
Contact Email Address — Contact phone number

CERTIFICATION: By signature in the above, Offeror certifies that it:

1. will not discriminate against any employee or applicant for employment in violation of Federal Executive Order 11246, [Arizona] State Executive Order 2009-9 or A.R.S. §§ 41−1461 through 1465;
2. has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the submitted offer. Failure to provide a valid signature affirming the stipulations required by this clause will result in rejection of the Offer. Signing the Offer with a false statement will void the Offer, any resulting contract, and may be subject to legal penalties under law;
3. complies with A.R.S. § 41-3532 when offering electronics or information technology products, services, or maintenance; and
4. is not debarred from, or otherwise prohibited from participating in any contract awarded by federal, state, or local government.

ACCEPTANCE OF OFFER: State hereby accepts the initial Offer, Revised Offer, or Best and Final Offer identified by number **#** at the top of this form, and which was dated **date** (the Accepted Offer). Offeror is now bound (as Contractor) to carry out the Work under the attached Contract, of which the Accepted Offer forms a part. Contractor is cautioned not to commence any billable work or to provide any material or perform any service under the Contract until Contractor receives the applicable Order or written notice to proceed from Procurement Officer.

State's Contract No. is: CTR046830 **The effective date of the Contract is: 10-09-2019** **Contract awarded: 10-09-2019**

Procurement Officer signature — Procurement Officer, James Atkins

Part 2: Scope, Pricing and Terms and Conditions (Rev 2)

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1.0 Background

1.1 The intent of this Solicitation is to provide both public communications equipment and services to support the State of Arizona's Agencies, Boards and Commissions including members of the State of Arizona Purchasing Cooperative.

1.2 The Solicitation shall describe the State's requirement and minimum technical specifications for the equipment and services the State wishes to purchase under the resultant contract(s).

1.3 This is a multi-award contract with Offeror ability to provide proposal's on one or more sections of this Scope of Work. Award will be made by Scope of Work Sub-section(s) two (2) through nine (9) independently.

2.0 2-Way Radios

2.1 **Analog & Digital Vehicular Mounted Mobile Radio Equipment**: Various types of vehicular-mounted mobile radio equipment for VHF, UHF, and 700/800 MHz trunked and conventional, analog and digital radio equipment

2.2 **Mobile Data Radio Vehicular Mounted Equipment**: UHF or 700/800 MHz mobile digital data link radios.

2.3 **Desk-top Analog &Digital Base Station Radio Equipment:** High-quality VHF, UHF, and 700MHz, 806-869 MHz, conventional, and 700/800 MHz trunked, multi-channel base/control stations using phase/frequency or digital modulation.

2.4 **Analog & Digital Personal/Portable Radio Equipment:** Various types VHF, UHF, and 700/800 MHz, conventional and trunked personal/portable radio transceivers.

2.5 **Analog & Digital Motorcycle Rear-mounted Radios:** 160+ channel, two-piece, VHF High-band, UHF, and 700/800 MHz, all solid-state motorcycle radio.

2.6 **Low Power Vehicular Repeater:** VHF, UHF, and 700/800 MHz in-vehicle mounted repeater, for attachment to the vehicle's mobile radio and extending the range of the user's portable radio.

2.7 **Multi Band Radios:** Mobile and potables capable of operating on more than one public safety band.

2.8 **Base/Mobile Relay Station Fixed Radio Equipment:** VHF High-band, UHF, 700/800 MHz continuous duty, mobile relay/base station equipment using phase, frequency, or digital modulation.

2.9 **Fixed Link Base Radios:** VHF, UHF, and 700/800 MHz fixed radios for site to site linking.

2.10 **Communications Service Monitors:** Communications Service Monitors for use in the maintenance of Arizona's Radio Communications Systems.

The following are definitions of terminology as they apply to the State's requirements as stated in this solicitation:

- ***VHF (High-band):*** means 150-174 MHz, additional coverage desirable but not required
- ***UHF***: means 450-470 MHz, additional coverage desirable but not required.
- ***700/800***: means radios capable of operation across the complete 700 and 800 MHz public safety band (769-869)

- ***800***: means radios capable of operating on FCC designated Public Safety LMR channels above 806 MHz
- ***Narrowband***: radios meeting FCC 12.5 KHz channel widths and meeting the mask requirements of FCC Part 90.210d.
- ***FDMA***: Frequency Division Multiple Access as applies to P25 or DMR.
- ***TDMA***: Time Division Multiple Access as applies to P25 Phase II, or Open Sky.
- ***P25*:** Project 25 per TIA standards AA102 etal
- ***High Tier Subscriber Equipment***: means radios designed for Public Safety applications with the highest transmitter and receiver performance specifications: Frequency Stability, Hum and Noise, Spurious Emissions, High Power; Receive Adjacent Channel Selectivity, Spurious and Intermodulation Rejection. Available features like: P25 conventional and trunking operations FDMA – TDMA, high channel / talk group count (1000+), AES / DES encryption, MultiKey, OTAR, OTAP, multiple display options, including multi–line alpha-numeric, keypad; Meets Mil Spec 810 C/D/E/F.
- ***Mid-Tier Subscriber Equipment***: means radios designed for Public Safety applications with good transmitter and receiver performance specifications: Frequency Stability, Hum and Noise, Spurious Emissions, Mid Power; Receive Adjacent Channel Selectivity, Spurious and Intermodulation Rejection. May include features like: P25 trunk and conventional operations, reduced channel / talk group count (100+), Encryption; Meets Mil Spec 810 C/D/E/F. High-Tier performance specifications apply unless otherwise listed.
- ***Low Tier Subscriber Equipment***: means radios designed for Business & Industry applications with good transmitter and receiver performance specifications for: Hum and Noise, Spurious Emissions; Receive Adjacent Channel Selectivity, Spurious and Intermodulation Rejection, Mid Power & reduced channel count; Meets Mil Spec 810 C/D/E/F.

2.11 **Radio Standards** - The radio equipment provided by the contractor shall meet or exceed EIA, TIA, FCC, IEEE and NEMA requirements, standards, specifications, practices and/or procedures current at the time of contract award. All equipment will be FCC Type Approved for class of service specified. The measurement procedures and performance standards for land mobile radio equipment specified herein shall comply with the TIA/EIA-603 standards. Standards for equipment employing digital C4FM or CQPSK modulation shall comply with the TIA/EIA-102 standards. Where the State's specification are more stringent than those of EIA/TIA, the State's specification shall apply.

2.12 **Transmitter Characteristics** - Transmitter shall use only solid-state active components. Synthesizing techniques of frequency generation are required for all but the Low-Tier models. Each Low-Tier unit will have a solid state sub-audible tone encoder.

2.12.1 Operating Frequency: The transmitter shall be factory supplied and aligned to the specific RF frequencies given in the purchase order.

2.12.2 Transmitter Standards: The transmitter shall meet or exceed the minimum standards as set forth in EIA/TIA Standard RS152B. Where the requirements of the State's specifications are more stringent than those of the EIA, the State's specifications shall apply. The transmitter shall comply with all FCC Rules and Regulations in effect on the date of issuance of the purchase order.

2.12.3 System Modulation, Narrowband:

2.12.3 (a) High-Tier: VHF/UHF/700/800: Analog - 11K2F3E / (800 -16K0F3E); Digital - 8K11F1E, and others in compliance with FCC efficiency standards

2.12.3 (b) Low-Tier: VHF or UHF: +/-2.5 KHz (11K2F3E)

2.12.4 Audio Frequency Harmonic Distortion:

High-Tier: All Bands: Less than 3% at 1000 Hz and 60% maximum deviation

Low Tier: All Bands: Less than 5% at 1000 Hz and 60% maximum deviation.

2.12.5 Carrier Frequency Stability: Radios offered under this contract shall meet or exceed the FCC stability requirements listed under 47CFR90.213 and 47CFR90.539. High-Tier radios are expected to exceed these specifications as applicable. All units will be priced and sold meeting these specifications.

2.12.6 Frequency Spread: Per Band definition; with no degradation in power output.

2.12.7 RF Output Impedance: 50 ohms.

2.12.8 Time-out Circuit: The transmitter shall be equipped with an adjustable time-out timer circuit that will turn off the transmitter after continuous transmitting. An audio tone shall be provided that will alert the operator that the transmitter has been timed out. Releasing the microphone push-to-talk button shall instantly reset the timer.

2.12.9 Continuous Toner Encoder: The conventional (non-trunked) transmitter shall be supplied with the capability to generate up to 32 sub-audible tones to modulate the transmitter for the full duration of all transmissions. The tone generators shall be designed for continuous operation with total harmonic distortion less than 10%. The tone encoder shall conform to all standards of EIA/TIA Standard RS-220A. There shall be available twenty (20) narrow band tone channels between 100.0 and 192.8 Hz inclusive (of Groups A and B) in accordance with EIA/TIA Standard RS-220A for continuous tone-controlled squelch system.

The frequency of the sub-audible tone generator shall be controlled by a solid-state tone network or be software based and shall be maintained within +/- 0.5% of its specified frequency over the temperature range of -30 degrees C to +60 degrees C.

The transmitter unit shall transmit a special sub-audible tone burst upon release of the push-to-talk switch. This burst shall last 160 +/- 40 msec. and be the same frequency as the regular tone supplied for a particular channel but out of phase by 180 +/-60 degrees from the previously transmitted tone. This circuitry shall be explicitly designed for the elimination of receiver "squelch tail."

2.12.10 Final Amplifier Protection: The transmitter output stage shall be protected from burnout due to excessive antenna VSWR. No damage shall result when the transmitter is subjected to a short or open circuit antenna output during continuous keying for a one minute period.

2.13 **Receiver Characteristics -** The receiver shall be completely solid-state, utilizing only high-quality transistors, integrated circuits, diodes, and other solid-state devices. The receiver shall be rated for continuous operation. A channel scanning feature with selectable priority may be listed as a separate option.

2.13.1 Operating Frequency: Per the band definitions.

2.13.2 Receiver Standards: The receiver shall meet or exceed the "minimum standards" as set forth in EIA/TIA Standard RS204C. Where the requirements of the State's specification are more stringent than those of the EIA/TIA, the State's specifications shall apply.

Definitions, standards, and methods of measurements shall conform to EIA/TIA Standard RS204C, unless specifically described otherwise.

2.13.2 (a) EIA 12 dB SINAD Sensitivity:

- High-Tier: All Bands: 0.25 microvolt or better, Analog
- Mid-Tier: All Bands: 0.3 microvolt or better, Analog
- Low-Tier: All Bands: 0.35 microvolt or better, Analog

2.13.2 (b) RF Input Impendence: 50 ohms

2.13.3 Squelch Circuitry: The conventional analog (non-trunked) receiver shall be supplied with carrier squelch and tone-coded squelch capability for a minimum of 32 CTCSS tone frequencies. The tone frequencies will be specified in the State purchase order. Tone decode circuitry shall be the sub-audible CTCSS type as described in EIA/TIA Standard RS-220A and shall meet all specifications of RS-220A.

There shall be two modes of operation, to be selected at the will of the operator. These are:

- Carrier squelch operation - The receiver squelch opens for any sufficiently strong on-frequency RF carrier; and
- Tone-coded squelch and carrier squelch operation- The receiver is muted until the incoming on-frequency RF carrier is modulated by the proper continuous sub-audible tone and the on frequency RF carrier is sufficiently strong to break squelch as determined by the carrier squelch adjustment control. This "and" squelch condition shall remain continuous for the duration of carrier reception. Selection of the mode of operation shall be made by manual switch control.

2.13.4 Carrier Actuated Squelch Circuit: The carrier actuated squelch shall be of the adjustable sensitivity type with a continuously variable control. The squelch circuit shall be designed to not respond to noise bursts.

2.13.5 Tone Actuated Squelch Circuits: The tone actuated squelch circuit shall conform to all standards of EIA/TIA Standard RS-220A. Continuous presence of the proper modulating tone shall be required to keep the squelch open when in the carrier squelch and tone-coded squelch mode of operation.

2.13.6 Tone Squelch Characteristics:

- Tone deviation shall not exceed 10% of the peak system deviation. A tone signal 3% removed from the frequency of the proper tone shall not operate the squelch circuit, regardless of the level recovered at the discriminator.
- The tone modulation shall be filtered from the voice signal such that with tone deviation set at 20% of the peak system deviation, the tone fundamental frequency shall be at least 30 dB below the level of a 1000 Hz tone transmitted at 2/3 rated system deviation with the receiver adjusted for maximum rated audio output.
- The tone squelch circuit shall respond by squelching the receiver within 160 +/-40 msec. of a tone burst 180 +/-60 degrees out of phase with the previous tone. This circuitry shall be explicitly designed to eliminate receiver "squelch tail."

2.14 Transceiver Unit Specifications:

2.14.1 Antenna Switching. Antenna switching must be accomplished by a hermetically sealed relay switch or some other reliable mechanical or electrical means.

2.14.2 Environmental Standards. All equipment provided under this specification shall be tested to, and conform to, the requirements of Mil Std. 810C/D/E for shock, vibration, humidity, dust, salt, fog, and other weather conditions.

2.15 Trunking Operation Option:

2.15.1 High Tier: Trunked radio options will be considered. Any such analog trunked radio shall meet the same technical RF specifications as the conventional model. Analog trunked radios shall conform to APCO 16 protocols. Digitally trunked radios should be of the same model line as the conventional radio, and shall be fully compatible with the P25 TIA/EIA Phase I Standard for FDMA, or the TDMA P25 Phase II or Open Sky Public Safety Trunking.

2.15.2 Low Tier: Trunked radio options will be considered. Any such trunked radio shall meet the same technical RF specifications as the conventional model.

2.15.3 Auxiliary Test Equipment: Associated test equipment such as plug-in service meters, computer interface cables/boxes, and test bench control set-ups may be offered. Any designated service meter should be compatible with the transceiver metering socket(s) and have scale calibrations consistent with the readings called for in the service manual. The test-bench control set-up shall include the proper style control heads, speaker, microphone, metering panel, and interconnecting cabling at least 6 feet in length. A price shall be included for an optional frequency programmer and software.

2.16 ANALOG & DIGITAL VEHICULAR MOUNTED MOBILE RADIO EQUIPMENT

2.16.1 **Model Specifications**

2.16.1 (a) **High-Tier, Mid-Tier:** The following specification describes various types of vehicular-mounted mobile radio equipment. These radios may be either one-piece (dash mount) or two-piece (remote mount). These radios are: VHF High-band, UHF and 700/800 MHz radios capable of analog conventional and trunked; and digital conventional and trunked radio operation.

2.16.1 (b) **Low-Tier:** The following specification describes various types of vehicular-mounted mobile radio equipment; High-band VHF, UHF, and 800 MHz. These radios may be either one-piece (dash mount) or two-piece (remote mount).

2.17 Electrical Specifications:

The equipment shall be designed to operate from a nominal 12 volt negative ground vehicle electrical system. Adequate overload and reverse polarity protection shall be provided. Control circuits shall be arranged so that the vehicle ignition switch will disable both the transmitter and receiver when in the OFF position, but allow operation when in the ACCESSORY position.

2.18 Transmitter Characteristics:

The transmitter shall be of modern solid-state design.

2.18.1 **Carrier Power Output Rating: (all minimum intermittent power at 20% duty cycle)**

2.18.2 **High Tier VHF:** 40 watts or, 50-110 watts, adjustable UHF: 40 watts or 50-100 watts, adjustable 700-800 MHz Trunked: 10-30 Watts

2.18.3 **Low-Tier VHF**: 25 Watts minimum, adjustable UHF: 25 Watts minimum, adjustable 700-800 MHz: 15 Watts minimum, adjustable.

2.18.4 Conducted and Radiated Spurious Emission Attenuation:

2.18.5 **High-Tier** -75 dB or greater

2.18.6 **Mid-Tier** -70 dB or greater

2.18.7 **Low Tier** -55 dB or greater

2.18.8 **Audio Frequency Harmonic Distortion:**

2.18.8 (a) High-Tier - All Bands: Less than 3% at 1000 Hz and 60% maximum deviation

2.18.8 (b) Low Tier - All Bands: Less than 5% at 1000 Hz and 60% maximum deviation

2.18.9 **FM Hum and Noise Attenuation:**

2.18.9 (a) **High-Tier** -40 dB (12.5 KHz)

2.18.9 (b) **Low Tier** -35 dB (12.5 KHz)

2.19 Receiver Standards

The receiver shall meet or exceed the "minimum standards" as set forth in EIA/TIA Standard RS-204C. Where the requirements of the State's specification are more stringent than those of the EIA/TIA, the State's specifications shall apply. Definitions, standards, and methods of measurements shall conform to EIA/TIA Standard RS-204C, unless specifically described otherwise.

2.19.1 **Adjacent Channel Selectivity Desensitization**

2.19.1 (a) High-Tier -70 dB or better (12.5 KHz)

2.19.1 (b) Mid-Tier -65dB or better (12.5 KHz)

2.19.1 (c) Low-Tier -60 dB or better (12.5 KHz)

2.19.2 **Spurious Response Attenuation:**

2.19.2 (a) High-Tier -80 dB, or better (12.5 kHz)

2.19.2 (b) Low-Tier -70 dB, or better (12.5 kHz)

2.19.3 **Intermodulation Spurious Attenuation:**

2.19.3 (a) High-Tier -80 dB, or better (12.5 kHz)

2.19.3 (b) Low-Tier -70 dB, or better (12.5 kHz)

2.19.4 **Audio Power Output:**

2.19.4 (a) High-Tier 10 watts minimum, 3% maximum distortion

2.19.4 (b) Low-Tier 7.5 watts minimum, 5% max. dist., external speaker

2.20 Transceiver Unit Specifications:

2.20.1 **Power Requirements.** The unit shall draw less than 1.0 amp of current with the receiver and transmitter in a quiescent "ON" condition. The transmitter/receiver shall be a complete integral unit with all previously specified items, including AF or RF power amplifier built internally into the transceiver unit.

2.20.2 **Physical Construction**

- The complete transmitter and receiver combination shall be mounted in a single housing.

- The housing shall be furnished in enamel or lacquer over a non- ferrous plating of A-N standard chrome type metal primer or equal.
- The housing shall be of steel or equivalent construction and not louvered, to inhibit the entrance of dust and other foreign matter. A locking device shall be used to prevent the unit from being removed from its mounting by unauthorized personnel.
- All interconnection cabling between the transmitter, receiver, and power supply shall be accomplished internally in the equipment housing. With exception of the power, control, and antenna cabling, there shall be no external connections or cabling on the equipment housing.
- All frequency determining elements in the transmitter and receiver shall have a locking or clamping device to ensure permanent connection during operation.
- The maximum transmitter/receiver dimensions shall not exceed 2.5" x H x 7.0" W x 13.0" L. All but the High-Tier Model must weigh less than 8.5 lbs. The complete mobile unit shall be capable of normal operation when mounted in any physical position.

2.20.3 **Interconnecting Cables.** All cables and wires shall be furnished to interconnect the radio set with its accessories and the vehicle's electrical system. Cables shall be insulated, waterproofed and equipped with appropriate connectors. All plug-in connectors shall be of the heavy-duty type and shall be provided with threaded coupling rings or other substantial fool proof locking devices to prevent accidental disconnect.

2.21 Supplied Components: The vendor shall supply all necessary components such as cased permanent magnet type loud speaker, combination transmitter/receiver, separate control head, a palm -type microphone, all ROMS, necessary control, power and cables, and all required mounting hardware as part of the Low-Tier transceiver package.

2.21.1 **Microphone and Control Head**

- A palm-type dynamic low impedance microphone with preamplifier and spring clip shall be supplied with each mobile unit. The microphone shall be ruggedly constructed to withstand the severe usage of mobile operations and shall have a push-to-talk switch mounted on the microphone housing. The microphone shall be provided with a nominal 4 ft. length self-retracting coil type cord. A separate matching control head (not part of the microphone) including all controls required for operation of the transmitter/receiver equipment shall be furnished as part of the equipment.
- The control head for a 2-piece control unit shall be capable of mounting on the vehicle dash or floorboard and a suitable inter-cabling kit shall be provided to interconnect the control head and the transmitter/receiver equipment. The control cable to be supplied shall be at least 20 feet in length and shall not have any intermediate junction boxes or barrier strips.
- The control head shall incorporate as a minimum:
  1. An ON and OFF switch.
  2. An indicator lamp to indicate that the radio is on.
  3. A squelch sensitivity control.
  4. Tone squelch disable switch, which may be located on the microphone hang-up brackets.

5. A volume control button or knob. (Clockwise Volume increase)
6. A red light that illuminates when the transmitter push-to-talk switch is activated.
7. Channel (Talk Group) selection control switch or knob.
8. Scan switch with channel priority select.
9. (**High-Tier/ Mid-Tier Requirement only**) A LCD alphanumeric readout display for channel information.

- All indicator lights shall be LED or LCD, or some other proven long-life illumination device (30,000 hour average life or better for High-Tier, 10,000 hour average life or better for all other models). All background lighting shall be diffused and non-glaring, with intensity sufficient for high ambient daytime lighting.
- The alphanumeric display control head shall be factory preprogrammed to the customer's channel labeling requirements. Radio frequency channeling shall also be preprogrammed at the factory.

2.21.2 **Loud Speaker.**
A heavy-duty permanent magnet loud speaker rated for a minimum of 10 watts and mounted in a heavy metal or high impact plastic case with mounting brackets shall be provided.

2.21.3 **Power Cable**.
One battery cable (hot) of at least 22 feet in length shall be supplied with each unit.

2.22 Optional Accessories:

The following accessories to the mobile unit are desired:

- **(High-Tier, Mid-Tier,)** Digital voice encryption, including AES and DES.
- **(High-Tier, Mid-Tier, Low-Tier)** Digitally controlled remote control head with alpha/numeric readout.
- (**High-Tier, Mid-Tier, or Low-Tier)** Analog or digital voice encryption, DTMF tone generator from microphone.

2.23 Servicing:

Transmitter/receiver equipment shall be readily removable from the mount for routine servicing. There shall be provisions for convenient metering of all essential transmitter and receiver circuits from multi-pin metering socket(s). All metering points shall be properly decoupled and connected to the metering socket(s). Provision for automated test set radio analysis is acceptable. All circuit modules shall be easily accessible plug-in printed circuit type fiberglass boards. Easy access shall be provided to all other portions of the unit.

2.24 <u>MOBILE, DATA RADIO, VEHICULAR MOUNTED EQUIPMENT</u>

This specification describes the minimum requirements for a UHF or 700/800 MHz mobile digital data link radio. The radio shall operate on a 25 KHz bandwidth channel at various data speeds from 19.2 Kb/sec to 44.3 Kb/sec, or 9.6 Kb/sec to 22 Kb/sec on a 12.5 KHz channel, or greater, depending upon signal conditions and BER conditions. Diversity receiver technology is encouraged, but not mandatory. Specifications shall meet voice radio specification unless otherwise listed.

2.24.1 **Transmitter Characteristics:**

2.24.1 (a) Operating Frequency. The transmitter shall be capable of operating on at least 16 separate conventional frequencies. The transmitter shall be factory supplied and aligned to the specific RF frequencies given in the purchase order.

Carrier Power Output Rating: (all minimum intermittent power at 20% duty cycle)
UHF: 10-40 Watts
800 MHz: 10-35 Watts
900 MHz: 10-25 Watts

- **System Modulation:**

UHF/800 MHz: Digital (8K6DF1D, 15K3F1D, 15K0F1D, 15K6F1D

- **Conducted and Radiated Spurious Emission Attenuation:**

UHF/800 MHz: -75 dBc

- **Harmonic Emission Attenuation**:

UHF/800 MHz: -80 dB

- **FM Hum and Noise Attenuation:**

UHF/800 MHz: -40 dB below 60% max deviation

2.25 Receiver Characteristics:

2.25.1 **Operating Frequency**

The receivers shall be capable of receiving on a minimum of 16 channels at UHF 450 MHz, and at 800 MHz.

2.25.2 **Receiver Standards:**

- **EIA 12 dB SINAD Sensitivity:**

All Bands: 0.35 microvolts

- **Adjacent Channel Selectivity Desensitization:**

UHF/800/900 MHz: 65 dB (12.5 KHz narrowband digital)

UHF/800 MHz: 75 dB (wideband 25 KHz)

- **Spurious Response Attenuation:**

UHF: -80 dB

800/900 MHz: -80 dB

- **Intermodulation Spurious Attenuation:**

UHF/800 MHz: -75 dB

- **Frequency Stability:**

UHF/800/900 MHz: 1.5 ppm

2.26 DESK-TOP ANALOG & DIGITAL BASE STATION RADIO EQUIPMENT:

This specification describes low and mid power radios, for desktop or wall mount, for use either as a local base or as a control station for a repeater or trunked network.

2.26.1 This device has an integrated housing with the AC power supply and the radio.

2.26.2 An option for this class is a remote line interface.

2.26.3 Offerings shall meet the corresponding mobile radio applications.

2.27 ANALOG & DIGITAL PERSONAL /PORTABLE RADIO EQUIPMENT

2.27.1 **Model Specifications**

2.27.1 (a) High-Tier

This specification describes various types VHF, UHF, and 700-800 MHz, narrow band, conventional and trunked personal/portable radio transceivers.

Specifications for battery charging units and jerk-and-run mobile radio converter consoles are also included.

2.27.1 (b) Mid-Tier

This specification describes various types VHF, UHF, and 700/800 MHz analog, digital, conventional and trunked personal/portable radio transceivers.

2.27.1 (c) Low-Tier

This specification describes various types VHF, UHF, and 800 MHz analog conventional and trunked personal/portable radio transceivers

2.28 Transmitter Standards

Definitions, standards, and methods of measurement shall conform to EIA Standard RS-316B, unless otherwise noted.

2.28.1 (a) Carrier Power Output

- High-Tier

VHF: 5 watts minimum

800 MHz: 3 watts minimum

- Low-Tier

2 watts minimum

2.28.1 (b) Spurious and Harmonic Emission

- High-Tier -75 dBc
- Low-Tier -60 dBc

2.28.1 (c) FM Hum and Noise

- High-Tier -40 dB or better (12.5 kHz)
- Low-Tier -35 dB or better (12.5 kHz)

2.28.1 (d) Transmit Audio Distortion

- High-Tier Less than 3%
- Low-Tier Less than 5%

2.29 Receiver Characteristics

2.29.1 Adjacent Channel Selectivity

• High-Tier -61 dB or better (12.5 kHz)

• Low-Tier -50 dB or better (12.5 kHz)

2.29.2 Intermodulation

- High-Tier -75 dB or better (12.5 kHz)
- Low-Tier -60 dB or better (12.5 kHz)

2.29.3 Spurious and Image Rejection

- High-Tier -75 dB or better (12.5 kHz)
- Low-Tier -60 dB or better (12.5 kHz)

2.29.4 Audio Power Output

- High-Tier 500 mw at less than 3% distortion
- Low-Tier 500 mw at less than 5% distortion

2.30 General Electric and Mechanical Characteristics:

2.30.1 **Components Included:**

The vendor shall supply all necessary components, such as transceiver, battery, and flexible antenna.

The radio shall effectively have the following exterior controls: Power on/off, volume, channel selector, and push-to-talk switch. The radio shall be supplied with an integral microphone and loud-speaker. The push-to-talk switch shall be located on the side of the transceiver so it may be conveniently depressed while speaking into the microphone.

2.30.2 **Programming:**

- Each unit under this section except for the Low-Tier model shall be completely Field programmable. All channel information such as transmit and receive RF frequencies; CTCSS tone frequencies, and anything else which would be functionally tied to the channel selector of the radio, shall be fully field programmable and reprogrammable utilizing a single programming unit.
- Field Programmer - Each Vendor shall provide as an option, a field programming unit which is designed to fully program the channel personality of each radio under this section. The programmer may either be a self-contained programming unit, or the programmer may consist of an interface unit and software to convert a personal computer to a field programmer.

2.31 Battery Cycle

The rechargeable battery supplied with each radio shall have the capacity to provide at least 8 hours of service when used in a 5% transmit, 5% receive, 90% standby duty cycle.

2.32 Battery Chargers

2.32.1 **High-Tier:** Single and multiple (minimum 5 unit) battery chargers shall be available and priced separately on the price pages. The chargers shall recharge a completely discharged battery within 3 hours; thereafter a low (trickle) charge rate shall be available.

The chargers shall be UL approved and operate from a 120-volt A.C., 60 Hz power source. Protection shall be provided to prevent battery damage by over-charging or over-heating.

2.32.2 **Low-Tier:** A single unit battery charger shall be available and priced separately on the price pages. The charger shall recharge a completely discharged battery within 14 hours; thereafter a low (trickle) charge rate shall be available. The charger shall be UL approved and operate from a 120-volt A.C., 60 Hz power source. Protection shall be provided to prevent battery damage by over-charging or over-heating.

2.33 Mobile Radio Converter Console and Charger (High-Tier Model Only):

2.33.1 **Availability**: There should be available, as an extra option, a mobile charger/converter console. The charger/converter console shall conform to the following criteria:

1. The vehicular chargers shall accept both VHF, UHF, 700/800 portables.

2. Circuitry shall be incorporated in the charger which will prevent over charging the battery if it is left on charge indefinitely.

3. The unit shall completely recharge either low or high capacity batteries in three hours or less.

4. A temperature sensing logic circuit shall be provided that prevents charging a battery that is too hot or cold for reliable safe charging.

5. When the portable is in the vehicular charger, the battery shall be electrically disconnected and the portable shall be powered from the vehicle battery. Operation of the portable in the charger shall not drain or prevent the portable battery from charging. It shall be possible to use the portable in the charger even if its battery is dead.

6. Audio power amplifier and charger circuitry shall be turned on by insertion of the portable in the charger and turned off by removal of the portable from the charger.

7. The charger/converter shall provide the vehicle enclosure for the radio and shall provide for the following items:

- Connects the radio to the external antenna.
- Connects the radio to the vehicle microphone.
- Connects the radio to the vehicle audio amplifier and speaker.
- Connects the radio to the charging circuit.

2.33.2 A key locking assembly shall be furnished to provide for locking the radio in the charger unit. The charger/converter mounting shall meet applicable federal safety standards for automotive accessories. A red LED "Transmit" indicator.

2.33.3 Accessories - Each charger/converter shall include the following accessories: • Microphone with coiled cord and connector.

- A 12 watt amplifier and speaker.
- Mounting brackets and hardware to mount the charger and its accessories.
- If a special calibrator is required to adjust the chargers, one shall be furnished.
- Special 12 watt speaker volume control or pad. Each 12 watt speaker amplifier, or the vehicle charger, shall incorporate a variable pad or volume control to allow for

presetting the portable volume control to a normal listening level, and then when the portable is inserted into the vehicular charger, the volume level will be correct for vehicular use without further adjustment.

2.33.4 Power Requirements: The charger/converter shall be designed to operate from a normal 12 volt negative ground automotive electrical system. The reference voltage shall be established at 13.6 volts DC.

2.33.5 Mechanical Adjustment: The vehicular charger shall be mechanically adjusted by the factory before delivery and shall not require further adjustment by the buyer prior to being placed into service. All mechanical adjustments shall have locking devices to ensure their continued alignment during operation. Proper operation of the vehicular charger includes the unit's ability to lock in and release the portable radio in a smooth and easy manner without binding. All electrical functions of the unit shall be operational with the portable radio properly locked in. The pins contacting the portable radio shall be a heavy-duty type, capable of withstanding multitudinous insertions and removals of the radio from the charger.

2.34 ANALOG & DIGITAL MOTORCYCLE REAR-MOUNT RADIO:

This specification describes low and mid power radios, for motorcycle use. Offerings shall meet the corresponding mobile radio applications.

2.34.1 **Installation:**
The radio unit shall be designed for two-piece rear fender/handlebar control head mounting on Kawasaki, Honda, BMW, or Harley Davidson motorcycles, and shall meet Federal safety requirements.

2.34.2 **Interconnecting Cables:**

2.34.2 (a) All cables and wires shall be furnished to connect the unit to its associated control head and to interconnect the mobile unit with its accessories and the vehicle electrical system. Cables shall be well insulated, waterproofed and equipped with appropriate connectors.

2.34.2 (b) Connectors shall have a screw fastener to mechanically secure the connectors.

2.34.3 **Control Panel:**

The control panel shall be functional, attractive and include all facilities for operating the radio. Controls shall include on-off switch, volume control and squelch disable switch, a red light indicator for transmitter operating, a frequency selection switch for multifrequency requirements, an alpha/numeric channel indicator display, and a Priority Scan enable switch. The control panel shall be weather proof.

2.34.4 **Microphone:**

2.34.4 (a) A military palm-type, noise-canceling microphone shall be supplied as part of the equipment. The microphone shall be a dynamic or magnetic type, and shall include a convenient push-to-talk button for transmitter control. Option helmet (head set) microphones are encouraged to be listed.

2.34.4 (b) The microphone cord shall be a retractable type, with conductors of tinned metallic stranded wire not smaller than AWG size 30. The microphone cord

shall be terminated with a separate screw-on male connector or telephone type modular connector, for mating with the receptacle supplied on the radio.

2.34.5 **Optional Weatherproof Housing:**

2.34.5 (a) Housing shall provide a weatherproof seal to the elements and shall be capable of preventing unauthorized access to the radio by some type of key lock mechanism. Housing should also be capable of supporting an antenna mount.

2.34.5 (b) Weatherproof Housing shall be included as a purchase option of the radio.

2.34.6 **Power Supply:**

2.34.6 (a) The power supply shall be designed to operate from a normal 12 volt negative ground motorcycle electrical system. The reference voltage shall be established at 13.6 VDC. DC input to the radio shall be adequately filtered to exclude all alternator noise.

2.34.6 (b) The power supply, and associated transmitter and receiver, shall be designed so that no degradation shall result (except for a 3 dB loss in transmitter power) in the receiver audio output, squelch sensitivity and SINAD sensitivity if the power supply voltage is varied +/-10% from 13.6 VDC.

2.34.6 (c) The power supply, transmitter, and receiver shall be adequately protected by replaceable type fuses or circuit breakers.

2.35 FIXED LINK BASE RADIOS

The following items are system specifications and shall be determined on a per channel basis, as appropriate, for two link transceivers and associated equipment.

2.35.1 **Power Requirements**

Each low power transceiver shall operate from a negative ground +12.6 volt supply. The transmitter current drain shall be adjustable to less than 1.0 amps when transmitting (at reduced power). The complete transceiver shall operate in an idle condition with a current draw of:

2.35.1 (a) Category 1- Less than 150 ma.

2.35.1 (b) Category 2- Greater than 150 ma., but less than 800 ma

2.35.2 **Environmental**

The transceivers shall operate and meet the specifications herein set forth over an ambient temperature range of 0 to +50 degrees Celsius, with a maximum humidity of 95% at altitudes from sea level to 10,000 feet. The equipment shall remain operational over an ambient temperature range of -20 to +55 degrees Celsius.

2.36 Duplexer, BP & BP/BR

The vendor shall list an optional duplexer. A duplexer, pre-tuned to the frequencies specified in the purchase order, shall be available with each link transceiver. It shall be included as a separate priced unit for each transceiver package. Both Pass and Band Pass / Band Reject duplexers should be offered.

- Insertion Loss shall be 1.5 dB maximum

- Connectors - Type N Female

2.36.1 **Option A -** UHF Option shall satisfy the following requirements

- Transmitter Noise Suppression an Receive Frequency / 75 dB
- Receiver isolation at Transmitter Frequency / 75 dB

2.36.2 **Option B -** 700-800 MHz Option shall satisfy the following requirements

- Transmitter Noise Suppression an Receive Frequency / 65 dB
- Receiver isolation at Transmitter Frequency / 65 dB

2.37 Re-Radiation Loss

The vendor shall list an optional isolator with no more than 0.5 dB total insertion loss and shall be capable of dissipating at least 10 watt of reflected power. Re-radiation of intermodulation products shall be no greater than -50 dBm from the duplexer antenna port when a spurious signal within the duplexer's pass band arrives at that port at 0 dBm (EMR model numbers 7540/2 / 7640/2 or equal). It shall be included as part of each transceiver package as a separate unit.

2.38 Common Circuitry

The transceiver shall be made with removable modular card construction and fit in a standard 19-inch rack mount. The transceiver shall have interfacing circuitry that provides a common point for external control (PTT, COR, power, and 600 Ohm audio connections) to the transmitter and receiver.

2.39 Audio Requirements

The transceiver shall have a 600 ohm balanced 4-wire audio interface. Transmitter and Receiver audio levels shall be adjustable from 16 to +1 dBm. The overall frequency response of the link (end to end) shall exceed a 3002 grade line with type C2 conditioning and be capable of passing industry standard function tones.

2.40 Physical Size/Form Factor

The physical size of the transceiver shall be such that it will fit in a 19-inch equipment rack (width) while not occupying more than 4 rack units (7 inches) vertically. The unit's depth shall not exceed 15 inches. The transceiver should be modular with individual modules plugging into the backplane via a card edge connector.

2.41 Transmitter Characteristics

The transmitter shall meet or exceed the following minimum specifications:

2.41.1 **Carrier Power Output**

- Category 1 / 6 watt minimum VHF, UHF, 3W minimum 700/800 MHz.
- Category 2 / 12 watt minimum VHF, UHF, 700/800 MHz

2.41.2 Spurious and Harmonic Emission Attenuation / 70 dB below carrier

2.41.3 Audio Frequency Total Harmonic Distortion / 5% maximum

2.41.4 Key-Up Time to Full Output / 40 milliseconds, maximum

2.42 Receiver Characteristics

2.42.1 Spurious Response Rejection (Attenuation) / 90 dB Minimum

2.42.2 Intermodulation Spurious Rejection (Attenuation) / 75 dB Minimum

2.42.3 Adjacent Channel Selectivity / - 45dB (12.5KHz)

2.42.4 Audio Output / -16 dBm to +1 dBm (600 Ohms).

2.42.5 Buffered discriminator output

2.42.6 External Mute - The receiver shall have an external mute input which while actively prevent any audio signal from passing through the 600 Ohm receive output port.

2.43 LOW POWER VEHICULAR REPEATERS EQUIPMENT

This specification describes VHF, UHF, and 700/800 MHz in-vehicle mounted repeater, for attachment to the vehicle's mobile radio and used to extending the range of the user's portable radio.

2.44 MULTI-BAND RADIOS

This section describes radios capable of operating in multiple public safety radio bands. For the purposes of this contract the 700 MHz and 800 MHz bands are considered a single band. Specifically, these radios are capable of operating in any two or more of the VHF, UHF, or the 700/800 MHz bands. Otherwise specifications are controlled by the class and tier of the offered product.

2.45 ANALOG & DIGITAL BASE/MOBILE RELAY STATION FIXED RADIO EQUIPMENT

Model Specifications

2.45.1 **Basic Operations**

The following specification describes, VHF High-band, UHF, 700 MHz, and 800 MHz continuous duty, mobile relay/base station equipment using phase, frequency, or digital modulation. Must be FCC type accepted to meet the modulation mask described in FCC Part 90.210.d. Trunked stations must meet the APCO 16, P25, or Open Sky system requirements. All 700 MHz stations shall be capable of P25 operation. Stations shall be capable of the following three modes of operation:

- Mode 1 - The station operates as a mobile relay only
- Mode 2 - The station operates as a tone and/or E&M remote controlled base station and mobile relay
- Mode 3 - The station operates as a tone and/or E&M remote controlled simplex or duplex base station

Digitally trunked base/repeaters shall be of the same model line as the conventional radios.

2.46 Electrical Specification:

The equipment shall be designed to operate from a primary power source of 117 volts AC, 60 Hz. Adequate overload protection shall be provided. All power supplies shall use only high-quality, long-life, solid-state components as active devices. The equipment shall also be capable of operating from an external DC power source.

2.47 Transmitter Characteristics:

2.47.1 The transmitter shall use solid-state components throughout. The use of vacuum tubes in any stage is not acceptable.

2.47.2 Each station offered shall be capable of normal, continuous duty operation.

2.47.3 The transmitter shall be supplied for single frequency operation at any frequency within the VHF, UHF, 700 MHz (745-805 MHz) or 806-869 MHz bands. An alternate option for two or more frequency stations shall also be an option. The transmitter shall be factory aligned to the frequency specified in the purchase order.

2.47.4 Transmitter Standards:

- Carrier Power Output Rating:

  High-Tier 40-100 watts, continuous duty.

- Conducted and Radiated Spurious Emissions:

  High-Tier / -85 dB (12.5 kHz)

  Mid-Tier / -70 dB (12.5 kHz)

- Audio Frequency Harmonic Distortion:

  High-Tier / All Bands: 2% Max.

  Mid-Tier / 3% maximum

- FM Hum and Noise Level: High-Tier / -45 dB (12.5 kHz)

  Mid-Tier / -34 dB (12.5 kHz)

2.47.5 **Reradiated Loss:**

Re-radiation of intermodulation products shall be at least -50 dBm VHF (-30dBm) all other bands) from the transmitter antenna port or at the external isolator output port (if provided) when a spurious signal arrives at the port at 0 dBm. Any isolators used to accomplish this, shall be capable of dissipating at least 50 watts of

2.48 Receiver Characteristics:

The receiver shall be completely solid-state, utilizing only high-quality, long-life, solid-state components as active devices. The receiver shall be rated for continuous operation.

2.48.1 **Receiver General Characteristics:**

- Adjacent Channel Selectivity: High-Tier / -75 dB at 12.5 KHz

  Mid-Tier / -60 dB at 12.5 KHz

- Spurious Response Attenuation: High-Tier / -95 dB at 12.5 KHz

  Mid-Tier / -70 dB at 12.5 KHz

- Intermodulation Spurious Attenuation:

  High-Tier / -80 dB at 12.5 KHz

  Mid-Tier / -70 dB at 12.5 KHz

2.48.2 **Carrier Operated Relay:**

A carrier operated relay (COR) shall be provided. Upon receipt of an on-frequency RF carrier signal and the required squelch activating sub-audible tone, this relay shall provide closure of a pair of normally open dry relay contacts.

2.48.3 **Mobile Relay Operation:**

The receiver repeat audio shall be connected to the transmitter modulator input through a gain control to permit independent adjustment of transmitter modulation level. The repeat level shall be independent of line input/output levels. A carrier control timer shall be provided. This will limit the duration of any continuous mobile relay transmission to a pre-selected interval of from 30 seconds to 5 minutes**.**

2.49 Station Control and Operation:

2.49.1 **Station Audio Control:**

The station shall be designed to accept two-line, 4-wire audio; 0 dB in/0 dB out.

2.49.2 **Tone Control Scheme:**

The base station shall be controlled by in-band tones for the remote controlled transmit function and the repeater enable/disable function.

2.49.2 (a) **Transmit Tone Control:**

- Transmit tone control shall be by tone intervals of the following sequence:

  A = Guard Tone (2175 Hz) for 125 msec. nominal

  B = Transmit Tone (1950 Hz; 10 dB down from (A) for 40 msec. nominal

  C = Low Level Guard Tone (2175 Hz for the duration of the message; 30 dB down from A)

- The "B" function tone shall activate the transmit function of a single frequency base station with the "C" tone continuing throughout the message.
- The station decoders shall not respond (false) to voice peaks up to test tone levels or noise up to -10 dBm.
- The tone decoder overload (talk-down level for voice peaks shall be greater than the test tone level; the overload level for noise shall be such that overload does not occur with levels as high as 10 dB below test tone.

2.49.2 (b) **Tone Squelch Disable:**

The receiver sub-audible tone squelch unit shall be disabled by the short tone sequence indicated below:

A= Guard Tone (2175 Hz) for 125 msec. nominal

B= CTCSS Disable Tone (2050 Hz); 10 dB down from (A) for 40 msec. nominal

2.49.3 **Repeater Enable/Disable Function:**

The mobile function of the station shall be enabled and disabled by the tone sequence indicated below:

A= Guard Tone (2175 Hz) for 125 msec. is nominal

B= Function Tones (10 dB down from A, 1550 Hz for enable, 1440 Hz for disable) for 40 msec. nominal

2.49.4 **E&M / DC Control**

The station shall provide a contact point, which when grounded, will key the station and allow the transmission of line audio. When the station is keyed by grounding the contact point, the remote control function shall have priority over the repeater function. Also, tone remote keying shall have priority over DC contact keying.

2.49.5 **Microphone and Speaker**

A palm-type microphone with push-to-talk switch and hang-up bracket shall be supplied with each unit for local control. A permanent magnet loud speaker with volume control shall also be supplied. The volume to the monitoring speaker shall be independent of the transmitter repeat and line output levels. The local PTT and microphone audio functions shall override repeater or line PTT and audio.

2.50 Optional Duplexer:

For the UHF & 800 MHz stations only, an optional duplexer, pre-tuned to the frequencies specified in the purchase order, shall be considered separately. It shall be capable of being mounted horizontally in a standard 19" rack. Models determined to meet the requirements of this section include the EMR 65534/ENC, SBC-2 for UHF, and the Celwave PD898 for 800 MHz, or approved equivalents. Because of random Tx/Rx frequency splits, VHF duplexing equipment is not a requirement of this RFP.

2.50.1 Frequency Separation: UHF MHz: 5 MHz minimum
700 MHz: 30 MHz minimum
800 MHz: 45 MHz minimum

2.50.2 Maximum Power Input: (Continuous duty) / 100 Watts

2.50.3 Insertion Loss:

UHF: at 5.0MHz Separation: 1.0dB Max.

700 MHz: at 30 MHz Separation: 1.0 dB Max.

800 MHz: at 45 MHz Separation: 1.0 dB Max.

2.50.4 Transmitter Noise Suppression at Receive Frequency:

UHF: : 75 dB minimum

700/800 MHz: 65 dB minimum

2.50.5 Receiver Isolation at Transmit Frequency:

UHF: : 75 dB minimum

700/800 MHz: 65 dB minimum

2.50.6 Maximum VSWR: 1.5:1 or less; both bands

2.50.7 Connectors: Type N Female or 7/16 DIN

2.51 General Electrical and Mechanical Characteristics:

2.51.1 Basic Components:

- The radio equipment shall be installed in a standard, indoor cabinet enclosure, or an optional heavy-duty, aluminum, 19-inch, open relay rack of a nominal 90-inch height, meeting EIA Standard RS310C (Harris -Dracon 46055-005 or approved equivalent). All station chassis shall be mounted near the middle of the rack. The maximum height of the mobile relay/base station equipment shall be 37 inches.
- All RF input/output connectors on major station assemblies shall be Type N, BNC, or TNC, or some other approved locking RF connector.

2.51.2 Special Tools:

One complete set of any specialized hand tools shall be provided with each base/mobile relay station ordered. Tools shall include all necessary tuning tools, cables, card and/or module extenders, etc., to locate defective parts, trace equipment malfunctions, and perform routine maintenance.

2.51.3 Service Meters:

Panel mounted meters with associated selector switches or similar means may be optional with all units to measure all transmitter and receiver circuits essential to tuning and servicing. Such meters or fixtures shall be separately priced. If a computer interface is required for routine maintenance, the software shall be provided.

2.51.4 Wiring:

Wiring shall be color coded or marked in an acceptable manner for ease of maintenance. All inter-chassis wiring shall be clamped, laced or tied to prevent undue mechanical strain on connectors and terminals. When subjected to an open flame, hot soldering iron, or short circuit, the wire used in this equipment shall not support combustion for more than five seconds after the heat source is removed.

2.52 COMMUNICATION SERVICE MONITORS

These specifications describe a Communications Service Monitors for use in the maintenance of public safety land mobile radio communications system. These systems will be primarily conventional narrowband FM, conventional P25, trunked P25 or Astro 25 systems.

2.52.1 **Physical Construction**:

The complete monitor, including any and all modules, shall be contained in the mainframe. All switches, controls, inputs and outputs normally used during operation should be accessible from the front of the instrument. The mainframe cabinet shall be provided with a cover to protect the controls and oscilloscope from damage. The monitor shall operate over a temperature range of 0 to 40 degrees Celsius and weigh less than 35 pounds, including all plug-in modules and batteries.

2.52.2 **Electrical Specifications:**

The monitor shall be all solid-state. The monitor shall be capable of accepting operating power from one of two sources. No internal modifications or adjustments shall be required by the operator to change from one power source to another.

2.52.2 (a) A.C. Power / 120 VAC, 60 Hz; the unit shall be supplied with a 6-foot grounding power cord.

2.52.2 (b) D.C. Power / 12 VDC to 15 VDC; the unit shall be supplied with the required connector to supply D.C. power to the monitor for specific classifications.

2.52.3 **Service Monitor Operating Sections:**

The following functions shall be provided by the monitor, as defined by instrument class:

- R.F. Signal Generator
- R.F. Receiver
- Duplex R.F. Signal Generator
- General Purpose Oscilloscope
- R.F. Spectrum Analyzer
- Tracking Generator
- High Stability Oscillator (0.01 ppm - 0.1 ppm)
- Frequency Counter
- Power Meter
- Audio Generator
- Distortion Meter
- General Purpose Oscilloscope

2.52.4 Signal Generator - Signal output(s) shall be provided to allow servicing and alignment of FM communications receivers.

2.52.5 Frequency Generation - Continuous from 1 MHz to 1000 MHz .

2.52.6 Output Level - 0.1 microvolt to 20 millivolts

2.52.7 Output Level Accuracy: <+/- 2Db

2.52.8 Time Base Aging and Stability: 1.0 PPM/year after the first month

2.52.9 Frequency Step Resolution: 10 Hz or better

2.52.10 Modulation: AM & FM

2.52.11 Audio Generator: 1 KHz fixed, & variable frequency tone

2.53 Receiver Monitor/Display:

The receiver/monitor shall display demodulated signals on the LCD display/meter and allow audible monitoring via a self-contained speaker.

2.53.1 Frequency Range & Accuracy: Same as for Signal Generator

2.53.2 Input Sensitivity: 2 microvolt maximum for 10 dB SINAD

2.53.3 Input Impedance: 50 ohm, nominal

2.53.4 Deviation Measurement Range: <+/- 2.0 KHz to >+/- 10 KHz peak for full scale display

2.53.5 Deviation Measurement Accuracy: +/- 5%

2.53.6 Demodulated Output Distortion: < 10%

2.53.7 Frequency Meter Error Resolution: 1 Hz/10 sec. gate time

2.54 Oscilloscope

The receiver LCD display should be made available for use as a general purpose oscilloscope to 50 KHz or 500 KHz, depending upon classification/model.

2.55 Spectrum Analyzer

2.55.1 Frequency Range: 400 KHz to 1000 MHz

2.55.2 Dynamic Range: -90 dBm to -30 dBm

2.55.3 Display Range: >70 dB calibrated in dBm

2.55.4 Horizontal Display Calibration: Shall have selectable per-division sweep calibration.

2.55.5 Calibration: A reference signal should be available from the instrument to be used for level calibration.

2.56 Duplex RF Signal Generator

2.56.1 Offset Frequency Range: +/- 10 KHz to +/- 45 MHz

2.56.2 Output Level: >100 microvolt

2.57 Accessories

The monitor shall be provided with a whip antenna designed to make off-the-air measurements, an output cable assembly, and a service manual.

2.58 Operational Considerations

It is the intent of these specifications to buy a dependable communications service monitor to service government-owned communications equipment. The monitor must be ruggedly constructed to withstand severe vibration and shock encountered during travel to remote transmitter sites.

The instrument will be used daily and must be a reliable standard under the specified extremes of temperature and other conditions experienced during routine service procedures. The monitor shall be portable and completely self-contained. The service monitor shall be so constructed and labeled for easy use. Protection should be provided to minimize damage to the instrument by an inadvertent keying of a transmitter into the generator output(s). The generator's output(s) shall withstand a minimum of 100 watts for up to 30 seconds.

2.59 Configurations

Three configurations of monitors shall be proposed separately, depending upon option level and vendor product line. These shall include the following:

2.59.1 Maximum Feature Test Set with Extended Range Duplex Signal Generator (no offset limit within 1-1000 MHz range), Spectrum Analyzer with full span (1-1000 MHz) sweep, Tracking Generator, High Stability Oscillator, & Computer control interface. Must list options required to meet specifications. It requires P25 digital trunking, Smartnet trunking capability. Options may include extended RF range, automatic test and tuning software, additional digital modes including LTE, BER testing (List all trunking modes and other additional options as offered by vendor.)

2.59.2 Full Feature Portable Service Monitor with Duplex Signal Generator (1000 MHz), Spectrum Analyzer (1000 MHz), Tracking Generator (1000 MHz), and High Stability Oscillator (0.5 ppm), with internal Battery Power (List trunking and other additional options as offered by vendor). Units determined to meet the intent of this specification include the Freedom 8000 series and Aeroflex 8800 series**.**

2.60 GENERAL SPECIFICATIONS:

2.60.1 Non-Proprietary Specifications

2.60.1 (a) These specifications describe electronic radio equipment to be used in various Arizona State, VHF High-band, UHF 450 MHz and 700- 800 MHz (Conventional and Trunked) radio communications systems. This document will describe separately, the requirements for fifteen (15) different classes of electronic equipment.

2.60.1 (b) Only the VHF (150-174 MHz) model in all radio lines will be evaluated on technical specifications. If a VHF conventional product qualifies for an award in a product line, then the vendor may add their conventional UHF Band, and qualification of a conventional 800 MHz product will allow a 700 MHz product in the same radio line to be added to the contract, providing the discount percentage is the same as for the VHF or 800 MHz model.

2.60.1 (c) The specifications do not include any proprietary items, components, circuits, or devices which would preclude any communications equipment manufacturer from producing equipment to meet these specifications. All technical tolerances, ratings, power outputs, or any technically specified criteria contained within these specifications are considered to be within the current state of the art and are currently being met by commercially available electronic equipment. The fact that a manufacturer chooses not to produce equipment to meet these specifications is not sufficient cause to adjudge these specifications as restrictive.

2.61 CONTRACTOR SUPPORT (Installation and Maintenance):

2.61.1 Instruction Books, User Guide and Product Literature

The contractor will make available the following equipment documentation to purchasers in any quantity specified by the purchaser over and above the quantity required to be included with the unit price. Manuals will accompany the equipment at time of delivery or may be delivered prior to equipment delivery.

- OPERATORS MANUAL One (1) operators manual will be furnished with each equipment unit. This manual will provide an operational description of the equipment and all other pertinent operational details. This manual must include illustrations or photographs displaying the location and details of the various devices and controls. This manual will be a volume separate from all other manuals.
- INSTALLATION MANUAL the installation manual will consist of printed and illustrated sections that describe the mechanical, electrical and electronic details of assembly sufficient to assure proper operation at completion. This manual may be a section of the service manual. Installation manuals **will be included** with each lot of purchase for example: a) one (1) manual for each base/repeater unit b) one (1) manual for each of the mobile or portable radio units, up to a maximum of ten (10) manuals for each lot of mobile or portable radios. The purchaser will specify additional manuals required with each purchase.
- SERVICE MANUAL The service manual must contain circuit descriptions in verbal and illustrative form which are concise and all inclusive. Sections of the manual will include theory of operation to the component level, parts lists, troubleshooting flow diagrams and charts, instructions for alignment programming, adjustment and/or setup, schematics with normal operating voltages, plus wiring, interface, interconnection and printed circuit layout and assembly diagrams. Also included will be a list of maintenance and test equipment required for equipment maintenance prescribing make, model, description, manufacturer and alternatives. Service

manuals will be included with each lot of purchase in the same manner as described above for the installation manual. The purchaser will specify additional manuals required with each purchase.

2.61.2 Warrantee (additional requirements):

It Contractors shall warrantee all equipment for one (1) year following the equipment's Acceptance.

2.61.3 Parts Support:

All equipment covered by these specifications and any resultant contracts will have a minimum service life of seven (7) years from date of delivery to the purchaser and the contractor will guarantee replacement parts stocking by the contractor and/or authorized distributor for this service life period.

2.62 WORKMANSHIP

All the various types of equipment supplied under this Contract shall be of the latest, most improved model, past the development state and in factory production. Such equipment shall have a satisfactory production performance record as evidenced by product literature supplied by the Contractor and as determined by the State. Equipment without performance data will be subject to a technical evaluation for acceptability. If requested, Contractor shall supply a sample unit to the State within ten (10) days of the request. The sample unit will be returned within sixty (60) days. Components used in the equipment shall be only those specified in Contractor's equipment literature. Contractor shall provide a name and telephone number list of users/agencies that have purchased and installed the proposed equipment for the State's use during the evaluation process.

2.63 PROGRAMMING

Each model of radio shall have a Radio Programming Device available if one is required to program the radio. This software shall be for the highest level and revision of software available, including all maintenance software. The vendor shall agree that purchase of a single software package constitutes a "user" license per-site and may make necessary copies for internal use as required at a site. The vendor shall also offer at a reasonable additional cost, a "system" license for use at up to 10 agency service shops.

3.0 Digital Microwave Terminals

3.1.1 Offer(s) shall be the manufacturer or distributers of the products requested and specified;

3.1.2 Standards and specifications from the following shall be used unless otherwise specified;

3.1.3 Federal Communications Commission (FCC) Title 47 Parts 2, 15, and 101 as applicable;

3.1.4 Bellcore Technical References;

3.1.5 International Telecommunications Union – Telecommunications Standardization Sector (ITU-T), formerly know as CCITT;

3.1.6 International Telecommunications Union Radio Communication Sector (ITU-R), formerly known as CCIR;

3.1.7 Institute of Electrical and Electronic Engineers (IEEE);

3.1.8 MIL-HDBK-217, Reliability Prediction of Electronic Equipment;

3.1.9 Underwirters laboratory (UL);

3.1.10 American National Standards Institute (ANSI);

3.1.11 Electronic Industries Association (EIA);

3.1.12 Telecommunications Industries Association (TIA);

3.1.13 In case of conflicting requirements of standards, they apply in the sequence in which they are listed above. The complete apparatus shall also comply with the applicable codes, laws, and regulations of all governmental agencies having jurisdiction.

3.2 General Requirements

3.2.1 Equipment to be furnished complete:

3.2.1 (a) When requested a fully functional assembly with standard industry interfaces for the signal payload, power connections, alarm I/O connections and any required data or service channel interfaces. All other accessories would be priced separately in the vendors catalogs at a discount off listed price and in as much as these materials may be provided by the purchaser or already exist.

3.2.1 (b) Equipment supplied under this contract shall be new and provided with the latest hardware and software revisions currently being shipped. The Contractor shall notify the Purchaser when any hardware or software revision is incompatible with previously shipped equipment. The Contractor shall identify the incompatibility and shall provide a method to resolve the incompatibility.

3.2.1 (c) Equipment supplied under this contract shall be standard production, identified by model numbers as listed in supplier's catalogs and price pages. All equipment supplied under this contract shall be in full production status. Equipment still in testing phases shall not be accepted.

3.2.2 Instruction Manuals - A complete, comprehensive set of instructions, block diagrams, and operating manuals shall be furnished for each piece of equipment supplied. Manuals shall be provided in the form of printed copy and available on CD Rom at no cost. The intent is for documentation at a level sufficient for maintenance to the lowest replaceable unit. Each instruction manuals shall contain the following as a minimum:

3.2.2 (a) Complete block diagrams including information outlining method of operation, supply voltages, etc. for all equipment.

3.2.2 (b) Circuit diagrams showing internal interconnect wiring of all equipment.

3.2.2 (c) Complete instructions covering operation, theory of operation, and maintenance of all equipment and accessories.

3.2.2 (d) Servicing manuals, instructions, and procedures shall be of sufficient detail in order to perform detailed maintenance down to the sub-assembly level.

3.2.2 (e) Diagrams showing inter-equipment wiring and cabling including terminal block connections.

3.2.2 (f) Normal point-to-point operating voltages, current, and power levels for test and adjustment purposes.

3.2.2 (g) Detailed installation instructions.

3.2.2 (h) Detailed list of all replacement spare parts.

3.2.2 (i) Block and level diagrams.

3.3 As-Built Drawings

Two sets of as-built drawings for the whole system plus one set for each site shall be supplied to the Purchaser indicating the location of the equipment, exterior equipment wiring, cabling, block and level diagrams, and any other details that are either different or omitted from the instruction books supplied. If only equipment has been ordered and not a complete system, the as-built drawings shall show the equipment interconnection details and specific frequencies for each piece of equipment.

3.4 Contractor's Guarantee

Contractor guarantees that the equipment furnished under the contract meets all of the requirements contained within this specification. Product shall meet or exceeds the manufacturers published performance specifications, as well as all equipment furnished shall fully meet all applicable Federal Communications Commission (FCC) rules and Electronic Industries Association (EIA) specifications.

3.5 Warranty Service and Maintenance Contracts

Contractor shall repair or replace without charge to the Purchaser, any equipment or part that which fails in operation during normal use within 24 months from the date of receipt of the equipment. This shall not apply to failures caused by acts of God or extraordinary circumstances beyond the control of the Contractor.

3.5.1 Contractor shall support the following:

3.5.1 (a) maintenance

3.5.1 (b) servicing

3.5.1 (c) removal and replacement of defective parts

3.5.1 (d) adjustments and measurements

3.5.2 In order to maintain the equipment supplied under this contract to the manufacturer's specifications and requirements of the FCC for a period of 2 years from the date of the receipt of the equipment. This shall be at no additional cost for those services requested for malfunctions reported during a normal working day. A normal working day is considered to be Monday through Friday, 0800 to 1700 hours, holidays excepted.

3.5.3 Contractor shall have a technician (at a fee) that has been trained and is competent to maintain the supplied equipment on 24-hour call at all times. Phone numbers and addresses shall be provided of the people to contact in an emergency. If the Purchaser elects to maintain the equipment themselves, the Contractor shall provide 24- hour call-in technical support 7 days a week. Contractor shall provide at time and expense price list for onsite maintenance services which may be purchased on an as needed basis.

3.5.4 When a malfunction is reported and service is requested, the Contractor's technician shall be able to provide technical support within 60 minutes after the Contractor or their representative was notified by the Purchaser.

3.5.5 Contractor shall provide the names of the persons who shall be the primary contact point for service, complaints, and general inquiries. Their names, addresses, and telephone numbers shall be submitted in Section 3 Personnel section.

3.5.6 Contractor shall quote when requested, charges for malfunctions reported, service requested, and maintenance performed as follows:

3.5.6 (a) After 1700 and before 2400 hours, Monday through Friday.

3.5.6 (b) After 2400 and before 0800 hours, Monday through Friday.

3.5.6 (c) Saturday, Sunday, and holidays.

3.5.7 Equipment or part replaced under the provisions of this warranty becomes the property of the Contractor. If the Contractor desires the defective equipment or part returned all

transportation charges shall be the responsibility of the Contractor. If the Contractor does not specifically request return of such replaced parts within the 30 days from date of replacement, the equipment or parts become property of the Purchaser. Contractor shall provide repair and return service for two years at no charge.

3.5.8 Replacement parts shall be regularly stocked by the Contractor and/or authorized distributor. Delay in the Purchaser's receipt of replacement parts shall not exceed ten calendar days from Contractor's or distributor's receipt of order.

3.5.9 Contractor shall guarantee deliver of emergency orders within 48 hours from receipt of order. Emergency orders shall be transported by the most expedient manner available with the transportation cost borne by the Purchaser less normal shipping cost.

3.6 Failure to Meet Requirements of Specifications

3.6.1 Should any of the inspections, tests, or operation of the equipment under service conditions show that the system or equipment does not meet the requirements of the specifications, the Purchaser shall reject the equipment and direct the Contractor to immediately furnish such new equipment or parts thereof, as may be necessary to bring it up to the requirements of the specifications.

3.6.2 Material and equipment furnished shall be subject to approval by the Purchaser(s), including engineers selected to review the products with regard to design, operation, performance and requirements of this specification. The acceptance of equipment or parts thereof shall in no way relieve the vendor of responsibility for furnishing equipment that meets this specification in all detail.

3.7 Detailed Specifications of Equipment

3.7.1 Contractor shall submit a complete description of the operation of the quoted equipment when requested. The description shall include detailed specifications, photographs, panel layouts with labeled controls, model numbers, and, in general, show all phases of the quoted equipment. These specifications must be complete and cover in detail all requirements set forth herein. Any deviation from these specifications shall be fully explained. No quote shall be considered that does not fulfill these requirements.

3.7.2 Differences may exist in physical arrangements and mechanical construction of standard products of various manufacturers. However, the requirements as stated in this section describe a state-of-the-art microwave radio system concept as related to the operation, expansion, maintenance, and requirements. Equipment offered that does not meet these requirements must have a detailed statement of where deviations exist. A description describing exactly how the equipment differs and the reasons the equipment is equivalent to the requirements of the specification.

3.8 Maintenance and Test Equipment List

3.8.1 Contractor shall if provide when requested, a list of recommended spare parts and test equipment deemed necessary to maintain the equipment.

3.9 Material and Workmanship

3.9.1 Material and workmanship shall conform as specified to the latest standardizing bodies as the IEEE, EIA, NEMA, NEC, FCC, etc. Applicable EIA standards shall be fully met, including all panel and equipment mounting rails, except as required by special circumstances. All material shall be free from defects, corrosion, and scratches.

3.10 Test Procedures

3.10.1 Test procedures shall be conducted as outlined in the EIA standards and IEEE specifications.

3.11 Identification

3.11.1 Operational controls and adjustments, plug-in-cards, sockets, and terminal strips shall have suitable nameplates or stamps for the identification of function or purpose. All cables, plugs, and sockets shall be marked to provide correct mating.

3.12 Servicing

3.12.1 Units shall be readily available for routine servicing. If module or card extenders are required for servicing, then one of each required type shall be furnished.

3.13 Factory Testing

3.13.1 Each unit and assembly shall undergo extensive testing prior to shipment from the factory. These tests shall encompass all aspects and functions of the equipment from the component to the unit entirety. Each delivered unit shall be accompanied by a printed record of the dynamic functional test results for that particular unit.

3.13.2 Equipment purchased shall be system tested at the factory prior to shipment to insure proper operation, alignment, and compatibility.

3.13.3 Contractor shall allow the Purchaser to witness the factory testing. The Contractor shall notify the Purchaser a minimum of 30 days prior to factory testing to allow the Purchaser to make travel arrangements. The Purchaser has the right to decline. Equipment purchased under this contract shall have a minimum service life of 10 years from the date of delivery to the Purchaser. Contractor shall maintain replacement parts for this service period. Should parts or equipment purchased becomes nonfunctional within the 10-year service life period; the Contractor shall find approved replacement equipment or new equipment to the Purchaser for the same price as the original equipment.

3.14 Training

3.14.1 Contractor shall provide training to the Purchaser's personnel in the operation of all of the equipment supplied under this contract. The training shall be supplied at the Contractor's training facility and shall be provided at no cost based on the amount equipment purchased as follows:

3.14.1 (a) 1 to 2 hops of equipment Purchaser pays full cost of training class.

3.14.1 (b) 3 to 5 hops of equipment Contractor provides one seat of training at no cost.

3.14.1 (c) 5 to 7 hops of equipment Contractor provides two seats of training at no cost.

3.14.1 (d) 8 and above Contractor provides three seats of training at no cost plus one additional seat at no cost for every two hops above 11 hops.

3.14.2 In all cases, the Purchaser shall be responsible for travel, lodging, and per diem costs for the people they send to training.

3.14.3 Contractor shall provide technical training in the operation of all of the user equipment supplied. This training shall include:

3.14.3 (a) Training in the operation of the equipment and basic troubleshooting techniques. This may include basic board replacement repair where appropriate.

3.14.3 (b) The Contractor shall provide factory training in the repair and maintenance of the equipment as applicable. This training shall be at the technician level and shall detail the maintenance, operation, level setting, and repair of any electronic equipment being provided.

3.14.4 Contractor shall set forth the cost for optional additional hours of training and for any optional or additional factory or field classes available.

3.14.5 Contractor shall coordinate any training schedule with the Purchaser 45 days prior to starting any training. The Contractor shall provide a training compendium at that time for Purchaser approval.

3.15 System Options

3.15.1 Options listed below shall be provided if requested by the State. The prices for these options are to be quoted in single unit quantities. The Purchaser may order any of the following features without any requirement to order any other option. All optional equipment shall meet the requirements of this specification as applicable.

3.15.2 Frequency coordination services as required to comply with FCC rules and licensing instructions. This shall include services required by the FCC at the time the frequency coordination is requested. Provide the cost on a “per-hop” basis.

3.15.3 Field Engineering Work: Provide a quotation for optional field engineering services for the microwave paths. These services shall include but are not limited to:

3.15.3 (a) Path engineering, including coordinating with the frequency coordinator to determine the correct frequency band considering interference as well as the physical characteristics of the path.

3.15.3 (b) Physical inspection of the sites and verification of the microwave paths.

3.15.3 (c) Providing written documentation showing photographs of the sites, site drawings, and equipment installation locations.

3.15.3 (d) Provide the cost on a per-hour basis.

3.15.4 Installation Services: A quotation for optional field installation services for the microwave equipment, antennas, waveguide, and ancillary equipment. Provide this price on an hourly basis.

3.15.5 No DS1 Multiplex: A deduct option shall be provided to remove the DS1 multiplex for all microwave radio equipment with channel capacities of 28 DS1s and above.

3.15.6 Encryption: Provide a quotation for available encryption options for the microwave equipment.

3.16 <u>Non-Frequency Specific Requirements</u>

3.16.1 Equipment is required to comply with these requirements unless specified elsewhere. These specifications apply to three (3) classes of microwave systems: TDM (DS1s/DS3s), Hybrid (supporting both TDM and Packet on their native modes), and Packet only radios.

3.16.2 Component Ratings: Each and every component part of the equipment shall be operated within the manufacturer's continuous commercial-duty rating under any combination of operating conditions specified. Relays and switches shall be hermetically sealed and rated for a minimum of 2 million operations.

3.16.3 Overload Protection: Adequate fuses, circuit breakers, or other electronic devices shall be included to protect the equipment from internal and external faults. In the event these fusing devices are employed in circuits exhibiting false operation and yet protect the equipment from a sustained overload.

3.17 Printed Circuit Connections

3.17.1 Panel-end cable connections are necessary to extend and interconnect the circuits to other module panels, wire cables may be used, but they shall be made with stranded wire and of sufficient gage and secured so as to equal the quality and reliability achieved from the printed circuit inter-module connections within a panel. Solid-wire cables shall not be used where cables shall be flexed.

3.17.2 Electrostatic Protection: The Contractor shall provide electrostatic protection device, one per unit.

3.17.3 Electromagnetic Susceptibility and Spurious Radiation

3.17.4 As a minimum, the equipment shall meet or exceed the spurious radiated signal requirements of FCC Rules, Title 47, Part 15, Subpart J for Class B computing devices.

3.17.5 Microwave equipment supplied under this specification and contract shall be capable of operating normally when located in a rack adjacent to Part 90 LMR base stations, and not less than 3 meters from high-power TV and FM broadcast transmitters.

3.17.6 Equipment when all covers are installed shall operate normally if a portable radio transmitter operating at 5 watts or less in the 136 to 174 MHz band, 4 watts or less in the 450 to 470 MHz band, and 3 watts or less in the 746 to 806 / 806 to 869 MHz band, is keyed not less than 2 meters from the closest point on the equipment.

3.17.7 Should equipment fail to operate properly under the conditions described above in this section, the Contractor shall be responsible for making any repairs or modifications to the equipment supplied at the Contractor's expense. The Purchaser shall be responsible for making sure any non-Contractor-supplied equipment is operating within specification.

3.18 Mechanical Requirements

3.18.1 Indoor mounted equipment shall be supplied in EIA standard, 7-foot or 7 1/2-foot, 19-inch or 23-inch racks. These racks shall be equipped with standard 1-3/4" rack spacing and drilled and tapped for standard 12-24 NF screws. The rack shall be included in the equipment pricing.

3.18.2 RF units and other equipment designed to be mounted outdoors shall be capable of optionally installing the equipment indoors in a standard EIA equipment rack.

3.18.3 Equipment shall be supplied that shall allow for two complete RF and multiplex equipment assemblies to be mounted in the same rack space to allow for a complete hot-standby repeater or hot-standby terminal to be installed in a single rack space.

3.18.4 Outdoor mounted equipment shall be provided in weatherproof housing including a sun shield as an option available to reduce the amount of heating due to solar isolation.

3.18.5 Equipment shall not be susceptible to bit errors, false alarms, or other abnormal operation when subjected to shock and vibration normally anticipated to be received during normal maintenance actions such as pulling and removing circuit cards, replacing covers, or connecting test equipment either in the immediate rack or an adjacent rack.

3.18.6 Parts requiring service or maintenance must be accessible during normal operation. If covers, shields, or assemblies have to be removed for service, special tools other than a screwdriver and pliers shall not be required. The fasteners holding items that are removed during service must be a captive type, designed for frequent use. All chassis shall be designed to be physically and electrically detached conveniently from the rack for replacement or bench service. All inter-chassis and interrack cabling or wiring shall have connectors designed for rapid connection and disconnection. All cable connectors shall have cable clamps.

3.18.7 Wiring and cabling shall be supported such that the weight of the cable or pressure from bending is not transferred to the connector pins, wire-wrap point, or solder connection.

3.18.8 Any piece of equipment or contact area on the equipment that is capable of inflicting an electrical shock or causing mechanical damage to a person working on the equipment shall have protective covers and shall have appropriate warning labels.

3.18.9 No liquid cooling systems shall be allowed as part of this equipment.

3.19 Environmental

3.19.1 Indoor mounted equipment shall operate as specified under the following room ambient environmental conditions:

3.19.1 (a) Operating Temperature -10 degrees C to +50 degrees C

3.19.1 (b) Relative Humidity 5% to 95%, non-condensing at all operating temperatures

3.19.1 (c) Operating Altitude 4,000 meters

3.19.2 Outdoor mounted equipment shall operate as specified under the following outside ambient environmental conditions:

3.19.2 (a) Operating Temperature -30 degrees C to +55 degrees C

3.19.2 (b) Relative Humidity 5% to 95%, non-condensing at all operating temperatures

3.19.2 (c) Operating Altitude 4,000 meters

3.20 Multiplex Equipment

3.20.1 Terminal and repeater equipment shall be supplied with multiplex equipment to convert the signaling speeds and formats internal to the microwave equipment to industry standard interfaces. These interfaces may include DS0/DS1/DS3, OC3/SONET, Ethernet, and MPLS. Support of these interfaces may be by both internal and/or external hardware.

3.20.2 Multiplex equipment shall be provided for the maximum capacity of the radio equipment being provided.

3.20.3 Multiplex equipment shall mount in the same rack as the microwave radio equipment.

3.20.4 Multiplex equipment shall report equipment and transmission alarms and shall provide an interface into the microwave radio alarm system so a single alarm interface is presented to the technician or person using the alarm system.

3.20.5 Multiplexers shall be capable of performing looping back, as appropriate, on any DS-1, DS-3, or OC-3 signal levels.

3.20.6 T1 digital channel banks should be offered with standard audio and data interfaces. Options that enhance the users flexibility are encouraged.

3.21 Alarm and Control

3.21.1 Alarms shall be available for display and metering locally as well as from any other terminal or repeater connected in the system to the same alarm and control system.

3.21.2 System including multiplex shall provide alarm and control capabilities via Simple Network Management Protocol (SNMP). Any applicable private vendor MIB shall be provided to Purchaser upon request without cost to the Purchaser.

3.21.3 Microwave equipment shall be equipped with front panel system status or a small handheld unit with displays and controls. A computer interface port should be provided for access to more detailed information or advanced features. However, all historical alarm events shall be available to the operator through a laptop port.

3.22 DC Power Requirements

3.22.1 Equipment supplied under this contract shall operate as specified with either a positive or negative ground over a voltage range from 21 to 28 VDC and 42 to 56 VDC with a 200 mV (RMS) ripple.

3.22.2 Radio assembly shall contribute no more that 30 mV RMS ripple to the DC bus, assuming a 400 amp-hour (AH) battery with the system bus rating of 100 A.

3.22.3 Radio rack assembly shall be equipped with a DC distribution facility including power bus, ground bus, and fuse or circuit breaker panel. This DC distribution facility shall provide main DC power for all the equipment installed in the rack. The DC distribution facility shall be equipped with an alarm system to provide an alarm contact whenever a fuse or circuit breaker has opened.

3.22.4 Systems shall provide “fail-safe” operation when the input voltages are outside the required operating range above. This means the radios shall not be subjected to damage or random operation. When the voltage returns to the normal operating limits, the

equipment shall restore normal operation without operator or technician intervention or requiring power to be removed to "reset" the equipment.

3.22.5 Radio equipment configured two or more to a rack shall be individually fused. A power supply failure in one radio assembly shall not affect any other path or hop. This includes the repair or replacement of the failed unit.

3.23 Service Channel and Orderwire

3.23.1 Radio terminal or repeater assembly shall be equipped with a minimum of two service channels capable of the following:

3.23.1 (a) One two-wire audio channel with a 600 ohm input.

3.23.1 (b) A data channel that interfaces at the RS-232 level

3.23.2 Service channels shall not decrease the traffic capacity of the system.

3.23.3 Service channels shall automatically be switched when installed in a radio network using a protected configuration (e.g., loop protection, hot-standby).

3.24 Redundancy and Protection

3.24.1 Microwave equipment shall be designed for reliable operation through the use of redundant power supplies and other common equipment.

3.24.2 Alarm condition shall be generated any time any equipment, with the exception of diversity receive, is operating in a protection mode.

3.24.3 Switching times, including maximum manual switching time, for all equipment shall be stated. Maximum bit errors incurred and transmitter failure confirmation time shall also be included.

3.24.4 Equipment shall provide both manual and automatic error free switching, receive only (and does not apply to 18 and 23GHz).

3.24.5 Complete or partial failure of the protection control or switching shall not render the microwave link inoperable. Any failure of the protection control or switching equipment shall generate a major alarm.

3.24.6 Equipment shall be designed so that protection circuits and units not in service can be tested and repaired without affecting the online system operation.

3.24.7 Amplitude of the digital output signal shall not change more than 2 dB as a result of a transmitter protection switching action.

3.24.8 If both receivers in a hot-standby configuration indicated a received signal level of less than the threshold, the protection circuits shall cause a reverse channel signal to be transmitted to command the standby transmitter to switch on at the far end. This requirement only applies to 6GHz, and 11Ghz systems.

3.25 Space Diversity

3.25.1 Equipment supplied with space diversity receive capability shall provide errorless switching between the transition from one receiver to the other.

3.26 Adaptive Equalization

3.26.1 Adaptive equalization shall be included in all radio receivers. The dispersive fade margin shall be greater than or equal to:

3.26.1 (a) 60 dB for radios operating at DS-3 rates and below

3.26.1 (b) 46 dB for radios operating at 2 DS-3 rates and above

3.26.1 (c) 39 dB for radios operating at OC3-3 rates and above

3.26.1 (d) 50 dB for radios operating 18GHz

3.26.1 (e) 40 dB for radios operating 23GHz

3.26.2 If Co-Channel Cross-Polarization Interference Correction (XPIC) Equalization is offered, the Contractor should so indicate.

3.27 General Radio Digital Performance

This section describes the general performance requirements for bit error rates. Reframe time and frame-lost seconds (FLS). A frame-lost second (FLS) is defined as a 1 second interval during which an out-of-frame condition exists or when the BER is 1x10E-3 or less. No FLS seconds shall be recorded in any consecutive 7-day test period when there are no radio fading effects. The recovery time of the radio from out-of-frame and out-of-synchronization conditions to reframed and resynchronized conditions shall nominally be 0.25 second or less. No more than 5 percent of the recovery times shall exceed 0.5 second. The maximum recovery time shall be 2 seconds or less. The reframe time (search time plus time to establish frame alignment) shall not exceed 7 ms for the level 2 (DS-2 with additional overhead bits) to the DS-1 stage of multiplexing.

3.28 DS-1 Digital Performance and Interface

3.28.1 DS-1 low-speed interface shall be as per Bellcore TR-NWT-000499 and ANSI T1.102 as applicable.

3.28.2 Basic specification shall be as follows:

3.28.2 (a) Data Rate: 1.544M bps ± 32 ppm

3.28.2 (b) Line Impedance: 100 ohms, ± 5 percent, balanced

3.28.2 (c) Line Code: User-selectable bipolar AMI or B8ZS

3.28.2 (d) Jitter Accommodation: per TR-NWT-000499 and TR-NWT-00499

3.28.3 Residual bit error rate shall not be greater than 1 in 10-12.

3.28.4 Loss of synchronization of any DS-1 signal shall cause an Alarm Indication Signal (AIS) of all ones to be transmitted. This AIS signal shall be repeated throughout the system as applicable.

3.29 DS-3 Digital Performance ad Interface

3.29.1 DS-3 high-speed interfaces shall be per Bellcore TR-NWT-000499 and ANSI T1.102.

3.29.2 Basic interface specification is as follows:

3.29.2 (a) Data Rate: 44.736M bps, ± 20 ppm

3.29.2 (b) Line code: B3ZS

3.29.2 (c) Line Impedance: 75 ohms, unbalanced

3.29.2 (d) Jitter Accommodation: per TR-TSY-000499 and TR-NWT-00499.

3.30 OC-3 Digital Performance and Interface

3.30.1 OC-3 interface shall comply with ANSI T1.106/88, T1.105a/90, and T1.105/90 specifications.

3.31 General Transmitter Specifications

3.31.1 Frequency tolerance shall meet or exceed FCC Part 101.107. Frequency stability is expected to be ±0.0025 percent or greater over the full operating range of the equipment.

3.31.2 Failure of a redundant amplifier in hot-standby configurations shall not reduce the power output from the radio.

3.31.3 Replacement of a failed redundant (standby) amplifier shall not cause a system outage.

3.31.4 Transmitter shall be equipped with ability to monitor output power and frequency on an in-service basis.

3.32 Regulatory Compliance

3.32.1 Radio equipment supplied under this contract shall meet the requirement of the current Sub-Sections of Volume 47 of the Federal Code of Regulations.

3.33 Outdoor Mounted RF Unit

3.33.1 Outdoor mounted RF unit when supplied shall comply with the requirements of this section.

3.33.2 Operating temperature range shall be -30 degrees C to +55 degrees C.

3.33.3 Unit shall be weatherproof.

3.33.4 Outdoor RF unit shall connect to the indoor IF and control unit using a 50-ohm coaxial cable. The coaxial cable shall transport signals and DC power to the RF unit.

3.33.5 It shall be possible to install the remote unit with up to 1,000 feet of cable between it and the indoor control unit.

3.33.6 Outdoor unit shall have a rack-mounting option so the outdoor unit may be collocated with the indoor unit.

3.34 RF Performance Characteristics for Radio Equipment Operating in the 900 MHz Microwave Radio Band

3.35 For the Band of 928 to 960 MHz with bandwidths of 100 and 200 KHz

3.35.1 Contractor shall provide other bandwidths as options. These shall be fully compliant with the current FCC Part 101 technical requirements.

3.36 Frequency Tolerance

3.36.1 Frequency tolerance shall meet or exceed FCC Part 101.107. Frequency stability is expected to be 2.5 ppm or greater over the full operating range of the equipment.

3.37 Feed Connection

3.37.1 Type “N” connectors are the expected feedline terminations.

3.38 RF Power Levels

3.38.1 Power levels shall be user adjustable up to a +29 dBm output.

3.39 Receiver Thresholds

3.39.1 Receivers shall have the following guaranteed receive thresholds as a maximum level to obtain a BER 1x10E-6 Guaranteed capacity at minimum Received Signal Level (RSL) in dBm as listed below.

3.39.1 (a)	Bandwidth	Received Signal Level (RSL) in dBm
3.39.1 (b)	100 KHz	-94 96
3.39.1 (c)	200 KHz	-90 91

3.39.2 Contractors may provide other bandwidths as options. These shall be fully compliant with the current FCC Part 101 technical requirements.

3.40 RF Performance Characteristics for Radio Equipment Operating in the 5.9-7.1 GHz Microwave Radio Band.

3.41 6 GHz Frequency Range and Bandwidth

3.41.1 Equipment supplied for this band shall comply with the following requirements, with payload capacities in compliance with FCC Part 101.141:

3.41.2 Desired capacities are from 8xDS1 to 3DS3/OC3 (and equivalent Ethernet data rates) and bandwidths from 3.75 to 30 MHz.

3.41.3 Contractor may provide other bandwidths as options. These shall be fully compliant with the current FCC Part 101 technical requirements.

3.42 Feedline Connection

3.42.1 Antenna connection shall be a CPR-137G. If an adapter is required to convert from the standard flange on the radio unit, it shall be supplied and included in the unit price.

3.42.2 System shall operate with an antenna system with a peak return loss of 18 dB or greater.

3.42.3 Feedline connection point shall be at the top of the radio, clear of any obstructions. In cases where the radios are mounted two or more to a rack, the feedline connection may exit perpendicular to the back of the radio. However, in those cases, the Contractor shall supply a rigid waveguide right-angle section to allow the connection to be made vertically.

3.42.4 Antenna coupling unit shall have an option to accommodate the interconnection of additional analog or digital microwave radios to a common waveguide antenna feeder system.

3.42.5 Systems with ODU mounted outdoors at the antenna port, there shall be options to connect to antenna directly or remotely.

3.43 RF Power Levels

3.43.1 Equipment shall have a minimum output High power level of +26dBm and Low Power level of less than or equal to +21dBm

3.43.2 Power levels shall be measured at the top of the waveguide flange and shall include all branching losses. Hot-standby configurations may have power levels reduced from the levels listed above to account for switching losses.

3.43.3 Automatic transmitter power control (ATPC) shall be available as an option. It shall be capable of being disabled in the field by operator programming.

3.44 Receiver Thresholds

3.44.1 Receivers shall have the following guaranteed receive thresholds as a maximum level to obtain a BER 1x10E-6 in a nonprotected configuration. Guaranteed capacity at minimum Received Signal Level (RSL) in dBm as listed below.

3.44.1 (a)	8- DS-1/ 3.75 MHz	-77	77	83	83
3.44.1 (b)	16 - DS-1/ 5 MHz	-75	77	76	78
3.44.1 (c)	28 - DS-1/ 10 MHz	-74	77	74	77 78
3.44.1 (d)	84 - DS-1/ 30 MHz	-70	73	70	71 75

3.44.2 Received threshold levels shall be measured at the top of the flange and shall include all branching losses.

3.45 <u>RF Performance Characteristics for Radio Equipment Operating in the 10-11 GHz Microwave Radio Band.</u>

3.46 10-11 GHz Frequency Range and Bandwidth

3.46.1 Equipment supplied for this band shall comply with the following requirements, with payload capacities in compliance with FCC Part 101.141:

3.46.2 Desired capacities are from 8xDS1 to 3DS3/OC3 (and equivalent Ethernet data rates) and bandwidths from 3.75 to 30 MHz.

3.46.3 Contractor may provide other bandwidths as options. These shall be fully compliant with the current FCC Part 101 technical requirements.

3.47 Feedline Connection

3.47.1 Antenna connection shall be a CPR-90G. If an adapter is required to convert from the standard flange on the radio unit, it shall be supplied and included in the unit price.

3.47.2 System shall operate with an antenna system with a peak return loss of 23 dB or greater.

3.47.3 A single feedline connection point shall be provided for all radio configurations except space diversity. Space diversity configurations shall have two feedline connection points—one for one receiver and any transmitters and the other for the diversity receiver.

3.47.4 Feedline connection point shall be at the top of the radio, clear of any obstructions. In cases where the radios are mounted two or more to a rack, the feedline connection may

exit perpendicular to the back of the radio. However, in those cases, the Contractor shall supply a rigid waveguide right-angle section to allow the connection to be made vertically.

3.47.5 Antenna coupling unit shall have an option to accommodate the interconnection of additional analog or digital microwave radios to a common waveguide antenna feeder system.

3.48 RF Power Levels

3.48.1 Equipment shall have a minimum output High power level of +27dBm and Low Power level of less than or equal to +20dBm.

3.48.2 Automatic transmitter power control (ATPC) shall be available as an option. It shall be capable of being disabled in the field by operator programming.

3.49 Receiver Thresholds

3.49.1 Receivers shall have the following guaranteed receive thresholds as a maximum level to obtain a BER 1x10E-6 in a nonprotected configuration. Guaranteed capacity at minimum Received Signal Level (RSL) in dBm as listed below.

	Capacity	**Received Signal Level (RSL) in dBm**				
3.49.1 (a)	8 - DS-1 / 3.75 MHz	-76	76			82
3.49.1 (b)	16 - DS-1 / 5 MHz	-75	76			76
3.49.1 (c)	28 - DS-1 / 10 MHz	-73	76	73	76	77
3.49.1 (d)	84 - DS-1 / 30 MHz	-68	72	69	71	73

3.49.2 Received threshold levels shall be measured at the top of the flange and shall include all branching losses.

3.50 RF Performance Characteristics for Radio Equipment Operating in the 18 GHz Microwave Radio Band

3.51 Frequency Range and Bandwidth

3.51.1 Equipment supplied for this band shall comply with the following requirements, with payload capacities in compliance with FCC Part 101.141:

3.51.2 Desired capacities are from 16xDS1 to 3DS3/OC3 (and equivalent Ethernet data rates) and bandwidths from 5 to 30 MHz.

3.51.3 Contractor may provide other bandwidths as options. These shall be fully compliant with the current FCC Part 101 technical requirements.

3.52 Feedline Connection

3.52.1 Antenna connection shall be a UG-595/U. If an adapter is required to convert from the standard flange on the radio unit, it shall be supplied and included in the unit price.

3.52.2 System shall operate with an antenna system with a peak return loss of 15 dB or greater.

3.52.3 A single feedline connection point shall be provided for all radio configurations except space diversity. Space diversity configurations shall have two feedline connection points—one for one receiver and any transmitters and the other for the diversity receiver. In lieu of this arrangement, two antennas and two RF units may be used with one RF unit operating at a time. If space diversity is not commonly deployed, nor useful at these frequencies, fully describe in your answer.

3.52.4 Feedline connection point shall be clear of any obstructions.

3.52.5 RF unit and antenna is to be mounted outdoors, then options shall be provided to integrate them.

3.53 RF Power Levels

3.53.1 Equipment shall have a minimum output power level of +16dBm for 16 QAM and 20dBm for QPSK. Bidders may provide additional power level options.

3.53.2 Power levels shall be measured at the top of the waveguide flange and shall include all branching losses. Hot-standby configurations may have power levels reduced from the levels listed above to account for switching losses.

3.54 Receiver Thresholds

3.54.1 **Receivers shall have the following guaranteed receive thresholds as a maximum level to obtain a BER 1x10E-6 in a non-protected configuration.**

3.54.2 **Guaranteed capacity at minimum Received Signal Level (RSL) in dBm as listed below.**

Capacity	Received Signal Level (RSL) in dBm		
3.54.2 (a)	Power16 - DS-1 / 5 MHz		-77
3.54.2 (b)	28 - DS-1 / 10 MHz	-80	
3.54.2 (c)	84 - DS-1 / 30 MHz	-67	73

3.54.3 Received threshold levels shall be measured at the top of the flange and shall include all branching losses.

3.55 RF Performance Characteristics for Radio Equipment Operating in the 23 GHz Microwave Radio Band

3.56 Frequency Range and Bandwidth

3.56.1 Equipment supplied for this band shall comply with the following requirements, with payload capacities in compliance with FCC Part 101.141:

3.56.2 Desired capacities are from 16xDS1 to 3DS3/OC3 (and equivalent Ethernet data rates) and bandwidths from 5 to 50 MHz.

3.56.3 Contractor may provide other bandwidths as options. These shall be fully compliant with the current FCC Part 101 technical requirements.

3.57 Feedline Connection

3.57.1 Antenna connection shall be a UG-595/U. If an adapter is required to convert from the standard flange on the radio unit, it shall be supplied and included in the unit price.

3.57.2 System shall operate with an antenna system with a peak return loss of 15 dB or greater.

3.57.3 Single feedline connection point shall be provided for all radio configurations except space diversity. Space diversity configurations shall have two feedline connection points—one for one receiver and any transmitters and the other for the diversity receiver. (In lieu of this arrangement, two antennas and two RF units may be used with one RF unit operating at a time. If space diversity is not commonly deployed, nor useful at these frequencies, fully describe in your quote.)

3.57.4 Feedline connection point shall be clear of any obstructions.

3.57.5 RF unit and antenna is to be mounted outdoors, then options shall be provided to integrate them.

3.58 Receivers Thresholds

3.58.1 Receivers shall have the following guaranteed receive thresholds as a maximum level to obtain a BER 1x10E-6 in a nonprotected configuration.

3.58.2 Guaranteed capacity at minimum Received Signal Level (RSL) in dBm as listed below.

Capacity Received Signal Level (RSL) in dBm

3.58.2 (a)	16 - DS-1	-78	
3.58.2 (b)	28 - DS-1	-78	
3.58.2 (c)	84 - DS-1	-68	73

3.58.3 Received threshold levels shall be measured at the top of the flange and shall include all branching losses.

4.0 LMR Base Station Antennas, Microwave Antennas

4.1 Offer(s) and Product Qualifications

4.1.1 Offer(s) shall be the manufacturer or distributers of the products requested and specified;

4.1.2 This solicitation describes Base Station Antennas for use in public safety land mobile systems. Antennas should provide selection of operating frequency, bandwidth, gain, antenna style, and construction format. The public safety frequency bands specifically requested for this section include: VHF (150 to 160 MHz), UHF (450 to 474 MHz), 700 (758 to 806 MHz), and 800 (806 to 869MHz). Additional bands and broader bandwidths, than those listed, is desirable but not specifically required; and

4.1.3 Antennas need to be designed for durability and reliability. Designed for the heat, cold, ice and wind conditions. Arizona's record high temperature was 122 degrees and had a record low of -40 degrees. Mountain top wind speeds can be in access of 100 MPH. While not typical, wind speeds in access of 140 MPH have been reported. VSWR shall be 1.5:1 or better at the rated frequency/bandwidth, nominal impendence of 50 ohms. Low PIM performance may be a consideration for some agencies.

4.2 Type(s) of LMR Antennas

4.2.1 The following antennas shall operate in the bands listed above.

4.2.1 (a) Fiberglass collinear antennas;

4.2.1 (b) Exposed dipole antennas - User adjustable patterns shall be a consideration for some users;

4.2.1 (c) Directional antennas; yagi, log periodic, and corner reflector antennas;

4.2.1 (d) Flat panel antennas; and

4.2.1 (e) Ground plane, discone, and other unity gain antennas.

4.3 Microwave Antennas (Dishes)

4.3.1 Microwave Antenna (Dishes) shall be the latest state of the art Microwave Antennas and Associated Equipment of use in specified frequency bands to meet the needs of the Eligible Agencies.

4.3.2 All equipment selected as suitable for purchase shall be given classification within the frequency band groups as follows:

Frequency Band

4.3.2 (a) 5.925-7.125 GHz

4.3.2 (b) 10.70-11.70 GHz

4.3.2 (c) 17.70-19.70 GHz

4.3.2 (d) 21.8-23.60 GHz

4.3.3 Federal Communications Commission (FCC) Rules and Regulations and amendments; E.I.A. Standards and amendments, RS222. (Latest Version)

4.3.4 All material and workmanship shall be of the type and grade most suitable for the application. All material shall be new and free from defects.

4.3.5 Unless specifically excepted by the terms of these specifications, any part or accessories ordinarily furnished or required to make the equipment, herein specified, a complete operating unit shall be furnished by the Vendor.

4.3.6 The contractor shall make available equipment documentation to The State's as specified herein. This documentation shall accompany the equipment at the time of delivery. Documentation costs for State's specified manuals shall be included as separate bid items. A copy of radiation patterns shall be provided at no cost if requested.

4.4 Service, Installation and Operations Manuals

4.4.1 Installation and or operation manuals shall be furnished with each order; each manual shall contain the following:

4.4.1 (a) Detailed drawings or clear photographs showing location of parts and hardware associated with antenna or connector assembly or mounting.

4.4.1 (b) Complete diagrams including information outlining method of operation, supply voltages, currents, and power requirements for each model of dehydrators.

4.5 Equipment Service Life

4.5.1 All equipment covered by these specifications and any resultant contracts shall have a minimum service life of ten (10) years from date of delivery to the State. The contractor shall guarantee replacement parts stocking for this service life period.

4.5.2 Each shall guarantee repair or replacement of any equipment or part thereof that fails in operation during normal and proper use within two (2) years from the date of State's receipt due to defects in design, material or workmanship, consummation of final acceptance and payment notwithstanding. These replacements shall be provided with no charge to the State.

4.5.3 Any equipment or part replaced under the provisions of this warranty becomes the property of the. If the vendor desires the defective equipment or part returned, The contractor shall pay all transportation charges and make all arrangements for the return. If the does not specifically request return of such replaced parts within thirty (30) days from the date of replacement, the equipment for parts become property of the State.

4.5.4 Replacement parts shall be regularly stocked by the manufacturer and/or authorized distributor. Delay in State's receipt of replacement parts shall not exceed thirty (30) consecutive days from manufacturer or distributor's receipt of order.

4.5.5 Emergency orders shall be transported by the most expedient manner available as agreed upon with the transportation cost born by the State less normal shipping cost.

4.6 General Equipment Characteristics

4.6.1 **Environmental** - All antennas shall survive wind velocities of one hundred (100) miles per hour with one (1) inch of radial ice and no more than 0.1 degree of deflection in seventy (70) mile per hour wind.

4.6.2 **Environmental** - All antennas shall remain operational within the temperature range of (-40 to 135 degree F)

4.6.3 **Environmental** - All antennas and associated hardware shall be non-corrosive, non-rust material. This can be accomplished by supplying Hot Dipped Galvanized or Stainless Steel hardware. Plated steel shall not be accepted. Aluminum antennas shall be painted with corrosion resistant paint.

4.6.4 **Environmental** - Field assembly of all antennas shall only be between antenna parabola, feed, antenna mount and fixed and/or slide assemblies. Antenna mount assembly is permitted.

4.6.5 **Environmental** - Parabolic solid antennas shall be equipped to include mounting hardware for a 4.5" vertical O.D. mounting pipe. Parabolic grid antennas shall be equipped to include mounting hardware for either a 1.9" – 3.5" or a 4.5" vertical O.D.(Outside Diameter) mounting pipe.

4.6.6 **Environmental** - Parabolic solid antennas shall have a reflector surface tolerance designed so that antenna feeds could be interchanged between 6GHz and 11 GHz without loss to antenna gain. Antenna feeds should also be interchangeable in the 18GHz and 23GHz dishes.

4.6.7 **Operational** - Material and workmanship shall be of the type and grade most suitable for the application and shall conform as a minimum unless otherwise specified to the latest applicable standards, specifications, recommended practices and procedures of such standardizing bodies as the I.E.E.E(Institute of Electrical and Electronics Engineers), N.E.M.A.(National Electrical Manufacturers Association), F.C.C.(Federal Communications Commission).

4.7 Microwave Antennas

4.7.1 The specifications listed herein are minimum requirements. These dish examples are for evaluation of the offered product lines. Frequencies listed represent the basic band of operation, which may consist of operational sub-bands. *A range variance of up to a maximum of -1 DB has been identified as acceptable. # VSWR is for standard bandwidths, a wide-bandwidth dish in the same product time with lesser VSWR performance is expected and acceptable.

Standard Performance, 5.925-7.125 GHz Band, Single Polarization , CPR 137G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width Degrees	Cross Pol Disc. DB	F/B Ratio DB	VSWR
6	38.4	38.7	39.1	A	1.9	30	55	1.3
8	40.1	41.2	40.3	A	1.5	30	55	1.3
10	42.8	43.2	43.5	A	1.2	30	61	1.3

High Performance, 5.925-7.125 GHz Band, Single Polarization, CPR137G Input

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width Degrees	Cross Pol Disc. DB	F/B Ratio DB	VSWR
6	38.4	39.	39.3	A	1.9	30	62	1.08
8	41.2	41.6	42	A	1.5	30	66	1.08
10	43	43.4	43.7	A	1.2	30	69	1.08

Ultra High Performance, 5.925-7.125 GHz, Super High Cross Polarization, CPR137G Input

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width Degrees	Cross Pol Disc. DB	F/B Ratio DB	VSWR
6	38.3	38.7	39	A	1.9	40	69	1.08
8	40.9	41.3	41.7	A	1.5	40	71	1.08
10	43	43.2	43.5	A	1.2	40	74	1.08

Standard Performance, 10.5-11.7 GHz, Single Polarization , CPR 90G Input Flange								
Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width Degrees	Cross Pol Disc. DB	F/B Ratio DB	VSWR
4	40.1	40.5	40.9	A	1.7	30	46	1.08
6	43.2	43.3	43.4	A	1.2	30	60	1.08
8	45.8	46.0	46.2	A	0.9	30	62	1.08

High Performance, 10.5-11.7 GHz Single Polarization, CPR90G – PBR 100 Input								
Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width Degrees	Cross Pol Disc. DB	F/B Ratio DB	VSWR
4	39.7	39.8	39.9	A	1.7	30	61	1.08
6	43.5	43.6	43.7	A	1.1	30	68	1.08
8	45.7	45.9	46	A	0.8	30	68	1.08

Ultra High Performance, 10.5-11.7 GHz, Super High Cross Polarization, CPR90G – PBR 100 Input								
Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width Degrees	Cross Pol Disc. DB	F/B Ratio DB	VSWR
4	39.7	39.8	39.9	A	1.7	40	64	1.10
6	43.2	43.3	43.4	A	1.1	40	72	1.08
8	45.6	45.8	45.9	A	0.8	40	75	1.08

Ultra High Performance, 17.7-19.7 GHz, Super High Cross Polarization, UG595/U – PBR220 Input								
Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width Degrees	Cross Pol Disc. DB	F/B Ratio DB	VSWR
2	38	38.4	38.8	A	1.9	36	64	1.2
4	44	44.4	44.8	A	1.0	36	67	1.2
6	47.5	48	48.4	A	0.7	36	72	1.2

Parabolic Antenna, 21.2-23.6 GHz, Single Polarization, UG-595/U – PBR220 Input Flange								
Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width Degrees	Cross Pol Disc. DB	F/B Ratio DB	VSWR
2	39.7	40.2	40.7	A	1.7	30	65	1.4
3	43.1	43.6	44.1	A	1.1	30	71	1.4
4	49.0	46	46.6	A	.8	30	72	1.4

4.8 Radomes

4.8.1 High Performance Antennas shall have flexible planar Radomes supplied with antenna.

4.8.2 All Standard Antennas shall have molded fiberglass Radomes, parabolic or conical in shape available.

4.9 Dehydrators

4.9.1 Dry air pressurization equipment for waveguide transmission lines. Low-pressure systems to pressurize waveguides with dry air. Systems should provide alarm monitoring of a low presure condition and excessive run time. Systems shall be rack or wall mounted. Power options shall be AC or DC power. Accessories shall include Distribution Manifolds and tubing.

1.	½", 7/8", 1-¼"	Diameter Foam Dielectric Coaxial Cable
2.	7/8"	Diameter Air Dielectric Coaxial Cable
3.	1 5/8"	Diameter Foam Dielectric Coaxial Cable
4.	½"	Diameter Super Flexible Foam Dielectric Coaxial Cable

4.10 Transmission Lines

4.10.1 Transmission line or COAXIAL cable shall be available according to the sizes listed below:

4.10.2 Elliptical, Flex and Rigid waveguide components shall be supplied according to the sizes and/or frequency bands listed below:

1.	Waveguide for	5.925 – 7.125 GHz
2.	Waveguide for	10.50 – 11.70 GHz
3.	Waveguide for	17.70 – 19.70 GHz
4.	Waveguide for	21.20 – 23.60 GHz

4.11 Connectors

4.11.1 **LMR Connectors**

	½" Connector	7/8" Connector	1-¼' Connector	1-5/8 connector	½" Super Flexible Connector
1.	"N" Male	"N" Male	"N" Male	"N" Male	"N" Male
2.	"N" Female	"N" Female	"N" Female	"N" Female	"N" Female
3.	UHF Male	UHF Male			UHF Male
4.	UHF Female	UHF Female			UHF Female
5.	7-16 DIN Male	7-16 DIN Male	7-16 DIN Male	7-16 DIN Male	7-16 DIN Male & Right Angle
6.	7-16 DIN Female	7-16 DIN Female	7-16 DIN Female	7-16 DIN Female	7-16 DIN Female
7.	7/8" EIA	7/8" EIA			

4.12 Waveguide Connectors

1.	EW63-E65, Tunable, Fixed Tuned, CPR and CPR 137G
2.	EW90-E105, Tunable, Fixed Tuned, CPR and, CPR 90G, PBR100
3.	EW180-E185, Fixed Tuned, UG595/U, PDR180
4.	EW220-E220, Fixed Tuned, UG595/U, PBR220

5.0 Radio Dispatch Consoles

5.1 General

5.1.1 This specification contains sections that describe various types of radio dispatch consoles to be utilized in State and Municipal public safety radio communications systems. These sections include (1) Single/dual channel desk top remote control handset controllers; (2) 8-12 channel desk-top dispatch consoles; (3) 96 channel, high capability radio dispatch consoles; (4) 450 channel remote electronics high-capability expandable radio dispatch consoles. Analog, TDM and RoIP/VoIP based options to be separately priced. It is not necessary for a vendor to bid all sections.

5.1.2 It is the intent of these specifications to ensure the purchase of highly reliable radio dispatch control console equipment. These specifications are minimum standards and are intended to ensure reliable, high quality, readily available and repairable equipment. These specifications may not list all necessary equipment beyond that needed to complete the electronic package and it shall be the responsibility of the contractor to verify completeness of the material list and the suitability of the devices to meet the total requirements of these specifications. Subsequent to award, any additional equipment, charges, or services required to meet the specifications, even if not specifically enumerated herein, shall be provided by the vendor without claim for additional payment or compensation.

5.1.3 The Type 2, 3, & 4 Flat Panel Display (FPD) communications control console electronic design criteria shall be based on the need for maximum reliability, flexibility, and ease of operation and service. To meet these criteria, the electronic equipment should be of the latest design. The design shall reflect state-of-the-art concepts in communications command and control console design.

5.1.4 The FPD based communications control consoles shall provide monitoring and control facilities for remotely located two-way radio base stations. The consoles shall also provide certain ancillary functions such as repeater enable and disable of each channel, simultaneous transmit, alert tone transmit, instant patching, and multiple frequency base station control. It is desired that all console functions be accomplished using a Touch-Screen and Trackball/Mouse combination. Other methods of console control will be evaluated and compared against this style of system control.

5.1.5 The ability of the vendor's FPD communications control consoles to remotely operate separately from the common control equipment over telephone lines, LAN, or digital and analog microwave channels is a requirement. Equipment that does not meet this requirement will not be evaluated.

5.1.6 The Type 3 & 4 common electronics shall be designed to remain fully operational during the loss of AC power for a minimum of one hour via either an internal or external

uninterruptible power supply (UPS). Each dispatch position shall have an available UPS option which will allow full operation during the loss of AC power for a minimum of thirty minutes.

5.1.7 The unique requirements of the console electronic packages may not readily lend themselves to standard contractor product lines. However, contractors shall propose equipment meeting the technical and operational requirements and make maximum use of the standard product line equipment.

5.1.8 Make and model numbers given in this specification are for reference only, and do not imply that they are the only acceptable equipment.

5.2 Electrical Requirements

5.2.1 Each console bid shall be equipped with sufficient power supply capabilities, common electronic modules, cabling, etc to accommodate the channel requirements. All consoles shall be capable of operating from a 120 VAC source. Backup power should ideally be from a DC source of 12 to 48 VDC, with all necessary power regulation built into console electronics.

5.3 Technical Specifications - Each console offered should meet the following technical specifications, as a minimum:

5.3.1 Individual channel 2W, 4W, Tone/DC/E&M selection

5.3.2 Line Impedance: 600 or >5K ohm (4-wire) or, 600 ohm Tx (2-wire)

5.3.3 Operating Temperature: 0 to +50 degrees C

5.3.4 Audio Response: +/- 3 dB from 300 to 3000 Hz

5.3.5 Tx & Rx Hum and Noise: -50 dB below rated output

5.3.6 Distortion: Tx & Rx - Less than 3% THD

5.3.7 Compression: Variable compression knee

5.3.8 Receive Audio: -25 to +10 dBm; 600 ohm or 5K ohm; w/ less than -60 dB crosstalk

5.3.9 Transmit Audio: -20 to +10 dBm; 600 ohm; w/ 70 dB line balance

5.3.10 Tone Control: A minimum of (7) industry standard function tones with 2175 Hz Hi/Lo Guard Tone; including 1250/1350/1450/1550, 1850 and 1950 Hz function tones (Repeater control, Aux Function control, CTCSS Monitor, F1/F2 Transmit)

5.3.11 DC Control Functions: Transmit - F1 +5.5 ma.; F2 +12.5 ma.; Monitor +2.5 ma.

5.3.12 Unit ID Functions: (Optional) Motorola MDC1200 system decode/display

5.3.13 Speaker Output: 500 mw minimum, 3% distortion, into a 4 ohm or 8 ohm load

5.4 DESK-TOP REMOTE CONTROL CONSOLES (TYPE I price category)

5.4.1 **General -** The following specification describes various switch-based, desk-top radio controllers, including fully self-contained Tone, DC & RoIP based single-channel and dual-channel telephone-type handset controllers (optionally expandable) known as Type 1; and 8-channel (expandable to at least 12 channel), self-contained desk-top consoles, known as Type 2. The multichannel desk-top units also allow for local remoting of the control electronics to a small desk or wall mounted electronic box up to 100' away from the dispatch control unit. Optional IP control for both type units may also be proposed.

5.4.2 Tone & DC Single/Dual-channel Handset Type Controllers (Type 1) - This specification is for a solid-state, 120 VAC powered, desk-top, handset type, Tone or DC controller for a single channel station. A selectable two-channel, expandable, model may also be offered as an option, which may also be optionally expandable to more channels. Models which have been determined to meet the general intent of this specification include the IDA 24-10, 24-15, 24-20, 24-66, and 24-30; The Telex-Vega IP-2002, and C-2000 and C-2000SF

units. (These models are only given as examples, and alternate models meeting the specifications may be proposed).

5.4.3 Technical Specifications

5.4.3 (a) On-hook monitor disable

5.4.3 (b) Weight: Less than 5 pounds (Desk-top unit)

5.4.3 (c) Size (Remote Box): Less than 12"X12"X6", including battery back-up

5.4.3 (d) Programmability: Fully field adjustable/programmable without a computer

5.4.3 (e) Transmit indicator light

5.4.3 (f) The units shall allow for on-hook receiver operation through a loudspeaker, and off-hook operation through the handset.

5.4.3 (g) An RoIP based remote, single-line handset controller, that does not require a separate computer for operation, is also acceptable. These handsets shall be fully compatible for direct connection to a 10/100 baseT internal Ethernet network connection, and shall allow for parallel operation of any number of controllers.

5.4.3 (h) Optional two-line controllers do not require the ability to independently select either 2W/4W operation by channel, Tone or DC control by channel, or simultaneous receiver monitoring of both channels. These may all be fixed (hard-wired) functions.

5.5 (8)-Channel Desk-Top Tone/DC Consoles (Required to be Expandable to 12 Channels) (Type ll price category)

5.5.1 This section defines the minimum requirements for a desk-top radio control console with a minimum 6 individual channel (line) capability, with optional expansion to at least 12 channels on a channel-by-channel basis. Each console channel shall be capable of controlling either a 4-wire channel or 2 wire channel on an individual basis, and shall be individually programmable for either Tone, DC (current), or E&M radio control. Local remote control of a radio is not required. Optionally, the manufacturer may offer an RoIP based console which can control a remote radio through an IP data circuit, but must still provide two-way analog audio capability on all channels.

5.5.2 Parallel operation of up to 4 separate units shall be available with supervisory override control.

5.5.3 The dispatch operator position shall be a single unit, except for the microphone and footswitch, or an outboard third-party provided paging encoder. No external attachments, including power supplies, loudspeakers, touch-tone pads, line splitter boxes to increase channel count, etc. will be acceptable.

5.5.4 It is required that the vendor offer switch-based control functions for their console. However, optional computer-based, Flat Panel Display (FPD) consoles offering mouse-controlled on-screen function switches will be evaluated if offered. Models of equipment which have been determined to meet the intent of this section of the specification include the Gai-tronics ICP9000 Series, and the Telex-Vega C1616/C6200, IP-1616, C-Soft series, for various channel configurations.

5.5.5 Operational Features Require, each dispatch console operator position offered must include the following:

5.5.5 (a) Individual audio speakers and volume controls for select and unselected channels

5.5.5 (b) Individual channel 2W, 4W, Tone/DC/E&M selection, with 4-frequency Tone control

5.5.5 (c) Desk-mic with PTT bar and mute switch

5.5.5 (d) Dual-plug type headset interface jacks

5.5.5 (e) Combined select/unselect/transmit audio combined output jack for recording

5.5.5 (f) Jack for external PTT footswitch

5.5.5 (g) (2)-channel cross-patch capability

5.5.5 (h) Multi-channel transmit select

5.5.5 (i) DTMF encoder

5.5.5 (j) Internal or external pager capability

5.5.5 (k) Controls/Indicators

5.5.6 Each dispatch console operator position offered must include the following:

5.5.6 (a) Console transmit indicator

5.5.6 (b) Console channel busy (receiving) green indicator

5.5.6 (c) Individual channel instant-transmit light

5.5.6 (d) Channel labels (fixed or electronic)

5.5.6 (e) Transmit audio level meter (Vu meter)

5.5.6 (f) Channel select indicator

5.5.6 (g) Console Technical Specifications

5.5.7 Each console offered should also meet the following technical specifications, as a minimum:

5.5.7 (a) Alert Tones: Optional continuous, hi/lo, warble; -30 to 0 dBm, independently adjustable

5.5.7 (b) Speaker Output: 500 mw minimum, 3% distortion, into a 4 ohm or 8 ohm load

5.6 Full Featured – Remote Electronics Consoles (Type III Price Category)

5.6.1 General - It is the intent of this specification to ensure the purchase of highly reliable communications control consoles. This includes a spectrum of console systems ranging from single 96 (minimum) channel remote units (Type III), to advanced Flat Panel Display (FPD) based, high 450 (minimum) channel, 20 operator position systems (Type IV). These specifications are minimum standards and are intended to ensure reliable, high quality, readily available and repairable equipment. These specifications may not list all necessary equipment beyond that needed to complete the electronic package and it shall be the responsibility of the contractor to verify the completeness of the material list and the suitability of the devices to meet the total requirements of these specifications. Subsequent to proposal award, any additional equipment, charges, or services required to meet the specifications, even if not specifically enumerated herein, shall be provided by the vendor without claim for additional payment or compensation.

5.6.2 The communications control console electronic design criteria shall be based on the need for maximum reliability, flexibility, ease of operation and service. The design shall reflect state-of-the-art concepts in communications command and control console design.

5.6.3 The communications control console shall provide monitoring and control facilities for remotely located two-way radio base stations. The console shall also provide certain ancillary functions such as repeater enable and disable of each channel, simultaneous transmit, alert tone transmit, instant transmit, supervisory override, cross channel patching with up to three separate but simultaneous patches possible, phone patching, and multiple frequency base station control. It is desired that all FPD-Type console functions be

accomplished using a Touch Screen and Trackball/Mouse combination. Other methods of console control will be evaluated and compared against this style of system control.

5.6.4 The ability of the vendor's FPD communications control consoles in Category III and IV to remotely operate separately from the common electronic control equipment over telephone lines, microwave channels or fiber optic lines is a requirement. Equipment that does not meet this requirement will not be evaluated.

5.6.5 Each Type III and IV console shall have both receive voter (like JPS SNVs) and auxiliary interfaces. Both RoIP and P25 interfaces are a requirement for both classes. In addition, at least one of the following trunking protocols MUST be supported as an option: Project 25, Astro P25, Open Sky, Smartnet/Smartzone. In addition, each console should be compatible with either a T1 or a WAN/LAN interface.

5.6.6 The common electronics and FPD operator positions shall be designed to remain fully operational during the loss of AC power for a minimum of one-half hour via either an internal or external uninterruptible power supply (UPS) or a battery backup system. Each FPD dispatch position shall have an available UPS option which will allow full operation during the loss of AC power for a minimum of one hour.

5.6.7 The unique requirements of the console electronic packages may not readily lend themselves to standard contractor product lines. However, contractors shall propose equipment meeting the technical and operational requirements that make maximum use of the standard product line equipment.

5.6.8 The specifications do not include any proprietary items, components, circuits, or devices which would preclude any communications equipment manufacturer from producing equipment to meet these specifications. All technical tolerances, ratings, power outputs, or any technically specified criteria contained within these specifications are considered to be within the current state of the electronic art and are currently being met by commercially available equipment.

5.7 Electrical Specifications

5.7.1 Both Type III and IV consoles shall operate from a primary power source of 120/240 VAC, with battery powered UPS backup required. AC current consumption on the primary side of the line for the central electronics shall not exceed 5 watts/channel for a 50 channels system. Each operator position electronics shall not consume more than 250 watts, including the FPD.

5.8 Full-Feature Console – Type III

5.8.1 The Type III communications control console shall provide the facilities for the operation and control of remotely located two-way radio base stations and other specialized equipment. The console shall be equipped with sufficient power supply capabilities, common electronic modules, cabling, etc. to accommodate these channel requirements. Each console electronic package shall be equipped with common control equipment to provide the capability to operate and control any one, any selected group, or all channels simultaneously. Each console electronic package shall comply with all FCC Rules and Regulations, where applicable.

5.8.2 The console shall be expandable to a minimum of 96 radio control channels and 6 operators' positions. There shall be receive voter (like JPS SNV-12s) and auxiliary control interfaces. In addition to the 96 radio channels, the console electronics shall be able to support 6 operator positions, and up to ten receiver voter groups with up to 24 base stations per voter group. The ability of a manufacturer's equipment to accommodate this future requirement will be a major consideration in the proposal evaluation. In addition to controlling conventional non-trunked channels, at least one of the following protocols must be supported as an option: RoIP, Project-25, Trunking (EDACS, Smartnet, Smartzone,

OpenSky). T1, or Lan/Wan interfaces may be optionally added. The console shall have extended remote capability to allow an operator position to be remoted from the central electronics bank by way of commercial telephone lines, Ethernet, fiber optic, or microwave.

5.9 Large Full-Feature Console – Classification (Type IV Price Category)

5.9.1 General Specifications same as Type III above. The console shall be expandable to a minimum of 450 radio control channels and 20 operators positions. There shall be receiver voter (like JPS SNV-12s) and auxiliary interfaces. In addition to controlling conventional non-trunked channels, at least one of the following protocols must be supported as an option: RoIP, Project-25, Trunking (EDACS, Smartnet, Smartzone, OpenSky). Additionally, optional T1, or Lan/Wan interfaces may be added. The console shall have extended remote capability to allow an operator position to be remote from the central electronics bank by way of commercial telephone lines, fiber optic, or microwave. In addition to the 450 radio channels and/or trunked talk groups, the console electronics shall be able to support twenty operator positions and up to twenty receiver voter groups with an average of six base stations per voter group. The ability of a manufacturer's equipment to accommodate this future requirement will be a major consideration in the proposal evaluation.

5.10 Control Functions & Status Indicators

5.10.1 Both Class III and Class IV configurations shall meet all of the following specifications, and have two dual-jack inputs and have select and unselect speakers for audio output. In addition, there shall be a selected audio output jack and a summed unselect audio port available.

5.11 Radio Channel Control Functions

5.11.1 The radio control channels shall have the functions listed below:

5.11.1 (a) Channel Select - Shall engage the selected channel in the transmit/receive, fully operational, ready condition. The channel select function should be capable of selecting of more than one channel up to all channels simultaneously.

5.11.1 (b) Repeater Enable and Disable - consoles shall enable and disable the repeat function of a tone controlled base station.

5.11.1 (c) Squelch Disable - Shall disable receiver continuous tone coded squelch operation of a tone controlled base station.

5.11.1 (d) Instant Transmit - Shall allow transmitting on a channel without placing the channel in a selected mode first. This function shall not override supervisory control.

5.11.1 (e) Channel Crosspatch - Shall allow audio received on one radio channel or phone line to be automatically repeated on one or more of the other channels. Class III and IV consoles shall be capable of supporting at least three simultaneous but separate crosspatches. (Desktop consoles should be capable of doing at least one crosspatch.) This function shall be independent of other console activities.

5.11.1 (f) Two Frequency Control - Shall allow frequency selection of a two-frequency tone controlled base station.

5.11.1 (g) Supervisory Control B Class III and IV consoles shall provide the capability for one operator position (the supervisor's position) to take over a channel from all other operator positions. All parallel operator positions on the same channel shall receive an indication that supervisory control has been initiated.

5.11.1 (h) Supervisory Monitor B Class III and IV consoles shall allow the transmit and receive audio from one console operator position to be monitored on another console position.

5.11.1 (i) Channel Mute - shall completely mute the channel receive audio.

5.11.1 (j) Auxiliary Enable and Disable B consoles shall enable and disable an auxiliary function of a tone controlled base station.

5.12 Status Indicator

5.12.1 All switching functions shall have an associated indicator to clearly display function and channel status, i.e. on-off, activated-not activated, in use-not in use. The FPD system shall display complete status for a minimum of eight channels and limited status for the optional eight additional channels at each operator position. This limited status information shall include the following: channel selected, instant transmit activated, channel cross patch activated, channel muted, channel receiving a call, and channel busy.

5.12.2 To simplify the operation of the console, it shall be possible to physically group channels on the console in any order to facilitate operations.

5.12.3 Status Indicators shall illuminate with the following functions:

5.12.3 (a) Channel Selected

5.12.3 (b) Repeater Enabled

5.12.3 (c) Squelch Disabled

5.12.3 (d) Instant Transmit activated

5.12.3 (e) Channel Crosspatch activated

5.12.3 (f) Frequency One selected

5.12.3 (g) Frequency Two selected

5.12.3 (h) Channel Muted

5.12.3 (i) Channel receiving a call - this shall be a flashing type indicator

5.12.3 (j) Channel busy - parallel wired console transmitting

5.13 Console Position-wide Functions

5.13.1 In addition to the individual channel functions and indicators specified under paragraph 5.5, the communications control console shall also provide the following functions. These functions are common to all radio channels.

5.13.1 (a) Simultaneous Selection - Shall enable the selection of any combination of channels for simultaneous operation. The capability shall also be provided to automatically unselect all channels by depressing a single button.

5.13.1 (b) Transmit - Shall activate the transmit condition and route dispatcher audio to all selected channels. This transmit switch shall be electrically paralleled to the console footswitch.

5.13.1 (c) Master Mute - Shall mute all receive audio except the selected channels to a preset level.

5.13.1 (d) Automatic Selection - Shall automatically select a group of channels by action of a single switch. All automatically selected channels shall be unselected by action of a single switch. The particular group of channels to be selected shall include any combination up to all of the console channels.

5.13.1 (e) Intercom - consoles shall allow communication on the selected channels without keying the base station transmitter. This function shall allow communications between dispatchers or between dispatchers and remotely located technicians.

5.13.1 (f) Alert Tones - consoles shall activate one of three different alert tones that shall be transmitted on the selected channel, the simultaneously selected channels, or the automatically selected channels. The alert tones shall be continuous, hilo, or warbled between two different audio frequencies.

5.13.1 (g) Priority Tone – consoles shall activate an intermittent tone on individually selected channels to indicate priority traffic on that channel. The tone will not cover voice traffic.

5.13.1 (h) Radio/Telephone Audio - consoles shall allow the dispatcher's headset to be used for both telephone and radio communications. The telephone audio shall be transferred to the headset by action of a single switch. The party on the opposite end of the phone line shall not hear the dispatcher's radio transmissions (any console PTT shall mute the dispatcher's voice from the telephone line). Transfer of telephone audio to the headset shall switch the selected channel audio back out to the selected audio speaker. During the time that the headset telephone operation mode is activated, the console operator shall retain the ability to instantaneously transmit on the selected channel by use of the footswitch or master control panel transmit switch with no degradation to the transmit functions, transmit audio quality and/or signal strength. The dispatcher shall also retain the ability to instantaneously transmit on the unselected channels as well.

5.14 Status Indicators

5.14.1 All switching functions and the following status indication capabilities shall have an associated indicator on the FPD to clearly display function and status, i.e. on-off, activated-not activated, in use-not in use.

5.14.2 The status indicators shall illuminate with the following functions:

5.14.2 (a) Simultaneous Selection in use.

5.14.2 (b) Transmit function activated.

5.14.2 (c) Master Mute activated.

5.14.2 (d) Automatic Selection in use.

5.14.2 (e) Intercom in use.

5.14.2 (f) Alert Tone being transmitted.

5.15 Ancillary Equipment

5.15.1 The communications control console shall include the following ancillary equipment: speakers for selected audio and unselected audio, paging encoder, and displayed on the console's FPD, a VU meter, and clock system.

5.15.2 Speakers - The capability of monitoring selected and unselected audio shall be provided via two separate console speakers. Each speaker shall be provided with a separate volume control to allow for individual adjustment. The volume controls shall provide sufficient attenuation to decrease the associated speaker audio to an inaudible level. These two volume controls, along with the headset volume controls, are the only ones required. Separate volume controls for each of the radio channels are not required. The dispatcher shall still have the capability to completely mute individual channels if desired. The selected and unselected audio speakers shall be separated a minimum of 12 inches center to center. The dispatcher shall also have the capability to turn off either or both speakers without turning down the volume controls.

5.15.3 VU Meter - A VU meter, located on the FPD console's display in such a way as to give optimum visibility to the operator, shall be provided. The meter shall indicate the transmit audio level and selected receive audio level.

5.15.4 Digital Clock - The console shall include a 24-hour digital clock display in the FPD console's display. The clock display shall give optimum visibility to the operator. The clock display shall be an integral part of the console system. The clock shall be a master/slave system capable of being set from the master, which is to be calibrated by an external time base via RS232 protocol or USB interface.

5.15.5 DTMF Paging Encoder - The console(s) shall incorporate DTMF capability. These must be an integral part of the console electronics installed in the console furniture and wired into the console electronics. Single button paging functions shall be available which send preselected DTMF strings of at least 3 numbers to either a predetermined radio channel or on the selected channel(s).

5.15.6 Receivers - The radio control channels will not only be routed to the console as separate channels but may also be routed to a separate system of up to ten receiver voter groups. The console shall have the capability to control and display the status of these voted channels. The dispatcher shall be able to force vote or disable a particular voter module by engaging switches or keying in a function which will operate a) Two form C dry contacts or b) Open collector outputs or c) Communicate with the system via RS-232 or Ethernet cabling. The enable/disable status of a particular voter module shall be displayed at the operator position. The console shall also provide an indication of which channel is currently being voted. It also should be capable of automatic transmit steering and indicate on the FPD which transmitter will be keyed if the master PTT is activated. The voted channels shall support voting systems manufactured by JPS Communications.

5.15.7 Headset - Each operator position shall be compatible with the Plantronics Encore Monaural Ultra Headset, model H91N, or approved equivalent.

5.15.7 (a) Headset Jack

5.15.7 (b) Each operator position shall be equipped with a dual phone plug type headset jack. The jack shall be compatible with dual phone plugs used on the Plantronics model SHS1890-251N headset jack plugs. The headset jack shall have an associated receive volume control. The external microphone shall be disabled when the headset is inserted into the headset jack. Audio to the select speaker shall be removed when the headset is inserted. The dispatcher shall have the option of applying audio to the select speaker and the headset simultaneously if desired. The headset jack shall have an easily accessible talk/training switch which will allow the dispatcher to talk and listen or listen only with the headset=s transmit mouthpiece disabled. Disabling the transmit mouthpiece shall not prevent a headset with an amplified ear piece from functioning correctly. The headset jack must also have a 4 wire/6 wire switch for operating either a 4 wire headset (talk and listen) or a 6 wire headset (talk, listen, and a transmit push to talk button).

5.15.8 External Microphone - Each operator position shall be equipped with an External Microphone mounted on a Flexible Gooseneck Boom.

5.15.9 Footswitch - Each operator position shall be provided with a dual footswitch to activate transmit and/or mute operations. The dual footswitch shall activate two functions within the console:

5.15.9 (a) Activate transmitter control.

5.15.9 (b) Activate the Master Mute function.

5.15.9 (c) The right half of the footswitch shall operate in the same manner as the Master Control Panel transmit push button switch. The left half shall mute all unselected channels when depressed and unmute these channels when

released. If the console system requires modification to implement these functions, the modifications shall be completed by the console manufacturer and shall be fully documented in the maintenance manual(s).

5.15.10 Logging Recorder Interfaces - Each operator position shall be provided with a logging recorder output that contains the dispatch position microphone audio and select audio combined onto one 600-Ohm output port. An optional second logging recorder interface for telephone audio is desirable.

5.15.11 Remote Control of Base Stations - The communications control console shall be capable of providing D.C. keying, tone sequence keying, or "M Lead" dry contact keying for each radio channel as well as tone sequence control of repeater, frequency, and squelch disable functions.

5.15.12 D.C. Keying – CRT and Desktop Consoles - Each radio channel shall have available regulated D.C. keying currents of 15 ma and 6 ma. The D.C. control currents shall be provided for a loop resistance up to 10K ohms. Although as a default all channels shall not be supplied with DC keying capability, but pricing to add DC control on a per channel basis shall be provided.

5.15.13 Tone Keying- FPD and Desktop consoles - Each radio channel shall have available a tone sequence keying scheme that provides a High Level Guard Tone followed by a Function Tone followed by a Low Level Guard Tone.

5.15.14 "M Lead" Keying- FPD and Desktop consoles - Each radio channel shall be capable of providing Form A (normally open) dry contacts for transmitter keying.

5.15.15 One Sequence Tolerances - FPD and Desktop consoles - Tolerances for tone sequence control shall be within the following limits:

5.15.15 (a) All tone frequencies as specified within +/-1 Hz.

5.15.15 (b) All tone durations as specified within +/-5 ms or adjustable from 25 ms to 150 ms.

5.15.15 (c) High Level Guard Tone - 0dBm to -10 dB adjustable to meet line conditions

5.15.15 (d) Function Tone - 10 dBm +/-1 dB adjustable to meet line conditions.

5.15.15 (e) Low Level Guard Tone - 30 dBm +/-1 dB adjustable to meet line conditions.

5.15.16 Radio Channel Terminations - Each radio channel shall be capable of 2 wire or 4 wire operation. The type of termination shall be readily selectable on a per channel basis.

5.15.17 Parallel Operator Position Control of Radio Channels - The console common electronics shall be capable of parallel operator position control of common radio channels. All channel control switches and indicators shall be paralleled. Parallel operation shall be readily selectable on a per channel basis.

5.16 Design Criteria

5.16.1 The console electronic package design criteria are based upon the need for maximum reliability, expandability, and ease of service. To meet these criteria, the electronic packages described in the subsequent paragraphs must be totally solid-state, completely modular, and reflect state-of-the-art concepts in communication control design. Each operator position shall include applicable switches, status indicators, amplifiers, tone circuits, power supplies, meters, clocks, speakers, and hardware to perform the functions.

5.16.2 Panel Wiring/Remote Electronic Circuitry- FPD consoles

5.16.2 (a) The console electronic package shall have the capability of allowing the electronic circuitry (transmit/receive, amplifier, tone control, power supply, etc. modules) to be remoted at least 1000 feet from the operator position over standard 600 ohm twisted pairs. The interconnecting cable shall be at most an eight pair cable. The Vendor will supply all cabling and connectors

between the console common electronics and the punch blocks in the equipment room housing these electronics.

5.16.2 (b) The remoting of the electronic circuitry up to 1000 feet from the operator position shall not degrade the console performance outside the minimum standards specified herein. All console functions shall be operable as specified herein regardless of remoting up to 1000 feet.

5.16.2 (c) In addition to hard wired remoting of the electronic circuitry, the console electronic package shall also allow remoting of the electronic circuitry over standard telephone lines or multiplex channels on a fiber network or a microwave system. No more than three multiplex channels shall be required to perform this function. All remote data and audio paths shall be automatically monitored to ensure the continuous integrity of the paths. If a path is lost, both the dispatch position and any diagnostic printer and/or terminal shall receive a report.

5.16.2 (d) The remoting of the electronic circuitry over microwave channels shall not degrade the console performance outside the minimum standards set forth in these specifications. All console functions shall remain operable regardless of remoting the operator position.

5.16.3 Electronic Circuitry

5.16.3 (a) The electronic circuitry shall be contained on printed circuit modules which plug into a module rack or mother board. The plating material at the printed circuit module where plug-in contact is made shall be gold to provide maximum reliability.

5.16.3 (b) A transmit/receive module shall be provided with each operational channel. This module shall contain all of the circuits necessary to perform the functions described on a per channel basis.

5.16.3 (c) Sufficient modules shall be provided with each console electronic package to perform the functions that are common to the transmit/receive channels and all other functions.

5.16.4 Expandability - Options shall be easily expanded by the addition of plug-in printed circuit modules, programming, and control switches.

5.16.5 Maintainability

5.16.5 (a) The transmit/receive circuitry shall include one plug-in T/R module for each channel. All T/R modules shall be interchangeable between channels. The only T/R module changes required to exchange T/R modules between channels or electronic packages shall be the selection of options by means of programming switches mounted on the modules or PROM exchanges.

5.16.5 (b) The remainder of the console electronic package printed circuit modules shall be interchangeable between electronic packages.

5.16.5 (c) Each type of plug-in printed circuit module shall be keyed to be inserted only into the correct location in the module rack or mother board. Guide rails shall be used to ensure proper alignment of plug-in printed circuit modules. Each plug-in printed circuit module shall be equipped with an extractor to allow easy removal.

5.16.5 (d) It shall not be necessary to remove power from the console electronic package to change a plug-in module.

5.16.5 (e) All printed circuit modules shall be plainly marked with the module's function. All components shall be plainly identified on the printed circuit

modules. The module rack or motherboard position shall be plainly marked with the module's function. It shall not be necessary to use a drawing to locate components on printed circuit modules or printed circuit module positions.

5.16.6 Standards

5.16.6 (a) All equipment contained in the proposal shall meet or exceed the latest applicable standards of the Electronic Industries Association, Federal Communications Commission, and Underwriters Laboratory, and must conform to the OSHA of 1973 requirements for safe operation. In addition, where applicable, the equipment must satisfy the requirements of the local telephone company and input requirements of a Microwave System with respect to audio levels and control voltages.

5.16.6 (b) The console electronic equipment shall be rated for continuous operation. The console electronic package shall operate over an ambient temperature range of 0 degrees C. to +50 degrees C. without degradation in performance.

5.16.7 Power Supply

5.16.8 Input Voltage - 105 to 125 volts AC at 60 Hz, 120 volts AC nominal.

5.16.9 Noise - less than 120 millivolts peak to peak output.

5.16.10 Overload Protection - overload protection shall be provided such that variations in input voltage or output current shall not damage or degrade the operation of any console modules or components.

5.16.11 On-Off Switch - shall have a switch to turn input voltage on and off and have a power-on indicator.

5.17 Mechanical Requirements - The following specifications concern the mechanical aspects of the communications control console. The mechanical requirements of both the optional operator position furniture as well as the back-room common electronics are as follows.

5.17.1 Operator Position – Console Furniture - State supplied equipment may be installed in the operator position furniture along with the vendor's equipment. The State assumes the responsibility of installing the equipment in State supplied furniture. The vendor may bid the option to install the console. (All operator position furniture will be purchased separately.)

5.17.2 Labeling - All channels, controls and indicators shall be identified on the FPD screen. Keyboard switches which are used to control functions on the FPD should be clearly engraved to indicate their function. The identification shall show the purpose of the channel, control or indicator and be easily associated with the control or indicator. The legends or labels shall be designated by the user at the time of order.

5.17.3 Radio Channel and Receiver Voter Names - Each radio channel and or receiver voter channel shall be identified with an appropriate name - normally an abbreviation of the base station mountain top name and/or call sign which will be designated at the time of order. The FPD system shall be capable of displaying abbreviated names on the screen of at least eight characters in length. Merely giving a number to a radio channel or voter group is not acceptable.

5.17.4 Common Electronics- FPD Consoles - All common electronics shall be remoted from the console operator position. This equipment should be capable of remoting up to 1000 ft. from the operator position. The design of the common electronics package shall reflect a heavy reliance on modularity of construction. This modularity shall permit the console to be expanded, diminished, or reconfigured in future years depending on increased functions or consolidation of hardware based on system modernization. All equipment

supplied shall either be mounted in 19 inch wide EIA standard 90 inch tall aluminum equipment racks which are drilled and tapped to EIA standards (RS-310C) or supplied in seven foot enclosed equipment cabinets. (Racks or cabinet mounting will be specified with each purchase order) All equipment shall be supplied with all the necessary mounting hardware. Access to electronics for maintenance and service shall be accomplished through sliding rail arrangements, hinged mounting racks or circuit board extenders. Where the use of circuit board extenders is required, two extenders per console shall be supplied.

5.18 Training

5.18.1 Technician Training - the successful Vendor shall provide separate pricing for comprehensive training on the equipment proposed. The training shall include discussion of the following subjects as a minimum:

5.18.1 (a) Theory of operation and circuit analysis of each equipment module, a complete console electronic package, and parallel operation of multiple consoles.

5.18.1 (b) Troubleshooting procedures including fault isolation, terminal diagnostics, stage gain measurements, voltage tests, and other procedures to locate and replace faulty components.

5.18.1 (c) Level setting and other adjustment procedures for each equipment module, a complete console electronic package, and parallel operation of up to eight consoles.

5.18.1 (d) Programming of the central electronics cards and CRT positions.

5.18.2 Training Type and Location

5.18.2 (a) The training may be presented by either a resident instructor or a self-tutored training course.

5.18.2 (b) If an instructor is used, he must be intimately familiar with the design, operation, and maintenance of the equipment model proposed.

5.18.2 (c) The instructor shall present a training session in State supplied facilities at Phoenix, Arizona of at least 8 hours in duration. Actual dates for the class will be established by the purchasing agent. The training shall be completed within 130 days of receipt of purchase order.

5.18.2 (d) If the successful vendor elects to supply a self-tutored training course, one such course shall be provided and will become property of the State. The course shall make use of textbooks, film strips, video tapes or other means to provide comprehensive self-training of the equipment model proposed.

5.18.3 Dispatcher Training - The successful vendor shall also provide 1-day training to the dispatchers of any purchasing agencies. This training shall cover the operational aspects of the equipment. In situations where the communications center is a twenty-four hour operation, it will be necessary to repeat the training for each shift during the day(s).

5.18.4 Instruction Books - the instruction books to be furnished by the vendor shall be complete with all pages securely fastened together. The instruction books shall incorporate as a minimum the following:

5.18.4 (a) Complete description and ordering information of each individual unit and/or sub-assembly. A material guide shall contain the replacement part numbers and description of all components used. The parts lists shall be associated with their respective chassis, module, or kit wherein they are found. A total listing of parts without such groupings will not be acceptable.

5.18.4 (b) Complete intercabling diagram between each unit and/or sub-assembly.

5.18.4 (c) Complete outline and drawings and dimensions as well as mounting dimensions of all equipment.

5.18.4 (d) Voltage and resistance diagrams or tables of all units and/or sub-assemblies.

5.18.4 (e) Complete level setting instructions in step by step tabular form for entire assembly and all components capable of being adjusted.

5.18.4 (f) Parts location, drawings or pictorial, detailed top view of individual parts, units and/or sub-assemblies.

5.18.4 (g) Operational block diagrams of individual units and/or sub-assemblies.

5.18.4 (h) Complete schematic diagrams of individual units and/or sub-assemblies.

5.18.4 (i) In addition to schematics, etc., the manual shall contain the theory of operation of all active devices and circuits in sufficient detail to facilitate servicing.

5.18.4 (j) Drawings which are supplied must be reproduced by such means as to preclude fading to the point of illegibility if exposed to normal illumination for extended periods of time. A developed and fixed process or one of the various forms of printing by actual ink transfer are acceptable types.

5.18.4 (k) In order to provide a complete manual containing all schematics, level setting information, and operating instructions, the contractor shall prepare all of the information in book form with no drawings larger than the page size of the book. Drawings, which must be larger than a single sheet for legibility may be photographically reduced so that they are no larger than 11 inches high or printed on fold-out sections. This manual shall contain an index of all schematics, charts, and diagrams to insure that pages have not been removed. Sufficient information shall be contained in the index to permit reordering lost or mutilated pages.

5.18.4 (l) Two instruction manuals shall be furnished for every unit supplied and costs shall be included in the proposal price.

5.18.4 (m) One typical instruction manual shall be supplied with the proposal.

5.19 Recommended Maintenance Equipment

5.19.1 Any special meters, unique/non-standard test equipment, test cables, harnesses, circuit board extenders, or hand tools required for monitoring and/or maintenance of the communications control console electronic packages shall be listed separately with their itemized cost and shall be included in the total initial cost of the equipment.

5.20 Recommended Replacement Parts

5.20.1 Because of the critical function the communications control console serves, vendors must be capable of supplying all electronic package parts, including individual components and mechanical and electrical assemblies used in the equipment supplied, within 48 hours. The vendor shall supply a list of recommended spares in his proposal response. The vendor shall include a complete set of these recommended spare modules as well as a spare of all other modules and power supplies with the initial console purchase. The cost for this spare module set shall also be priced as a separate line item in the proposal response.

6.0 Generators

6.1 AC/DC power generators operating with diesel, gasoline or propane fuel. Indoor and Outdoor installations systems capable of handling extreme temperature of -50 degrees F up to 150 degrees

F. This includes but is not limited to Transfer Switches, panels, monitoring services, and controlling accessories inclusive of timing and sensing functions with associated hardware and software.

6.2 Requirements

6.2.1 Proposed product(s) must be rated for industrial use, home-use styles of generators will not be considered.

6.2.2 The proposal should include product(s) options from 10kw up to 400kw.

6.2.3 Product(s) offered must include all alarming equipment and software for remote monitoring.

6.2.4 Product(s) offered must be able to supply simple network management protocol (SNMP) and contact closure alarms.

6.2.5 Product(s) offered must have programmable exercise timers that can be set to transfer load capability.

7.0 Back-up Batteries (Including Solar)

7.1 Specifications

7.1.1 Telecom Applications – the State and/or Co-op Agencies require long life batteries (both voltage and solar) to support Agency efforts for providing power in multiple public communications applications, including but not limited to data centers, network operation centers, wireless, Microwave and mobile centers.

7.1.2 Product types for procurement:

7.1.2 (a) Modular Flooded Lead Acid

7.1.2 (b) Modular Flooded Lead Acid

7.1.2 (c) Mono-Block Valve Regulated Lead Acid

7.1.2 (d) Portable Radio

7.1.3 Renewable/ Solar Energy Product offerings must include the following:

7.1.3 (a) Benchmark data of Offeror's product to Industry Leading Life Cycle Data

7.1.4 Power Systems, DC Conversion

7.1.4 (a) Inclusive of AC/DC converters, battery chargers, DC/DC converters, along with low voltage disconnect DC breakers, power distribution panels and any additional associated hardware and software needed to operate.

7.1.5 The proposal must include float rates for the products being offered.

7.1.6 Offeror proposal to include system and module configuration requirements.

7.1.7 Must meet all UL industry requirements

7.1.8 Must withstand Operating temperature beyond 150 degrees F and temperature that drop below -50 degrees F.

7.1.9 Must provide performance data to support product viability.

8.0 Prefab Communications Shelters

8.1 General

8.1.1 Equipment shelters of various sizes specifically designed and constructed for extreme installation locations and to be installed with minimal soil disruption and without site-build foundation. This includes all required accessories and appurtenances, including antenna mast, RF shielding and grounding systems.

8.1.2 Vendor shall submit descriptive catalog product description to include all specifications.

8.2 Requirements

8.2.1 Prefab Communications shelters must meet State and National regulations.

8.2.2 Offeror to submit proposal for multiple dimensions that are offered to State and local public safety Agencies.

8.2.3 Offeror's proposal must address recommendations for transportation and off-loading.

8.2.4 HVAC system requirements should be detailed in the proposal submitted.

8.2.5 Electrical requirement for each prefab communication shelter offering should be listed in the proposal.

8.2.6 Proposed lighting systems should be included in the offer.

8.3 Installation and service

8.3.1 Offeror must provide on-site installation and set-up service as part of the proposal. This pricing should be included as separate line item within the pricing proposal.

8.3.2 R-56 standards must be followed in the proposed construction of any prefab communications shelters.

8.3.3 If on-site installation is required, Contractor(s) must be able to pass a background check.

8.4 Pricing

8.4.1 Pricing should include discount off list catalog pricing plus additional options on an individual list item basis for upgrades that might add to discounted price listed in catalog.

8.5 Warranty

8.5.1 All offerings must include a minimum five (5) year warranty period.

9.0 Service

9.1 The services that may be offered in correlation with the equipment listed above are categorized as follows:

9.2 Design/Engineering

9.2.1 The Contractor(s) shall clearly define and communicate to the State what is specifically included in their Design Services.

9.3 Managed Services - considered a service subscription.

9.3.1 The Contractor(s) shall clearly define and communicate to the State what is specifically included in their Managed Services. Examples of Managed Services include: 24x7x365 technical support, network monitoring, alarm monitoring, service ticket generation, performance management, system provisioning, system updates, end-to-end event monitoring, security monitoring, software maintenance and updates, annual preventative maintenance, and onsite support.

9.3.2 The Contractor(s) shall clearly define and communicate qualifications for any system or equipment being considered for Managed Services.

9.4 Field Service Repair and Maintenance – considered as needed, or one-time services.

9.4.1 The Contractor(s) shall clearly define and communicate guaranteed time of repair or restoration and qualifications for any system or equipment being considered for maintenance support.

9.4.2 The Contractor(s) shall perform work in accordance with the manufacturer's recommendation to ensure it is performing to all defined technical and environmental specifications for the system.

9.4.3 In addition to maintenance of new equipment purchases, the Contractor(s) shall also offer maintenance of legacy equipment. Legacy equipment defined as any existing public communications equipment and its associated supplies and/or accessories that have been purchased prior to the RFP issuance and resulting Contract Award.

9.5 Installation

9.5.1 Time of Purchase of new equipment

9.5.2 Previously purchased equipment

9.5.3 The Contractor(s) shall also conduct initial preventative maintenance ensuring performance begins at the optimal level.

9.6 Integration

9.6.1 Integration Services shall be offered at an hourly rate by the Contractor(s) unless otherwise specified in the SOW defined above as part of the equipment installation. The Contractor(s) shall clearly list and communicate to the State what is specifically included in their integration services, if applicable.

10.0 Consultation and Third-Party Oversight

10.1 The State is also looking to solicit proposals from qualified, vendor independent, full service firms who can provide third party oversight on behalf of the State of Arizona. Any offer of services must comply with the following:

- Demonstrate independence of any manufacturer, software provider, or vendor.
- Demonstrate experience and knowledge of all aspects of public safety operations as they relate to communications and interoperability needs
- Demonstrate mission critical communications system design experience in the public safety arena
- Demonstrate knowledge and experience with contemporary and emerging wireless mission critical communications technologies utilized in the public safety arena including:
    - Mission critical radio systems-infrastructure, subscriber hardware, RF system design, radio propagation, frequency research
    - Microwave and RF control link design and specification
    - Voice logging
    - Paging and Alerting systems
    - Radio interoperability
    - Radio dispatch console systems
- Demonstrate familiarity and expertise in FCC regulations, licensing and frequency availability research
- Demonstrate in-house subject matter experts, telecommunications specialists, state and local policy experts, and project managers with APCO Project 25 implementation experience.
- Demonstrate experience in the identification, evaluation and recommendation of appropriate sites and infrastructure for mission critical communications towers and facilities.

- Demonstrate experience in structured wiring plans and electrical and power system design relative to Public Safety and Mission critical RF systems.
- Demonstrate experience, establishing continuity of operations (COOP) plans, planning, and implementation of disaster recovery solutions, and establishing supporting standard operating procedures (SOPs) and policies that enhance system reliability, resiliency, and redundancy.
- Demonstrate experience with providing consulting, systems engineering and architecture services for both urban and rural mission critical communications systems.
- The firm must have at least one telecommunications specialist certified in industry accepted site standards such as Motorola R56.
- The firm must demonstrate that it follows accepted industry standards (i.e., Project Management Institute) standards and practices for management of projects.
- The firm must demonstrate knowledge in the trends and directions of mission critical radio networks, automated systems, facilities and operations.
- Demonstrate experience and capability of providing ongoing service and support throughout the lifecycle of network and associated devices and peripherals

EXHIBITS TO THE SCOPE DOCUMENT

NO EXHIBITS FOR THIS SOLICITATION

End of section 2-A

SECTION 2-B: Pricing Document

1.0 Compensation

Contractor will be compensated for the satisfactorily carrying out its obligations under the Contract by the method indicated by the "●" mark below:

●	Contracted Labor Rates (refer to paragraph 1.13 below)
●	Discount Off List or Catalog (refer to paragraph 1.25 below)

1.1 CONTRACTED LABOR RATES. The contracted labor rates are the fully-burdened and marked-up billing rates for Contractor's labor scheduled in Exhibit 1 to this Pricing Document.

1.1.1 The rates are deemed to be inclusive of the actual gross wages plus all:

(a) applicable payroll taxes, non-payroll employer burden, workers' compensation contributions and health and welfare benefit contributions;

(b) retirement or other pension contributions, vacation, sick time or other paid leave allowances and the like;

(c) required home office support, corporate or subordinate licenses or registrations, corporate insurance, professional association fees, advertising, time and travel by any of Contractor's personnel other than billable personnel and any bonuses or other incentives for all personnel (including billable Personnel);

(d) insurance coverages to be provided by Contractor under the Contract; and

(e) profit.

1.1.2 The rates are not subject to overtime or other premium time unless expressly stated otherwise in the Pricing Document or a relevant Annex thereto.

1.1.3 The rates include all transaction privilege and other sales/use taxes, including any gross receipts taxes on services, unless expressly stated otherwise in the Pricing Document or a relevant Annex thereto.

1.1.4 Reimbursable items consist of three components:

(a) *Site Services, Logistics, and Utilities*. State and Contractor shall each provide those items of site services, logistics and utilities that are assigned to them in Attachment 4 to this Pricing Document. Excluding only those item expressly indicated as being provided by State, provided by others, or a reimbursable item, Contractor shall provide all services, equipment, tools, and logistics necessary for its personnel and otherwise as required to carry out the Work and compensation for all those is deemed to be included in the contractual fee mark-up (if any applies).

i. For items indicated to be paid on a "unit rate" basis, Contractor shall submit a worksheet with each application for payment showing the actual amount of payment requested for these items, which amount shall not exceed the unit rate multiplied by the total quantity (i.e., Contractor is "at risk" for costs it incurs that are in excess of the extended value unless State has issued a Change Order for the excess.

ii. For items indicated to be paid on a "cost" basis, Contractor shall request reimbursement for the actual cost of such items at least monthly and shall provide the necessary back-up documentation, including receipts or invoices and timesheets (if applicable).

iii. For items indicated to be paid on a "lump sum" basis, Contractor shall request payment for the completed proportion of such items at least monthly.

(b) *Personnel-Related Expenses*. State will only reimburse for those items of personnel-related expense expressly indicated in Attachment 4 to this Pricing Document as a reimbursable item, and it is agreed that the costs of all other such expenses applicable to its personnel and otherwise as required to carry out the Work are adequately compensated in the contractual fee mark-up (if any applies).

i. For items to be paid on a "unit rate" basis, Contractor shall submit a worksheet with each application for payment showing the actual amount of payment requested for these items, which amount shall not exceed the unit rate multiplied by the total quantity (i.e., Contractor is "at risk" for costs it incurs that are in excess of the extended value unless State has issued a Change Order for the excess.

ii. For items to be paid on a "cost" basis, Contractor shall request reimbursement for the actual cost of such items at least monthly and shall provide the necessary back-up documentation, including receipts or invoices (if applicable). All reimbursements shall be strictly subject to State's travel policy, which is available at https://gao.az.gov/travel.

iii. Contractor must obtain State's written approval prior to booking or going on any reimbursable travel.

iv. Contractor will be reimbursed at the current Travel Policy rates.

v. Contractor shall itemize all per diem and lodging charges.

vi. For items to be paid on a "lump sum" basis, Contractor shall request payment for the applicable proportion of such items at least monthly.

1.2 DISCOUNT OFF LIST OR CATALOG. A discount off list or catalog means a percentage discount to be applied to a base price for from one or more contractually-established price lists against published catalogs. The applicable discounts are scheduled in Exhibit 1 to this Pricing Document.

1.2.1 Unless specified otherwise in the Pricing Document, base price is the price that is most widely offered to general customers at the time of the Order.

1.2.2 The catalogs used to establish base price are specified otherwise in the Pricing Document. If nothing is so specified, then the commercially available catalogs published by Contractor or Subcontractor to a dealer or reseller network for the covered materials or services are to be used.

1.2.3 Each catalog must:

(a) bear the applicable State contract number;

(b) list all materials or services Contractor is authorized to sell under the Contract;

(c) not contain any items that are excluded from the Contract;

(d) provide ordering information and contact information for customer support.

1.2.4 Each catalog and its accompanying price list must include for each item:

(a) a part or model number, if applicable;

(b) a complete and accurate description of the item;

(c) the manufacturer's suggested retail price (MSRP) or Contractor's list price;

(d) a stock keeping unit (SKU) number (SKU) , if applicable;

(e) the item's unit of measure (UOM), if applicable; and

(f) the quantity in the unit of measure (QUOM), if applicable.

1.2.5 Contractor shall provide and maintain concurrent and identical electronic and hardcopy versions of all contracted price lists and catalogs.

(a) The electronic versions are to be provided as an Amendment to the Contract.

i. State, at its discretion, may host Contractor's electronic price lists and catalogs directly, or may link through ProcureAZ as a punch-out.

ii. Regardless of the number and types of links to Contractor's electronic price lists and catalogs, Contractor shall ensure that all Eligible Agencies and Co-Op Buyers are only able to access one unified set of data.

(b) Contractor shall supply sufficient, current hardcopy catalogs and price lists price lists to applicable Eligible Agencies at Contract commencement, and provide prompt hardcopy notice of any changes to list/catalog holders as they occur. Contractor shall not change State or any Eligible Agency (or any Co-Op Buyer, if applicable) for lists/catalogs or updates.

2.0 Pricing

2.1 CONTRACTOR'S BEST PRICING. Supplier warrants that, for the term of the Contract, the prices and discounts set out in Exhibit 1 to this Pricing Document, including any subsequent agreed amendment to it (the "Contract Pricing"), will be equal to or better than the lowest prices and largest discounts, both separately and in combination, at which Contractor sells equivalent items of equipment and materials.

2.1.1 That price-plus-discount equivalence ("Contractor's Best Pricing") is intended to be irrespective of whether or not those other sales have special purchase terms, conditions, rebates or allowances.

2.1.2 If Contractor's Best Pricing for equivalent items of equipment and materials is better than the Contract Pricing, then Contractor agrees to adjust the Contract Pricing to match the Contractor's Best Pricing for all sales related to the Contractor made after the date when the Contractor's Best Pricing was first better than the Contract Pricing.

2.1.3 For clarification of intent, that date is intended to be the date when the difference first occurred, which might have been before the difference was first identified. If it was before, then Supplier agrees to charge at less than the Contract Pricing until the extended difference that would have been realized (i.e., if the Contractor's Best Pricing had been applied when it should have been) has been settled.

2.2 PRICING-ALL-INCLUSIVE:

2.2.1 Pricing is all-inclusive, including any ancillary fees and costs required to accomplish the Scope of Work and all aspects of Contractor's offer as accepted by State. Details of service not explicitly stated in the Scope of Work or in Contractor's Offer, but necessarily a part of, are deemed to be understood by Contractor and included herein. All administrative, reporting, or other requirements, all overhead costs and profit and any other costs toward the accomplishment of the requirements in the Contract are included in the pricing provided.

2.3 PRICE INCREASES:

2.3.1 The SPO may review a fully documented request for a price increase. The requested increase shall be in writing and be based upon a cost increase to the contractor that was clearly unpredictable at the time of the offer and is directly correlated to the price of the product concerned. Contractor must provide conclusive evidence of a need for any price increases such as being substantiated by the Producer Price Index, Consumer Price Index, or similar pricing guide.

(a) Initial Contract prices will be honored for one year after award of Contract.

(b) All written requests for price adjustments made by the contractor shall be initiated thirty (30) days in advance of any desired price increase to allow State sufficient time to make a fair and equitable determination to any such requests. This may be waived upon proper documentation demonstrating the urgency of the request.

(c) All price adjustments will be implemented by a formal contract change order. State shall determine whether the requested price increase or an alternate option is in the best interest of State.

2.4 PRICE REDUCTIONS:

2.4.1 Price reductions shall by immediately passed along to State and may be submitted in writing to State for consideration at any time during the Contract period. The contractor shall offer State a price reduction on the Contract product(s) concurrent with a published price reduction made to other customers. State at its own discretion may accept a price reduction. The price reduction request shall be in writing and include documentation showing the actual reduction of cost. Sales promotions requests shall include difference in pricing, begin, and end date of promotion along with the products covered.

2.5 ADDITIONAL CHARGES:

2.5.1 Any charges or fees not delineated in the Contract may not be added, billed, or invoiced under the Contract. All additional work shall be approved by Eligible Agency in advance and be in accordance with the contract rate.

2.6 TRAVEL.

2.6.1 Contractor shall get written approval prior to any travel under the Contract in which reimbursement of expenses will be requested. Contractor will be reimbursed for actual expenses incurred in accordance with the current rates specified in State's Travel Policy. Contractor shall itemize all per diem and lodging charges. State Travel Policy, including State rates, may be located at https://gao.az.gov/travel. The Eligible Agency shall reject any claim for travel reimbursement without prior written approval.

2.7 DELIVERY

2.7.1 Unless stated otherwise in the contract, all prices shall be F.O.B. Destination and shall include all freight delivery and unloading at the destination.

3.0 Funding

No particular funding considerations apart from paragraph 4.3 of the Uniform Terms and Conditions [*Availability of Funds*] have been identified as of the Solicitation date.

4.0 Invoicing

4.1 INVOICES GO TO BUYING ENTITY. Contractor shall submit all billing notices or invoices to the ordering Eligible Agency or Co-Op Buyer at the address indicated on the applicable Order document.

4.2 MINIMUM INVOICE REQUIREMENTS. Every invoice must include the following information:

Item	Required
Bill-to name and address	●
Contractor name and contact information	●
Remit-to address	●
State contract number	●
Order number (typically the ProcureAZ PO #)	●
Invoice number and date	●
Date the items shipped or services performed	●
Applicable payment terms	●
Contract line item number	●
Contract line item description	●
Quantity delivered or performed	●
Line item unit of measure	●
Item price	●
Extended pricing	●
Discount off list or catalog	●
Taxes *(as a separate invoice line item)*	●
Upcharge shipping/freight, etc. *(as a separate invoice line item)*	Materials only
Total invoice amount due	●

4.3 NO INVOICE WITHOUT AUTHORIZATION. Contractor shall not seek payment for any:

1. Materials or Services that have not been authorized on an acknowledged Order;
2. expediting, overtime, premiums, or upcharges absent State's express prior approval; or
3. Materials or Services that are the subject of a Contract Amendment or Change Order that has not been fully signed.

4.4 PRE-INVOICE REVIEW. Upon Eligible Agency request and shortly before Contractor is scheduled to submit each invoice, the parties' representatives shall meet informally to review any issues relevant to that upcoming invoice so that the formal invoice process is thereby facilitated and made more efficient.

4.5 SUBMITTING INVOICES. Contractor shall submit an invoice to the ordering Eligible Agency or Co-Op Buyer using the form provided or required by the ordering Eligible Agency or Co-Op Buyer. Every invoice must be signed by Contractor's authorized representative and accompanied by all supporting information and documentation required by the Contract and applicable laws.

4.6 DEFECTIVE INVOICES. Without prejudice to its other rights under the Contract or further obligation to Contractor, the ordering Eligible Agency or Co-Op Buyer may, at its discretion, reject any materially defective invoice.

4.6.1 The ordering Eligible Agency or Co-Op Buyer shall notify Contractor within 5 (five) business days after receipt if it determines an invoice to be materially defective.

4.6.2 Invoices will be deemed automatically rejected upon delivery if they:

4.6.2 (a) are sent to an incorrect address;

4.6.2 (b) do not reference the correct State contract number; or

4.6.2 (c) are payable to any Person other than the Contractor.

4.6.3 The ordering Eligible Agency or Co-Op Buyer will have no obligation to pay against a defective invoice unless and until Contractor has re-submitted it free of defects.

4.7 INVOICING FOR TASK ORDERS. For task order Services, invoices must include the following information as applicable to the relevant task order being invoiced against:

1. substantiation of hours worked using:
   a. a detailed daily timesheet;
   b. itemization to the task level; and
   c. breakdown by service area (if the Contract covers more than one area) and Contract Amendment (if any apply);
2. authorizations and receipts for all allowable reimbursable items being invoiced; and
3. Contractor's certification that the invoice has been examined and to the best of Contractor's knowledge and belief the invoiced amounts are entitled, correct, and accurate as can be demonstrated by the contractually-required books and records upon State's demand.

5.0 Payments

5.1 PAYMENT. The applicable Eligible Agency or Co-Op Buyer shall pay undisputed amounts due to Contractor within the time period specified in Section 18.1 of the Special Terms and Conditions

5.2 JOINT CHECKS OR DIRECT PAY. applicable Eligible Agency or Co-Op Buyer may, but is under no obligation to, pay by joint check or to pay directly to any Subcontractor or other creditor to whom any portion of Contractor's requested payment is owed.

5.3 RECOVERY OF OVER-PAYMENT. If applicable Eligible Agency or Co-Op Buyer determines that an over-payment has been made to Contractor on any prior invoice, it shall inform Contractor of the amount and date of the over-payment and may deduct the over-paid amount from amounts then or thereafter due to Contractor.

5.4 PAYMENTS TO SUBCONTRACTORS. Contractor shall make payment of all undisputed amounts due to Subcontractors within thirty (30) days of receipt of funds from applicable Eligible Agency or Co-Op Buyer applicable to their services.

5.5 PURCHASING CARD. applicable Eligible Agency or Co-Op Buyer may pay invoices for some or all Orders using a purchasing card. Any and all fees related to payment using a Purchasing Card are the responsibility of Contractor. Unless otherwise stated in the Contract there will be no additional fees or increase in prices associated with this method of payment.

5.6 AUTOMATED CLEARING HOUSE. applicable Eligible Agency or Co-Op Buyer may pay invoices for some or all Orders through an Automated Clearing House (ACH). In order to receive payments in this manner from

Eligible Agencies, Contractor must complete an ACH Vendor Authorization Form (form GAO-618) within 30 (thirty) days after the effective date of the Contract. The form is available online at:

https://gao.az.gov/afis/vendor-information

End of Section 2-B

SECTION 2-C: Special Terms and Conditions

The Special Terms and Conditions modify the Uniform Terms and Conditions and its Appendices. It can modify them by replacing, deleting, appending to, or revising the text of an existing provision or by inserting a new paragraph into an existing article. No other document modifies or adds to the Uniform Terms and Conditions, except as may subsequently be otherwise and expressly agreed and incorporated by Contract Amendment.

1.0 Definition of Terms

As used in the Contract, the terms listed below are defined as follows:

1.1. Co-Op Buyer

"Co-Op Buyer" means a member of the State Purchasing Cooperative that has entered into a "Cooperative Purchasing Agreement" with the Arizona Department of Administration State Procurement Office under A.R.S. § 41-2632. Unless there is an applicable Cooperative Purchasing Agreement in effect at the time, a State Purchasing Cooperative member cannot be a Co-Op Buyer. For reference, "Co-Op Buyer" is to be construed as encompassing "eligible procurement unit" under A.A.C. R2-7-101(23).

NOTE: Membership in the State Purchasing Cooperative is open to all Arizona political subdivisions, including cities, counties, school districts, and special districts. Membership is also available to non-profit organizations, other state governments, the federal government and tribal nations. For reference, "non-profit organizations" are defined in A.R.S. § 41-2631(4) as any nonprofit corporation as designated by the IRS under section 501(c)(3) through 501(c)(6) of the tax code.

1.2. Eligible Agency

If the Special Terms and Conditions indicates that the Contract is a "single-agency" contract, then "Eligible Agency" means the particular State of Arizona agency, university, commission, or board identified therein. If the Special Terms and Conditions indicates that the Contract is a "statewide" contract, then "Eligible Agency" means any State of Arizona department, agency, university, commission, or board.

2.0 Contract Interpretation

No modifications to uniform terms and conditions section

3.0 Contract Administration and Operation

3.1 Term of Contract

The term of the Contract will commence on the date indicated on the Acceptance and continue for five (5) years with an optional additional five (5) year term with annual renewal(s) for a total max term of ten (10) years unless canceled, terminated, or permissibly extended.

3.2 Statewide Contract Provisions

The Contract is a "statewide" contract for multiple purchases, projects, or assignments, and can be purchased against by some or all Eligible Agencies and any Co-Op Buyers that elect to participate. Even if only one Eligible Agency needs or elects to purchase against the Contract, it is to be construed as being a "statewide" contract hereunder.

The Contract is an indefinite delivery, indefinite quantity (ID/IQ) type of contract; it is to be construed as a "delivery order" sub-type of ID/IQ contract to the extent the Work is Materials, and a "task order" sub-type to the extent the Work is Services.

1. Contractor shall verify if an ordering entity is a bona fide Co-Op Buyer before selling Materials to or providing Services for them under the Contract. The current list of Co-Op Buyers is available on the State Procurement Office website:

https://spo.az.gov/procurement-services/cooperative-procurement/coop-usage-report

2. Contractor shall sell to Co-Op Buyers at the same price and on the same lead times and other terms and conditions under which it sells to Eligible Agencies, with the sole exception of any legitimately additional costs for extraordinary shipping or delivery requirements if the Co-Op Buyer is having Materials delivered or installed or Services performed at locations not contemplated in the contracted pricing (e.g. delivery to a location outside Arizona).
3. Contractor shall pay State an administrative fee against all Contract sales to Co-Op Buyers, as provided for under A.R.S. § 41-2633. The fee rate is one (1%) percent. Failure to remit the administrative fees is a material breach of contract, and will entitle State to its remedies under Article 8 and its right to terminate for default under Article 9. Method of calculation, payment procedures, and other details are provided on the State Procurement Office website:

   https://spo.az.gov/contractor-resources/statewide-contracts-administrative-fee
4. Contractor shall submit to State a quarterly usage report documenting all Contract sales to both Eligible Agencies and Co-Op Buyers, itemized separately. Contractor shall further itemize divisions, groups or areas within a given Eligible Agency if they place Purchase Orders independently of each other. Failure to submit the report is a material breach of contract, and will entitle State to its remedies under Article 8 and its right to terminate for default under Article 9. Contractor shall submit the report using the forms and following the instructions on the State Procurement Office website:

   https://spo.az.gov/contractor-resources/statewide-contracts-administrative-fee
5. Contractor shall acknowledge each Purchase Order from Eligible Agencies within 1 (one) business day after receipt by either: (a) "approving" the Purchase Order electronically in ProcureAZ, which will indicate Contractor's unqualified acceptance of the Purchase Order as-issued; or (b) "rejecting" the Purchase Order electronically in ProcureAZ, with a concurrent explanation by email to relevant originator as to the reason for rejecting it. By way of reminder, the only grounds on which Contractor may reject or refuse a Purchase Order are those set out in subparagraph 3.12.3 [*Orders are Obligatory*]. Unless and until Contractor has approved the Purchase Order in ProcureAZ, it will have no effect under the Contract and will not oblige either State or Contractor. If the relevant Eligible Agency explicitly instructs at the time that a verbal acceptance is sufficient because of urgency or other unusual circumstances and Contractor duly gives its verbal acceptance, then Contractor will be deemed to have accepted the Purchase Order immediately upon commencing performance, provided that, Contractor must follow-up its verbal acceptance by accepting the Purchase Order electronically in ProcureAZ within 3 (three) business days. Contractor shall thereafter be barred from subsequently rejecting the Purchase Order in ProcureAZ and if it does so the rejection will be void.
6. Contractor shall acknowledge each Purchase Order from Co-Op Buyers in conformance with each buyer's instructions given at the time of ordering or in any supplemental participating agreement Contractor might have with them. Purchase Orders from Co-Op Buyers create no obligation on State's part, since they are entirely

between the Co-Op Buyer and Contractor. That notwithstanding, Contractor's obligation under the Contract is to service Co-Op Buyers commercially as though they were with an Eligible Agency, and Contractor's refusal to do so would be a material breach of the Contract.

3.3 Multiple-Use Provisions

Eligible Agencies may issue Purchase Orders for Services in several forms, all of which become final and effective by a "Release Purchase Order" in ProcureAZ. Purchase Orders issued by Co-Op Buyers will be in whatever form the Co-Op Buyer normally uses. Regardless of origin, Purchase Orders must cite the State contract number to be valid. State may, at its discretion in each instance, determine the scope, schedule, and price for each Purchase Order in any of the following ways:

1. By choosing some or all of the Materials or Services items covered by the Contract for which a price is established in the Pricing Document, then preparing an Purchase Order using those prices (e.g., filling out a purchase order form), and sending it to Contractor.
2. By instructing Contractor to provide a comprehensive proposal of item quantities, combinations, etc., or services hours, personnel, etc., for a defined scope using those established prices as a basis, then validating and negotiating the proposal with Contractor and issuing an Purchase Order if and when reaching agreement.
3. As described in *(2)* above but requesting the proposal from both Contractor and other vendors who are contracted within the applicable scope categories and locations, either sequentially or concurrently, then selecting the proposal or proposals combination that is most advantageous to State.
4. As described in *(3)* above but introducing ad-hoc commercial competition by making the selection and ordering conditional on obtaining more favorable prices than the contractually-established ones.

When evaluating the proposals under *(3)* and *(4)* above, State may select based on price (for example, a quoted number of hours times the contracted or improved rate plus a fixed amount for incidentals), by experience and qualifications (for example, having an office nearer the required work location), or whatever combination thereof it determines is most appropriate to the work in question.

4.0 Costs and Payments

4.1 Proposal Costs

Costs Incurred During Proposal Development. The State will not be responsible for any cost incurred during the period of proposal development, including but not limited to On-Site Visits, Pre-Offer Conferences, Demonstrations and any other costs incurred by the Offeror in preparation for Bid Offering.

5.0 Contract Changes

No modifications to uniform terms and conditions section.

6.0 Risk and Liability

6.1 Contractor Insurance

Indemnification Clause

To the fullest extent permitted by law, Contractor shall defend, indemnify, and hold harmless the State of Arizona, and its departments, agencies, boards, commissions, universities, and any jurisdiction or agency issuing permits for any work included in the project, and their respective directors, officers, officials, agents and employees (hereinafter referred to as "Indemnitee") from and against any and all claims, actions, liabilities, costs, losses, or expenses, (including reasonable attorney's fees), (hereinafter collectively referred to as "Claims") arising out of actual or alleged bodily injury or personal injury of any person (including death) or loss or damage to tangible or intangible property caused, or alleged to be caused, in whole or in part, by the negligent or willful acts or omissions of Contractor or any of Contractor's directors, officers,

agents, employees, volunteers or subcontractors. This indemnity includes any claim or amount arising or recovered under the Workers' Compensation Law or arising out of the failure of Contractor to conform to any federal, state or local law, statute, ordinance, rule, regulation or court decree. It is the specific intention of the parties that the Indemnitee shall, in all instances, except for Claims arising solely from the negligent or willful acts or omissions of the Indemnitee, be indemnified by Contractor from and against any and all Claims. It is agreed that Contractor will be responsible for primary loss investigation, defense and judgment costs where this indemnification is applicable. This indemnification will survive the termination of the above listed contract with the Contractor.

This indemnity shall not apply if the contractor or sub-contractor(s) is/are an agency, board, commission or university of the State of Arizona.

Insurance Requirements

Contractor and subcontractors shall procure and maintain, until all of their obligations have been discharged, including any warranty periods under this Contract, insurance against claims for injury to persons or damage to property arising from, or in connection with, the performance of the work hereunder by the Contractor, its agents, representatives, employees or subcontractors.

The Insurance Requirements herein are minimum requirements for this Contract and in no way limit the indemnity covenants contained in this Contract. The State of Arizona in no way warrants that the minimum limits contained herein are sufficient to protect the Contractor from liabilities that arise out of the performance of the work under this Contract by the Contractor, its agents, representatives, employees or subcontractors, and the Contractor is free to purchase additional insurance.

Minimum Scope and Limits of Insurance

Contractor shall provide coverage with limits of liability not less than those stated below.

1. **Commercial General Liability (CGL) – Occurrence Form**

Policy shall include bodily injury, property damage, and broad form contractual liability coverage.

- General Aggregate $2,000,000
- Products – Completed Operations Aggregate $1,000,000
- Personal and Advertising Injury $1,000,000
- Damage to Rented Premises $50,000
- Each Occurrence $2,000,000

The policy shall be endorsed, as required by this written agreement, to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by or on behalf of the Contractor.

Policy shall contain a waiver of subrogation endorsement, as required by this written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.

2. **Business Automobile Liability**

Bodily Injury and Property Damage for any owned, hired, and/or non-owned automobiles used in the performance of this Contract.

- Combined Single Limit (CSL) $1,000,000

Policy shall be endorsed, as required by this written agreement, to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed

by, or on behalf of, the Contractor involving automobiles owned, hired and/or non-owned by the Contractor.

Policy shall contain a waiver of subrogation endorsement as required by this written agreement in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.

3. **Workers' Compensation and Employers' Liability**

•	Workers' Compensation	Statutory
•	Employers' Liability	
o	Each Accident	$1,000,000
o	Disease – Each Employee	$1,000,000
o	Disease – Policy Limit	$1,000,000

Policy shall contain a waiver of subrogation endorsement, as required by this written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.

This requirement shall not apply to each Contractor or subcontractor that is exempt under A.R.S. § 23-901, and when such Contractor or subcontractor executes the appropriate waiver form (Sole Proprietor or Independent Contractor).

4. **Professional Liability (Errors and Omissions Liability)**

•	Each Claim	$2,000,000
•	Annual Aggregate	$2,000,000

In the event that the Professional Liability insurance required by this Contract is written on a claims-made basis, Contractor warrants that any retroactive date under the policy shall precede the effective date of this Contract and, either continuous coverage will be maintained, or an extended discovery period will be exercised, for a period of two (2) years beginning at the time work under this Contract is completed.

The policy shall cover professional misconduct or negligent acts for those positions defined in the Scope of Work of this contract.

4. **Technology Errors & Omissions Insurance**

•	Each Claim	$2,000,000
•	Annual Aggregate	$2,000,000

Such insurance shall cover any, and all errors, omissions, or negligent acts in the delivery of products, services, and/or licensed programs under this contract.

Coverage shall include copyright infringement, infringement of trade dress, domain name, title or slogan.

In the event that the Tech E&O insurance required by this Contract is written on a claims-made basis, Contractor warrants that any retroactive date under the policy shall precede the effective date of this Contract and, either continuous coverage will be maintained or an extended discovery period will be exercised for a period of two (2) years, beginning at the time work under this Contract is completed.

5. **Network Security (Cyber) and Privacy Liability**

•	Each Claim	$2,000,000
•	Annual Aggregate	$2,000,000

Such insurance shall include, but not be limited to, coverage for third party claims and losses with respect to network risks (such as data breaches, unauthorized access or use, ID theft, theft of data) and invasion of privacy regardless of the type of media involved in the loss of private information, crisis management and identity theft response costs. This should also include breach notification costs, credit remediation and credit monitoring, defense and claims expenses, regulatory defense costs plus fines and penalties, cyber extortion, computer program and electronic data restoration expenses coverage (data asset protection), network business interruption, computer fraud coverage, and funds transfer loss.

In the event that the Network Security and Privacy Liability insurance required by this Contract is written on a claims-made basis, Contractor warrants that any retroactive date under the policy shall precede the effective date of this Contract and, either continuous coverage will be maintained, or an extended discovery period will be exercised for a period of two (2) years beginning at the time work under this Contract is completed.

The policy shall be endorsed, as required by this written agreement, to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to vicarious liability of the insured arising out of the activities performed by or on behalf of the Contractor.

Policy shall contain a waiver of subrogation endorsement, as required by this written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.

6. Installation Floater

- Coverage amount is $___TBD At Award

Policy shall contain an Additional Insured endorsement, as required by this written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees.

The State of Arizona and the Department shall be named as loss payee as its interest may appear.

Coverage shall be written on an all risk, replacement cost basis and shall include coverage for flood and earth movement as well as coverage for losses that may occur during equipment testing/commissioning.

Policy shall be maintained until whichever of the following shall first occur: (1) final payment has been made; or, (2) until no person or entity, other than the State of Arizona, has an insurable interest in the property required to be covered.

Policy shall be endorsed such that the insurance shall not be canceled or lapse because of any partial use or occupancy by the State of Arizona.

The Installation Floater must provide coverage from the time the equipment/material becomes the responsibility of the Contractor and shall continue without interruption during the installation, testing and commissioning, including any time during which the equipment/material is being transported to the installation site, or awaiting installation, whether on or off site.

Policy shall contain a Waiver of Subrogation endorsement, as required by written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by the Contractor for the State of Arizona.

Contractor is responsible for the payment of all deductibles under the Installation Floater.

Additional Insurance Requirements

The policies shall include, or be endorsed to include, as required by this written agreement, the following provisions:

The Contractor's policies, as applicable, shall stipulate that the insurance afforded the Contractor shall be primary and that any insurance carried by the Department, its agents, officials, employees or the State of Arizona shall be excess and not contributory insurance, as provided by A.R.S. § 41-621 (E).

Insurance provided by the Contractor shall not limit the Contractor's liability assumed under the indemnification provisions of this Contract.

Notice of Cancellation

Applicable to all insurance policies required within the Insurance Requirements of this Contract, Contractor's insurance shall not be permitted to expire, be suspended, be canceled, or be materially changed for any reason without thirty (30) days prior written notice to the State of Arizona. Within two (2) business days of receipt, Contractor must provide notice to the State of Arizona if they receive notice of a policy that has been or will be suspended, canceled, materially changed for any reason, has expired, or will be expiring. Such notice shall be sent directly to the Department and shall be mailed, emailed, hand delivered or sent by facsimile transmission to (State Representative's Name, Address & Fax Number).

Acceptability of Insurers

Contractor's insurance shall be placed with companies licensed in the State of Arizona or hold approved non-admitted status on the Arizona Department of Insurance List of Qualified Unauthorized Insurers. Insurers shall have an "A.M. Best" rating of not less than A- VII. The State of Arizona in no way warrants that the above-required minimum insurer rating is sufficient to protect the Contractor from potential insurer insolvency.

Verification of Coverage

Contractor shall furnish the State of Arizona with certificates of insurance (valid ACORD form or equivalent approved by the State of Arizona) evidencing that Contractor has the insurance as required by this Contract. An authorized representative of the insurer shall sign the certificates.

All such certificates of insurance and policy endorsements must be received by the State before work commences. The State's receipt of any certificates of insurance or policy endorsements that do not comply with this written agreement shall not waive or otherwise affect the requirements of this agreement.

Each insurance policy required by this Contract must be in effect at, or prior to, commencement of work under this Contract. Failure to maintain the insurance policies as required by this Contract, or to provide evidence of renewal, is a material breach of contract.

All certificates required by this Contract shall be sent directly to the Department. The State of Arizona project/contract number and project description shall be noted on the certificate of insurance. The State of Arizona reserves the right to require complete copies of all insurance policies required by this Contract at any time.

Subcontractors

Contractor's certificate(s) shall include all subcontractors as insureds under its policies or Contractor shall be responsible for ensuring and/or verifying that all subcontractors have valid and collectable insurance as evidenced by the certificates of insurance and endorsements for each subcontractor. All coverages for subcontractors shall be subject to the minimum Insurance Requirements identified above. The Department reserves the right to require, at any time throughout the life of this contract, proof from the Contractor that its subcontractors have the required coverage.

Approval and Modifications

The Contracting Agency, in consultation with State Risk, reserves the right to review or make modifications to the insurance limits, required coverages, or endorsements throughout the life of this contract, as deemed necessary. Such action will not require a formal Contract amendment but may be made by administrative action.

Exceptions

In the event the Contractor or subcontractor(s) is/are a public entity, then the Insurance Requirements shall not apply. Such public entity shall provide a certificate of self-insurance. If the Contractor or subcontractor(s) is/are a State of Arizona agency, board, commission, or university, none of the above shall apply.

7.0 Warranties

No modifications to uniform terms and conditions section.

8.0 State's Contractual Remedies

No modifications to uniform terms and conditions section.

9.0 Contract Termination

No modifications to uniform terms and conditions section

10.0 Contract Claims

No modifications to uniform terms and conditions section.

11.0 General Provisions for Products

11.1	**Applicability**	Article 11 applies to the extent the Work is or includes Materials.
11.2	**Off-Contract Materials**	Contractor shall ensure that the design and/or procedures for the Materials ordering method prevents Purchase Orders for off-contract items or excluded items. Notwithstanding that State might have its own internal administrative rules regarding off-contract or excluded item ordering, and endeavors to prevent such purchase orders from occurring, Contractor is responsible for not accepting any such Purchase Orders; State may, at its discretion, return any such items under subparagraph 11.17 or cancel any such Purchase Order under subparagraph 11.18, in either case being without obligation and at Contractor's expense. As used above, "off-contract item" refers to any product not included in the scope of the Contract and for which no price or compensation has been established contractually, and "excluded item" refers to any product expressly stated in the Contract as being excluded from the Contract.
11.3	**Compensation for Late Deliveries**	Contractor shall have clear, published policies in place regarding late delivery, purchase order cancelation, discounts, or rebates given to compensate for late deliveries, etc., and make them readily available to those Eligible Agencies that are likely to need them.
11.4	**Indicate Shipping Costs on Purchase Order**	If shipping cost is additional to the contracted price or rate for an item, the Contractor shall identify the shipping cost it intends to add for shipping, as a separate line item on the price quote provided to ASDB. The Contractor shall also provide the required substantiating documentation for the shipping cost with the price quote. If ASDB approves paying a shipping cost, ASDB will list the agreed upon shipping cost as a line item on their Purchase Order, when it is issued. If there is no additional shipping cost, the Contractor shall indicate on the price quote that shipping is included in the Purchase Order price.
11.5	**Current Products**	Contractor shall keep all products being offered under the Contract: (a) in current and ongoing production; (b) in its advertised product lines; (c) as models or types that are actively functioning in other paying customer environments; and (d) in conformance to the requirements of the Contract.

11.6	**Maintain Comprehensive Selection**	Contractor shall provide at all times the comprehensive selection of products for which a price is established in the Pricing Document.
11.7	**Additional Products**	State, at its discretion, may modify the scope of the Contract by Contract Amendment to include additional products or product categories so long as they are within the general scope of the ones originally covered by the Contract. Once the Contract Amendment has been fully executed, Contractor shall then update all applicable catalogs and price lists and make them available to all affected entities at no additional cost. Either party may make the request to add products to the Contract; regardless of who makes the request, the parties shall negotiate in good faith a fair price for any additional products, but State may elect not to add some or all of the products in question if no agreement is reached on pricing in a timely manner. Contractor's request or proposal in response to State's request must include: (a) documentation demonstrating that the additional products meet or exceed the specifications for the original products while remaining in the same product groups as the original ones; and (b) documentation demonstrating that the proposed price for the additional products is both fair and reasonable and at the same level of discount relative to market price as were the original ones. Demonstration of (b) typically requires showing how prices at which sales are currently or were last made to a significant number of buyers compare to the prices or discounts (as applicable) being proposed for the additional products.
11.8	**Discontinued Products**	If a product or groups of products covered by the Contract are discontinued by the manufacturer, Contractor shall notify State within 5 (five) business days after receiving the manufacturer's notification. State, at its discretion, will either allow Contractor to provide substitutes for the discontinued products or delete the products from the scope of the Contract, both of which will be accomplished by Contract Amendment. Contractor shall then update all applicable catalogs and price lists and make them available to all affected entities at no additional cost. The parties shall negotiate in good faith a fair price for any substitute product, but State may elect to delete the products from the scope of the Contract if no agreement is reached on substitute pricing in a timely manner. When notifying State of the discontinuance, Contractor shall provide: (a) manufacturer's announcement or documentation stating that the products have been discontinued, with identification by model/part number; (b) documentation demonstrating that the substitute products meet or exceed the specifications for the discontinued products while remaining in the same product groups as were the discontinued ones; and (c) documentation demonstrating that the proposed price for the substitute products is both fair and reasonable and at the same level of discount relative to market price as were the discontinued ones (with demonstration being as described in subparagraph 11.7).
11.9	**Forced Substitutions**	Forced substitutions will not be permitted; Contractor shall obtain State's prior written consent before making any discretionary substitution for any product covered by the Contract.
11.10	**Recalls**	In the event of a recall notice, technical service bulletin, or other important notification affecting a product offered under the Contract (collectively, "recalls" hereinafter), Contractor shall send timely notice to State for each applicable Purchase Order referencing the affected Purchase Order and product. Notwithstanding whatever protection Contractor might have under A.R.S. § 12-684 with respect to a manufacturer, Contractor shall handle recalls entirely and without obligation on State's part, other than to permit removal of installed products, retrieval of stored products, etc., as necessary to implement the recall.
11.11	**Delivery**	11.11.1 PRICING. Unless stated otherwise in the Pricing Document, all Materials prices set forth therein are FCA (seller's dock) Incoterms®2010, with "seller's dock" meaning the last place of manufacturing, assembly, integration, final packing, or warehousing before departure to designated point of delivery to State. For reference, the foregoing is to be construed as equivalent to "F.O.B. Origin, Contractor's Facility" under FAR 52.247-30.

11.11.2 LIABILITY. Unless stated otherwise in the Pricing Document or an Purchase Order, Contractor's liability for all Materials is DDP (State-designated receiving point per Purchase Order) Incoterms®2010, but with unloading at destination included. For reference, the foregoing is to be construed as equivalent to "F.O.B. Destination, Within Consignee's Premises" under FAR 52.247-35.

11.11.3 PAYMENT. Unless stated otherwise in the Pricing Document or an Purchase Order, State shall reimburse Contractor the costs of the difference between DDP (State-designated receiving point per Purchase Order) and FCA (seller's dock) with no mark-up, which Contractor shall itemize and invoice separately.

11.12 Delivery Time

Unless stated otherwise in the Pricing Document generally or in the applicable Purchase Order particularly, Contractor shall make delivery within 2 (two) weeks or earlier after receiving each Purchase Order. If Contractor is unable to make delivery within 2 (two) weeks after receiving the Purchase Order, the Contractor will communicate expected delivery time to Eligible Agency within 24 hours after Purchase Order.

11.13 Delivery Locations

Contractor shall offer deliveries to every location served under the scope of the Contract, specifically:

1. if the Contract is for a single State agency in a single area, then Contractor shall deliver to any agency location in that area;
2. if the Contract is for a single State agency in all its locations, then Contractor shall deliver to any of that agency's location in Arizona;
3. if the Contract is for statewide use but excludes certain areas, then Contractor shall deliver to any Eligible Agency location that is not in the excluded areas; and
4. if the Contract is for unrestricted statewide use, then:
    a) Contractor shall deliver to any Eligible Agency anywhere in Arizona;
    b) if the Pricing Document indicates defined delivery areas and prices, those always apply unless the Purchase Order expressly states otherwise and Contractor accepts it.

11.14 Conditions at Delivery Location

Contractor shall verify receiving hours and conditions (i.e. height/weight restrictions, access control, etc.) with the relevant purchaser for the receiving site before scheduling or making a delivery. State will neither allow extra charges for wait time, comebacks, or the like nor excuse late delivery if Contractor has failed to make the verification or comply with the applicable conditions. Contractor shall make each delivery to the specific location indicated in the Purchase Order, which Contractor acknowledges might be inside an industrial building, institutional building, low-rise office building, or high-rise office building instead of a normal receiving dock. Contractor might be required to make deliveries to locations inside a secured perimeter at certain institutional facilities such as prisons where prior clearances are required for each delivery and driver individually. Contractor shall contact each such facility directly to confirm its most-current security clearance procedures, allowable hours for deliveries, visitor dress code, and other applicable rules. State will neither allow extra charges for wait time, comebacks, or the like nor excuse late delivery if Contractor has failed to make the confirmation or comply with the applicable conditions.

11.15 Materials Acceptance

State has the right to make acceptance of Materials subject to a complete inspection on delivery and installation, if installation is Contractor's responsibility. State may apply as acceptance criteria conformity to the Contract, workmanship and quality, correctness of constituent materials, and any other matter for which the Contract or applicable laws state a requirement, whether stated directly or by reference to another document, standard, reference specification, etc. Contractor shall remove any rejected Materials

from the delivery location, or from any immediate environs to which it might have been reasonably necessary to move it, carry it off the delivery premises, and subsequently deliver an equal number or quantity of conforming items. State will not owe Contractor any payment for rejected Materials, and State may, at its discretion, withhold or make partial payment for any rejected Materials that have been returned to Contractor in those instances where State has agreed to permit repair instead of demanding replacement.

11.16 Correcting Defects

Contractor shall, at no additional cost and without entitlement to extension of any delivery deadline or specified time for performance, remove or exchange and replace any defective or non-conforming delivered or installed Materials.

1. Contractor shall be solely responsible for the cost of any associated cutting and patching, temporary protection measures, packing and crating, hoisting and loading, transportation, unpacking, inspection, repacking, reshipping, and reinstallation if installation is within the scope of the Contract.
2. If Contractor fails to do so in a timely manner, State will be entitled to exercise its remedies under paragraph 8.5 [Right of Offset] of the Uniform Terms and Conditions.
3. Whether State will permit Contractor to repair in place or demands that Contractor remove and replace is at State's discretion in each instance, provided that, State shall not apply that discretion punitively if repair in place is practicable and doing so would not create safety hazards, put property at risk, unreasonably interfere with operations, create public nuisance, or give rise to any other reasonable concern on State's part.

11.17 Returns

State may, at its discretion, return for full credit and with no restocking charges any delivered Materials unused in the original packaging, including any instruction manuals or other incidental item that accompanied the original shipment, within 30 (thirty) days after receipt. If State elects to return delivered Materials, then State shall pay all freight, delivery, and transit insurance costs to return the products to the place from which Contractor shipped them, provided that, if State returns delivered Materials because they are defective or non-conforming or for any other reason having to do with Contractor fault or error, then State will not be responsible for paying freight, delivery, or transit insurance costs to return the products and may, at its discretion, either have those billed directly to Contractor or offset them under paragraph 8.5 [Right of Offset] of the Uniform Terms and Conditions.

11.18 Purchase Order Cancellation

State may cancel Purchase Orders within a reasonable period after issuance and at its discretion. The same method as that used for ordering will be used for cancellation. If State cancels an Purchase Order, then State shall:

1. pay Contractor for any portion of the Materials and Services from that Purchase Order that have been properly delivered or performed as of the cancellation effective date plus 1 (one) additional business day;
2. reimburse Contractor for:
    a) its actual, documented costs incurred in fulfilling the Purchase Order up to the cancellation effective date plus 1 (one) additional business day; and
    b) the cost of any obligations it incurred as of the cancellation effective date plus 1 (one) additional business day that demonstrably cannot be canceled, or that have pre-established cancelation penalties specified in the relevant Subcontracts, to the extent the penalties are reasonable and customary for the work in question; and

3. contractor shall not charge or be entitled to charge State for any new costs it incurs after receiving the cancelation notice plus 1 (one) business day or for any lost profits or opportunity.

By way of reminder, State is not liable for any products that were produced, shipped, or delivered or any services that were performed before Contractor had acknowledged the corresponding Purchase Order.

11.19 Product Safety

Materials as-shipped must comply with applicable safety regulations and standards. Unless expressly stated otherwise in the Scope of Work, State is not responsible for making any Materials safe or compliant following acceptance and is relying exclusively on Contractor to deliver only products that are already safe and compliant.

11.20 Hazardous Materials

Contractor shall timely provide State with any "Safety Data Sheets" (SDS) and any other hazard communication documentation required under the US Department of Labor's Occupational Safety and Health Administration (OSHA) "Hazard Communication Standard" (often referred to as the "HazCom 2012 Final Rule") that is reasonably necessary for State to comply with regulations when it or its other contractors install, handle, operate, repair, maintain or remove any Materials. Note that, in the past, those documents might have been referred to as "Material Safety Data Sheets" or "Product Safety Data Sheets", but State (and this Contract) use only the more up-to-date "SDS" reference. Contractor shall ensure that all its relevant personnel understand the nature of and hazards associated with, to the extent it they are Contractor's responsibility under the Contract, the design, shipping, handling, delivery, installation, repair and maintenance of any portion of the Work that is, contains or will become upon use a hazardous material, with "hazardous material" being any material or substance that is: (1) identified now or in the future as being hazardous, toxic or dangerous under applicable laws; or (2) subject to statutory or regulatory requirement governing special handling, disposal or cleanup.

12.0 General Provisions for Services

12.1 Applicability

Article 12 applies to the extent the Work is or includes Services.

12.2 Comprehensive Services Offering

Contractor shall provide the comprehensive range of services for which a price is established in the Pricing Document for ordering by Eligible Agencies, and Co-Op Buyers if co-op buying applies.

12.3 Additional Services

State at its discretion may modify the scope of the Contract by Contract Amendment to include additional services or service categories that are within the general scope of the ones originally covered by the Contract if it determines that doing so is in its best interest. Once the Contract Amendment is fully executed, Contractor shall then update all applicable price lists and make them available to all affected entities at no additional cost. Either party may make the request to add services to the Contract; regardless of who makes the request, the parties shall negotiate in good faith a fair price for any additional services, but State may elect not to add some or all of the services in question if no agreement is reached on pricing in a timely manner. Contractor's request or proposal in response to State's request must include documentation demonstrating that the proposed price for the additional services is both fair and reasonable and comparable to the original ones.

12.4 Off-Contract Services

Contractor shall ensure that the design and/or procedures for the Services ordering method prevents Purchase Orders for off-contract or excluded services. Notwithstanding that State might have its own internal administrative rules regarding off contract or excluded service ordering, and endeavors to prevent such purchase orders from occurring, Contractor is responsible for not accepting any such Purchase Orders. State may, at its discretion, cancel any such Purchase Order without obligation. As used above, "off-contract service" refers to any

service not included in the scope of the Contract and for which no price or compensation has been established contractually, and "excluded service" refers to any service expressly excluded from the scope of the Contract.

12.5 Removal of Personnel

Notwithstanding that Contractor is in every circumstance responsible for hiring, assigning, directing, managing, training, disciplining, and rewarding its personnel, State may at its discretion and without the obligation to demonstrate cause instruct Contractor to remove any of its personnel from State's facilities or from further assignment under the Contract. In such cases, Contractor shall promptly replace them with other personnel having equivalent qualifications, experience, and capabilities.

12.6 Transitions

During commencement, Contractor shall attend transition meetings with any outgoing vendors to coordinate and ease the transition so that the effect on State's operations is kept to a minimum. State may elect to have outgoing vendors complete some or all of their work or purchase orders in progress to ease the transition as is safest and most efficient in each instance, even if that scope is covered under the Contract. Conversely, State anticipates having a continued need for the same materials and services upon expiration or earlier termination of the Contract. Accordingly, Contractor shall work closely with any new (incoming) vendor and State to ensure as smooth and complete a transfer as is practicable. State's representative shall coordinate all transition activities and facilitate joint development of a comprehensive transition plan by both Contractor and the incoming vendor. As with the incoming transition. State may permit Contractor (outgoing) to complete work or purchase orders in progress to ease the transition as is safest and most efficient in each instance.

12.7 Accuracy of Work

Contractor is responsible for the accuracy of the Services, and shall promptly make all necessary revisions or corrections resulting from errors and omissions on its part without additional compensation. Acceptance by State will not relieve Contractor of responsibility for correction of any errors discovered subsequently or necessary clarification of any ambiguities.

12.8 Requirements at Services Location

Contractor personnel shall perform their assigned portions of the Services at the specific location indicated in the Purchase Order (if applicable). Contractor acknowledges that the location might be inside an industrial building, institutional building, or one of various office types and classes. Additionally, if performing the Services requires Contractor personnel to work inside a secured perimeter at certain institutional facilities such as prisons where prior clearances are required, Contractor shall contact the facility directly to confirm its most-current security clearance procedures, allowable hours for work, visitor dress code, and other applicable rules. State will neither allow extra charges for wait time, comebacks, or the like nor excuse late performance if Contractor has failed to make the confirmation or comply with the applicable conditions.

12.9 Services Acceptance

State has the right to make acceptance of Services subject to acceptance criteria. State may apply as acceptance criteria conformity to the Contract, accuracy, completeness, or other indicators of quality or other matter for which the Contract or law states a requirement, whether stated directly or by reference to another document, standard, reference specification, etc. State will not owe Contractor any payment for un-accepted Services; and State may, at its discretion, withhold or make partial payment for any rejected Services if Contractor is still in the process of re-performing or otherwise curing the grounds for State's rejection.

12.10 Corrective Action Required

Notwithstanding any other guarantees, general warranties, or particular warranties Contractor has given under the Contract, if Contractor fails to perform any material portion of the Services, including failing to complete any contractual deliverable, or if its performance fails to meet agreed-upon service levels or service standards set out in or referred to in the Contract, then Contractor shall perform a root-cause analysis to identify the source of the failure and use all commercially reasonable efforts to correct the failure and meet the Contract requirements as promptly as is practicable.

1. Contractor shall provide to State a report detailing the identified cause and setting out its detailed corrective action plan promptly after the date the failure occurred (or the date when the failure first became apparent, if it was not apparent immediately after occurrence).
2. State may demand to review and approve Contractor's analysis and plans, and Contractor shall make any corrections State instructs and adopt State's recommendations so far as is commercially practicable, provided that State may insist on any measures it determines within reason to be necessary for safety or protecting property and the environment.
3. Contractor shall take the necessary action to avoid any like failure in the future, if doing so is appropriate and practicable under the circumstances.

13.0 Data and Information Handling

13.1 Applicability

Article 13 applies to the extent the Work includes handling of any (1) State's proprietary and sensitive data or (2) confidential or access-restricted information obtained from State or from others at State's behest.

13.2 Data Protection and Confidentiality of Information

Contractor warrants that it will establish and maintain procedures and controls acceptable to State for ensuring that State's proprietary and sensitive data is protected from unauthorized access and information obtained from State or others in performance of its contractual duties is not mishandled, misused, or inappropriately released or disclosed. For purposes of this paragraph, all data created by Contractor in any way related to the Contract, provided to Contractor by State, or prepared by others for State are proprietary to State, and all information by those same avenues is State's confidential information. To comply with the foregoing warrant:

1. Contractor shall: (a) notify State immediately of any unauthorized access or inappropriate disclosures, whether stemming from an external security breach, internal breach, system failure, or procedural lapse; (b) cooperate with State to identify the source or cause of and respond to each unauthorized access or inappropriate disclosure; and (c) notify State promptly of any security threat that could result in unauthorized access or inappropriate disclosures; and
2. Contractor shall not: (a) release any such data or allow it to be released or divulge any such information to anyone other than its employees or officers as needed for each person's individual performance of his or her duties under the Contract, unless State has agreed otherwise in advance and in writing; or (b) respond to any requests it receives from a third party for such data or information, and instead route all such requests to State's designated representative.

13.3 Personally Identifiable Information.

Without limiting the generality of paragraph 13.2, Contractor warrants that it will protect any personally identifiable information ("PII") belonging to State's employees' or other contractors or members of the general public that it receives from State or otherwise acquires in its performance under the Contract.

For purposes of this paragraph:

1. PII has the meaning given in the [federal] Office of Management and Budget (OMB) *Memorandum M-07-16 Safeguarding Against and Responding to the Breach of Personally Identifiable Information*; and
2. "protect" means taking measures to safeguard personally identifiable information and prevent its breach that are functionally equivalent to those called for in that OMB memorandum and elaborated on in the [federal] General Services Administration (GSA) *Directive CIO P* 2180*.1 GSA Rules of Behavior for Handling Personally Identifiable Information*.

NOTE (1): For convenience of reference only, the OMB memorandum is available at:

https://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2007/m07-16.pdf

NOTE (2): For convenience of reference only, the GSA directive is available at:

http://www.gsa.gov/portal/directive/d0/content/658222

13.4 Protected Health Information

Contractor warrants that, to the extent performance under the Contract involves individually identifiable health information (referred to hereinafter as protected health information ("PHI") and electronic PHI ("ePHI") as defined in the Privacy Rule referred to below), it:

1. is familiar with and will comply with the applicable aspects of the following collective regulatory requirements regarding patient information privacy protection: (a) the "Privacy Rule" in CFR 45 Part 160 and Part 164 pursuant to the Health Insurance Portability and Accountability Act ("HIPAA") of 1996; (b) Arizona laws, rules, and regulations applicable to PHI/ePHI that are not preempted by CFR 45-160(B) or the Employee Retirement Income Security Act of 1974 ("ERISA") as amended; and (c) State's current and published PHI/ePHI privacy and security policies and procedures;
2. will cooperate with State in the course of performing under the Contract so that both State and Contractor stay in compliance with the requirements in *(1)* above; and
3. will sign any documents that are reasonably necessary to keep both State and Contractor in compliance with the requirements in *(1)* above, in particular "Business Associate Agreements" in accordance with the Privacy Rule.

NOTE: For convenience of reference only, the Privacy Rule is available at:

http://www.hhs.gov/hipaa/for-professionals/privacy/index.html

14.0 Information Technology Work

14.1 Applicability

Article 14 applies to any Invitation for Bids, Request for Proposals, or Request for Quotations for "Information Technology," as defined In A.R.S. § 41-3501(6) 6: " . . . computerized and auxiliary automated information processing, telecommunications and related technology, including hardware, software, vendor support and related services, equipment and projects" if and to the extent that the Work is or includes Information Technology.

14.2 Background Checks

Each of Contractor's personnel who is an applicant for an information technology position must undergo the security clearance and background check procedure, which includes fingerprinting, as required by A.R.S § 41-710. Contractor shall obtain and pay for the security clearance and background check. Contractor personnel who will have administrator privileges on a State network must additionally provide identify and address verification and undergo State-specified training for unescorted access, confidentiality, privacy, and data security.

14.3 Information Access

14.3.1 SYSTEM MEASURES. Contractor shall employ appropriate system management and maintenance, fraud prevention and detection, and encryption application and tools to any systems or networks containing or transmitting State's proprietary data or confidential information.

14.3.2 INDIVIDUAL MEASURES. Contractor personnel shall comply with applicable State policies and procedures regarding data access, privacy, and security, including prohibitions on remote access and obtaining and maintaining access IDs and passwords. Contractor is responsible to State for ensuring that any State access IDs and passwords are used only by the person to whom they were issued. Contractor shall ensure that personnel are only provided the minimum only such level of access necessary to perform his or duties. Contractor shall on request provide a current register of the access IDs and passwords and corresponding access levels currently assigned to its personnel.

14.3.3 ACCESS CONTROL. Contractor is responsible to State for ensuring that hardware, software, data, information, and that has been provided by State or belongs to or is in

the custody of State and is accessed or accessible by Contractor personnel is only used in connection with carrying out the Work, and is never commercially exploited in any manner whatsoever not expressly permitted under the Contract. State may restrict access by Contractor personnel, or instruct Contractor to restrict access their access, if in its determination the requirements of this subparagraph are not being met.

14.4 Pass-Through Indemnity

14.4.1 INDEMNITY FROM THIRD PARTY. For computer hardware or software included in the Work as discrete units that were manufactured or developed solely by a third party, Contractor may satisfy its indemnification obligations under the Contract by, to the extent permissible by law, passing through to State such indemnity as it receives from the third-party source (each a "Pass-Through Indemnity") and cooperating with State in enforcing that indemnity. If the third party fails to honor its Pass-Through Indemnity, or if a Pass-Through Indemnity is insufficient to indemnify State Indemnitees to the extent and degree Contractor is required to do by the Uniform Terms and Conditions, then Contractor shall indemnify, defend and hold harmless State Indemnitees to the extent the Pass-Through Indemnity does not.

14.4.2 NOTIFY OF CLAIMS. State shall notify Contractor promptly of any claim to which a Pass-Through Indemnity might apply. Contractor, with reasonable consultation from State, shall control of the defense of any action on any claim to which a Pass-Through Indemnity applies, including negotiations for settlement or compromise, provided that:

(a) State reserves the right to elect to participate in the action at its own expense;

(b) State reserves the right to approve or reject any settlement or compromise on reasonable grounds and if done so timely; and

(c) State shall in any case cooperate in the defense and any related settlement negotiations.

14.5 Systems and Controls

In consideration for State having agreed to permit Pass-Through Indemnities in lieu of direct indemnity, Contractor agrees to establish and keep in place systems and controls appropriate to ensure that State funds under this Contract are not knowingly used for the acquisition, operation, or maintenance of Materials or Services in violation of intellectual property laws or a third party's intellectual property rights.

14.6 Redress of Infringement

14.6.1 REPLACE, LICENSE, OR MODIFY. If Contractor becomes aware that any Materials or Services infringe, or are likely to be infringing on, any third party's intellectual property rights, then Contractor shall at its sole cost and expense and in consultation with State either:

(a) replace any infringing items with non-infringing ones;

(b) obtain for State the right to continue using the infringing items; or

(c) modify the infringing item so that they become non-infringing, so long as they continue to function as specified following the modification.

14.6.2 CANCELLATION OPTION. In every case under 14.6.1, if none of those options can reasonably be accomplished, or if the continued use of the infringing items is impracticable, State may cancel the relevant Purchase Order or terminate the Contract and Contractor shall take back the infringing items. If State does cancel the Purchase Order or terminate the Contract, Contractor shall refund to State:

(a) for any software created for State under the Contract, the amount State paid to Contactor for creating it;

(b) for all other Materials, the net book value of the product provided according to generally accepted accounting principles; and

(c) for Services, the amount paid by State or an amount equal to 12 (twelve) months of charges, whichever is less.

14.6.3. EXCEPTIONS. Contractor will not be liable for any claim of infringement based solely on any of the following by a State Indemnitee:

(a) modification or use of Materials other than as contemplated by the Contract or expressly authorized or proposed by a Contractor Indemnitor;

(b) operation of Materials with any operating software other than that supplied by Contractor or authorized or proposed by a Contractor Indemnitor; or

(c) combination or use with other products in a manner not contemplated by the Contract or expressly authorized or proposed by a Contractor Indemnitor.

14.7 First Party Liability Limitation

14.7.1 LIMIT. Subject to the provisos that follow below and unless stated otherwise in the Special Terms and Conditions, State's and Contractor's respective first party liability arising from or related to the Contract is limited to the greater of $1,000,000 (one million dollars) or 3 (three) times the purchase price of the specific Materials or Services giving rise to the claim.

14.7.2 PROVISOS. This paragraph 14.7 limits liability for first party direct, indirect, incidental, special, punitive, and consequential damages relating to the Work regardless of the legal theory under which the liability is asserted. This paragraph 14.7 does not limit liability arising from any:

(a) Indemnified Claim against which Contractor has indemnified State Indemnitees;

(b) claim against which Contractor has indemnified State Indemnitees; or

(c) provision of the Contract calling for liquidated damages or specifying amounts or percentages as being at-risk or subject to deduction for performance deficiencies.

14.7.2 PURCHASE PRICE DETERMINATION. If the Contract is for a single-agency and a single Purchase Order (or if no Purchase Order applies), then "purchase price" in Subparagraph 14.7.1 above means the aggregate Contract price current at the time of Contract expiration or earlier termination, including all change orders or other forms of Contract Amendment having an effect on the aggregate price through that date. In all other cases, "purchase price" above means the total price of the Purchase Order for the specific equipment, software, or services giving rise to the claim, and therefore a separate limit will apply to each Purchase Order.

14.7.3 NO EFFECT ON INSURANCE. This paragraph does not modify the required coverage limits, terms, and conditions of, or any insured's ability to claim against, any insurance that Contractor is required by the Contract to provide, and Contractor shall obtain express endorsements that it does not.

14.8 Information Technology Warranty

14.8.1 SPECIFIED DESIGN. Where the Scope of Work for information technology Work provides a detailed design specification or sets out specific performance requirements, Contractor warrants that the Work will provide all functionality material to the intended use stated in the Contract, provided that, the foregoing warranty does not extend to any portions of the Materials that are:

(a) modified or altered by anyone not authorized by Contractor to do so;

(b) maintained in a way inconsistent to any applicable manufacturer recommendations; or

(c) operated in a manner not within its intended use or environment.

14.8.2 COTS SOFTWARE. With respect to Materials provided under the Contract that are commercial-off-the-shelf (COTS) software, Contractor warrants that:

(a) to the extent possible, it will test the software before delivery using commercially available virus detection software conforming to current industry standards;

(b) the COTS software will, to the best of its knowledge, at the time of delivery be free of viruses, backdoors, worms, spyware, malware, and other malicious code

that could hamper performance, collect unlawfully any personally identifiable information, or prevent products from performing as required by the Contract; and

(c) it will provide a new or clean install of any COTS software that State has reason to believes contains harmful code.

14.8.3 PAYMENT HAS NO EFFECT. The warranties in this paragraph are not affected by State's inspection, testing, or payment.

14.9 Specific Remedies

Unless expressly stated otherwise elsewhere in the Contract, State's remedy for breach of warranty includes, at State's discretion, re-performance, repair, replacement, or refund of any amounts paid by State for the nonconforming Work, plus (in every case) Contractor's payment of State's additional, documented, and reasonable costs to procure materials or services equivalent in function, capability, and performance at that first called for. For clarification of intent, the foregoing obligations are limited by the limitation of liability. If none of the forgoing options can reasonably be effected, or if the use of the materials by State is made impractical by the nonconformance, then State may seek any remedy available to it under law.

14.10 Section 508 Compliance

Unless specifically authorized in the Contract, any electronic or information technology offered to the State of Arizona under this Contract shall comply with A.R.S. § 18-131 and § 18-132 and Section 508 of the Rehabilitation Act of 1973, which requires that employees and members of the public shall have access to and use of information technology that is comparable to the access and use by employees and members of the public who are not individuals with disabilities.

14.11 Cloud Applications

The following are required for Contractor of any "cloud" solution that hosts State data outside of the State's network, or transmits and/or receives State data.

1. Submit a completed Arizona Baseline Infrastructure Security Controls assessment spreadsheet as found at: https://aset.az.gov/resources/policies-standards-and-procedures, and mitigate or install compensating controls for any issues of concern identified by State. Contractor is required to provide any requested documentation supporting the review of the assessment. The assessment shall be re-validated on a minimum annual basis.
2. State reserves the right to conduct Penetration tests or hire a third party to conduct penetration tests of the Contractor's application. Contractor will be alerted in advance and arrangements made for an agreeable time. Contractor shall respond to all serious flaws discovered by providing an acceptable timeframe to resolve the issue and/or implement a compensating control.
3. Contractor must submit copy of system logs from cloud system to State of AZ security team on a regular basis to be added to the State SIEM (Security Information Event Monitor) or IDS (Intrusion Detection System).

Contractor must employ a government-rated cloud compartment to better protect sensitive or regulated State data.

15.0 Agency Contract Administration and Operations – Department of Corrections

15.1 Drug Testing Program

The Contractor shall implement a drug and alcohol testing program for applicants, employees and volunteers, at no additional cost to the Department. The Contractor shall ensure that all subcontractors implement the same drug and alcohol testing program required by the Department. The program shall meet the requirements of Department Order 522, Drug-Free Workplace.

15.2 Department Policies and Procedures

The contractor shall follow all Department policies, procedures and Department Orders (DO) and Directors Instruction (DI) i.e., drug-free workplace, dress code, grooming, etc. The policies, procedures, DO and DI are available on the following website www.azcorrections.gov.

15.3 Notice Warning

Any person who takes into or out of or attempts to take into or out of a correctional facility or the grounds belonging to or adjacent to a correctional facility, any item not specifically authorized by the correctional facility, shall be prosecuted under the provisions of the Arizona Revised Statues. All persons, including, employee and visitors, entering upon these confines are subject to routine searches of their persons, vehicles,

Authority	A.R.S. §13-2501:
	A.R.S. §13-2505
	ADC Department Order 708

15.4 Contraband

Contraband means any dangerous drug, narcotic drug, intoxicating liquor or any kind, deadly weapon, dangerous instrument, explosive or any other article whose use of or possession would endanger the safety, security or preservation of order in a correctional facility or any person therein. (Any other article includes any substance which could cause abnormal behavior, i.e., marijuana, nonprescription medications, etc.)

Promoting prison contraband A.R.S. § 13-2505:

A person, not otherwise authorized by law, commits promoting prison contraband:

a. By knowingly taking contraband into a correctional facility or the grounds of such a facility; or

b. By knowingly conveying contraband to any persons confined in a correctional facility; or

c. By knowingly making, obtaining, or possessing contraband while being confined in a correctional facility.

Promoting Prison Contraband is a Class 5 felony.

Authority	A.R.S. § 13-2501
	A.R.S. § 13-2505
	ADC Department Order 70814.4.2

15.5 Rules and Regulations

15.5.1 Attention of the Offerors is called to the requirements specified in **Attachment 6**, Rules for Non-Employees of the Department of Corrections in Arizona State Prison Complexes which shall be adhered to in all respects.

15.5.2 Should the Contractor require signatures of other parties such as subcontractor or persons directly or indirectly employed by the Contractor, it shall be the Contractor's responsibility to obtain such signatures. The signed document must be submitted within ten (10) days of notification of intent to award.

15.6 Unlawful Sexual Conduct

15.6.1 A person – who is employed by the State Department of Corrections or the Department of Juvenile Corrections; is employed by a private prison facility or a city or county jail; Contracts to provide services with the State Department of Corrections, the Department of Juvenile Corrections, a private prison facility or a city or county jail; is an official visitor, volunteer or agency representative of the State Department of Corrections, the Department of Juvenile Corrections, a private prison facility or a city or county jail – commits unlawful sexual conduct by intentionally or knowingly engaging in any act of a sexual nature with an offender who is in the custody of the State Department of Corrections, the Department of Juvenile Corrections, a private prison facility or a city or county jail or with an offender who is under the supervision of either Department or a city or county.

15.6.2 This section does not apply to a person who is employed by the State Department of Corrections, a private prison facility or a city or county jail or who Contracts to provide services with the State Department of Corrections, a private prison facility or a city or county jail or an offender who is on release status if the person was lawfully married to the prisoner or offender on release status before the prisoner or offender was sentenced to the State Department of Corrections or was incarcerated in a city or county jail.

15.6.3 Unlawful sexual conduct with an offender who is under fifteen years of age is a class 2 felony. Unlawful sexual conduct with an offender who is between fifteen and seventeen years of age is a class 3 felony. All other unlawful sexual conduct is a class 5 felony.

15.6.4 Unlawful sexual conduct; correctional facilities; classification; Definition A.R.S. §13-1419.

15.7 Federal Prison Rape Elimination Act 2003

15.7.1 The Contractor shall comply with the Federal Prison Rape Elimination Act of 2003.14.7.2

End of Section 2-C

SECTION 2-D:

Uniform Terms and Conditions

Version 2018 (2/1/2018)

1.0 Definition of Terms

1.1	**Acceptance**	"Acceptance" means the document headed "Offer and Acceptance Form" bearing the State contract number once Procurement Officer has signed it to signify (1) State's formal acceptance of the Accepted Offer and (2) the formation of the Contract.
1.2	**Accepted Offer**	If State did not request a Revised Offer, then "Vendor Offer" means the Initial Offer. If State did request a Revised Offer but not a Best and Final Offer, then "Accepted Offer" means the latest Revised Offer. If State requested a Best and Final Offer, then "Accepted Offer" means the latest Best and Final Offer.
1.3	**Arizona Procurement Code; A.R.S.; A.A.C.**	The "Arizona Procurement Code, "A.R.S.," and "A.A.C." refers to Arizona Revised Statutes ("A.R.S.") § 41-2501, *et seq.*, and the rules promulgated thereunder, Arizona Administrative Code ("A.A.C.") R2-7-101, *et. seq.*
1.4	**Arizona TPT**	"Arizona TPT" means Arizona Transaction Privilege Tax. For information, refer to the Arizona Department of Revenue (DOR) website at: https://www.azdor.gov/business/transactionprivilegetax.aspx.
1.5	**Attachment**	"Attachment" means any item that: 4. the Solicitation required Offeror to submit as part of the relevant Offer (e.g., Initial Offer, Revised Offer, or BAFO); 5. was attached to an Offer when submitted; and 6. was included in the Accepted Offer.
1.6	**Contract**	"Contract" " means the combination of the Solicitation, including the Uniform and Special Instructions to Offerors, the Uniform and Special Terms and Conditions, and the Specifications and Statement or Scope of Work; the Offer and any Best and Final Offers; and any Solicitation Amendments or Contract Amendments or authorized Purchase Orders.
1.7	**Contract Amendment**	"Contract Amendment" means a document signed by Procurement Officer that has been issued for the purpose of making changes to the Contract after execution. Only the Procurement Officer responsible for this Contract has the authority to modify or amend this Contract. In ProcureAZ, the term "Change Order" has the same meaning as "Contract Amendment".
1.8	**Contract Terms and Conditions**	"Contract Terms and Conditions" means the Special Terms and Conditions and these Uniform Terms and Conditions taken collectively.
1.9	**Contractor**	"Contractor" means the Person identified on the Accepted Offer who has entered into the Contract with State.
1.10	**Contractor Indemnitor**	"Contractor Indemnitor" means Contractor or any of its owners, officers, directors, agents, employees, volunteers or Subcontractors.

1.11	**eProcurement System (currently ProcureAZ)**	"eProcurement System" means State's official electronic procurement system, established pursuant to A.A.C. R2-7-201 as set forth in the Arizona Department of Administration State Procurement Office policy. This eProcurement System may be subject to change. The State's current eProcurement system is "ProcureAZ." The current version of the ADOA policy regarding the State's eProcurement System is *Technical Bulletin No. 020, ProcureAZ – The Official State eProcurement System*. NOTE (1): Technical Bulletin No. 020 is available online at: https://spo.az.gov/administration-policy/state-procurement-resource/procurement-regulations NOTE (2): The URL for ProcureAZ itself is: https://procure.az.gov/
1.12	**Gratuity**	"Gratuity" means a payment, loan, subscription, advance, deposit of money, services, or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value is received.
1.13	**Indemnified Basic Claims**	"Indemnified Basic Claims" means any and all claims, actions, liabilities, damages, losses, or expenses, including court costs, attorney fees, and costs of claim processing, investigation and litigation, for bodily injury or personal injury, including death, or loss or damage to any real or tangible or intangible personal property, collectively. See paragraph 6.2.
1.14	**Instructions to Offerors**	"Instructions to Offerors" is Section 3-a of Part 3 of the Solicitation Documents.
1.15	**Materials**	"Materials" has the meaning given in A.R.S. § 41-2503(7). Materials includes software, except that if software is sold or provided as a service, then to the extent it consists of encoded information or computer instructions it is included in "Materials" and to the extent it is a service it described in "Services" below.
1.16	**Offer: Initial Offer; Revised Offer; Best and Final Offer (BAFO)**	"Initial Offer" means, per A.A.C. R2-7-101(33), Offeror's proposal submitted to State in response to the Solicitation, as initially submitted. "Revised Offer" means any revised versions of the Initial Offer that Offeror has submitted to State at State's request as permitted under A.A.C. R2-7-C314 and R2-7-C315. "Best and Final Offer" ("BAFO") means, per A.A.C. R2-7-101(8), the Revised Offer submitted after negotiations have been completed that contain Offeror's most favorable terms for price, service, and products to be delivered. Reference to "an Offer, "the Offer," or "your Offer" means any of the Initial Offer, a Revised Offer, or the Best and Final Offer.
1.17	**Pricing Document**	"Pricing Document" means Section 2-B of Part 2 of the Solicitation Documents, provided that, if there is no such Section in the Contract, then "Pricing Document" is to be construed as referring to whatever item in the Contract contains the contracted pricing and payment provisions.
1.18	**Procurement Officer**	"Procurement Officer" means the person, or his or her designee, who has been duly authorized by the State to enter into and administer the Contract and to make written determinations with respect to the Contract. Procurement Officer is as identified on the Acceptance unless subsequently changed by Contract Amendment.
1.19	**Purchase Order**	"Purchase Order" means the instrument by which State authorizes Contractor to perform some or all of the Work. Whether the Contract will have one Purchase Order or many Purchase Orders depends the scope of the Contract and how State will use it. The Special Terms and Conditions provide that information. Any of the following is to be construed as being a "Purchase Order": 1. "Release" or "Release Purchase Order" in ProcureAZ;

2. "task order", "service order," or "job order" when a Release Purchase Order for Services has already been committed in ProcureAZ; or
3. "purchase order" for buying by Co-Op Buyers, if co-op buying applies.

1.20 Services "Services" has the meaning given in A.R.S. § 41-2503(35), Services include the service aspect s of software described in the definition of "Materials" above.

1.21 Specification "Specification" has the meaning given in A.R.S. § 41-2561. Specifications (if any are included in the Contract), are indexed in the Scope of Work and could be bound separately from the other documents forming the Contract.

1.22 State With respect to the Contract generally, "State" means the State of Arizona and its department, agency, university, commission, or board that has executed the Contract. With respect to administration or rights, remedies, obligations and duties under the Contract for a given Purchase Order, "State" means each of Eligible Agency or Co-Op Buyer who has issued the Purchase Order.

1.23 State Fiscal Year "State Fiscal Year" means the period beginning with July 1 and ending June 30.

1.24 State Indemnitees "State Indemnitees" means, collectively, the State of Arizona, its departments, agencies, universities, commissions, and boards and, and their respective officers, agents, and employees.

1.25 Subcontract "Subcontract" means any Contract, express or implied, between the Contractor and another party or between a subcontractor and another party, delegating, in whole or in part, the making or furnishing of any material or any service required for the performance of the Contract.

1.26 Subcontractor "Subcontractor" has the meaning given in A.R.S. § 41-2503(38).

1.27 Work "Work" means the totality of the provision of Materials and the Services and all the acts of administration, creation, production, and performance necessary to fulfill and incidental to fulfilling all of Contractor's obligations and duties under the Contract in conformance with the Contract and applicable laws.

2.0 Contract Interpretation

2.1 Arizona Law The Contract is governed by, and is to be interpreted in accordance with, the laws of the State of Arizona, including, but not limited to the Arizona Procurement Code, without consideration of conflict of laws principles.

2.2 Implied Terms Each provision of law and any terms required by law to be in this Contract are a part of this Contract as if fully stated in it.

2.3 Contract Order of Precedence COMPLEMENTARY DOCUMENTS. All of the documents forming the Contract are complementary and all provisions are to be interpreted as a single, united Contract. If certain work, requirements, obligations, or duties are set out only in one but not in another, Contractor shall carry out the Work as though the relevant work, requirements, obligations, or duties had been fully described in all, consistent with the other documents forming the Contract and as is reasonably inferable from them as being necessary to produce complete results.

CONFLICTS. In case of any inconsistency, conflict, or ambiguity among the documents forming the Contract and their provisions, the Contract documents and their provisions are to prevail in the following order, descending from most dominate to most subordinate, provided that, among categories of documents or provisions within the same sub-section below, the document or provision with the latest date prevails. Information being identified in one document but not in another is not to be considered a conflict or inconsistency.

(a) Contract Amendments;

(b) the Solicitation Documents, in the order:

(1) Special Terms and Conditions;

(2) Exhibits to the Special Terms and Conditions;

(3) Uniform Terms and Conditions;
(4) Scope of Work;
(5) Exhibits to the Scope of Work;
(6) Pricing Document;
(7) Exhibits to the Pricing Document;
(8) Specifications; and
(9) any other documents referenced or included in the Solicitation;

(c) Orders, in reverse chronological order; and

(d) Accepted Offer.

2.4 Severability

The provisions of this Contract are severable to the extent allowed under Arizona Contract Law. Any term or condition deemed or adjusted illegal or invalid is thereby stricken from the Contract and will not affect any other term or condition of the Contract..

2.5 Complete Integration

The Contract, including any documents incorporated into the Contract by reference and any authorized Contract Amendments and Orders, is intended by the parties as a final and complete expression of their agreement. There are no prior, contemporaneous, or additional agreements, either oral or in writing, pertaining to the Contract. No course of prior dealings between the parties shall supplement or explain any terms used in this document and no other understanding either oral or in writing can independently bind the State to changes to the Contract.

2.6 Independent Contractor

Contractor is an independent contractor and shall act in an independent capacity in performance under the Contract. Neither party is or is to be construed as being to be the employee or agent of the other party, and no action, inaction, event, or circumstance will be grounds for deeming it to be so.

2.7 No Waiver of Rights

Either party's failure to insist on strict performance of any term or condition of the Contract is not, and is not to be construed as being, nor will it be deemed, a waiver of that term or condition or a bar to, or diminishment of the right of, subsequent enforcement of any term or condition.

3.0 Contract Administration and Operation

3.1 Books and Records; Audit

3.1.1 RETAIN RECORDS. By A.R.S. § 41-2548(B), Contractor shall retain and shall contractually require each Subcontractor to retain books and records relating for any cost and pricing data submitted in satisfaction of § 41-2543 for the period specified in the statute.

3.1.2 RIGHT TO AUDIT. The retained books and records are subject to audit by State during that period. By A.R.S. § § 35-214 and-2548(B), Contractor shall retain and shall contractually require each Subcontractor to retain books and records relating to performance under the Contract for the period specified in the statute and those retained books and records are subject to audit by State during that period.

3.1.3 AUDITING. Contractor or Subcontractor shall either make all such books and records under subparagraphs 3.1.1 and 3.1.2 available to State at all reasonable times or produce the records at a designated State office on State's demand, the choice of which being at State's discretion. For the purpose of this paragraph, "reasonable times" are during normal business hours and in such a manner so as to not unreasonably interfere with normal business activities. Any person who obstructs or impairs an audit being conducted or about to be conducted in relation to and Contract or Subcontract with the State may be found guilty of a Class 5 Felony under A.R.S. § 35-215.

3.2 Non-Discrimination

The Contractor shall comply with State Executive Order No. 2009-09 and all other applicable Federal and State laws, rules and regulations, including the Americans with Disabilities Act.

3.3 Contractor Licenses

Contractor shall maintain current all federal, state and local licenses and permits required for the operation of its business in general, for its operations under the Contract, and for the Work itself.

3.4 Inspection and Testing

By A.R.S. § 41-2547, State may at reasonable times inspect the part of Contractor's or Subcontractors' plant or places of business related to performance under the Contract. Accordingly, Contractor agrees to permit (for itself) and ensure (for Subcontractors) access for inspection at any reasonable time to its facilities, processes, and services. State may inspect or test, at its own cost, any finished goods, work-in-progress, components, or unfinished materials that are be supplied under the Contract or that will be incorporated into something to be supplied under the Contract. If the inspection or testing shows non-conformance or defects, then Contractor will owe State reimbursement or payment of all costs it incurred in carrying out or contracting for the inspection and testing, as well as for any re-inspection or re-testing that might be necessary. Neither inspection of facilities nor testing of goods, work, components, or unfinished materials will of itself constitute acceptance by State of those things.

3.5 Notices and Correspondence

3.5.1 TO CONTRACTOR. State shall:

(a) address all Contract correspondence other than formal notices to the email address indicated as "Default for Type" for "General Mailing Address" in Contractor's corresponding ProcureAZ Vendor Profile; and

(b) address notices to Contractor to the "Contractor Name and Title" at the "Mailing Address" indicated in the Contract

3.5.2 TO STATE. Contractor shall :

(a) address all Contract correspondence, other than notices, to the email address indicated in "Contact Instructions" in the ProcureAZ Summary for State; and

(b) address any required notices to State to Procurement Officer identified as "Purchaser" in the ProcureAZ Summary at the following mailing address:

Arizona Department of Administration
State Procurement Office
100 N 15th Ave., Suite 402
Phoenix, AZ 85007

3.5.3 CHANGES. State may change the designated Procurement Officer, update contact information, or change the applicable mailing address by Contract Amendment.

3.6 Signing of Contract Amendments

Contractor's counter-signature – or "approval" in ProcureAZ, in the case of a Change Order – is not required to give effect if the Contract Amendment only covers either:

4. extension of the term of the Contract within the maximum aggregate term;
5. revision to Procurement Officer appointment or contact information; or
6. modifications of a clerical nature that have no effect on terms, conditions, price, scope, or other material aspect of the Contract.

In every case other than those listed in *(1)*, *(2)*, and *(3)* above, both parties' signature – or "approval" in ProcureAZ, in the case of a Change Order – are required to give it effect.

3.7 Click-Through Terms and Conditions

If either party uses a web based ordering system, an electronic purchase order system, an electronic purchase order acknowledgement, a form of an electronic acceptance, or any software based ordering system with respect to the Contract (each an "Electronic Ordering System"), the parties acknowledge and agree that an Electronic Ordering System is for ease of administration only, and Contractor hereby acknowledges and agrees that the persons using Electronic Ordering Systems on behalf of State do not have any actual or apparent authority to create legally binding obligations that vary from the terms and conditions of the Contract. Accordingly, where an authorized State user is required to "click through" or otherwise accept or be made subject to any terms and conditions in using an Electronic Ordering Systems, any such terms and conditions are deemed void upon presentation. Additionally, where an authorized

State user is required to accept or be made subject to any terms and conditions in accessing or employing any Materials or Services, those terms and conditions will also be void.

3.8 Ownership of Intellectual Property

3.8.1 RIGHTS IN WORK PRODUCT. All intellectual property originated or prepared by Contractor pursuant to the Contract, including but not limited to, inventions, discoveries, intellectual copyrights, trademarks, trade names, trade secrets, technical communications, records reports, computer programs and other documentation or improvements thereto, including Contractor's administrative communications and records relating to the Contract, are considered work product and Contractor's property, provided that, State has Government Purpose Rights to that work product as and when it was delivered to State.

(a) "Government Purpose Rights" are:

i. the unlimited, perpetual, irrevocable, royalty free, non-exclusive, worldwide right to use, modify, reproduce, release, perform, display, sublicense, disclose and create derivatives from that work product without restriction for any activity in which State is a party;

ii. the right to release or disclose that work product to third parties for any State government purpose; and

iii. the right to authorize those to whom it rightfully releases or discloses that work product to use, modify, release, create derivative works from the work product for any State government purpose; such recipients being understood to include the federal government, the governments of other states, and various local governments.

(b) "Government Purpose Rights" do not include any right to use, modify, reproduce, perform, release, display, create derivative works from, or disclose that work product for any commercial purpose or to authorize others to do so.

3.8.2 JOINT DEVELOPMENTS. The parties may each use equally any ideas, concepts, know-how, or techniques developed jointly during the course of the Contract, and may do so at their respective discretion, without obligation of notice or accounting to the other party.

3.8.3 PRE-EXISTING MATERIAL. All pre-existing software and other materials developed or otherwise obtained by or for Contractor or its affiliates independently of the Contract or applicable Purchase Orders are not part of the work product to which rights are granted State under subparagraph 3.8.1 above, and will remain the exclusive property of Contractor, provided that any derivative works of such pre-existing material or elements thereof that are created pursuant to the Contract are part of that work product.

3.9 Subcontracts

3.9.1 INITIAL LIST. At the time of Contract execution, Contractor may have listed prospective Subcontractors in Attachment 3-C to the Vendor Offer [*Proposed Subcontractors*]. If a Subcontractor is on this initial list in a Vendor Offer, then the Contractor has the Procurement Officer's advance consent to enter into a Subcontract with each listed candidate.

3.9.2 ADDITIONAL NAMES. Contractor shall not enter into a Subcontract without first obtaining Procurement Officer's written consent with any prospective Subcontractor that (a) was not listed on Attachment 3-C at time of Contract execution or (b) is for any Materials or Services categories other than the ones for which they were previously consented. For either case *(a)* or *(b)*, Contractor shall submit a written request sufficiently in advance of the need date for those materials or services so that performance under the Contract is not impaired. Procurement Officer may request any additional information he or she determines is necessary to assess the submittal, and may withhold consent pending it.

3.9.3 FLOW-DOWN. Contractor shall incorporate the provisions, terms, and conditions of the Contract into every Subcontract by inclusion or by reference, as appropriate. When making any post-execution consent requests, Contractor shall include its warrant that it will do the same for the pending Subcontracts covered by the request. Entering into Subcontracts will not relieve Contractor of any of its obligations or duties under the Contract, including, among other things, the duty to supervise and coordinate the work of Subcontractors. Nothing contained in any Subcontract will create or is to be construed as creating any contractual relationship between State and the Subcontractor.

3.10 E-Verify Requirements

In accordance with A.R.S. § 41-4401, Contractor warrants compliance with all Federal immigration laws and regulations relating to employees and warrants its compliance with Section A.R.S. § 23-214, Subsection A. Contractor acknowledges and agrees that under A.R.S. § 41-4401, State retains the legal right to inspect papers of any Contractor employee who works under the Contract to ensure compliance with the foregoing warranty and understands that a breach of the foregoing warranty under shall be deemed a material breach of the Contract that is subject to penalties up to and including termination of the Contract.

3.11 Offshore Performance of Certain Work Prohibited

Contractor shall only perform those portions of the Services that directly serve State or its clients and involve access to secure or sensitive data or personal client data within the defined territories of the United States. Unless specifically stated otherwise in the Scope of Work, this paragraph does not apply to indirect or overhead services, redundant back-up services, or services that are incidental to performance under the Contract. This provision applies to work performed by Subcontractors at all tiers.

3.12 Purchase Orders

3.12.1 PURCHASE ORDER SUFFICIENCY. A Purchase Order issued by an authorized person that cites the correct State contract number will suffice to authorize Contractor to provide the Materials and perform the Services covered by that Purchase Order.

3.12.2 PURCHASE ORDER TERMS. All Purchase Orders are subject to the Contract Terms and Conditions; a Purchase Order cannot modify the Contract Terms and Conditions.

3.12.3 PURCHASE ORDERS ARE OBLIGATORY. Until the expiration or earlier termination of the Contract, State may issue and Contractor shall accept Purchase Orders that make proper reference to the Contract and are permissible hereunder, provided that, Contractor is not obliged to accept any Purchase Order that is not consistent with the then-current pricing, lead times, specifications, or payment provisions of the Contract. Contractor shall fulfill and complete any Purchase Orders that are begun but not yet completed as of expiration or earlier termination of the Contract unless State instructs otherwise at the time.

3.12.4 SPECIAL CASE. In the special case where both the following conditions are true, Procurement Officer's signature on the Acceptance is Contractor's authorization to perform and therefore no Purchase Order is required: (a) the Contract is identified as being a "single-agency/single-project" contract and (b) the Contract was created in ProcureAZ as something other than a "Master/ Blanket" type.

3.12.5 NO MINIMUMS OR COMMITMENTS. (a) Contractor shall not impose any minimum dollar amount, item count, services volume, or services duration on Purchase Orders; (b) State makes no commitment of any kind concerning the quantity or monetary value of activity actually initiated or completed during the term of the Contract; (c) Contractor shall only deliver or perform as authorized by Purchase Orders; and (d) State is not limited as to the number of Purchase Orders it may issue for the Contract. For clarity of intent, the foregoing applies equally whether an Eligible Agency issues the Purchase Order or, if applicable, a Co-Op Buyer issues it.

3.12.6 NON-CONTRACTED MATERIALS OR SERVICES. Any attempt to knowingly represent for sales, marketing, or related purposes that goods or services not specifically awarded are under a State contract is a violation of the Contract and law.

3.13 Other Contractors

State may undertake with its own forces or award other contracts to the same or other vendors for additional or related work. In such cases, Contractor shall cooperate fully with State's

employees and such other vendors and carefully coordinate, fit, connect, accommodate, adjust, or sequence its work to the related work by others. Where the Contract requires handing-off Contractor's work to others, Contractor shall cooperate as State instructs regarding the necessary transfer of its work product, services, or records to State or the other vendors. Contractor shall not commit or permit any act that interferes with the State's or other vendors' performance of their work.

3.14 Work on State Premises

3.14.1 COMPLIANCE WITH RULES. Contractor is responsible for ensuring that its personnel comply with State's rules, regulations, policies, documented practices, and documented operating procedures while delivering or installing Materials or performing Services on State's grounds or in its facilities. Contractor shall comply with State security requirements in order to deliver, install, or perform at that particular location, without entitlement to any additional compensation or additional time for performance if those particular requirements are not expressly stated in the Contract.

3.14.2 PROTECTION OF GROUNDS AND FACILITIES. Contractor shall deliver or install the Materials and perform the Services without damaging any State grounds or facilities. Contractor shall promptly repair or replace any damage it caused and at its own expense, subject to whatever instructions and restrictions State needs to make to prevent inconvenience or disruption of operations. If Contractor fails to make the necessary repairs or replacements in a timely manner, State will be entitled to exercise its remedies under paragraph 8.5 [*Right of Offset*].

3.15 Advertising, Publishing and Promotion of Contract

Contractor shall not advertise, promote, or otherwise use information concerning the Contractor commercial benefit without the prior written approval of Procurement Officer, which approval Procurement Officer may withhold at his or her discretion.

4.0 Costs and Payments

4.1 Payments

4.1.1 PAYMENT DEADLINE. State shall make payments in compliance with Arizona Revised Statues Titles 35 and 41. Unless stated otherwise in the Pricing Document, State shall make payment in full for Materials that have been delivered and accepted and Services that have been performed and accepted within the time specified in A.R.S. § 35-342 after both of the following become true: (a) all of the Materials being invoiced have been delivered or installed (as applicable) and accepted and all of the Services being invoiced have been performed and accepted; and (b) Contractor has provided a complete and accurate invoice in the form and manner called for in the Pricing Document, provided that, State will not make or be liable for any payments to Contractor until Contractor has registered properly in ProcureAZ and provided a current IRS Form W-9 or an equivalent form to the State unless excused by law from providing one.

4.1.2 PAYMENTS ONLY TO CONTRACTOR. Unless compelled otherwise by operation of law or order of a court of competent jurisdiction, State will only make payment to Contractor under the federal tax identifier indicated on the Vendor Offer.

4.2 Applicable Taxes

4.2.1 CONTRACTOR TO PAY ALL TAXES. State is subject to Arizona TPT. Therefore, Arizona TPT applies to all sales under the Contract and Arizona TPT is Contractor's responsibility (as seller) to remit. Contractor's failure to collect Arizona TPT or any other applicable sales or use taxes from an Eligible Agency or Co-Op Buyer (as buyer) will not relieve Contractor of any obligation to remit sales or use taxes that are due under the Contract or laws. Unless stated otherwise in the Pricing Document, all prices therein include Arizona TPT as well as every other manner of transaction privilege or sales/use tax that is due to a municipality or another state or its political subdivisions. Contractor shall pay all federal, state, and local taxes applicable to its operations and personnel.

4.2.2 TAX INDEMNITY. Contractor shall hold State harmless from any responsibility for taxes or contributions, including any applicable damages and interest, that are due to federal, state, and local authorities with respect to the Work and the Contract, as well any

related costs; the foregoing expressly includes Arizona TPT, unemployment compensation insurance, social security, and workers' compensation insurance.

4.3 Availability of Funds for the Next State fiscal year

Funds may not presently be available for performance under this Contract beyond the current state fiscal year. No legal liability on the part of the State for any payment may arise under this Contract beyond the current state fiscal year until funds are made available for performance of this Contract.

4.4 Availability of Funds for the current State fiscal year

Should the State Legislature enter back into session and reduce the appropriations or for any reason and these goods or services are not funded, the State may take any of the following actions:

4.4.1. Accept a decrease in price offered by the contractor;

4.4.2. Cancel the Contract; or

4.4.3. Cancel the contract and re-solicit the requirements

5.0 Contract Changes

5.1 Amendments

This Contract is issued under the authority of the Procurement Officer who signed this Contract. The Contract may be modified only through a Contract Amendment within the scope of the Contract. Changes to the Contract, including the addition of work or materials, the revision of payment terms, or the substitution of work or materials, directed by a person who is not specifically authorized by the procurement officer in writing or made unilaterally by the Contractor are violations of the Contract and of applicable law. Such changes, including unauthorized written Contract Amendments shall be void and without effect, and the Contractor shall not be entitled to any claim under this Contract based on those changes.

5.2 Assignment and Delegation

5.2.1 IN WHOLE. Contractor shall not assign or delegate its duties under the Contract, in whole or in part, without Procurement Officer's prior written consent; Procurement Officer may withhold at his or her discretion. If Contractor's proposed assignment or delegation stems from a split, sale, acquisition, or other non-merger change in control, then no such consent will be given in any event without the assignee or delegate giving State satisfactory and equivalent evidence or assurance of its financial soundness, competency, capacity, and qualification to perform as that which Contractor possessed when State first awarded it the Contract.

5.2.2 IN PART. Subject to paragraph 3.9 (*Subcontracts*) with respect to subcontracting, Contractor may assign particular rights or delegate particular duties under the Contract, but shall obtain Procurement Officer's written consent before doing so. Procurement Officer shall not unreasonably withhold consent so long as the proposed assignment or delegation does not attempt to modify the Contract in any way or to alter or impair State's rights or remedies under the Contract or laws.

6.0 Risk and Liability

6.1 Risk of Loss

Contractor shall bear all risk of loss to Materials if, and as, those duties are within the scope of the Work, until they have been accepted as conforming by State in the manner specified in the Purchase Order, or as specified generally elsewhere in the Contract if the Purchase Order does not provide particulars. Risk of loss for nonconforming Materials will remain with Contractor notwithstanding acceptance to the extent the loss stems from the nonconformance.

6.2 Basic Indemnification

6.2.1 CONTRACTOR/VENDOR (NOT PUBLIC AGENCY). To the fullest extent permitted by law, Contractor shall defend, indemnify, and hold harmless State Indemnitees from Indemnified Basic Claims that: (a) are caused or alleged to be caused in whole or in part by the negligent or willful acts or omissions of a Contractor Indemnitor; (b) arise out of or are recovered under worker compensation laws; and/or (c) arise out of a Contractor Indemnitor's failure to conform to any federal, state, or local law, statute, ordinance, rule, regulation, or court decree. The parties specifically intend that the Contractor Indemnitors shall indemnify the relevant State Indemnitees from and against Indemnified Basic Claims in all instances except where the Indemnified Basic Claim

arises solely from those State Indemnitees' own negligent or willful acts or omissions. Wherever the indemnification under this subparagraph applies, Contractor is responsible for primary loss investigation, defense, and judgment costs for an on behalf of the other Contractor Indemnitors with respect to State Indemnitees, and accordingly Contractor is also responsible for any cooperation, contribution, or subordination between or amongst the Contractor Indemnitors. In consideration of the award of the Contract by a State Indemnitee, Contractor hereby waives all rights of subrogation against State Indemnities for losses arising from the Work.

If Contractor is a public agency, this paragraph does not apply and subparagraph 6.2.1 below applies instead.

6.2.2 PUBLIC AGENCY. Each party (as 'indemnitor') agrees to indemnify, defend, and hold harmless the other party (as 'indemnitee') from and against any and all claims, losses, liability, costs, or expenses (including reasonable attorney's fees) (hereinafter collectively referred to as 'claims') arising out of bodily injury of any person (including death) or property damage but only to the extent that such claims which result in vicarious/derivative liability to the indemnitee, are caused by the act, omission, negligence, misconduct, or other fault of the indemnitor, its officers, officials, agents, employees, or volunteers.

6.2.3 If Contractor is not a public agency, this paragraph does not apply and subparagraph above applies instead.

6.3 Patent and Copyright Indemnification

CONTRACTOR/VENDOR (NOT PUBLIC AGENCY). With respect to Materials or Services provided or proposed by a Contractor Indemnitor for performance under the Contract, Contractor shall indemnify, defend and hold harmless State Indemnitees against any third-party claims for liability, costs, and expenses, including, but not limited to reasonable attorney fees, for infringement or violation of any patent, trademark, copyright, or trade secret by the Materials and the Services. With respect to the defense and payment of claims under this subparagraph:

1. State shall provide reasonable and timely notification to Contractor of any claim for which Contractor may be liable under this paragraph;
2. Contractor, with reasonable consultation from State, shall have control of the defense of any action on an indemnified claim including all negotiations for its settlement or compromise;
3. State may elect to participate in such action at its own expense; and
4. State may approve or disapprove any settlement or compromise, provided that, (i) State shall not unreasonably withhold or delay such approval or disapproval and (ii) State shall cooperate in the defense and in any related settlement negotiations.

If Contractor is a public agency, this paragraph 6.3 does not apply.

6.4 Force Majeure

6.4.1 DEFINITION. For this paragraph, "force majeure" means an occurrence that is (a) beyond the control of the affected party, (b) occurred without the party's fault or negligence, and (c) something the party was unable to prevent by exercising reasonable diligence. Without limiting the generality of the foregoing, force majeure expressly includes acts of God, acts of the public enemy, war, riots, strikes, mobilization, labor disputes, civil disorders, fire, flood, lockouts, injunctions-intervention-acts, failures or refusals to act by government authorities, and, subject to paragraph 7.10 (*Performance in Public Health Emergency)*, declared public health emergencies. Force majeure expressly does not include late delivery caused by congestion at a manufacturer's plant or elsewhere, an oversold condition of the market, late performance by a Subcontractor unless the delay arises out of an occurrence of force majeure, or inability of either Contractor or any Subcontractor to acquire or maintain any required insurance, bonds, licenses, or permits.

6.4.2 RELIEF FROM PERFORMANCE. Except for payment of sums due, the parties are not liable to each other if an occurrence of force majeure prevents its performance under the Contract. If either party is delayed at any time in the progress of their respective performance under the Contract by an occurrence of force majeure, the delayed party

shall notify the other no later than the following working day after the occurrence, or as soon as it could reasonably have been expected to recognize that the occurrence had effect in cases where the effects were not readily apparent. In any event, the notice must make specific reference to this paragraph specifying the causes of the delay in the notice and, if the effects of the occurrence are on-going, provide an initial notification and thereafter the delayed party shall provide regular updates until such time as the effects are fully known. To the extent it is able, the delayed party shall cause the delay to cease promptly and notify the other party when it has done so. The parties shall extend the time of completion by Contract Amendment for a period equal to the time that the results or effects of the delay prevented the delayed party from performing.

6.4.3 EXCUSABLE DELAY IS NOT DEFAULT. Failure in performance by either party will not constitute default hereunder or give rise to any claim for damages or loss of anticipated profits if and to the extent that such failure was or is being caused by an occurrence of force majeure.

6.4.4 DEFAULT DIMINISHES RELIEF. Entitlement to relief from the effects of an occurrence of force majeure is diminished to the extent that the delay did or will result from the affected party's default unrelated to the occurrence, in which case and to that extent the other party's normal remedies and the affected party's obligations would apply undiminished.

6.5 Third Party Antitrust Violations

Contractor assigns to State any claim for overcharges resulting from antitrust violations to the extent that those violations concern materials or services supplied by third parties to Contractor toward fulfillment of the Contract.

7.0 Warranties

7.1 Liens

The Contractor warrants that the materials supplied under this Contract are free of liens and shall remain free of liens.

7.2 Conformity to Requirements

Contractor warrants that, unless expressly provided otherwise elsewhere in the Contract, the Materials and Services will for 1 (one) year after acceptance and in each instance: (1) conform to the requirements of the Contract, which by way of reminder include without limitation all descriptions, specifications, and drawings identified in the Scope of Work and any Contractor affirmations included as part of the Contract; (2) be free from defects of material and workmanship; (3) conform to or perform in a manner consistent with current industry standards; and (4) be fit for the intended purpose or use described in the Contract. Mere delivery or performance does not substitute for express acceptance by State. Where inspection, testing, or other acceptance assessment of Materials or Services cannot be done until after installation, the forgoing warranty will not begin until State's acceptance.

7.3 Quality

Unless otherwise modified elsewhere in these terms and conditions, the Contractor warrants that, for 1 (one) year after acceptance by the State of the materials, they shall be:

7.3.1. Of a quality to pass without objection in the trade under the Contract description;

7.3.2. Fit for the intended purposes for which the materials are used;

7.3.3. Within the variations permitted by the Contract and are of even kind, quantity, and quality within each unit and among all units;

7.3.4. Adequately contained, packaged and marked as the Contract may require; and

7.3.5. Conform to the written promises or affirmations of fact made by the Contractor.

7.4 Inspection/Testing

The warranties set forth in subparagraphs 7.1 through 7.3 of this paragraph are not affected by inspection or testing of or payment for the materials by the State.

7.5 Compliance with Laws

The materials and services supplied under this Contract shall comply with all applicable Federal, state and local laws, and the Contractor shall maintain all applicable license and permit requirements.

7.6 Survival of Rights and Obligations after Contract Expiration or Termination

7.6.1. Contractor's Representations and Warranties. All representations and warranties made by the Contractor under this Contract shall survive the expiration or termination hereof. In addition, the parties hereto acknowledge that pursuant to A.R.S. § 12-510, except as provided in A.R.S. § 12-529, the State is not subject to or barred by any limitations of actions prescribed in A.R.S., Title 12, Chapter 5.

7.6.2. Purchase Orders. The Contractor shall, in accordance with all terms and conditions of the Contract, fully perform and shall be obligated to comply with all purchase orders received by the Contractor prior to the expiration or termination hereof, unless otherwise directed in writing by the Procurement Officer, including, without limitation, all purchase orders received prior to but not fully performed and satisfied at the expiration or termination of this Contract.

7.7 Contractor Personnel

Contractor warrants that its personnel will perform their duties under the Contract in a professional manner, applying the requisite skills and knowledge, consistent with industry standards, and in accordance with the requirements of the Contract. Contractor further warrants that its key personnel will maintain any certifications relevant to their work, and Contractor shall provide individual evidence of certification to State's authorized representatives upon request.

7.8 Intellectual Property

Contractor warrants that the Materials and Services do not and will not infringe or violate any patent, trademark, copyright, trade secret, or other intellectual property rights or laws, except only to the extent the Specifications do not permit use of any other product and Contractor is not and cannot reasonably be expected to be aware of the infringement or violation.

7.9 Operational Continuity

Contractor warrants that it will perform without relief notwithstanding being sold or acquired; no such event will operate to mitigate or alter any of Contractor's duties hereunder absent a consented delegation under paragraph 5.2 (*Assignment and Delegation*) that expressly recognizes the event.

7.10 Performance in Public Health Emergency

Contractor warrants that it will:

1. have in effect promptly after commencement a plan for continuing performance in the event of a declared public health emergency that addresses, at a minimum: (a) identification of response personnel by name; (b) key succession and performance responses in the event of sudden and significant decrease in workforce; and (c) alternative avenues to keep sufficient product on hand or in the supply chain; and
2. provide a copy of its current plan to State within 3 (three) business days after State's written request. If Contractor claims relief under paragraph 6.4 (*Force Majeure*) for an occurrence of force majeure that is a declared public health emergency, then that relief will be conditioned on Contractor having first implemented its plan and exhausted all reasonable opportunity for that plan implementation to overcome the effects of that occurrence, or mitigate those effects to the extent that overcoming entirely is not practicable.

For clarification of intent, being obliged to implement the plan is not of itself an occurrence of force majeure, and Contractor will not be entitled to any additional compensation or extension of time by virtue of having to implement it. Furthermore, failure to have or implement an appropriate plan will be a material breach of contract.

7.11 Lobbying

7.11.1 PROHIBITION.

(a) Contractor warrants that:

i. it will not engage in lobbying activities, as defined in 40 CFR part 34 and A.R.S. § 41-1231, et seq., using monies awarded under the Contract, provided that, the foregoing does not intend to constrain Contractor's use of its own monies or property, including without limitation any net proceeds duly realized under the Contract or any value thereafter derived from those proceeds; and

ii. upon award of the Contract, it will disclose all lobbying activities to State to the extent they are an actual or potential conflict of interest or where such activities could create an appearance of impropriety.

(b) Contractor shall implement and maintain adequate controls to assure compliance with *(a)* above.

(c) Contractor shall obtain an equivalent warranty from all Subcontractors and shall include an equivalent no-lobbying provision in all Subcontracts.

7.11.2 EXCEPTION. This paragraph does not apply to the extent that the Services are defined in the Contract as being lobbying for State's benefit or on State's behalf.

8.0 State's Contractual Remedies

8.1 Right to Assurance

If the State in good faith has reason to believe that the Contractor does not intend to, or is unable to perform or continue performing under this Contract, the Procurement Officer may demand in writing that the Contractor give a written assurance of intent to perform. Failure by the Contractor to provide written assurance within the number of Days specified in the demand may, at the State's option, be the basis for terminating the Contract under the Uniform Terms and Conditions or other rights and remedies available by law or provided by the contract.

8.2 Stop Work Order

8.2.1. The State may, at any time, by written order to the Contractor (the "Stop Work Order"), require the Contractor to stop all or any part, of the work called for by this Contract for period(s) of days indicated by the State in the Stop Work Order. The order shall be specifically identified as a Stop Work Order issued under this clause. Upon receipt of the Stop Work Order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the Stop Work Order during the period of work stoppage.

8.2.2. If a Stop Work Order issued under this clause is canceled or the period of the order or any extension expires, the Contractor shall resume work. If the Procurement Officer determines that an equitable adjustment is necessary, he or she shall make an equitable adjustment in the delivery schedule or Contract price, or both, and the Contract shall be amended in writing accordingly.

8.3 Non-exclusive Remedies

The rights and the remedies of the State under this Contract are not exclusive.

8.4 Nonconforming Tender

Materials or services supplied under this Contract shall fully comply with the Contract. The delivery of materials or services or a portion of the materials or services that do not fully comply constitutes a breach of contract. On delivery of nonconforming materials or services, the State may terminate the Contract for default under applicable termination clauses in the Contract, exercise any of its rights and remedies under the Uniform Commercial Code, or pursue any other right or remedy available to it.

8.5 Right of Offset

The State shall be entitled to offset against any sums due the Contractor, any expenses or costs incurred by the State, or damages assessed by the State concerning the Contractor's non-conforming performance or failure to perform the Contract, including expenses, costs and damages described in the Uniform Terms and Conditions.

9.0 Contract Termination

9.1 Cancellation for Conflict of Interests

Pursuant to A.R.S. § 38-511, the State may cancel this Contract within three (3) years after Contract execution without penalty or further obligation if any person significantly involved in initiating, negotiating, securing, drafting or creating the Contract on behalf of the State is or becomes at any time while the Contract or an extension of the Contract is in effect an employee of or a consultant to any other party to this Contract with respect to the subject matter of the Contract. The cancellation shall be effective when the Contractor receives written notice of the cancellation unless the notice specifies a later time. If the Contractor is a political subdivision of the State, it may also cancel this Contract as provided in A.R.S. § 38-511.

9.2	**Gratuities**	The State may, by written notice, terminate this Contract, in whole or in part, if the State determines that employment or a Gratuity was offered or made by the Contractor or a representative of the Contractor to any officer or employee of the State for the purpose of influencing the outcome of the procurement or securing the Contract, an amendment to the Contract, or favorable treatment concerning the Contract, including the making of any determination or decision about contract performance. The State, in addition to any other rights or remedies, shall be entitled to recover exemplary damages in the amount of three times the value of the Gratuity offered by the Contractor.
9.3	**Suspension or Debarment**	The State may, by written notice to the Contractor, immediately terminate this Contract if the State determines that the Contractor has been debarred, suspended or otherwise lawfully prohibited from participating in any public procurement activity, including but not limited to, being disapproved as a subcontractor of any public procurement unit or other governmental body. Submittal of an offer or execution of a contract shall attest that the contractor is not currently suspended or debarred. If the contractor becomes suspended or debarred, the contractor shall immediately notify the State.
9.4	**Termination for Convenience**	The State reserves the right to terminate the Contract, in whole or in part at any time when in the best interest of the State, without penalty or recourse. Upon receipt of the written notice, the Contractor shall stop all work, as directed in the notice, notify all subcontractors of the effective date of the termination and minimize all further costs to the State. In the event of termination under this paragraph, all documents, data and reports prepared by the Contractor under the Contract shall become the property of and be delivered to the State upon demand. The Contractor shall be entitled to receive just and equitable compensation for work in progress, work completed and materials accepted before the effective date of the termination.
9.5	**Termination for Default**	9.5.1. In addition to the rights reserved in the contract, the State may terminate the Contract in whole or in part due to the failure of the Contractor to comply with any term or condition of the Contract, to acquire and maintain all required insurance policies, bonds, licenses and permits, or to make satisfactory progress in performing the Contract. The Procurement Officer shall provide written notice of the termination and the reasons for it to the Contractor. 9.5.2. Upon termination under this paragraph, all goods, materials, documents, data and reports prepared by the Contractor under the Contract shall become the property of and be delivered to the State on demand. 9.5.3. The State may, upon termination of this Contract, procure, on terms and in the manner that it deems appropriate, materials or services to replace those under this Contract. The Contractor shall be liable to the State for any excess costs incurred by the State in procuring materials or services in substitution for those due from the Contractor.
9.6	**Continuation of Performance Through Termination**	The Contractor shall continue to perform, in accordance with the requirements of the Contract, up to the date of termination, as directed in the termination notice.

10.0 Contract Claims

10.1	**Claim Resolution**	Notwithstanding any law to the contrary, all contract claims or controversies under the Contract are to be resolved according to the Arizona Procurement Code, including judicial review under A.R.S. § 12-1518.
10.2	**Arbitration**	The parties to this Contract agree to resolve all disputes arising out of or relating to this Contract through arbitration, after exhausting applicable administrative review, to the extent required by A.R.S. § 12-1518, except as may be required by other applicable statutes (Title 41).

End of Section 2-D
End of Part 2

Attachment 3-C
Proposed Subcontractors

Check "NO" if you **WILL NOT** subcontract any portion of the Work and will therefore be carrying out all of the Work with your own personnel.

○	NO, the Offeror will not subcontract any portion of the Work.

If you WILL subcontract any portion of the Work, check "YES" below and list name of persons or companies you propose to use as subcontractors.

1. Fill in the information for every significant subcontractor – indicate the type of work the subcontractor will perform under the Contract, and their approximate percentage of the total Contract work.
2. Provide copies of relevant certifications each one possesses in the Attachment Supplements section.
3. Provide description of quality assurance methods and quality control measures that you will use to ensure that Subcontractor work meets the Contract requirements.
4. State may demand additional information about proposed subcontractors as a precondition of award.

●	YES, the Offeror will use the Subcontractors listed below:

	Name and contact information	Small Business	Work to be performed	%
1.	Gila Electronics 2481 E Palo Verde St Yuma, AZ 85365 (928) 726-0896	YES	Front-line sales, support, engineering, and field service as a regional Manufacturer's Representative ("MR") of Motorola serving primarily Yuma, La Paz, and Mohave counties.	5
2.	ADW Communications 14350 N 87th St #145 Scottsdale, AZ 85260 (480) 291-6820	YES	Provides turnkey project management, engineering, and construction services for wireless infrastructure.	5
3.	Mangum Civil Constructors, Inc., 1075 E Salter Dr Phoenix, AZ 85024 (602) 466-3926	YES	Full range of construction and technical services in the general and wireless construction industry and are an "In-House" builder with it's own civil, tower, DC and fiber crews	5
4.	High Desert Communications, Inc., 372 W Cullumber Ave Gilbert, AZ 8523 (480) 632-0020	NO	Full service communication site/tower design, engineering, installation, and ongoing support.	5
5.	NB Construction, Inc., 16602 N 23rd Ave Ste 111 Phoenix, AZ 85023 (480) 947-3599	NO	Provider of wireless communications site development services for government, enterprise and commercial carriers.	5

6.	Arizona West Builders, Inc., 7515 S Atwood Mesa, AZ 85212 (480) 988-3630	NO	Licensed general contractor that specializes in "turn-key" construction and maintenance solutions for the cellular industry including tower erection, foundations, excavations, electrical, RF and microwave installation/services, site surveys, power and Telco coordination services.	5
7.	Pyramid Network Services, LLC. 6615 Towpath Road East Syracuse, NY 13057 (315) 701-1300	NO	Pyramid is Motorola Solutions largest preferred vendor for site development services across the United States and Canada, and has completed over 340 distinct public safety projects. Pyramid Network Services—is a leading nationwide turnkey communications systems contractor delivering cost effective solutions to design, develop and deploy wireless communications networks for both commercial carriers AND Federal, State, & Local public safety agencies.	5

End of Attachment 3-C

Attachment 5-B

Conformance Statements

STATE WILL NOT CONSIDER ANY EXCEPTIONS UNLESS DESIGNATED ON THIS FORM.

READ PARAGRAPH **ERROR! REFERENCE SOURCE NOT FOUND.** OF THE INSTRUCTIONS TO OFFERORS BEFORE TAKING ANY EXCEPTIONS – TAKING EXCEPTIONS CAN BE GROUNDS FOR STATE REJECTING OR DOWN-GRADING YOUR OFFER IN EVALUATION.

CONFORMANCE TO THE INSTRUCTIONS:
(PART 3 OF THE SOLICITATION)

Check one of the following – if neither is checked, State will assume that as equivalent to "YES":

○ YES – Offeror acknowledges that it has read and understands the Instructions to Offerors in Section 3-A of the Solicitation Documents and attests that its Offer complies with both.

● NO – Offeror acknowledges that it has read and understands the Instructions to Offerors in Section 3-A of the Solicitation Documents, and attests that its Offer complies with both EXCEPT FOR the exceptions listed in **Attachment 5-B Supplement 1**.

CONFORMANCE TO THE TECHNICAL DOCUMENTS:
(PART 2 OF THE SOLICITATION)

Check one of the following – if neither is checked, State will assume that as equivalent to "YES":

○ YES – Offeror acknowledges that it has read and understands the Scope Document and the Pricing Document in Part 2 of the Solicitation Documents and attests that its Offer complies with both.

● NO – Offeror acknowledges that it has read and understands the Scope Document and the Pricing Document in Part 2 of the Solicitation Documents and attests that its Offer complies with both EXCEPT FOR the exceptions listed in **Attachment 5-B Supplement 2**.

CONFORMANCE TO THE CONTRACT TERMS AND CONDITIONS:
(PART 2 OF THE SOLICITATION)

Check one of the following – if neither is checked, State will assume that as equivalent to "YES":

○ YES – Offeror acknowledges that it has read and understands the Special Terms and Conditions and the Uniform Terms and Conditions, along with their respective Exhibits and Appendices, in Part 2 of the Solicitation Documents and attests that its Offer complies with both.

● NO – Offeror acknowledges that it has read and understand the Special Terms and Conditions and the Uniform Terms and Conditions, along with their respective Exhibits and Appendices in Part 2 of the Solicitation Documents and attests that its Offer complies with both EXCEPT FOR the exceptions listed in **Attachment 5-B Supplement 3**.

ATTACHMENT 5-B Supplement No. 1:

Exceptions to Instructions

Article / Paragraph or Exhibit Reference	Proposed Changes / Alternate Language	Rationale for Proposed Change
Section 1-A: Solicitation Details		
x	x	x
x	x	x
x	x	x
Section 1-B: Instructions to Offerors		
6.3 Cost or Pricing Data	Pursuant to A.R.S § 41-2543 per A.A.C. R2-7-702(B)(2), Motorola certifies to the best of its knowledge and belief the pricing provided within its response is accurate, complete and current. Motorola will cooperate with reasonable requests for pricing validity information but will not be required to provide its internal cost and pricing data which it considers confidential and proprietary information.	9.16.19 See attached Change Log to Attachment 5-B Exceptions, ("5-B Change Log").

Motorola Solutions, Inc.

Company Name

Signature of Person Authorized to Sign

NOTE: Offeror must sign and return all Attachment 5-B Supplements Nos. 1 – 3 (even if not submitting exceptions)

ATTACHMENT 5-B Supplement No. 2:

Exceptions to Technical and Commercial

Article / Paragraph or Exhibit Reference	Proposed Changes / Alternate Language	Rationale for Proposed Change
Section 2-A: Scope of Work (Technical Document)		
2.49.4 E&M / DC Control	Comply with clarification, No DC Control, Exception on DC Contact Keying	9.16.19 See attached 5-B Change Log for all Section 2-A.
2.52.1 Physical Construction	Comply w/ one exception 36.8 lbs x	
2.52.5	Exception 10Mhz to 1050Mhz (useable from 100kHz); Optional to 2700MHz	
2.55.1 x	Exception 10Mhz to 1050Mhz (useable from 100kHz); Optional to 2700MHz	
3.23.1x	Exception- PTP820 doesn't provide way-side service channel.	
3.37 Feed Connection	Exception-TNC connectors	
3.39.1	Exception – 100/200KHz options not supported (OK) - cnReach is a software defined radio. In 900 MHz MAS band current max bandwidth is 50 kHz but 100/200 kHz channels can be added via roadmap.	
Capacity Received Signal Level (RSL) in dBm (c) 28 - DS-1 / 10 MHz -73 76 73 76 77	Exception-not offered	
Capacity Received Signal Level (RSL) in dBm d) 84 - DS-1 / 30 MHz -68 72 69 71 73	Exception not offered	

Capacity Received Signal Level (RSL) in dBm (b) 28 - DS-1 / 10 MHz -80	Exception not offered	
Capacity Received Signal Level (RSL) in dBm (c) 84 - DS-1 / 30 MHz -67 73	Exception not offered	
Capacity Received Signal Level (RSL) in dBm (b) 28 - DS-1 - 78	Exception not offered	
Capacity Received Signal Level (RSL) in dBm (c) 84 - DS-1 - 68 73	Exception not offered	
4.5.1	**Exception-Motorola has a 2-yr standard warranty on microwave and LMR antennas. If any products are discontinued Motorola will be able to provide spare parts and repair for a period of 7 yrs.**	
5.15.12	Motorola does not support DC control	
5.16.2 Panel Wiring/Remote Electronic Circuitry- FPD consoles (a)	Exception CAT5e cable range is only 100 mts. However, Motorola can provide a fiber link to connect the base station to the Conventional interface.	
5.16.2 Panel Wiring/Remote Electronic Circuitry- FPD consoles (b)	Exception CAT5e cable range is only 100 mts. However, Motorola can provide a fiber link to connect the base station to the Conventional interface.	
5.16.5 Maintainability (a)	Exception Motorola's CCGWs can support from 1 to 8 channels per module.	

Section 2-B: Commercial Document

Section 2.1 Contractor Best Pricing	Motorola takes exception to this provision and requires its removal.	Motorola Solutions builds communication equipment, systems and solutions that do not fit within a standard conventional pricing framework. Due to the unique pricing and design specifications for each customer's communication equipment, system and solution requirements, Motorola Solutions cannot guarantee that the pricing offered in this proposal is no higher or lower than prices offered to other customers. 9.16.19 See attached x5-B Change Log.

Motorola Solutions, Inc.

Company Name

Signature of Person Authorized to Sign

NOTE: Offeror must sign and return all Attachment 5-B Supplements Nos. 1 – 3 (even if not submitting exceptions)

ATTACHMENT 5-B Supplement No. 3:

Exceptions to Contract Terms & Conditions

Article/ Paragraph or Exhibit Reference	Proposed Changes / Alternate Language	Rationale for Proposed Change
Section 3-A: Special Terms & Conditions		
Section 6.1 Contractor Insurance Indemnification Clause	Motorola complies with the general indemnification described in this section subject to removing the words “or intangible” and “arising or recovered under the Worker’s Compensation Law”.	Motorola believes that Workers Compensation is provided for and covered in Subsection 6.1.3. The proposed edits are consistent with the indemnification language agreed by the State in previous contracts, including ADSPO13-036880. 9.16.19 See attached 5-B Change Log
Section 6.1 Contractor Insurance-Insurance Requirements	Please see the attached proposed modifications for how Motorola can comply with the State's insurance requirements	The parties have previously negotiated an insurance module in the Arizona Department of Transportation Solicitation # T11-43-00008, agreed as applicable to ADSPO13-036880. Motorola’s Corporate Insurance Department believes that the changes it has made to this section are in line with what has been previously negotiated and agreed upon between the State and Motorola. 9.16.19 see attached 5-B Change Log
Section 13.1 Applicability	Motorola complies with the language with the removal of the words 'or from others at State's behest.'	It is unclear if Motorola has a contractual relationship with the 3rd party. 9.16.19 See attached 5-B Change Log

Section 13.2 Data Protection & Confidentiality	Motorola proposes the following language in lieu of the RFP language: Contractor warrants that, to the extent the Work includes (1) or (2) above, it will establish and maintain procedures and controls for ensuring that State's proprietary and sensitve data is protected from unauthorized access and that information obtained from the State in performance of its contractual duties is not mishandled, misused, or inappropriately released or disclosed. Contractor, the third party manufacturer, and the copyright owner of any non-Contractor software own and retain all of their repective proprietary rights in the equipment and software, and nothing in this Article 13 is intended to restrict their proprietary rights. All intellectual property developed, originated, or prepared by Contractor in connection with providing to State the Work remain vested exclusively in Contractor, and this Article 13 does not grant to State, either directly or by implication, estoppel, or otherwise, any right, title or interest in Contractor's Proprietary Rights.	The RFP language "all data created by Contractor" in the next to last sentence of the first paragraph in this section implies transfer of IP rights, which is not contemplated in the work Motorola would be performing. 9.16.19 See attached 5-B Change Log.
Section 13.2.1 Data Protection & Confidentiality	Motorola complies with the language in 13.2.1.a and b with the following suggested modifications: (1) with the replacement of 'immediately' with 'promptly' and (2) in 13.2.1.b with the insertion of 'reasonably' at the beginning of the statement. Motorola takes exception to 13.2.c and requests its removal.	Motorola requests these modifications to be in line with industry standard language. Regarding 13.2.c., it is not reasonably practicable to notify the State to every possible threat which might affect the system. 9.16.19 See attached 5-B Change Log.
Section 13.2.2 Data Protection & Confidentiality	**Motorola complies with the language in 13.2.2.a with the insertion of 'except as required by law' a the beginning of the statement.**	**Motorola requests these modifications to be in line with industry standard language.** 9.16.19 See attached 5-B Change Log.
Section 13.3.2 Personally Identifiable Information	**Motorola clarifies that it maintains industry standard security measures to protect the Solution from intrusion, breach, corruption, or other security risk. Please see Section 4.1 of the attached Subscription Services Addendum for more information on Motorola's compliance with security standards.**	**Motorola asserts it is CJIS compliant.** 9.16.19 See attached 5-B Change Log.

Section 14.3.3 Access Control	**Motorola proposes the inclusion of the following language within this section: To the extent permitted by law, State retains ownership of State Data. State grants Motorola and its subcontractors a personal, royalty-free, non-exclusive license to use, host, cache, store, reproduce, copy, modify combine, analyze, create derivatives from, communicate, transmit, publish, display, and distribute such State Data for the purpose of providing the Subscription Services to State, other Motorola customers and end users. In addition to the rights listed above, State grants Motorola a license to sell an Anonymized version of State Data for any purpose.**	**Motorola requests the ability to retain rights to use anonymized and derivative data for purposes of improving its product.** 9.16.19 See attached 5-B Change Log.
Section 14.4 Pass-through Indemnity	**Motorola proposes the language in Section 3 of the Additional Provisions in place of the RFP language regarding infringement indemnity:**	**Motorola requests the use of its standard intellectual properity infringement indemnities for its solutions.** 9.16.19 See attached 5-B Change Log.
Section 14.8.2.b Information Technology Warranty	**Motorola proposes the following language in lieu of the RFP: At Customer's request, Motorola will make every reasonable effort to test and verify specific anti-virus, anti-worm, or anti-hacker patches against a replication of Customer's application. Motorola will respond to any reported problem as an escalated support call.**	**As is industry standard, Motorola does not provide a warranty against worms and viruses.** 9.16.19 See attached 5-B Change Log.
Section 14.11.2 Cloud Applications	**Motorola requests 'serious flaws' be expressly defined. Motorola will not allow either State or third-party penetration testing from within Motorola's system**	**Requested definition to clarify between the parties what errors are agreed as serious meriting correction. Motorola's security policies do not allow outside-Motorola entities access to Motorola's internal system for penetration testing.** 9.16.19 See attached 5-B Change Log.

Section 14.11.3 Cloud Applications	**Motorola proposes the following language: Contract will submit a copy of system logs specific to the State from cloud system to State of AZ security team on an annual basis to be added to the State SIEM (Security Information Event Monitor) or IDS (Intrusion Detection System).**	**Motorola requests clarity on what logs are being requested and the proposed regularity of such requests.** 9.16.19 See attached 5-B Change Log.
Section 15.1 Drug Testing Program	**Motorola affirms that all employees are required to submit to a five-panel drug screen at the time of hire, where permitted by law. If Motorola is awarded the contract, Motorola agrees to discuss the need for additional drug tests of Motorola employees and to negotiate a contractual provision that is mutually acceptable and compliant with applicable law. However, in no event can Motorola agree to waive the rights of its employees, nor can Motorola provide the Customer with any information protected by law, including but not limited to drug test results.**	**Motorola cannot agree to waive the rights of its employees or to providing information protected by law, including drug test results.** 9.16.19 See attached 5-B Change Log.

Article/ Paragraph or Appendix Reference	Proposed Changes / Alternate Language	Rationale for Proposed Change
Section 3-B: Uniform Terms & Conditions		
Section 3.1 Books and Records; Audit	Motorola understands and will comply with all applicable Arizona statutes with the clarifying assertion that Motorola considers its books and records, including those related to product cost data, to be trade secrets, confidential or proprietary and as may be provided by Arizona law, should not be used, duplicated or disclosed to any other third party.	Motorola considers its internal books and records confidential and proprietary information. 9.16.19 See attached 5-B Change Log.

Section 3.4 Inspection and Testing	Motorola acknowledges the State's right to inspect materials, equipment and workmanship at Motorola manufacturing or staging facilities for the limited purpose of evaluating Motorola's performance of this Agreement. Motorola requires thirty days' written notice prior to the inspection of any facility and the State will be responsible for its own costs associated with such inspection. Motorola will restrict inspection of its facilities to areas that are relevant to the performance of the Contract, and to areas which Motorola Solutions does not consider confidential or proprietary in nature. A Motorola representative must accompany State's employees at all times."	Motorola requires sufficient notice of State's intent to inspect Motorola facilities. 9.16.19 See attached 5-B Change Log.
Section 3.8 Ownership of Intellectual Property	It is Motorola's understanding from past dealings with the State Procurement Office that the State is not interested in obtaining ownership interest in any intellectual property and accordingly, these sections, or any other section that may give ownership rights in intellectual property, are not applicable and be of no cause and effect in this contract.	Motorola is providing products and services that are commercially available to any customer and does not intend to perform any Works For Hire. The Pricing included in Motorola's proposal does not reflect the transfer of any intellectual property rights to the State. If performance results in the development of new proprietary and secret concepts, methods, techniques, processes, adaptations, discoveries, improvements and ideas ("Discoveries"), such Discoveries and the intellectual property embodied therein will be owned exclusively by Motorola. If subsequently the State elects to purchase and Motorola elects to sell development services that are intended to result in a new product to be owned by the State, the parties will execute a separate development or Work for Hire agreement. 9.16.19 See attached 5-B Change Log.

Section 6.2 Basic Indemnification	Motorola proposes that all indemnification be handled as provided for in Subsection 6.1- Indemnification of the Special Terms and Conditions.	Motorola believes that Workers Compensation is provided for and covered in Subsection 6.1.3 of the Special Terms and Conditions in Section 2-C. The proposed edits are consistent with the indemnification language agreed by the State in previous contracts, including ADSPO13-036880. 9.16.19 See attached 5-B Change Log.
Section 6.3 Patent and Copyright Indemnification	Please see Section 3 of the attached Additional Provisions which describe Motorola's IP Infringement Indemnifications.	Motorola requests the use of its standard intellectual properity infringement indemnities for its solutions. 9.16.19 See attached 5-B Change Log.
Section 7.2 and 7.3 Conformity and Quality	Please see the attached Section 1 of the Additional Provisions below which explain Motorola's suggested way to address warranty which is in a like manner as in the current contracts between the parties for similar products (i) ADSPO13-036613 and (ii) ADSPO13-036880.	Motorola proposes addressing the State's warranty requirements in a manner consistent with previous contracts. 9.16.19 See attached 5-B Change Log.
Section 9.5.3 Termination for Default	Motorola complies subject to excess costs being reasonable and for materials and services not exceeding that specified in the contract less the unpaid portion of the contract price.	Motorola proposes the suggested modifications to clarify termination costs to be reasonable. 9.16.19 See attached 5-B Change Log.
5C Insurance Certificate	Please see Motorola's Evidence of Coverage Certificate and modifications to the Special Terms and Conditions, Section 6.2, for Motorola's coverage details. Motorola agrees all COI, endorsements and waivers must be valid and provided via email to State Contract Manager within 30 days of contract execution and before any work commences. Motorola's surety requires a signed agreement prior to issuing COI.	9.16.19 See attached 5-B Change Log.

Motorola Solutions, Inc.

Company Name | Signature of Person Authorized to Sign

NOTE: Offeror must sign and return all Attachment 5-B Supplements Nos. 1 – 3 (even if not submitting exceptions)

End of Attachment 5-B

State Response to Exceptions
Motorola Change Log/Revised Attachment 5-B Exceptions 9.16.19

ATTACHMENT 5-B Supplement No. 1:

Exceptions to Instructions

Article / Paragraph or Exhibit Reference	Proposed Changes / Alternate Language	Rationale for Proposed Change	State Response	Vendor Response
Section 1-A: Solicitation Details				
x	None	x		
Section 1-B: Instructions to Offerors				
6.3 Cost or Pricing Data	Pursuant to A.R.S § 41-2543 per A.A.C. R2-7-702(B)(2), Motorola certifies to the best of its knowledge and belief the pricing provided within its response is accurate, complete and current. Motorola will cooperate with reasonable requests for pricing validity information but will not be required to provide its internal cost and pricing data which it considers confidential and proprietary information.	Public exposure of Motorola's internal costs and pricing would put it at a severe competitive disadvantage.	Rejected, exception not accepted. Catalog/list pricing along with % off list data is required as part of soliciataion and is not considered confdential per R2-7-103.	7/25/19 Motorola verbally agreed 8-8-19 Motorola concurs

ATTACHMENT 5-B Supplement No. 2:

Exceptions to Technical and Commercial

Article / Paragraph or Exhibit Reference	Proposed Changes / Alternate Language	Rationale for Proposed Change	State Response	
Section 2-A: Scope of Work (Technical Document)				**8/28/19 Motorola agreed with the State's responses to Motorola's clarifications and exceptions in this Section 2-A**
2.49.4 E&M / DC Control	Comply with clarification, No DC Control, Exception on DC Contact Keying	x	Accept, the exception is accepted by the State as a clarification. As stated in Section 2-A Scope of Work 1.3 This is a multi-award contract, The State may choose not to engage with a vendor, if noted clarifications impact product or services sought after.	7/25/19 Motorola verbally agreed
2.52.1 Physical Construction	Comply w/ one exception 36.8 lbs x	x	Accept, the exception is accepted by the State as a clarification. As stated in Section 2-A Scope of Work 1.3 This is a multi-award contract, The State may choose not to engage with a vendor, if noted clarifications impact product or services sought after.	7/25/19 Motorola verbally agreed
2.52.5	Exception 10Mhz to 1050Mhz (useable from 100kHz); Optional to 2700MHz	x	Accept, the exception is accepted by the State as a clarification. As stated in Section 2-A Scope of Work 1.3 This is a multi-award contract, The State may choose not to engage with a vendor, if noted clarifications impact product or services sought after.	7/25/19 Motorola verbally agreed
2.55.1 X	Exception 10Mhz to 1050Mhz (useable from 100kHz); Optional to 2700MHz		Accept, the exception is accepted by the State as a clarification. As stated in Section 2-A Scope of Work 1.3 This is a multi-award contract, The State may choose not to engage with a vendor, if noted clarifications impact product or services sought after.	7/25/19 Motorola verbally agreed
3.23.1x	Exception- PTP820 doesn't provide way-side service channel.		Accept, the exception is accepted by the State as a clarification. As stated in Section 2-A Scope of Work 1.3 This is a multi-award contract, The State may choose not to engage with a vendor, if noted clarifications impact product or services sought after.	7/25/19 Motorola verbally agreed
3.37 Feed Connection	Exception-TNC connectors		Accept, the exception is accepted by the State as a clarification. As stated in Section 2-A Scope of Work 1.3 This is a multi-award contract, The State may choose not to engage with a vendor, if noted clarifications impact product or services sought after.	7/25/19 Motorola verbally agreed

3.39.1	Exception – 100/200KHz options not supported (OK) - cnReach is a software defined radio. In 900 MHz MAS band current max bandwidth is 50 kHz but 100/200 kHz channels can be added via roadmap.		Accept, the exception is accepted by the State as a clarification. As stated in Section 2-A Scope of Work 1.3 This is a multi-award contract, The State may choose not to engage with a vendor, if noted clarifications impact product or services sought after.	7/25/19 Motorola verbally agreed
Capacity Received Signal Level (RSL) in dBm (c) 28 - DS-1 / 10 MHz -73 76 73 76 77	Exception-not offered		Rejected, exception not accepted. For standardization and uniformity concerns the clause must remain. If it's not applicable, Offeror shall just ignore this section.	7/25/19 Motorola agreed to remove exception
Capacity Received Signal Level (RSL) in dBm d) 84 - DS-1 / 30 MHz -68 72 69 71 73	Exception-not offered		Rejected, exception not accepted. For standardization and uniformity concerns the clause must remain. If it's not applicable, Offeror shall just ignore this section.	7/25/19 Motorola agreed to remove exception
Capacity Received Signal Level (RSL) in dBm (b) 28 - DS-1 / 10 MHz -80	Exception-not offered		Rejected, exception not accepted. For standardization and uniformity concerns the clause must remain. If it's not applicable, Offeror shall just ignore this section.	7/25/19 Motorola agreed to remove exception
Capacity Received Signal Level (RSL) in dBm (c) 84 - DS-1 / 30 MHz -67 73	Exception-not offered		Rejected, exception not accepted. For standardization and uniformity concerns the clause must remain. If it's not applicable, Offeror shall just ignore this section.	7/25/19 Motorola agreed to remove exception
Capacity Received Signal Level (RSL) in dBm (b) 28 - DS-1 - 78	Exception-not offered		Rejected, exception not accepted. For standardization and uniformity concerns the clause must remain. If it's not applicable, Offeror shall just ignore this section.	7/25/19 Motorola agreed to remove exception
Capacity Received Signal Level (RSL) in dBm (c) 84 - DS-1 - 68 73	Exception-not offered		Rejected, exception not accepted. For standardization and uniformity concerns the clause must remain. If it's not applicable, Offeror shall just ignore this section.	7/25/19 Motorola agreed to remove exception
4.5.1	**Exception-Motorola has a 2-yr standard warranty on microwave and LMR antennas. If any products are discontinued Motorola will be able to provide spare parts and repair for a period of 7 yrs.**		Accept, the State will accept the exception with End Of Life Notification being provided in writing and buyer being notified of End Of Life Notification at time of order placement.	7/25/19 Motorola verbally agreed
5.15.12	Motorola does not support DC control		Accept, the exception is accepted by the State as a clarification. As stated in Section 2-A Scope of Work 1.3 This is a multi-award contract, The State may choose not to engage with a vendor, if noted clarifications impact product or services sought after.	7/25/19 Motorola verbally agreed
5.16.2 Panel Wiring/Remote Electronic Circuitry-FPD consoles (a)	Exception CAT5e cable range is only 100 mts. However, Motorola can provide a fiber link to connect the base station to the Conventional interface.		Accept, the exception is accepted by the State as a clarification. As stated in Section 2-A Scope of Work 1.3 This is a multi-award contract, The State may choose not to engage with a vendor, if noted clarifications impact product or services sought after.	7/25/19 Motorola verbally agreed

ATTACHMENT 5-B Supplement No. 1:

5.16.2 Panel Wiring/Remote Electronic Circuitry-FPD consoles (b)	Exception CAT5e cable range is only 100 mts. However, Motorola can provide a fiber link to connect the base station to the Conventional interface.		Accept, the exception is accepted by the State as a clarification. As stated in Section 2-A Scope of Work 1.3 This is a multi-award contract, The State may choose not to engage with a vendor, if noted clarifications impact product or services sought after.	7/25/19 Motorola verbally agreed
5.16.5 Maintainability (a)	Exception Motorola's CCGWs can support from 1 to 8 channels per module.		Accept, the exception is accepted by the State as a clarification. As stated in Section 2-A Scope of Work 1.3 This is a multi-award contract, The State may choose not to engage with a vendor, if noted clarifications impact product or services sought after.	7/25/19 Motorola verbally agreed
Section 2-B: Commercial Document				
Section 2.1 Contractor Best Pricing	Motorola takes exception to this provision and requires its removal.	Motorola Solutions builds communication equipment, systems and solutions that do not fit within a standard conventional pricing framework. Due to the unique pricing and design specifications for each customer's communication equipment, system and solution requirements, Motorola Solutions cannot guarantee that the pricing offered in this proposal is no higher or lower than prices offered to other customers.	Rejected, exception not accepted. The State requires standardization and uniformity of contract language across its suppliers.	7/25/19 Motorola will send new language to review 8/14/19 Please see below language. Price Guarantee: During the Term of the Agreement and provided Customer is in compliance with all provisions of the Agreement, Motorola asserts its pricing for products and services offered on this Agreement will be consistent with competitively priced products and services for similarly situated state and local customers within the State of Arizona purchasing the same or similar products and services sold in like quantities on substantially similar or comparable terms and conditions. This price guarantee excludes volume discounts, Federal, dealer, and third party distributor pricing.

ATTACHMENT 5-B Supplement No. 3:

Exceptions to Contract Terms & Conditions

Article / Paragraph or Exhibit Reference	Proposed Changes / Alternate Language	Rationale for Proposed Change	State Response
Section 3-A: Special Terms & Conditions			

Section 6.1 Contractor Insurance Indemnification Clause	Motorola complies with the general indemnification described in this section subject to removing the words “or intangible” and “arising or recovered under the Worker’s Compensation Law”.	Motorola believes that Workers Compensation is provided for and covered in Subsection 6.1.3. The proposed edits are consistent with the indemnification language agreed by the State in previous contracts, including ADSPO13- 036880.	Rejected, exception not accepted. Please be specific in your request for a exception. Exceptions from previous contracts (7-9 years old) may not be acceptable. 8-8-19 Please see attachment FINAL Attachment 5-A Confidential Information Designation - State Response 8-8-19	8/8/19 Motorola acknowledges receipt of State's response to Attachment 5-A Confidential Information Designation and asserts Motorola insurance policies are its confidential and proprietary information not generally known externally and will cause Motorola harm if released. Motorola will not release copies of its policies.
Section 6.1 Contractor Insurance- Insurance Requirements	Please see the attached proposed modifications for how Motorola can comply with the State's insurance requirements	The parties have previously negotiated an insurance module in the Arizona Department of Transportation Solicitation # T11-43-00008, agreed as applicable to ADSPO13-036880. Motorola’s Corporate Insurance Department believes that the changes it has made to this section are in line with what has been previously negotiated and agreed upon between the State and Motorola.	Rejected, exception not accepted. Please be specific in your request for a exception. Exceptions from previous contracts (7-9 years old) may not be acceptable. 8-8-19 Please see attachment FINAL Attachment 5-A Confidential Information Designation - State Response 8-8-19 9-6-19 State will discuss duiring meeting on 9/9/19	9.16.19 Motorola includes its revised Insurance redline as discussed with State on 9.13.19; please see attached redline and comment.
Section 13.1 Applicability	Motorola complies with the language with the removal of the words 'or from others at State's behest.'	It is unclear if Motorola has a contractual relationship with the 3rd party.	Rejected, exception not accepted. The State requires standardization and uniformaity of contract language across its suppliers.	7/25/19 Motorola verbally agreed 8/8/19 Motorola notes it withdrew based upon this provision may not be applicable to Motorola's scope of work; specific requirement to be addressed with task order.
Section 13.2 Data Protection & Confidentiality	Motorola proposes the following language in lieu of the RFP language: Contractor warrants that, to the extent the Work includes (1) or (2) above, it will establish and maintain procedures and controls for ensuring that State's proprietary and sensitve data is protected from unauthorized access and that information obtained from the State in performance of its contractual duties is not mishandled, misused, or inappropriately released or disclosed. Contractor, the third party manufacturer, and the copyright owner of any non-Contractor software own and retain all of their repective proprietary rights in the equipment and software, and nothing in this Article 13 is intended to restrict their proprietary rights. All intellectual property developed, originated, or prepared by Contractor in connection with providing to State the Work remain vested exclusively in Contractor, and this Article 13 does not grant to State, either directly or by implication, estoppel, or otherwise, any right, title or interest in Contractor's Proprietary Rights.	The RFP language "all data created by Contractor" in the next to last sentence of the first paragraph in this section implies transfer of IP rights, which is not contemplated in the work Motorola would be performing.	Rejected, exception not accepted. The State requires standardization and uniformaity of contract language across its suppliers. 7/25/19 - State added langauge - Upon the issuance of a Task Order, requirements will be defined. IP rights will not be transferred	8/9/19 Motorola agrees with State's language as noted in comment dated 7/25/19.

Section 13.2.1 Data Protection & Confidentiality	Motorola complies with the language in 13.2.1.a and b with the following suggested modifications: (1) with the replacement of 'immediately' with 'promptly' and (2) in 13.2.1.b with the insertion of 'reasonably' at the beginning of the statement. Motorola takes exception to 13.2.c and requests its removal.	Motorola requests these modifications to be in line with industry standard language. Regarding 13.2.c., it is not reasonably practicable to notify the State to every possible threat which might affect the system.	Rejected, exception not accepted. The State requires standardization and uniformaity of contract language across its suppliers. 7/25/19 - State added langauge - Upon the issuance of a Task Order, requirements will be defined.	8/9/19 Motorola agrees with State's language as noted in comment dated 7/25/19.
Section 13.2.2 Data Protection & Confidentiality	Motorola complies with the language in 13.2.2.a with the insertion of 'except as required by law' a the beginning of the statement.	Motorola requests these modifications to be in line with industry standard language.	Rejected, exception not accepted. The State requires standardization and uniformaity of contract language across its suppliers. 7-25-19 - The State accepts the addition "except as required by law"	8/9/19 Motorola agrees with State's language as noted in comment dated 7/25/19.
Section 13.3.2 Personally Identifiable Information	Motorola clarifies that it maintains industry standard security measures to protect the Solution from intrusion, breach, corruption, or other security risk. Please see Section 4.1 of the attached Subscription Services Addendum for more information on Motorola's compliance with security standards.	Motorola asserts it is CJIS compliant.	Rejected, exception not accepted. The State requires that you meet the States requirements at a minimum.	7/21/19 Motorola may be acceptable, State to verify Federal requirements vs State requirements 8/28/19 Motorola verbally accepts 9/10/19 Motorola accepted.
Section 14.3.3 Access Control	Motorola proposes the inclusion of the following language within this section: To the extent permitted by law, State retains ownership of State Data. State grants Motorola and its subcontractors a personal, royalty-free, non-exclusive license to use, host, cache, store, reproduce, copy, modify combine, analyze, create derivatives from, communicate, transmit, publish, display, and distribute such State Data for the purpose of providing the Subscription Services to State, other Motorola customers and end users. In addition to the rights listed above, State grants Motorola a license to sell an Anonymized version of State Data for any purpose.	Motorola requests the ability to retain rights to use anonymized and derivative data for purposes of improving its product.	Rejected, exception not accepted.	7/25/19 Motorola verbally agreed 8/8/19 Motorola agrees.
Section 14.4 Pass-through Indemnity	Motorola proposes the language in Section 3 of the Additional Provisions in place of the RFP language regarding infringement indemnity:	Motorola requests the use of its standard intellectual properity infringement indemnities for its solutions.	Rejected - Any compromise in wording of the Indemnification clause that reduces protection or shifts liability back to the State of Arizona are in direct violation of A.R.S. § 41-621 and A.R.S. § 35-154. The State cannot accept this exception.	7/25/19 Motorola to review 8/28/19 Motorola conditionally accepts 9/10/19 Motorola agrees to withdraw exception.
Section 14.8.2.b Information Technology Warranty	Motorola proposes the following language in lieu of the RFP: At Customer's request, Motorola will make every reasonable effort to test and verify specific anti-virus, anti-worm, or anti-hacker patches against a replication of Customer's application. Motorola will respond to any reported problem as an escalated support call.	As is industry standard, Motorola does not provide a warranty against worms and viruses.	Rejected, exception not accepted. (b) the COTS software will, **to the best of its knowledge**, at the time of delivery be free of viruses, backdoors, worms, spyware, malware, and other malicious code that could hamper performance, collect unlawfully any personally identifiable information, or prevent products from performing as required by the Contract; and	7/25/19 Motorola to review will probably accept 8/8/19 Motorola accepts State's language.

Section 14.11.2 Cloud Applications	Motorola requests 'serious flaws' be expressly defined. Motorola will not allow either State or third-party penetration testing from within Motorola's system	Requested definition to clarify between the parties what errors are agreed as serious meriting correction. Motorola's security policies do not allow outside-Motorola entities access to Motorola's internal system for penetration testing.	Rejected, exception not accepted. 7/25/19 - State added langauge - Upon the issuance of a Task Order, requirements will be defined.	7/25/19 Motorola to review 8/8/19 Motorola agrees with State's added language regarding issuance of Task Order.
Section 14.11.3 Cloud Applications	Motorola proposes the following language: Contract will submit a copy of system logs specific to the State from cloud system to State of AZ security team on an annual basis to be added to the State SIEM (Security Information Event Monitor) or IDS (Intrusion Detection System).	Motorola requests clarity on what logs are being requested and the proposed regularity of such requests.	Rejected, exception not accepted. 7/25/19 - State added langauge - Upon the issuance of a Task Order, requirements will be defined.	7/25/19 Motorola to review 8/8/19 Motorola agrees with State's added language regarding issuance of Task Order.
Section 15.1 Drug Testing Program	Motorola affirms that all employees are required to submit to a five-panel drug screen at the time of hire, where permitted by law. If Motorola is awarded the contract, Motorola agrees to discuss the need for additional drug tests of Motorola employees and to negotiate a contractual provision that is mutually acceptable and compliant with applicable law. However, in no event can Motorola agree to waive the rights of its employees, nor can Motorola provide the Customer with any information protected by law, including but not limited to drug test results.	Motorola cannot agree to waive the rights of its employees or to providing information protected by law, including drug test results.	Rejected, exception not accepted.	7/25/19 Motorola to review 8/8/19 Pursuant to conversation with State on 7/25/19, this provision has limited applicability to DOC and historically Motorola employees have agreed to background checks. Motorola withdraws its exception.
Section 3-B: Uniform Terms & Conditions				
Section 3.1 Books and Records; Audit	Motorola understands and will comply with all applicable Arizona statutes with the clarifying assertion that Motorola considers its books and records, including those related to product cost data, to be trade secrets, confidential or proprietary and as may be provided by Arizona law, should not be used, duplicated or disclosed to any other third party.	Motorola considers its internal books and records confidential and proprietary information.	Rejected, exception not accepted. The State is limited in its ability to modify the Uniform Terms and Conditions. Any Concerns would need to be documented and addressed in Special Terms and Conditions.	6/10/19 Response Motorola acknowledges the State's audit requirements. The statements here are meant the clarify and assert that any Motorola cost information provided be afforded trade secret protections pursuant to AZ law. 8/9/19, Pursuant to conversation on 7/25/19, vendor cost and price data is not required if State elects to audit Motorola's performance.

Section 3.4 Inspection and Testing	Motorola acknowledges the State's right to inspect materials, equipment and workmanship at Motorola manufacturing or staging facilities for the limited purpose of evaluating Motorola's performance of this Agreement. Motorola requires thirty days' written notice prior to the inspection of any facility and the State will be responsible for its own costs associated with such inspection. Motorola will restrict inspection of its facilities to areas that are relevant to the performance of the Contract, and to areas which Motorola Solutions does not consider confidential or proprietary in nature. A Motorola representative must accompany State's employees at all times."	Motorola requires sufficient notice of State's intent to inspect Motorola facilities.	Rejected, exception not accepted. The State is limited in its ability to modify the Uniform Terms and Conditions. Any Concerns would need to be documented and addressed in Special Terms and Conditions.	6/10/19 Response This is a clarification only; Motorola agrees with the State having the contractual right to inspect at its facilities and seeks to outline the parameters of that process 7/25/19 Verbal agreement to remove exception 8/9/19 Motorola concurs.
Section 3.8 Ownership of Intellectual Property	It is Motorola's understanding from past dealings with the State Procurement Office that the State is not interested in obtaining ownership interest in any intellectual property and accordingly, these sections, or any other section that may give ownership rights in intellectual property, are not applicable and be of no cause and effect in this contract.	Motorola is providing products and services that are commercially available to any customer and does not intend to perform any Works For Hire. The Pricing included in Motorola's proposal does not reflect the transfer of any intellectual property rights to the State. If performance results in the development of new proprietary and secret concepts, methods, techniques, processes, adaptations, discoveries, improvements and ideas ("Discoveries"), such Discoveries and the intellectual property embodied therein will be owned exclusively by Motorola. If subsequently the State elects to purchase and Motorola elects to sell development services that are intended to result in a new product to be owned by the State, the parties will execute a separate development or Work for Hire agreement.	Rejected, exception not accepted. The State is limited in its ability to modify the Uniform Terms and Conditions. Any Concerns would need to be documented and addressed in Special Terms and Conditions. If it's not applicable, Offeror shall just ignore this section.	6/10/19 Response Motorola would not be providing any custom development work for the State under this agreement and believes this provision to be non applicable. Would the State please confirm. 8/8/19 Pursuant to 7/25/19 discussion, intellectual property ownership is not contemplated in the agreement.
Section 6.2 Basic Indemnification	Motorola proposes that all indemnification be handled as provided for in Subsection 6.1- Indemnification of the Special Terms and Conditions.	Motorola believes that Workers Compensation is provided for and covered in Subsection 6.1.3 of the Special Terms and Conditions in Section 2-C. The proposed edits are consistent with the indemnification language agreed by the State in previous contracts, including ADSPO13-036880.	Rejected, exception not accepted. The State is limited in its ability to modify the Uniform Terms and Conditions. Any Concerns would need to be documented and addressed in Special Terms and Conditions.	6/10/19 Response Motorola proposes that the general indemnity provisions be governed by Subsection 6.1 within the Special Terms and Conditions in lieu of the basic indemnity outlined in the Uniform terms and conditions; this is consistent with ADSPO13-036880. 7/25/19 Verbal agreement to remove exception 8/8/19 Agreed, during the 7/25 conversation, parties agreed if modification need to handle in special T&C

Section 6.3 Patent and Copyright Indemnification	Please see Section 3 of the attached Additional Provisions which describe Motorola's IP Infringement Indemnifications.	Motorola requests the use of its standard intellectual properity infringement indemnities for its solutions.	Rejected, exception not accepted. The State is limited in its ability to modify the Uniform Terms and Conditions. Any Concerns would need to be documented and addressed in Special Terms and Conditions.	6/10/19 Response Motorola proposes the inclusion of its industry standard IP Infringement Indemnity for its solutions in lieu of the RFP Patent and Copyright Indemnification, which did not appear t be pursuant to State statute. 7/25/19 Verbal agreement to remove exception 8/8/19 Handle in special T&C's
Section 7.2 and 7.3 Conformity and Quality	Please see the attached Section 1 of the Additional Provisions below which explain Motorola's suggested way to address warranty which is in a like manner as in the current contracts between the parties for similar products (i) ADSPO13-036613 and (ii) ADSPO13-036880.	Motorola proposes addressing the State's warranty requirements in a manner consistent with previous contracts.	Rejected, exception not accepted. The State is limited in its ability to modify the Uniform Terms and Conditions. Any Concerns would need to be documented and addressed in Special Terms and Conditions.	6/10/19 Response Motorola is proposing its express warranties which apply to its products and services; these are also consistent with the warranty provisions agreed to in previous contracts ADSPO13-036613 and ADSPO13-036880. 7/25/19 Motorola to compare. Motorola warranty may be exceed requirements. 8/8/19 Motorla accepts, discussion was for clarification.
Section 9.5.3 Termination for Default	Motorola complies subject to excess costs being reasonable and for materials and services not exceeding that specified in the contract less the unpaid portion of the contract price.	Motorola proposes the suggested modifications to clarify termination costs to be reasonable.	Rejected, exception not accepted. The State is limited in its ability to modify the Uniform Terms and Conditions. Any Concerns would need to be documented and addressed in Special Terms and Conditions. Please see Uniform Terms and Conditions, Section 8 State's Contractual Remidies the State may choose to use prior to Contract Termination.	6/10/19 Response Motorola complies with the language included in 9.5.3 of the Uniform Terms; its modification here is to specify the replacement materials not exceed the specifications of the materials originally purchased (no upgrades). 7/25/19 Added Section 8 language for clarification 8/9/19 Motorola agrees with State's clarification (addition of Section 8 reference).
5C Insurance Certificate	Please see Motorola's Evidence of Coverage Certificate and modifications to the Special Terms and Conditions, Section 6.2, for Motorola's coverage details. Motorola agrees all COI, endorsements and waivers must be valid and provided via email to State Contract Manager within 30 days of contract execution and before any work commences. Motorola's surety requires a signed agreement prior to issuing COI.		Rejected, exception not accepted. The State provides the following clarification: You have 30 days from award (Agreement) to provide Certificates Of Insurance. Pursant to Section 3-A: Instructions to Offerors, 3.0 Offer Preparation, 3.6 Insurance, All COI, endorsements, and waivers must be valid, in place and provided via emailed to the Contracts Manager within 30 days after award and before any work commences as called for in Attachment 5-C [Insurance].	6/10/19 Response Motorola has provided its Evidence of Coverage certificate and references its proposed modifications to the RFP insurance provisions in the Special Terms and Conditions. These modifications are based on statutory as well as Motorola's insurance compliance requirements. 8/14/19 Please see attached revised insurance terms.

6.0 Risk and Liability

6.1 Contractor Insurance

Please see following proposed modifications to the Insurance provisions. Motorola also encloses its Evidence of Coverage certificate.

Insurance Requirements

Contractor and subcontractors shall procure and maintain, until all of their obligations have been discharged, including any warranty periods under this Contract, insurance against claims for injury to persons or damage to property arising from, or in connection with, the performance of the work hereunder by the Contractor, its agents, representatives, employees or subcontractors.

The Insurance Requirements herein are minimum requirements for this Contract and in no way limit the indemnity covenants contained in this Contract. The State of Arizona in no way warrants that the minimum limits contained herein are sufficient to protect the Contractor from liabilities that arise out of the performance of the work under this Contract by the Contractor, its agents, representatives, employees or subcontractors, and the Contractor is free to purchase additional insurance.

Minimum Scope and Limits of Insurance

Contractor shall provide coverage with limits of liability not less than those stated below.

1. Commercial General Liability (CGL) – Occurrence Form

Policy shall include bodily injury, property damage, and broad form contractual liability coverage.

• General Aggregate	$2,000,000
• Products – Completed Operations Aggregate	$1,000,000
• Personal and Advertising Injury	$1,000,000
• Damage to Rented Premises	$50,000
• Each Occurrence	$2,000,000

The policy shall be endorsed, as required by this written agreement, to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by or on behalf of the Contractor.

Policy shall contain a waiver of subrogation endorsement, as required by this written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.

The policy shall include coverage for Sexual Abuse and Molestation (SAM). This coverage may be sub-limited to no less than $500,000. The limits may be included within the General Liability limit or provided by separate endorsement with its own limits. If you are unable to obtain SAM coverage under your General Liability because the insurance market will not support it, it should it be included with the Professional Liability.

Contractor must provide the following statement on their Certificate(s) of Insurance: "Sexual Abuse and Molestation coverage is included" or "Sexual Abuse and Molestation coverage is not excluded."

2. Business Automobile Liability

Bodily Injury and Property Damage for any owned, hired, and/or non-owned automobiles used in the performance of this Contract.

- Combined Single Limit (CSL) $1,000,000

Policy shall be endorsed, as required by this written agreement, to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by, or on behalf of, the Contractor involving automobiles owned, hired and/or non-owned by the Contractor.

Policy shall contain a waiver of subrogation endorsement as required by this written agreement in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.

3. Workers' Compensation and Employers' Liability

- Workers' Compensation Statutory
- Employers' Liability
  - o Each Accident $1,000,000
  - o Disease – Each Employee $1,000,000
  - o Disease – Policy Limit $1,000,000

Policy shall contain a waiver of subrogation endorsement, as required by this written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.

This requirement shall not apply to each Contractor or subcontractor that is exempt under A.R.S. § 23-901, and when such Contractor or subcontractor executes the appropriate waiver form (Sole Proprietor or Independent Contractor).

4. Professional Liability (Errors and Omissions Liability) **including Technology Errors & Omissions and Network Security (Cyber) and Privacy Liability**

- Each Claim $2,000,000
- Annual Aggregate $6,000,000

In the event that the Professional Liability insurance required by this Contract is written on a claims-made basis, Contractor warrants that any retroactive date under the policy shall precede the effective date of this Contract and, either continuous coverage will be maintained, or an extended discovery period will be exercised, for a period of two (2) years beginning at the time work under this Contract is completed.

The policy shall cover Contractor's professional misconduct or negligent acts for those positions defined in the Scope of Work of this contract.

Such insurance shall cover any, and all errors, omissions, or negligent acts in the delivery of products, services, and/or licensed programs Contractor provides under this contract.

Coverage shall include copyright infringement, infringement of trade dress, domain name, title or slogan.

Such insurance shall include, but not be limited to, coverage for third party claims and losses with respect to network risks (such as data breaches, unauthorized access or use, ID theft, theft of data) and invasion of privacy regardless of the type of media involved in the loss of private information, crisis management and identity theft response costs. This should also include breach notification costs, credit monitoring, defense and claims expenses, regulatory defense

costs plus fines and penalties, cyber extortion, computer program and electronic data restoration expenses coverage (data asset protection), network business interruption,.

Commercial Crime –including employee dishonesty covering liability against direct and verifiable losses of money, securities, products, equipment, material and other property of the State caused by theft or forgery, computer fraud or fund transfers by identifiable employees of in the following limits:

- $2,000,000 each claim
- $5,000,000 annual aggregate

~~The policy shall be endorsed, as required by this written agreement, to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to vicarious liability of the insured arising out of the activities performed by or on behalf of the Contractor.~~

~~Policy shall contain a waiver of subrogation endorsement, as required by this written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.~~)

4. Installation Floater

- Coverage amount is $___TBD At Award of Contract based on Value_____

Policy shall contain an Additional Insured endorsement, as required by this written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees.

The State of Arizona and the Department shall be named as loss payee as its interest may appear.

Coverage shall be written on an all risk, replacement cost basis and shall include coverage for flood and earth movement as well as coverage for losses that may occur during equipment testing/commissioning.

Policy shall be maintained until whichever of the following shall first occur: (1) final payment has been made; or, (2) until no person or entity, other than the State of Arizona, has an insurable interest in the property required to be covered.

Policy shall be endorsed such that the insurance shall not be canceled or lapse because of any partial use or occupancy by the State of Arizona.

The Installation Floater must provide coverage from the time the equipment/material becomes the responsibility of the Contractor and shall continue without interruption during the installation, testing and commissioning, including any time during which the equipment/material is being transported to the installation site, or awaiting installation, whether on or off site.

Policy shall contain a Waiver of Subrogation endorsement, as required by written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities,

Comment [DAB1]: 9.16.19 After further consultation with its broker and underwriter, Motorola cannot agree to the inclusion of the Additional Insured endorsement within the Professional Liability Policy. It is however, included within the CGL policy.

officers, officials, agents, and employees for losses arising from work performed by the Contractor for the State of Arizona.

Contractor is responsible for the payment of all deductibles under the Installation Floater.

Additional Insurance Requirements

The policies shall include, or be endorsed to include, as required by this written agreement, the following provisions:

The Contractor's policies (excluding the Professional Liability policy) as applicable, shall stipulate that the insurance afforded the Contractor shall be primary and that any insurance carried by the Department, its agents, officials, employees or the State of Arizona shall be excess and not contributory insurance, as provided by A.R.S. § 41-621 (E).

Insurance provided by the Contractor shall not limit the Contractor's liability assumed under the indemnification provisions of this Contract.

Notice of Cancellation

Applicable to all insurance policies required within the Insurance Requirements of this Contract, Contractor's insurance shall not be permitted to expire, be suspended, be canceled, or be materially changed for any reason without thirty (30) days prior written notice to the State of Arizona. Within two (2) business days of receipt, Contractor, (not Contractor's insurance provider), must provide notice to the State of Arizona if they receive notice of a policy that has been or will be suspended, canceled, materially changed for any reason, has expired, or will be expiring. Such notice shall be sent directly to the Department and shall be mailed, emailed, hand delivered or sent by facsimile transmission to (State Representative's Name, Address & Fax Number).

Acceptability of Insurers

Contractor's insurance shall be placed with companies licensed in the State of Arizona or hold approved non-admitted status on the Arizona Department of Insurance List of Qualified Unauthorized Insurers. Insurers shall have an "A.M. Best" rating of not less than A- VII. The State of Arizona in no way warrants that the above-required minimum insurer rating is sufficient to protect the Contractor from potential insurer insolvency.

Verification of Coverage

Contractor shall furnish the State of Arizona with certificates of insurance (valid ACORD form or equivalent approved by the State of Arizona) evidencing that Contractor has the insurance as required by this Contract. An authorized representative of the insurer shall sign the certificates.

All such certificates of insurance and policy endorsements must be received by the State before work commences. The State's receipt of any certificates of insurance or policy endorsements that do not comply with this written agreement shall not waive or otherwise affect the requirements of this agreement.

Each insurance policy required by this Contract must be in effect at, or prior to, commencement of work under this Contract. Failure to maintain the insurance policies as required by this Contract, or to provide evidence of renewal, is a material breach of contract.

All certificates required by this Contract shall be sent directly to the Department. The State of Arizona project/contract number and project description shall be noted on the certificate of insurance. In the event of a claim from a third party naming the State of Arizona with allegations arising directly out of the products and/or services rendered by Motorola under this contract, the State of Arizona reserves the right to request Motorola as Contractor to provide access to any and all policy(ies) required by the insurance requirements, including all endorsement(s), within 30 business days of such request. Contractor will be permitted to redact any references or endorsements to other customer (non-State of Arizona) information before providing access to the policies.

Subcontractors

Contractor shall be responsible for ensuring and/or verifying that all subcontractors have valid

and collectable insurance as evidenced by the certificates of insurance and endorsements for each subcontractor. All coverages for subcontractors shall be subject to the minimum Insurance Requirements identified above. The Department reserves the right to require, at any time

throughout the life of this contract, proof from the Contractor that its subcontractors have the required coverage.

Approval and Modifications

Upon 60 days' notice to Contractor, tThe Contracting Agency, in consultation with State Risk, reserves the right to review or make modifications to the insurance limits, required coverages, or endorsements throughout the life of this contract, as deemed necessary. Such action will not require a formal Contract amendment but may be made by administrative action, but will be subject to commercially available terms and conditions on the marketplace.)

Exceptions

In the event the Contractor or subcontractor(s) is/are a public entity, then the Insurance Requirements shall not apply. Such public entity shall provide a certificate of self-insurance. If the Contractor or subcontractor(s) is/are a State of Arizona agency, board, commission, or university, none of the above shall apply.

Comment [K2]: The State would need to make 60 day's notice to Motorola of any change in the insurance requirements and be subject to commercially available terms and conditions in the marketplace and not result in increased premium charges to Motorola. Otherwise, this paragraph is unacceptable. **8.28.19 Procurement will check with Risk Mgmt, but agreed 60 days was reasonable. 9/9/19 State can agree with exception of 'result in increased premium to Motorola' which such event might occur due to legislative changes.. if high/ significant premium increase then State may agree to a price increase.**
9/12/19 Motorola risk and finance agreed with exclusion of 'increased premium charges to Motorola' and includes the 60 days' notice and available marketplace conditions in this revision.
9.13.19 State will double check with risk mgmt; tentatively accept, State to confirm.

Motorola Solutions, Inc.

Change Log to State of Arizona – Additional Provisions-Supplemental Terms – ADSPO19-00008376

The following are changes that Motorola Solutions, Inc. is submitting to our original proposal submitted on September 4, 2018.

Attachment A

For purposes of showing precedence and the parties' past course of doing business, Solicitations # ADSPO13-036880 and ADSPO13-036613, which are the current contracts between the Parties for similar products, contain Additional Provisions for limitation of liability, warranty and the inclusion of Motorola's Software License Agreement. With this in mind, Motorola proposes for the State's consideration the inclusion of the following items:

Section 1:

1.1 EQUIPMENT WARRANTY. During the Warranty Period established in the State of Arizona contract resulting from ADSPO19-00008376, Motorola warrants that the Equipment under normal use and service will be free from material defects in materials and workmanship. If System Acceptance is delayed beyond six (6) months after shipment of the Equipment by events or causes within Customer's control, this warranty expires eighteen (18) months after the shipment of the Equipment.

1.2. MOTOROLA SOFTWARE WARRANTY. Unless otherwise stated in the Software License Agreement, during the Warranty Period, Motorola warrants the Motorola Software in accordance with the terms of the Software License Agreement and the provisions of this Section 1 that are applicable to the Motorola Software. If System Acceptance is delayed beyond six (6) months after shipment of the Motorola Software by events or causes within Customer's control, this warranty expires eighteen (18) months after the shipment of the Motorola Software.

1.3. EXCLUSIONS TO EQUIPMENT AND MOTOROLA SOFTWARE WARRANTIES. These warranties do not apply to: (i) defects or damage resulting from: use of the Equipment or Motorola Software in other than its normal, customary, and authorized manner; accident, liquids, neglect, or acts of God; testing, maintenance, disassembly, repair, installation, alteration, modification, or adjustment not provided or authorized in writing by Motorola; Customer's failure to comply with all applicable industry and OSHA standards; (ii) breakage of or damage to antennas unless caused directly by defects in material or workmanship; (iii) Equipment that has had the serial number removed or made illegible; (iv) batteries (because they carry their own separate limited warranty) or consumables; (v) freight costs to ship Equipment to the repair depot; (vi) scratches or other cosmetic damage to Equipment surfaces that does not affect the operation of the Equipment; and (vii) normal or customary wear and tear.

1.4. WARRANTY CLAIMS. To assert a warranty claim, Customer must notify Motorola in writing of the claim before the expiration of the Warranty Period. Upon receipt of this notice, Motorola will investigate the warranty claim. If this investigation confirms a valid warranty claim, Motorola will (at its option and at no additional charge to Customer) repair the defective Equipment or Motorola Software, replace it with the same or equivalent product, or refund the price of the defective Equipment or Motorola Software. That action will be the full extent of Motorola's liability for the warranty claim. If this investigation indicates the warranty claim is not valid, then Motorola may invoice Customer for responding to the claim on a time and materials basis using Motorola's then current labor rates. Repaired or replaced product is warranted for

the balance of the original applicable warranty period. All replaced products or parts will become the property of Motorola.

1.5. ORIGINAL END USER IS COVERED. These express limited warranties are extended by Motorola to the original user purchasing the System for commercial, industrial, or governmental use only, and are not assignable or transferable.

1.6. DISCLAIMER OF OTHER WARRANTIES. THESE WARRANTIES ARE THE COMPLETE WARRANTIES FOR THE EQUIPMENT AND MOTOROLA SOFTWARE PROVIDED UNDER THIS AGREEMENT AND ARE GIVEN IN LIEU OF ALL OTHER WARRANTIES. MOTOROLA DISCLAIMS ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

"Warranty Period" means ~~one (1) year from the date of System Acceptance or Beneficial Use, whichever occurs first.~~the applicable category warranty period defined in the State of Arizona ADSPO19-00008376.

Section 2 LIMITATION OF LIABILITY

This limitation of liability provision shall apply notwithstanding any contrary provision in this Agreement and to the extent permitted by State of Arizona law. Except for personal injury or death, Motorola's total liability, whether for breach of contract, warranty, negligence, strict liability in tort, indemnification, or otherwise, will be limited to the direct damages recoverable under law, but not to exceed the price of the Equipment, Software, or services with respect to which losses or damages are claimed. ALTHOUGH THE PARTIES ACKNOWLEDGE THE POSSIBILITY OF SUCH LOSSES OR DAMAGES, THEY AGREE THAT MOTOROLA WILL NOT BE LIABLE FOR ANY COMMERCIAL LOSS; INCONVENIENCE; LOSS OF USE, TIME, DATA, GOOD WILL, REVENUES, PROFITS OR SAVINGS; OR OTHER SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO OR ARISING FROM THIS AGREEMENT, THE SALE OR USE OF THE EQUIPMENT OR SOFTWARE, OR THE PERFORMANCE OF SERVICES BY MOTOROLA PURSUANT TO THIS AGREEMENT. This limitation of liability will survive the expiration or termination of this Agreement.

Section 3 Intentionally Deleted. ~~PATENT AND COPYRIGHT INFRINGEMENT.~~

~~Motorola will defend at its expense any suit brought against Customer to the extent it is based on a third-party claim alleging that the Equipment manufactured by Motorola or the Motorola Software ("Motorola Product") directly infringes a United States patent or copyright ("Infringement Claim"). Motorola's duties to defend and indemnify are conditioned upon: Customer promptly notifying Motorola in writing of the Infringement Claim; Motorola having sole control of the defense of the suit and all negotiations for its settlement or compromise; and Customer providing to Motorola cooperation and, if requested by Motorola, reasonable assistance in the defense of the Infringement Claim. In addition to Motorola's obligation to defend, and subject to the same conditions, Motorola will pay all damages finally awarded against Customer by a court of competent jurisdiction for an Infringement Claim or agreed to, in writing, by Motorola in settlement of an Infringement Claim.~~

~~If an Infringement Claim occurs, or in Motorola's opinion is likely to occur, Motorola may at its option and expense: (a) procure for Customer the right to continue using the Motorola Product; (b) replace or modify the Motorola Product so that it becomes non-infringing while providing functionally equivalent performance; or (c) accept the return of the Motorola Product and grant Customer a credit for the Motorola Product, less a reasonable charge for depreciation. The depreciation amount will be calculated based upon generally accepted accounting standards.~~

~~Motorola will have no duty to defend or indemnify for any Infringement Claim that is based upon: (a) the~~

~~combination of the Motorola Product with any software, apparatus or device not furnished by Motorola; (b) the use of ancillary equipment or software not furnished by Motorola and that is attached to or used in connection with the Motorola Product; (c) Motorola Product designed or manufactured in accordance with Customer's designs, specifications, guidelines or instructions, if the alleged infringement would not have occurred without such designs, specifications, guidelines or instructions; (d) a modification of the Motorola Product by a party other than Motorola; (e) use of the Motorola Product in a manner for which the Motorola Product was not designed or that is inconsistent with the terms of this Agreement; or (f) the failure by Customer to install an enhancement release to the Motorola Software that is intended to correct the claimed infringement. In no event will Motorola's liability resulting from its indemnity obligation to Customer extend in any way to royalties payable on a per use basis or the Customer's revenues, or any royalty basis other than a reasonable royalty based upon revenue derived by Motorola from Customer from sales or license of the infringing Motorola Product.~~

~~This Section provides Customer's sole and exclusive remedies and Motorola's entire liability in the event of an Infringement Claim. Customer has no right to recover and Motorola has no obligation to provide any other or further remedies, whether under another provision of this Agreement or any other legal theory or principle, in connection with an Infringement Claim. In addition, the rights and remedies provided in this Section are subject to and limited by the restrictions set forth in Motorola's Limitation of Liability.~~

Attachment B. SOFTWARE LICENCE AGREEMENT: For the purposes of showing precedence and the parties past course of doing business, in the Arizona Department of Transportation Solicitation # T11-43-00008 contract dated September 2, 2010, the State of Arizona's Attorney General agreed to an additional provision that provided for licensing of software in accordance with Motorola's Software License Agreement, which was contemplated in ADSPO13-036880. With this in mind, Motorola's Software License Agreement is attached and proposed for inclusion in this contract.

Attachment B

MOTOROLA SOFTWARE LICENSE AGREEMENT

This Exhibit A Motorola Software License Agreement ("Agreement") is between Motorola Solutions, Inc., ("Motorola"), and the purchaser of products containing Motorola software under the State of Arizona's Agreement from RFP ADSPO19-00008376 ("Licensee").

For good and valuable consideration, the parties agree as follows:

Section 1 DEFINITIONS

1.1 "Designated Products" means products provided by Motorola to Licensee with which or for which the Software and Documentation is licensed for use.

1.2 "Documentation" means product and software documentation that specifies technical and performance features and capabilities, and the user, operation and training manuals for the Software (including all physical or electronic media upon which such information is provided).

1.3 "Open Source Software" means software with either freely obtainable source code, license for modification, or permission for free distribution.

1.4 "Open Source Software License" means the terms or conditions under which the Open Source Software is licensed.

1.5 "Primary Agreement" means the agreement to which this exhibit is attached.

1.6 “Security Vulnerability” means a flaw or weakness in system security procedures, design, implementation, or internal controls that could be exercised (accidentally triggered or intentionally exploited) and result in a security breach such that data is compromised, manipulated or stolen or the system damaged.

1.7 “Software” (i) means proprietary software in object code format, and adaptations, translations, de-compilations, disassemblies, emulations, or derivative works of such software; (ii) means any modifications, enhancements, new versions and new releases of the software provided by Motorola; and (iii) may contain one or more items of software owned by a third party supplier. The term "Software" does not include any third party software provided under separate license or third party software not licensable under the terms of this Agreement.

Section 2 SCOPE

Motorola and Licensee enter into this Agreement in connection with Motorola's delivery of certain proprietary software or products containing embedded or pre-loaded proprietary software, or both. This Agreement contains the terms and conditions of the license Motorola is providing to Licensee, and Licensee’s use of the proprietary software and affiliated documentation.

Section 3 GRANT OF LICENSE

3.1. Subject to the provisions of this Agreement and the payment of applicable license fees, Motorola grants to Licensee a personal, limited, non-transferable (except as permitted in Section 7) and non-exclusive license under Motorola’s copyrights and Confidential Information (as defined in the Primary Agreement) embodied in the Software to use the Software, in object code form, and the Documentation solely in connection with Licensee's use of the Designated Products. This Agreement does not grant any rights to source code.

3.2. If the Software licensed under this Agreement contains or is derived from Open Source Software, the terms and conditions governing the use of such Open Source Software are in the Open Source Software Licenses of the copyright owner and not this Agreement. If there is a conflict between the terms and conditions of this Agreement and the terms and conditions of the Open Source Software Licenses governing Licensee’s use of the Open Source Software, the terms and conditions of the license grant of the applicable Open Source Software Licenses will take precedence over the license grants in this Agreement. If requested by Licensee, Motorola will use commercially reasonable efforts to: (i) determine whether any Open Source Software is provided under this Agreement; and (ii) identify the Open Source Software (or specify where that license may be found).

3.3. TO THE EXTENT, IF ANY, THAT THERE IS A SEPARATE LICENSE AGREEMENT PACKAGED WITH, OR PROVIDED ELECTRONICALLY WITH, A PARTICULAR PRODUCT THAT BECOMES EFFECTIVE ON AN ACT OF ACCEPTANCE BY THE END USER, THEN THAT AGREEMENT SUPERCEDES THIS SOFTWARE LICENSE AGREEMENT AS TO THE END USER OF EACH SUCH PRODUCT.

Section 4 LIMITATIONS ON USE

4.1. Licensee may use the Software only for Licensee's internal business purposes and only in accordance with the Documentation. Any other use of the Software is strictly prohibited. Without limiting the general nature of these restrictions, Licensee will not make the Software available for use by third parties on a "time sharing," "application service provider," or "service bureau" basis or for any other similar commercial rental or sharing arrangement.

4.2. Licensee will not, and will not allow or enable any third party to: (i) reverse engineer, disassemble, peel components, decompile, reprogram or otherwise reduce the Software or any portion to a human perceptible form or otherwise attempt to recreate the source code; (ii) modify, adapt, create

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4.4 Licensee will maintain, during the term of this Agreement and for a period of two years thereafter, accurate records relating to this license grant to verify compliance with this Agreement. Motorola or an independent third party ("Auditor") may inspect Licensee's premises, books and records, upon reasonable prior notice to Licensee, during Licensee's normal business hours and subject to Licensee's facility and security regulations. Motorola is responsible for the payment of all expenses and costs of the Auditor. Any information obtained by Motorola and the Auditor will be kept in strict confidence by Motorola and the Auditor and used solely for the purpose of verifying Licensee's compliance with the terms of this Agreement.

Section 5 OWNERSHIP AND TITLE

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Section 6 LIMITED WARRANTY; DISCLAIMER OF WARRANTY

6.1. Unless otherwise stated in the Primary Agreement, the commencement date and the term of the Software warranty will be a period of ninety (90) days from Motorola's shipment of the Software (the "Warranty Period"). If Licensee is not in breach of any of its obligations under this Agreement, Motorola warrants that the unmodified Software, when used properly and in accordance with the Documentation and this Agreement, will be free from a reproducible defect that eliminates the functionality or successful operation of a feature critical to the primary functionality or successful operation of the Software. Whether a defect occurs will be determined by Motorola solely with reference to the Documentation. Motorola

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6.3. Warranty claims are described in the Primary Agreement.

6.4. The express warranties set forth in this Section 6 are in lieu of, and Motorola disclaims, any and all other warranties (express or implied, oral or written) with respect to the Software or Documentation, including, without limitation, any and all implied warranties of condition, title, non-infringement, merchantability, or fitness for a particular purpose or use by Licensee (whether or not Motorola knows, has reason to know, has been advised, or is otherwise aware of any such purpose or use), whether arising by law, by reason of custom or usage of trade, or by course of dealing. In addition, Motorola disclaims any warranty to any person other than Licensee with respect to the Software or Documentation.

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Section 8 TERM AND TERMINATION

8.1 Licensee's right to use the Software and Documentation will begin when the Primary Agreement is signed by both parties and will continue for the life of the Designated Products with which or for which the Software and Documentation have been provided by Motorola, unless Licensee breaches this Agreement, in which case this Agreement and Licensee's right to use the Software and Documentation may be terminated immediately upon notice by Motorola.

8.2 Within thirty (30) days after termination of this Agreement, Licensee must certify in writing to Motorola that all copies of the Software have been removed or deleted from the Designated Products and that all copies of the Software and Documentation have been returned to Motorola or destroyed by Licensee and are no longer in use by Licensee.

8.3 Licensee acknowledges that Motorola made a considerable investment of resources in the development, marketing, and distribution of the Software and Documentation and that Licensee's breach of this Agreement will result in irreparable harm to Motorola for which monetary damages would be inadequate. If Licensee breaches this Agreement, Motorola may terminate this Agreement and be entitled to all available remedies at law or in equity (including immediate injunctive relief and repossession of all non-embedded Software and associated Documentation unless Licensee is a Federal agency of the

United States Government).

Section 9 Commercial Computer Software

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Section 10 CONFIDENTIALITY

Licensee acknowledges that the Software and Documentation contain Motorola's valuable proprietary and Confidential Information and are Motorola's trade secrets, and that the provisions in the Primary Agreement concerning Confidential Information apply.

Section 11 LIMITATION OF LIABILITY

The Limitation of Liability provision is described in the Primary Agreement.

Section 12 NOTICES

Notices are described in the Primary Agreement.

Section 13 GENERAL

13.1. COPYRIGHT NOTICES. The existence of a copyright notice on the Software will not be construed as an admission or presumption of publication of the Software or public disclosure of any trade secrets associated with the Software.

13.2. COMPLIANCE WITH LAWS. Licensee acknowledges that the Software is subject to the laws and regulations of the United States and Licensee will comply with all applicable laws and regulations, including export laws and regulations of the United States. Licensee will not, without the prior authorization of Motorola and the appropriate governmental authority of the United States, in any form export or re-export, sell or resell, ship or reship, or divert, through direct or indirect means, any item or technical data or direct or indirect products sold or otherwise furnished to any person within any territory for which the United States Government or any of its agencies at the time of the action, requires an export license or other governmental approval. Violation of this provision is a material breach of this Agreement.

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13.5. THIRD PARTY BENEFICIARIES. This Agreement is entered into solely for the benefit of Motorola and Licensee. No third party has the right to make any claim or assert any right under this Agreement, and no third party is deemed a beneficiary of this Agreement. Notwithstanding the foregoing, any licensor or supplier of third party software included in the Software will be a direct and intended third party beneficiary of this Agreement.

13.6. SURVIVAL. Sections 4, 5, 6.4, 7, 8, 9, 10, 11 and 13 survive the termination of this Agreement.

13.7. ORDER OF PRECEDENCE. In the event of inconsistencies between this Exhibit and the Primary Agreement, the parties agree that this Exhibit prevails, only with respect to the specific subject matter of this Exhibit, and not the Primary Agreement or any other exhibit as it applies to any other subject matter.

13.8 SECURITY. Motorola uses reasonable means in the design and writing of its own Software and the acquisition of third party Software to limit Security Vulnerabilities. While no software can be guaranteed to be free from Security Vulnerabilities, if a Security Vulnerability is discovered, Motorola will take the steps set forth in Section 6 of this Agreement.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Stacy Saltzburg, City Clerk
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration and Approval of Council Meeting Schedule Adjustments: Reschedule the July 4, 2023 Council Meeting to July 3, 2023; Reschedule the August 29, 2023 meeting to August 28, 2023; Cancel the meeting of December 26, 2023 and January 2, 2024.

STAFF RECOMMENDED ACTION:

1. Reschedule the July 4, 2023 Council Meeting to July 3, 2023
2. Reschedule the August 29, 2023 meeting to August 28, 2023
3. Cancel the meetings of December 26, 2023 and January 2, 2024

Executive Summary:

At the City Council Retreat of January 19, 2023 the Council discussed their meeting dates for 2023 and gave direction to staff to make a few modifications to the schedule.

Tuesday, July 4, 2023 is an observed holiday. Council gave direction to reschedule the meeting to Monday, July 3, 2023 to meet the requirements of the City Charter and maintain the Council Recess schedule.

Tuesday, August 29, 2023 coincides with the 2023 Arizona League of Cities and Towns Annual Conference and a number of Councilmembers and staff are planning to attend. Council gave direction to reschedule the meeting to Monday, August 28, 2023.

Tuesday, December 26, 2023 and Tuesday, January 2, 2024 are to be canceled in observance of the winter holidays.

Flagstaff City Charter Article II, Section 12 - COUNCIL MEETINGS

The Council shall meet regularly at such times and at such places as shall be prescribed by its rules, but not less frequently than once each month. All meetings of the Council shall be open to the public. No change shall be made in regular meeting times or place without a published seven day notice.

City Council Rules of Procedure Rule 3.01 - Regular Meetings

The City Council shall hold regular meetings at 3:00 p.m. on the first and third Tuesday of January, February, March, April, May, June, September, October, November, and December, and on the first Tuesday of July and third or fourth Tuesday of August unless a majority of the Council decides to postpone or cancel such meeting. No change shall be made in regular meeting times or place without a

published seven day notice.

If the day fixed for any regular meeting of the Council falls upon a day which the City observes as a legal holiday, the meeting may be canceled or held at a time and date designated by the Council.

Financial Impact:
None

Policy Impact:
None

Connection to PBB Key Community Priorities/Objectives & Regional Plan:
N/A

Previous Council Decision on This:
Council gave direction on the modifications at their Retreat of January 19, 2023. This action is to memorialize that direction.

Attachments:

9. A.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Nicole Antonopoulos, Sustainability Director
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration and Approval of Contract: An Energy Efficiency Services Job Order Contract with NORESCO, LLC; and Construction Work Order No. 1 with NORESCO, LLC, in an amount not to exceed $4,423,547, for Phase One of Project Implementation.

STAFF RECOMMENDED ACTION:

1. Award an Energy Efficiency Services Job Order Contract with NORESCO, LLC;
2. Award Construction Work Order No. 1 with NORESCO, LLC, in an amount not to exceed $4,423,547, for Phase One of Project Implementation; and
3. Authorize the City Manager to execute all necessary documents.

Executive Summary:

On November 29, 2021, the City of Flagstaff (City) and NORESCO, LLC (NORESCO) entered into an Energy Service Contract wherein NORESCO agreed to conduct an Investment Grade Audit (Audit) of certain identified City facilities. After providing the City the Audit, the City and NORESCO collaborated to develop an energy program that provides a full range of energy and operational conservation measures (ECMs) to be implemented at a variety of City facilities through a three-phased effort. This program will allow the City to demonstrate the capability of energy cost savings to fund infrastructure improvements that reduce GHG emissions, electrify infrastructure, provide needed capital improvement projects (CIP), and reduce deferred maintenance. The Energy Efficiency Services Job Order Contract is the overarching agreement between NORESCO and the City. Awarding Construction Work Order No. 1 will initiate the performance of the ECMs for Phase One.

Financial Impact:

The cost of Construction Work Order No. 1 (Phase One) of this project will be $4,423,547. Construction Work Order No. 1 will be expended in the General Fund. The fiscal year 2022-2023 portion of the cost is available in account 001-09-402-1310-1-4405 for $2,500,000. The remaining balance will be budgeted in fiscal year 2023-2024. Of this total cost $3,190,847 is related to General Fund program costs.

The remaining $1,232,700 will be paid by other funds through a revenue transfers. These funds include Library, Economic Development, Sustainability, Tourism, Water, Wastewater and Solid Waste.

All transfers are expected to be completed by fiscal year 2027-2028. Staff is recommending using cash balances to fund Construction Work Order No. 1. An option of financing was available, however, financially the City will be able to save approximately $1.4 million in interest expenses over a 20-year period by not financing the cost.

Under Arizona Revised Statute 35-105, the City can use guaranteed utility and operational savings to reinvest in infrastructure. The legislation allows for project terms of up to 25 years. This project pays for itself by generating $6.1 million in savings during the 20-year project term and an additional $2.1 million in years 20 to 25.

Policy Impact:

The Energy Efficiency Services Job Order Contract and Construction Work Order No. 1 with NORESCO support the City's Carbon Neutrality Plan.

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

Priority Based Budget Key Community Priorities and Objectives

Council Goals:

Take meaningful climate change action.

Strategic Priorities:

High performing governance
Safe and healthy community
Inclusive and engaged community
Sustainable, innovative infrastructure
Robust resilient economy
Livable community

Carbon Neutrality Plan

BE-1: Achieve net zero energy City of Flagstaff facilities.
CR-1: Ensure all mitigation actions improve Flagstaff's ability to adapt to the future.
FS-3: Support fuel switching in existing residential and commercial buildings.
FS-1: Reduce or remove natural gas usage in municipal buildings
WS-3: Continue to support water conservation efforts across the Flagstaff community.
BE-3: Reduce energy use in existing buildings**.**

Regional Plan

Goal E&C.2. Achieve carbon neutrality for the Flagstaff community by 2030.
Goal E&C.3. Prepare Flagstaff's community systems and resources to be more resilient to climate change impacts, and address climate change in a manner that prioritizes those most impacted and ensures the costs and benefits of climate adaptation and mitigation are equitably distributed.
Goal E&C.4. Integrate available science into policies governing the use and conservation of Flagstaff's natural resources.

Has There Been Previous Council Decision on This:

1. Adoption of the Climate Action and Adaptation Plan on November 20, 2018.
2. Adoption of the Climate Emergency Declaration Resolution on June 23, 2020.
3. Adoption of the Carbon Neutrality Plan on June 15, 2021.
4. Award of contract to NORESCO on November 2, 2021 to perform an Investment Grade Audit.

Key Considerations:

Upon approval of the Energy Efficiency Services Job Order Contract, NORESCO will be authorized to provide a full range of energy and operational conservation measures (ECMs) to be implemented at a variety of City facilities. Each of the three phases will be detailed and seek the approval of City Council through Construction Work Orders. Currently, City Council is being provided Construction Work Order No. 1 for consideration to authorize NORESCO to perform the ECMs for Phase One.

Energy Conservation Measures

The recommended Phase One ECMs within Construction Work Order No. 1 include the following highlighted upgrades to reduce utility consumption, costs, and associated GHG emissions. Concurrently, the City will realize capital improvement cost avoidance and resolution of maintenance issues as it standardizes equipment and, most importantly, initiates the process of building and infrastructure electrification.

1. LED Lighting and Controls Upgrades – Includes over 5,900 interior retrofits of lighting to LED and 319 lighting control sensors.
2. Mechanical Upgrades – Heating, ventilating, and air conditioning (HVAC) systems will be electrified with heat pumps at Montoya Community and Senior Center. Concurrently, the Energy Management System software will be upgraded and sequences optimized at six locations.
3. Electric Rate Switch for Pumping Accounts – Following an extensive review of water supply electric accounts, it is recommended to switch the electric rate for Lake Mary Well #8 from its current Medium General Service Rate (E-32 M) to a Pumping Rate (E-221).
4. Building Envelope Improvements – This ECM will install weatherstripping, seal windows, and apply spray-foam insulation at 15 facilities totaling approximately 600,000 square feet. Also included at the Jay Lively Ice Rink is the installation of two air curtains at the entrance to the ice arena and an automated roll-up door operator where the ice resurfacing machine exits the building to dump the ice.
5. Electric Vehicle Charging Stations – NORESCO will install 7 level two, dual-port electric vehicle (EV) charging stations at three facilities.
6. Water Conservation – The existing WeatherTRAK irrigation control system will be re-commissioned at 20 locations to maintain coverage while optimizing water use. This ECM includes the installation of new heads, nozzles, flow sensors and master valves at select locations.
7. Water Meter Testing – This task will assist the development of Phase 2 – Water Meters/AMI implementing the water meter testing plan, described in *Section 5.2,* for small meters (2" and under) and survey of large meters (>3"). It includes removal of 179 small meters for accuracy testing and incorporation into recovered revenue models, and replacement with new ultrasonic meters with Itron 500W encoders.

Project Schedule

The Project Schedule for Construction Work Order No. 1 outlines a 20-month project duration inclusive of the final design and installation of the ECMs described herein. Due to current supply chain delivery issues and chip shortages, major mechanical and electrical equipment has significantly prolonged delivery times. The overall schedule duration accounts for these extended material delays coupled with seasonal constraints. With an anticipated contract signing in March 2023, the work will be divided into two separate construction phases.

The first phase will combine the Interior/Exterior LED Lighting, Weatherization (including Jay Lively Ice Rink), Electric Vehicle Charging Stations, and Irrigation Repairs & Re-commissioning. This first phase of construction will be complete by approximately September/November of 2023 and will allow energy savings to start being accrued. The second phase will commence in the spring of 2024 when the major mechanical and electrical equipment is being delivered and/or the weather is favorable for replacing the exterior-mounted equipment and Water Meter Test installations.

Measurement and Verification

NORESCO developed an ECM-specific Measurement and Verification (M&V) Plan for each of the ECMs proposed, which will provide cost-effective verification of savings throughout the Guarantee Period. The proposed M&V Plan offers the City a savings verification strategy that emphasizes M&V rigor where it is best applied, yielding the best return to the City.

Attachments: Presentation
Energy Services & Work Order

Investment Grade Audit Agreement
Investment Grade Audit

Consideration of Energy Efficiency Services Job Order Contract with NORESCO, LLC; and Construction Work Order No. 1

March 21, 2023

TEAM FLAGSTAFF

WE MAKE THE CITY BETTER

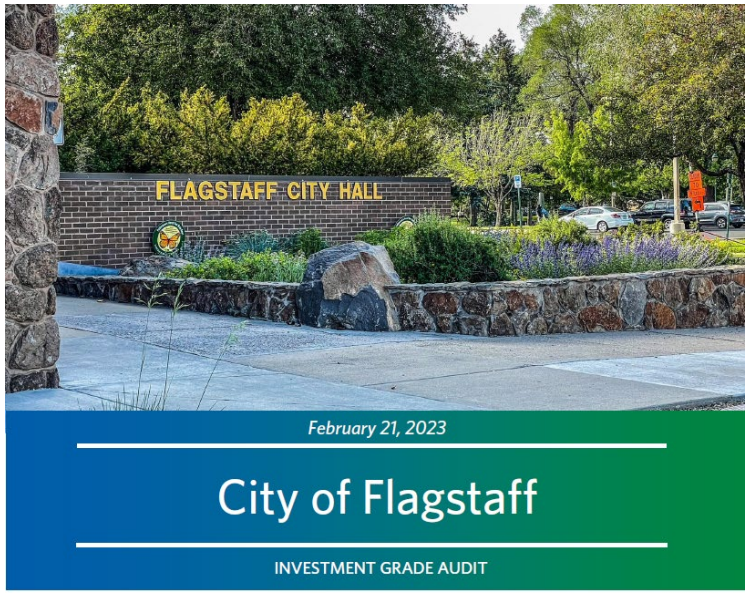
Discussion

- Background information
- Construction Work Order No. 1
  - Highlights
  - Energy Conservation Measures (ECM's)
  - Locations
- Financial Summary
- Timeline / Construction Phase

Background

In 2021 the City entered into contract with Noresco LLC to conduct an Investment Grade Audit:

- The Audit identified opportunities for energy conservation measures across City operations in multiple phases:
  - **Phase 1: Building energy efficiency**
  - Phase 2: Water meters replacement
  - Phase 3: Wastewater upgrades
- Staff worked to develop a list of prioritized energy efficiency measures



NORESCO

Kathy Krasenics, Senior Account Executive
2198 E. Camelback Rd., Ste. 200
Phoenix, AZ 85016
Cell: 602.524.8086 | Fax: 480.308.0338
kathleen.krasenics@noresco.com

Work Order No. 1- Project Highlights

- Multi-phase program that will reduce Flagstaff's municipal carbon emissions by 30%
- Over $4.4 million in facility improvements
- $8.1 million of guaranteed savings
- Upgrades to lighting, HVAC, energy management systems, building envelope and irrigation systems
- New charging stations to support electric fleet

Work Order No. 1- ECMs

- Mechanical Upgrades – **20 Tons of Packaged Equipment** to be replaced with all electric
- Building Envelope – Over **600,000 Square Feet** of facilities weatherized
- LED Lighting – Over **5,000 interior and 600 exterior lighting fixtures** to be upgraded to LED
- EV Charging Stations – **7 stations** to be installed
- Rate Switch for Pumping Accounts for **operational savings**
- Upgrade irrigation with **weather-based controllers**
- AMI **Water Meters Testing** Pilot



Existing wall pack fixtures (above) with 2-26W compact fluorescent lamps to be replaced with amber dark sky compliant LED wall pack (below) that will have full cutoff lighting distribution pattern



Work Order No. 1

Aquaplex Center
Cinder Lake Landfill
City Hall
City Warehouse
Coconino Warehouse
Fire Station #1
Fire Station #10
Fire Station #2
Fire Station #3
Fire Station #3
Fire Station #4
Fire Station #5
Fire Station #6
Hal Jensen Rec Center
J. Lively Ice Rink
Joe C. Montoya Community and Senior Center
Lake Mary Water Plant
Library Main
Milligan House
Murdoch Center
NACET Accelerator
NACET Incubator
Various Parks
Public Works
Sustainability
Rio De Flag Wastewater
Theatrikos Building
Thorpe Shop
USGS #5
USGS #6
Utilities Shop
Visitor's Center
Wildcat Wastewater Plant
Woody Mountain Clarifier

Financial Summary

The Budget Team approved funding Construction Work Order No. 1 with cash:

- The long-term avoidance of interest on debt service
- Adds to immediate direct savings to the City versus paying off debt service

Financial Summary

Projects	ECM Cost	Year 1 Savings	Annual GHG Reductions*
LED Lighting and Controls	$2,669,462	$84,894	492
Energy Management System Upgrades		$25,150	206
Heat Pump Heating and Cooling	$350,960	$(2,046)	32
Electric Rate Switch for Pumping Accounts		$10,109	
Weatherization & Air-Sealing	$388,135	$13,577	147
Ice Rink Automated Door Closer and Air Curtains	$35,440	$570	5
Electric Vehicle Charging Stations	$304,449	$28,342	46
Water Conservation			
Irrigation Repairs & Re-Commissioning	$482,746	$63,727	
Water Meter Testing	$192,356		
Totals	**$4,423,547**	**$224,323**	**928**

metric tons

Financial Summary

Year	Utility Savings	O & M Savings	Guaranteed Savings	M & V Service	Net Cash Flow
1	$213,729	$10,594	$224,323	$14,821	$209,503
2	$220,535	$10,806	$231,341	$9,731	$221,610
3	$227,571	$11,022	$238,593	$10,023	$228,570
4	$234,847	$11,242	$246,089	$10,324	$235,765
5	$242,368	$11,467	$253,835	$10,633	$243,202
6	$250,147	$11,697	$261,844	$10,952	$250,891
7	$258,189	$11,931	$270,120	$11,281	$258,839
8	$266,506	$12,169	$278,675	$11,619	$267,056
9	$275,108	$12,413	$287,521	$11,968	$275,553
10	$284,004	$12,661	$296,665	$12,327	$284,338
11	$293,205	$12,914	$306,119	$12,697	$293,422
12	$302,722	$13,172	$315,894	$13,078	$302,816
13	$312,567	$13,436	$326,003	$13,470	$312,533
14	$322,750	$13,704	$336,454	$13,874	$322,580
15	$333,285	$13,979	$347,264	$14,290	$332,974
16	$344,184	$14,258	$358,442	$14,719	$343,722
17	$355,459	$14,543	$370,002	$15,161	$354,841
18	$367,125	$14,834	$381,959	$15,615	$366,344
19	$379,197	$15,131	$394,328	$16,084	$378,244
20	$391,688	$15,433	$407,121	$16,566	$390,554
21	$404,612	$15,742	$420,354	$0	$420,354
22	$417,989	$16,057	$434,046	$0	$434,046
23	$431,830	$16,378	$448,208	$0	$448,208
24	$446,157	$16,706	$462,863	$0	$462,863
25	$460,984	$17,040	$478,024	$0	$478,024
Totals	**$8,036,757**	**$339,329**	**$8,376,086**	**$259,235**	**$8,116,851**

Work Order No. 1 Timeline

Milestones	Estimated Date
Consideration for Approval of Investment Grade Audit	~~Nov 2, 2021~~
Kickoff Meeting	~~Nov 16, 2021~~
Planning and Logistics	~~Nov 2021~~
Site Work	~~Dec 2021 – Jan 2022~~
Evaluation, Scope Workshops, Structure Financing	~~Feb – May 2022~~
Deliver and Review Investment Grade Audit and Energy Services Contract	~~Aug 2022~~
Finalize Energy Services Contract and Financing, Notice-to-Proceed	**Sept 2022 - Mar 2023**
Procurement, Design & Construction	**Starting Q3 – 2023**

Construction Timeline – 20 Months

With an anticipated contract signing in March 2023, the work will be divided into (2) two separate construction phases:

1. September/November of 2023: Interior/Exterior LED Lighting, Weatherization, Electric Vehicle Charging Stations, and Irrigation Repairs.
2. March/April of 2024: Mechanical and electrical equipment delivered and installed and Water Meter Test installations.

Work will be performed during normal business days and hours defined as Monday through Friday, 7:00 a.m. to 3:30 p.m., with an exception of City observed holidays.

Questions?

Thank you.

Nicole Antonopoulos
Nantonopoulos@flagstaffaz.gov

ENERGY EFFICIENCY SERVICES JOB ORDER CONTRACT

BY AND BETWEEN

CITY OF FLAGSTAFF

AND

NORESCO, LLC

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ENERGY EFFICIENCY SERVICES JOB ORDER CONTRACT BY AND BETWEEN CUSTOMER AND NORESCO, LLC

THIS ENERGY EFFICIENCY SERVICES JOB ORDER CONTRACT (the "Agreement") is entered into this _____day of 2023, by and between the City of Flagstaff, a political subdivision of the State of Arizona, having its principal place of business located at 211 West Aspen Avenue, Flagstaff, AZ 86001 (hereinafter referred to as "Customer") and NORESCO, LLC, a Delaware limited liability company, having its principal place of business at One Research Drive, Suite 400C, Westborough, MA 01581 (hereinafter referred to as "NORESCO"). The parties to this Agreement will be collectively referred to as the "Parties" and individually as a "Party."

SECTION 1 SCOPE OF SERVICES

(a) The Work: In accordance with the terms of this Agreement, NORESCO may perform multiple phases of design/build construction work ("Construction Work"), and the Customer may determine whether to amend the Scope of Services to include preliminary strategic sourcing analysis ("Strategic Sourcing Work"). The Parties hereby acknowledge that the Construction Work primarily relates to construction of the Energy Conservation Measures ("ECMs") desired by Customer, Strategic Sourcing Work relates primarily to a preliminary analysis by NORESCO of specified customer budget categories for the purpose of identifying expense reduction and/or revenue enhancement in one or more budget categories. Where Customer desires that Construction Work be performed, Customer shall issue a Construction Work Order to NORESCO. Where Customer desires that Strategic Sourcing Work be performed, Customer may issue a Strategic Sourcing Addendum to NORESCO.

(b) Construction Work: Upon delivery by the Customer to NORESCO of a construction work order substantially in the form attached to this Agreement as Exhibit A ("Construction Work Order"), NORESCO shall furnish all labor, materials and equipment and perform all work required for the completion of the Scope of Services set forth in Attachment C to that Construction Work Order, including the installation of the ECMs, for the facilities ("Facilities") described in Attachment B to that Construction Work Order, as such Scope of Services and Facilities may be modified in accordance with this Agreement. Customer and NORESCO shall mutually plan the scheduling of the construction work. NORESCO will list installed ECMs on Attachment J to the Construction Work Order and made a part thereof at the time that construction is complete.

SECTION 2 CONTRACT DOCUMENTS

(a) Upon execution of this Agreement by both Parties, this Agreement and its Exhibits/Attachments will constitute the entire Agreement between the Parties relating to the subject matter hereof, and with the exception of the IGA concerning the water meter and wastewater process work, supersedes all proposals, previous agreements, discussions, correspondences, and all other communications, whether oral or written, between the Parties relating to the subject matter of this Agreement.

(b) Headings are for the convenience of reference only and are not to be construed as a part of the Agreement.

- This Agreement may not be modified or amended except in writing signed by both Parties.

- This Agreement may be executed simultaneously in two (2) or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

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- At any time after execution of the Agreement, the Agreement may be terminated in whole or part by Customer for convenience upon thirty (30) days written notice to NORESCO, without further penalty and liability to NORESCO, provided that Customer has paid to NORESCO: (a) all amounts due as set forth in Section 5 and on Attachment G (other than amounts due for future performance by NORESCO) as further agreed upon in writing by the Parties.

- Customer may terminate all or a portion of the Agreement due to budget constraints and non-appropriation of funds for the following fiscal year, without penalty or liability to NORESCO.

- In the event the City terminates the contract for budget constraints and non-appropriation of funds for the following fiscal year, City shall pay NORESCO for materials and/or services accepted by the City prior to the date of termination.

SECTION 3 NOTICES

All notices and other communication under this Agreement (other than regularly scheduled payments) shall be deemed properly given upon receipt if delivered in person or sent by electronic facsimile with regular mail follow-up or sent by overnight delivery service or sent by registered mail, return receipt requested and postage prepaid, addressed as follows:

To: Customer
Patrick Brown
Purchasing Director
211 W. Aspen Avenue
Flagstaff, AZ 86001

With a copy to:
Nicole Antonopoulos
Sustainability Director
City of Flagstaff
419 N. Mogollon Street
Flagstaff, AZ 86001

To NORESCO:
One Research Drive
Suite 400C
Westborough, MA 01581
Attention: Pablo Hernandez

Either Party may change such address from time to time by written notice to the other Party.

SECTION 4 REPRESENTATIONS AND WARRANTIES

Each Party warrants and represents to the other that:

(a) It has all requisite power, authority, licenses, permits, and franchises, corporate or otherwise, to execute and deliver this Agreement and perform its obligations hereunder;

(b) Its execution, delivery, and performance of this Agreement have been duly authorized by, or are in accordance with, as to NORESCO, its organic instruments and, as to Customer, by all requisite municipal, board, or other action and are not in breach of any applicable law, code or regulation; this Agreement has been duly executed and delivered by the signatories so authorized, and constitutes each Party's legal, valid and binding obligation;

(c) Its execution, delivery, and performance of this Agreement shall not result in a breach or

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violation of, or constitute a default under, any agreement, potential lease or instrument to which it is a party or by which it or its properties may be bound or affected;

(d) It has not received any notice, nor to the best of its knowledge is there pending or threatened any notice of any violation of any applicable laws, ordinances, regulations, rules, decrees, awards, permits or orders which would materially adversely affect its ability to perform hereunder;

(e) The persons executing this Agreement are fully authorized by law to do so;

(f) In addition, Customer warrants and represents to NORESCO that Customer has obtained or shall obtain all necessary governmental, legal, administrative and any other approval necessary for it to enter into this Agreement;

(g) To assist in NORESCO's tax compliance, upon job completion Customer agrees, if applicable, to execute the required Written Allocation including the Declaration related to Section 179D of the Internal Revenue Code. NORESCO will be responsible for preparing the Declaration, all accompanying documentation and the contents therein. NORESCO will be designated the sole Section 179D beneficiary; and

(h) The Customer acknowledges and agrees that NORESCO has not acted as a municipal financial advisor to the Customer, nor is NORESCO providing financial advisory services, and that the Customer has not relied on NORESCO for any matters relating to the financing of the Construction Work, including issuance of the Bonds.

SECTION 5 INDEPENDENT CONTRACTOR

▶ Except to the extent that the Customer may coordinate with the NORESCO representative identified in a specific Construction Work Order regarding issues caused by business and business operations on the property, nothing in this Agreement shall be construed as reserving to Customer any right to exercise any control over or to direct in any respect the conduct or management of business or operations of NORESCO on the property. The entire control or direction of such business and operations shall be in and shall remain in NORESCO, subject only to NORESCO's performance of its obligations under this Agreement. Neither NORESCO nor any person performing any duties or engaged in any work on the property on behalf of NORESCO shall be deemed an employee or agent of Customer.

▶ Nothing in this Section shall be deemed to be a waiver by the Customer of the right to use its property. The Customer and NORESCO are independent of one another and shall have no other relationship relating to or arising out of this Agreement. Neither Party shall have or hold itself out as having the right or authority to bind or create liability for the other by its intentional or negligent act or omission, or to make any contract or otherwise assume any obligation or responsibility in the name of or on behalf of the other Party.

SECTION 6 ADDITIONAL REPRESENTATIONS AND WARRANTIES OF CUSTOMER

Customer hereby warrants and represents to NORESCO that:

(a) Customer presently intends to continue to use the property in a manner reasonably similar to its present use;

(b) Customer does not presently contemplate any changes to the electrical and thermal consumption characteristics of the property as these existed during the base period except as may have been disclosed to NORESCO by Customer in writing prior to the execution of this Agreement;

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(c) Customer will provide NORESCO with all records requested by NORESCO and all information in provided shall be, true and accurate in all material respects except as may be disclosed by Customer in writing;

(d) Customer has not entered into any contracts or agreements for the property with persons or entities other than NORESCO regarding the provision of the energy services referenced herein.

SECTION 7 THIRD PARTY BENEFICIARIES

Except as may be specifically provided for in this Agreement, the Parties hereto do not intend to create any rights for, or grant any remedies to, any third party beneficiary of this Agreement.

SECTION 8 GOVERNING LAW

The terms and conditions of this Agreement shall be governed by the laws of the Commonwealth of Massachusetts without regard to conflicts of law principles.

SECTION 9 ORDER OF PRECEDENCE

In the event of conflicts among the terms and conditions of the Contract Documents, interpretation shall be based on the following descending order of priority:

- Latest Change Order to a Construction Work Order
- Construction Work Order
- Latest Amendment to the Agreement
- Agreement
- Energy Services Contract No. 2021-63 (Investment Grade Audit)

SECTION 10 PROTECTING PERSONAL DATA

NORESCO processes personal data as described in our privacy notices at noresco.com. The parties will comply with applicable data privacy laws governing personal data processed in connection with this Agreement, including the California Consumer Privacy Act (CCPA), and take all reasonable commercial and legal steps to protect personal data. If Customer provides NORESCO with personal data, Customer will ensure that it has the legal right to do so, including notifying the individuals whose personal data is shared. If a party collects or processes personal data from California residents under this Agreement, such party is a “Service Provider” under the CCPA, and will not sell or exchange such personal data for anything of value.

SECTION 11 CANCELLATION FOR CONFLICT OF INTEREST

The Agreement is subject to the cancellation provisions of A.R.S. § 38-511.

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IN WITNESS WHEREOF, the duly authorized officers or representatives of the Parties have set their hand on the date first written above with the intent to be legally bound.

NORESCO, LLC:

By:_____

Title: Pablo Hernandez, Vice President

Witness: _____

CITY OF FLAGSTAFF

By:_____

Title:_____

Witness: _____

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney's Office

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EXHIBIT A

CONSTRUCTION WORK ORDER NO. _____
AND NOTICE TO PROCEED

1. This Construction Work Order No. __, executed between NORESCO and Customer and dated _____ ("Construction Work Order Effective Date"), is issued pursuant to the Agreement dated _____, between NORESCO and Customer. All terms of the Agreement are incorporated herein.

2. The terms applicable to this Construction Work Order are set forth in the Agreement, this Construction Work Order, and attachments hereto.

3. Customer hereby requests that NORESCO complete the Construction Work described in this Construction Work Order and NORESCO agrees to complete the Construction Work described in this Construction Work Order.

4. Customer hereby acknowledges that this Construction Work Order constitutes a valid Notice to Proceed issued by the Customer for the work discussed herein.

By signing below, the Parties agree to the terms of this Construction Work Order.

NORESCO, LLC

Signature: _____

Printed Name: _____

Title: _____

Date: _____

City of Flagstaff

Signature: _____

Printed Name: _____

Title: _____

Date: _____

ATTEST:

_____
City Clerk

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APPROVED AS TO FORM:

_____

City Attorney's Office

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EXHIBIT A,

ATTACHMENT A

TERMS FOR CONSTRUCTION WORK

All Capitalized terms not defined herein, shall have the definition as set for the in the Agreement.

SECTION 1 SCOPE OF SERVICES

(a) Construction Work: NORESCO shall furnish all labor, materials, and equipment and perform all work required for the completion of the Scope of Services set forth in Attachment C at Customer's buildings/land, premises described in Attachment B ("Property"), including the installation of the energy conservation measures listed therein, as such Scope of Services and such Attachments may be modified in accordance with this Construction Work Order. Customer and NORESCO shall mutually plan the scheduling of the construction work. The construction work will be planned to minimize the interruption of the daily routine of Customer's staff and students except as permitted in writing by Customer. NORESCO will list installed equipment on Attachment J hereto and made a part hereof at the time that construction is complete. Attachment J may be modified as provided for herein.

(b) Hazardous Materials: Unless explicitly and specifically identified in Attachment C, NORESCO's Scope of Services is predicated on the viability of this Project without any asbestos or hazardous materials abatement being required by NORESCO. For the avoidance of doubt, unless explicitly and specifically identified in Attachment C or in Section 1(c) below, the Scope of Services does not include directly or indirectly performing or arranging for the detection, testing, handling, storage, removal, treatment, transportation, disposal, monitoring, abatement or remediation of any contamination of any premise, Property, site, facility, etc. at which Work is performed and any soil or groundwater at the premise, Property, site, facility, etc. by petroleum or petroleum products (collectively called "Oil"), mold, lead, asbestos, or any hazardous, toxic, radioactive or infectious substances, including any substances regulated under RCRA, CERCLA or any Applicable Law (collectively called "Hazardous Materials"), including without limitation: Ionization smoke detectors, ballasts, mercury bulb thermostats, used oil, contaminated filters, contaminated absorbents, asbestos, lead-containing paint, mold, and refrigerant. Except as explicitly and specifically identified in Attachment C, the Customer represents and warrants that, to the best of its knowledge following due inquiry, there are no Hazardous Materials or Oil present where the Work is to be performed. All services have been priced and agreed to by NORESCO in reliance on the Customer's representations as set forth in this Article. In the event that (i) NORESCO encounters any Hazardous Materials which are in the immediate vicinity of NORESCO's work, or (ii) NORESCO determines that its work will result in the disturbance of Hazardous Materials, or (iii) NORESCO determines that the presence of Hazardous Materials will impede NORESCO's work, NORESCO will notify Customer of the same and Customer will, at its cost, cause the Hazardous Materials to be promptly and properly removed, enclosed, encapsulated or otherwise abated in accordance with applicable laws and regulations, or alternatively, Customer, at its cost, may provide written test reports showing that Hazardous Materials in that area have been properly removed, enclosed encapsulated or otherwise abated in accordance with applicable laws. In the event NORESCO cannot determine whether any particular material does or does not contain Hazardous Materials, Customer, upon NORESCO's written request, will, at its cost, promptly perform tests or cause tests to be performed in order to determine whether or not such material is a Hazardous Material and/or whether there are unacceptable levels of airborne particulate material containing

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asbestos or such other Hazardous particulate(s) or provide such a test report. Under no circumstances, shall NORESCO be required to handle Hazardous materials.

(c) Disposal: NORESCO, at its cost, shall be responsible for disposal of all non-hazardous equipment and materials which are rendered useless and removed as a result of the installation of the ECMs pursuant to this Construction Work Order. In addition, NORESCO shall, at its cost, cause all lamps and PCB-contaminated ballasts, if any, which have been rendered useless and removed as a result of the installations of the ECMs to be transported and disposed of via recycling and incineration, respectively. All other existing PCB-contaminated ballasts, lamps and any other hazardous substances, however, remain the responsibility of Customer and NORESCO shall assume no liability in connection with their removal, handling, transportation, and/or disposal. In all instances, with the only exception being those hazardous materials that NORESCO brings to the site, the Customer will be the "Generator" of record and sign any and all disposal documents (i.e. manifests, bills of lading, etc.) in order to document the abatement or removal of any such Hazardous Materials from Customer's site or Premises.

(d) Maintenance: To the extent provided for in Attachment I "Maintenance Services," NORESCO will service and maintain the equipment that is specifically identified therein, at a cost to the Customer which is provided for in Attachment G, for the Term of this Construction Work Order. Except for ECMs (or other equipment) which are to be maintained by NORESCO, Customer shall be responsible for servicing and maintaining the ECMs (and such other equipment) at its own cost.

(e) Measurement & Verification: To the extent provided for in Attachment F – "Guaranty of Energy Cost Savings" - NORESCO will also supply such ongoing Measurement & Verification services to the Customer which may be agreed upon between the Parties at an annual fee to be set forth in Attachment G.

(f) Compliance With Law: NORESCO shall comply with and obtain, at its expense, all licenses and permits required by Federal, state and local laws in connection with the installation of the ECMs. To the extent that NORESCO agrees to perform operations and/or maintenance of specified ECMs or other equipment, it shall comply with and obtain, at its expense, all licenses and permits which may be required by Federal, state and local laws in connection with the operation and/or maintenance of such specified ECMs. In the event that NORESCO cannot procure any such license or permit in light of a requirement that Customer is required to do so, Customer will procure the same. Should a change in law occur subsequent to the date of execution of the Construction Work Order that increases NORESCO's Project costs, the parties shall, to the extent allowed by law, negotiate an equitable resolution. NORESCO shall pay the required prevailing wage rates for work in connection with this Project to the extent required by Arizona law.

(g) Taxes: Notwithstanding any other provision herein, Customer shall be responsible for all taxes arising from or in connection with Customer's participation in this Construction Work Order and the benefits to Customer hereunder. Customer shall reimburse NORESCO for any taxes, permits, tariffs, or fees not in effect on the date of this Construction Work Order, but for which NORESCO may become liable, directly or indirectly, during the Term of this Construction Work Order. If Customer is a tax-exempt entity, it shall cooperate reasonably with NORESCO to ensure purchases of materials or equipment required under this Construction Work Order enjoy any reasonable favorable tax considerations available under applicable State or local law or regulation.

(h) Non-Discrimination: NORESCO agrees not to knowingly or willfully discriminate against any employee, or applicant for employment, to be employed in the performance of this Construction Work Order, with respect to hire, tenure, terms, conditions, or privileges of

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employment, or any matter directly or indirectly related to employment, because of age, sex, race, disability, color, religion, national origin, Vietnam era military service, or ancestry in accordance with applicable Federal, State, or local laws.

(i) Standards of Service and Comfort: Customer shall operate the ECMs in a manner that shall provide the standards of service and comfort provided for in Attachment K hereto.

(j) Specifications: Prior to beginning the work hereunder, NORESCO may provide (or Customer, at its option, may reasonably request to have NORESCO provide) written specification of, any ECMs to be installed. Customer shall furnish its written approval or disapproval of each such written specification within ten (10) working days following its receipt of written notice by NORESCO of completion of each such sample installation or the provision of such written specifications to Customer. If Customer disapproves any such ECM, NORESCO shall have the right to provide a substitute ECM which conforms to the applicable specifications or is equivalent to any applicable sample provided and approved by Customer hereunder, for Customer's approval. In the event Customer approves the substitute ECMs (in writing), NORESCO shall revise the Attachments to reflect each such substitution, subject to Customer's written approval of each revised Attachment. In the event that Customer does not approve or disapprove of any ECM(s) within ten (10) working days following NORESCO 's written notice to Customer that the written specification is ready for inspection, Customer shall be deemed to have given its approval. If, however, Customer again does not approve of any such substituted ECMs or specifications, the Parties hereby agree to negotiate a mutually acceptable solution. Customer shall not unreasonably withhold any approval provided for herein.

(k) Duties, Obligations and Responsibilities of NORESCO:

(i) All labor furnished under this Construction Work Order shall be competent to perform the tasks undertaken, that all materials and equipment provided shall be new and of appropriate quality, and that the completed work shall comply with the requirements of this Construction Work Order.

(ii) NORESCO shall maintain the Project site in a reasonably clean condition during the performance of the construction work.

(iii) NORESCO shall thoroughly and regularly clean the Project site of all nonhazardous debris, trash and excess material or equipment.

(iv) At all times relevant to this Construction Work Order, NORESCO shall permit Customer or any of its representatives to enter upon the Project site to review or inspect the construction work without formality or other procedure.

(v) NORESCO will provide equipment manuals and other appropriate information regarding equipment installed hereunder to Customer at or about the time of Substantial Completion.

SECTION 2 OWNERSHIP OF ECMS

Ownership of and title to the ECMs referenced in Attachment E(1) to each Delivery and Acceptance Certificate (Attachment E) will automatically transfer to the Customer upon both: (a) the delivery of each such Delivery and Acceptance Certificate and Attachment E(1) by Customer to NORESCO, the execution and delivery of which shall not be unreasonably withheld or delayed, and (b) completion of all Customer's payment obligations to NORESCO, excluding payment obligations related to maintenance or other annual services hereunder.

Subject and subordinate to Lessors rights pursuant to the potential Lease, as defined below, NORESCO under this Construction Work Order shall be entitled to all rights, benefits, and remedies afforded a secured party under law with respect to the equipment installed pursuant to

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this Construction Work Order, including but not limited to those under the Uniform Commercial Code, as adopted in the State of Arizona or any other applicable state ("Code"). NORESCO shall retain such security interest in the ECMs, pursuant to this Construction Work Order, for equipment installed hereunder until Customer shall have accepted the same and title has transferred to Customer. If requested by NORESCO in connection therewith, Customer agrees to provide to NORESCO appropriate financing statements and other documents necessary in order for NORESCO and/or any bank, lender or financial institution to which NORESCO has assigned any interest in this Construction Work Order, to perfect said subordinate security interest in the ECMs.

SECTION 3 FINANCIAL SERVICES

Energy Performance Contract Municipal Lease and Option to Purchase Agreement:

- Customer hereby represents and warrants to NORESCO that if the Customer enters into a lease ("Lease") with a third party lessor, Customer's obligation to make payments pursuant to the Lease will commence on the date that funds are deposited in the Escrow Fund.

- Customer acknowledges and understands that the amount of the potential Lease payments will be subject to current market conditions at the time of final credit approval and that the effectiveness of the potential Lease will be subject to final credit approval. Customer further acknowledges that its responsibility for the payments described in this Construction Work Order are in no way contingent on the effectiveness of the potential Lease.

SECTION 4 APPROPRIATION

Customer warrants and represents that Customer has on-hand, or shall obtain complete Project funding to compensate NORESCO for their services, in accordance with this Agreement, before Notice to Proceed shall be issued.

SECTION 5 COMPENSATION AND PAYMENT

(a) During the period beginning on the date of execution of this Construction Work Order and continuing through the Date of Substantial Completion for this Construction Work Order, Customer will make monthly progress payments to NORESCO based upon the portion of the work completed at the end of each month, as respectively provided for in Attachment G for which payment is being made. Customer shall (within five (5) days of receipt) execute and deliver to NORESCO completed forms E-1 (Attachment E-1) upon completion by NORESCO of each ECM. A Final Delivery and Acceptance Certificate (Attachment E-2) shall be executed by Customer upon final completion of the ECMs. Customer shall not unreasonably withhold or delay the execution of any Delivery and Acceptance Certificate, which shall be deemed approved by NORESCO if Customer has not taken action with respect to any Certificate within ten (10) days of its receipt thereof. For the purposes of this Construction Work Order the term "Substantial Completion" shall mean that the subject ECM has been demonstrated by NORESCO to be operating in a manner consistent with its manufacturer's intended use. For the purposes of this Construction Work Order, the terms "Final Completion" or "Final Acceptance" shall mean that NORESCO has fulfilled all of its construction obligations for all ECMs installed under this Construction Work Order. This shall include the completion of all punchlist items and the submission of all required documentation.

(b) During the month following each successive twelve (12) month period beginning with the first day of the month following the date on which the Customer executes a Final Delivery and Acceptance Certificate (Attachment E-2), Customer shall pay the annual maintenance and measurement and verification (M&V) service fees (collectively, the "Performance Period Fee") set forth in Attachment G.

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(c) Thirty (30) days after the date of an invoice on account of work done by NORESCO, Customer shall pay NORESCO 95% of the value of NORESCO's work. The remaining 5% retained shall be held as additional security for the faithful performance by NORESCO of all the work required under this Construction Work Order and shall be paid to NORESCO within thirty (30) days after Final Acceptance.

(d) Amounts not paid to NORESCO on or before the due dates specified in Sections 5(a)-(c) above will accrue interest at the rate of the prime interest rate plus four (4) percent for the number of days following the due date until such time as such amount due has been paid in full.

SECTION 6 COMMENCEMENT DATE AND TERM

The Commencement Date shall be the first (1st) day of the month following the date of execution of the Delivery and Acceptance Certificate (Attachment E-2) upon Final Acceptance. Subject to the following sentence, the Term of this Construction Work Order shall begin on the Commencement Date and shall end exactly twenty (20) years from the commencement date, unless terminated prior to such date, as provided for in Section 13 and/or Section 16 of this Construction Work Order. If not otherwise terminated as provided for herein, the Term of this Construction Work Order shall terminate simultaneously with any termination of the potential Lease or termination of the Measurement and Verification Services. Nonetheless, the Construction Work Order shall be effective and binding upon the parties immediately upon its execution, and the period from contract execution until the Commencement Date shall be known as the "Interim Period".

SECTION 7 PUBLICITY

Customer hereby grants to NORESCO and its directors, officers, employees, and affiliates (its "Authorized Representatives"):

- authorization to use Customer's name in NORESCO's client list;
- authorization to disclose the nature of Customer's relationship with NORESCO and certain summary "Project Information" (as defined below) in connection with the work for use in NORESCO's marketing efforts (the "Marketing Works");
- an non-exclusive, nontransferable, royalty-free license to copy any Project progress photos taken by NORESCO, or photos or other copyrighted material supplied by the Customer regarding the Project (the "Licensed Material") or any portion thereof, solely as needed to create Marketing Works, and
- authorization allowing NORESCO to publicly display the Licensed Material included in the Marketing Works.

Summary "Project Information" may include the location of the project, services provided by NORESCO in connection with the project, project price and any recognition or certification (e.g., LEED® certification) associated with the project. Authorized marketing materials which include summary Project Information–and/or Customer's name shall include internal newsletters or publications, press releases, case studies, photos, promotional brochures, and other publications (e.g. annual reports) created by or on behalf of NORESCO (the "Marketing Works"). Customer warrants that it owns the copyrights in the Licensed Material and waives any fees or royalties for use of the Licensed Material in the Marketing Works. For the avoidance of doubt, none of NORESCO, its Authorized Representatives, successors, or assigns has authorization from the Customer to publicize the Customer name, summary Project Information or Licensed Material for any other purpose.

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SECTION 8 GUARANTEE OF ENERGY SAVINGS

NORESCO will guarantee to the Customer the amount of energy savings determined in accordance with Attachment F, "Guaranty of Energy Cost Savings".

SECTION 9 RIGHT OF ENTRY/SPACE

During the Term of this Construction Work Order, Customer shall provide NORESCO, and its employees, agents and subcontractors, including any utility which provides or may provide any payment under this Construction Work Order, access to the Property for the purpose of fulfilling NORESCO's obligations under this Construction Work Order. Customer shall provide mutually satisfactory space for the installation and operation of the ECMs and shall protect such equipment in the same careful manner that Customer protects its Property. Additionally, Customer shall provide NORESCO remote electronic access to the Energy Management System (if required) during the Term of this Construction Work Order. NORESCO shall obey and abide by any and all reasonable rules of Customer relative to the Property as they would directly relate to NORESCO's performance of its obligations under this Construction Work Order.

SECTION 10 CHANGES IN WORK

- The quantity, quality, dimensions, type, or other characteristics of the ECMs may be changed only by written consent of the Customer and NORESCO (and, where required by the potential Lease, the Lessor), via the execution of a Change Order Form (Attachment H). For any such Change Order request, NORESCO shall provide documentation substantiating the price increase.

- Changes not within the context of the original Scope of Services and/or an increase in the amount of the Construction Work Order exceeding $50,000 may not be accomplished through the Change Order process, but shall require an amendment to the associated Construction Work Order and City Council approval.

- The parties agree that the Project Cost is based on prices of materials and labor in effect as of the date of the Agreement. Unless constituting a change to the original Scope of Services and/or an increase in the amount of the Construction Work Order exceeding $50,000, the Project Cost may be adjusted via Change Order if changes in tariffs, import duties, trade policy, epidemics, applicable laws, market conditions, or related impacts result in substantial inequity (i.e. increase in over 5% of the Project Cost) to NORESCO, or its subcontractors/suppliers at any tier.

SECTION 11 WARRANTIES

(a) NORESCO warrants that the design, engineering, and installation services it performs will be performed consistent with good engineering practices and that such work is warranted to be free from defects in materials and workmanship for a period of two (2) years from the date of execution of the Delivery and Acceptance Certificate by the Customer with respect to Substantial Completion. Any manufacturers' warranties which exceed this two (2) year period shall be assigned to Customer to the extent allowed by the manufacturer. This warranty shall survive termination or expiration of the Agreement.

- Upon receipt of written notice from Customer, NORESCO at its' own expense shall promptly correct work rejected as defective or as failing to conform to the Agreement, whether observed before or after acceptance, and whether or not fabricated, installed or completed by NORESCO, and shall bear all costs of correction. If NORESCO does not correct deficiencies within a reasonable time specified in the written notice from Customer, Customer may perform

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the work and NORESCO shall be liable for the costs. This two (2) year warranty is in addition to and does not limit NORESCO's other obligations herein. This warranty shall survive termination or expiration of the Agreement.

SECTION 12 CUSTOMER ROLE AND RESPONSIBILITIES

(a) Operations: The Customer shall operate the equipment installed hereunder in accordance with the manufacturers' recommendations and the procedures supplied to the Customer by NORESCO.

(b) Maintenance: The Customer shall, at its expense, maintain the Property in good working order during the Term of this Construction Work Order. Except as may otherwise be provided for in Attachment I, the Customer will maintain, at Customer's expense: (i) the equipment and all other components which comprise the ECMs (following the date of Substantial Completion), and (ii) all other equipment which is attached thereto and/or is integral to the proper functioning of the ECMs.

(c) Malfunctions: The Customer will notify NORESCO immediately in the event of any malfunction in the operation of the ECMs or the equipment installed hereunder.

(d) Protection of ECMs: Except in the case of emergency, the Customer will not remove, move, alter, turn off, or otherwise significantly affect the operation of the equipment installed hereunder or the operation of the ECMs, or any individual part thereof, without the prior approval of NORESCO, which approval shall not be unreasonably withheld. After receiving NORESCO's approval, Customer shall proceed as instructed. Customer shall act reasonably to protect the ECMs from damage or injury, if, due to an emergency, it is not reasonable to notify NORESCO before acting. Customer agrees to protect and preserve the facility envelope and the operating condition of all ECMs, mechanical systems, and other energy consuming systems located on the Property.

(e) Measurement & Verification System: Customer shall not alter, move, modify, or otherwise change the measurement and verification system or any component thereof without the written consent of NORESCO unless such action is in accordance with operating procedures provided by NORESCO.

(f) Adjustment to Baseline: If, in the reasonable opinion of NORESCO, the Customer does not reasonably protect the ECMs and/or maintain the Property in good repair and good working condition, then NORESCO will equitably adjust the baseline, as referenced in Attachment F, for any increased energy usages at the Property.

(g) Changes to Property: The Customer will notify NORESCO in writing at least thirty (30) days prior to making any change to the Property that would significantly affect the energy usage at the Property, including but not limited to changes in the hours or days that the Property is occupied or operated, the number of occupants (including, but not limited to, staff, faculty and students), the activity conducted, the equipment, or the size of the Property. In the event NORESCO receives such notification or otherwise determines that such a change has occurred, it will make the appropriate revisions to the Attachments or take such other action as may be provided for hereunder.

(h) Energy Usage Data: The Customer will make available to NORESCO, on a monthly basis for the Term of this Construction Work Order, copies of all energy bills, energy usage data, and any and all other such documentation maintained by the Customer, as requested by NORESCO, which is necessary for NORESCO to determine and satisfy all of its obligations under this Construction Work Order.

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(i) Insurance and Risk of Loss or Damage:

Prior to the Customer's receipt of ownership and title, at all times during the Term of this Construction Work Order, NORESCO assumes all risk of loss of or damage to the ECMs from any cause whatsoever.

Without limiting any of its obligations or liabilities under this Construction Work Order, upon receipt of ownership and title to the ECMs referenced in Attachment E(1), the Customer will, at its expense, provide and maintain sufficient insurance against the loss or theft of or damage to the ECMs related equipment and all components installed hereunder, for the full replacement value thereof.

If, following Customer's execution of the Delivery and Acceptance Certificate to be provided upon Substantial Completion and subsequent to Customer's complete payment to NORESCO in accordance with Section 5(a), as that amount may then have been modified in accordance with this Construction Work Order, any fire, flood, other casualty, or condemnation renders a majority of the Property incapable of being occupied and renders the ECMs or the equipment installed hereunder inoperable and, in the case of a casualty, the affected portion of such ECMs or equipment is not reconstructed or restored within one hundred and twenty (120) days from the date of such casualty, NORESCO and/or Customer may terminate this Construction Work Order by delivery of a written notice to the other Party. Upon such termination, Customer shall pay NORESCO any amounts, or pro-rata portions thereof, accrued under Section 5(b)-(e), and the applicable Termination Value, if any, set forth in Section 5. NORESCO shall not be responsible for any savings deficiencies resulting from ECMs being rendered useless for the period of time prior to reconstruction of the ECM. The savings guaranty will be adjusted to account for the unavailability of the ECM.

(j) Telephone/Broadband: Customer is responsible for installing and maintaining either telephone lines or providing broadband access to the energy management system via Customer's Local Area Network (LAN). Customer is responsible for all associated costs for the energy management system's telephone lines or broadband access.

(k) Protection. Customer shall at all times act reasonably to protect the ECMs from damage, theft or injury to the same extent and in the same manner in which it protects its other Property.

(l) Alteration: Customer agrees not to move, alter, or change the ECMs in any way that causes a reduction in the level of efficiency or savings generated by any ECM or the equipment installed hereunder without obtaining NORESCO's prior written approval which shall not be unreasonably withheld.

(m) Storage: Customer will provide reasonable rent free space for NORESCO, or any of its subcontractors, to mobilize and store its supplies, tools, and equipment during installation of the ECMs or other activities by NORESCO within the Property pursuant to this Construction Work Order for which such storage may be required. Said storage space shall be provided with locking capacity acceptable to NORESCO. Only NORESCO, or any of NORESCO's subcontractors, and the Customer's assigned personnel shall have access to the storage. Customer assumes no responsibility nor will Customer provide any additional security for the storage provided.

(n) Fuel: Customer shall procure and pay for all energy and fuel for the operation of the Property.

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SECTION 13 DEFAULTS BY CUSTOMER AND NORESCO

(a) Customer shall be in default under this Construction Work Order upon the occurrence of any of the following:

(i) Customer fails to pay when due any amount to be paid under this Construction Work Order and such failure continues for a period of five (5) working days after notice of overdue payment is delivered by NORESCO to the Customer;

(ii) Customer fails to perform or meet any of its required duties or obligations under this Construction Work Order and fails to cure such failure and the effects of such failure within thirty (30) days of receipt of written notice of default, unless such failures and effects cannot be completely cured within thirty (30) days after said written notice, in which case a default shall exist only if Customer does not commence and diligently pursue to cure such failure and effects as soon as possible;

(iii) Customer goes into receivership, or makes an assignment for the benefit of creditors whether voluntary or involuntary, or a petition is filed by or against the Customer under any bankruptcy, insolvency or similar law and such petition is not dismissed within sixty (60) days.

(iv) Customer becomes aware that the allocated funds associated with this Agreement have been reduced (or are no longer available) to an amount insufficient to meet its outstanding obligations on the Project;

(b) NORESCO shall be in default under this Construction Work Order upon the occurrence of the following:

(i) NORESCO fails to perform or meet any of its required duties or obligations under this Construction Work Order and fails to cure such failure or effects of such failure within thirty (30) days of receipt of written notice of default, unless such failure or effects cannot be completely cured within thirty (30) days after said written notice, in which case a default shall exist only if NORESCO does not commence and diligently pursue to cure such failure as soon as possible.

SECTION 14 REMEDIES FOR DEFAULTS

(a) In the event Customer defaults under this Construction Work Order, NORESCO:

(i) may bring actions for any remedies available at law or in equity or other appropriate proceedings for the recovery of direct damages, (including amounts past due), and/or bring an action in equity for specific performance; and

(ii) without recourse to legal process, may terminate this Construction Work Order by delivery of written notice of termination.

(b) In the event NORESCO defaults under this Construction Work Order, Customer may terminate this Construction Work Order and bring an action in law for direct damages.

SECTION 15 ARBITRATION

In the event of any dispute whatsoever between the Parties, they shall exhaust every reasonable effort to settle or dispose of the same, including a discussion of the matter between senior executives of each Party.

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Any controversy or claim arising out of or relative to this Construction Work Order or the breach thereof, not adjusted or disposed of by mutual agreement between the Parties, shall be first settled by mediation and then (in the absence of settlement after mediation), by arbitration under the American Arbitration Association Construction Arbitration Rules then in effect, and judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof, and arbitration decision shall be final and binding on the Parties and on all Parties subject to the following. Said arbitration proceedings shall be filed in the Regional office of the American Arbitration Association nearest to the project site. All arbitrators shall be bound by the terms of this Construction Work Order. The expenses of any arbitration shall be borne equally by the Parties to the arbitration, provided that each Party shall pay for and bear the cost of its own experts, evidence, and counsel.

SECTION 16 TERMINATION

- At any time after execution Customer may terminate all or a portion of the Construction Work Order in whole or part for convenience upon thirty (30) days written notice to NORESCO, without further penalty and liability to NORESCO provided that Customer has paid to NORESCO: (a) all amounts due as set forth in Section 5 and on Attachment G (other than amounts due for future performance by NORESCO) as further agreed upon in writing by the Parties.

- Customer may terminate all or a portion of the Construction Work Order due to budget constraints and non-appropriation of funds for the following fiscal year, without penalty or liability to NORESCO. In the event the City terminates the contract for budget constraints and non-appropriation of funds for the following fiscal year, City shall pay NORESCO for materials and/or services accepted by the City prior to the date of termination.

SECTION 17 INSURANCE

Without limiting any of its obligations or liabilities under this Construction Work Order, NORESCO shall provide and maintain at its expense the following minimum insurance coverage's where reasonable market availability for such insurance exists:

(a) Workers' Compensation and Employer's Liability Insurance at the level required by the laws of the State of Arizona.

(b) Comprehensive General Liability Insurance, including contractual liability: Bodily Injury per person, $1 million; Bodily Injury per occurrence, $1 million; Property Damage per occurrence, $1 million; Personal Injury per occurrence, $1 million; and Excess Liability, $5 million.

(c) Comprehensive Automobile Liability Insurance, including owned, non-owned and hired automotive equipment: Bodily Injury per person, $1 million; Bodily Injury per occurrence, $1 million; Property Damage per occurrence, $1 million; and Excess Liability, $5 million.

(d) Payment and Performance Bond. NORESCO shall within thirty (30) days of execution of this Construction Work Order, deliver to the Customer Performance and Payment Bonds in a sum equal to the contract price with sureties satisfactory to the Customer, conditioned upon the faithful performance by NORESCO, for the implementation of the ECMs as it may be from time to time modified by Change Orders, such bonds to be in such form and otherwise to contain such provisions as are reasonably satisfactory to the Customer. NORESCO shall deliver to Customer the Payment and Performance Bond prior to commencement of construction of any work in respect of this Construction Work Order. The Payment and Performance Bonds required hereunder shall expire upon final acceptance of all ECMs required under this Construction Work Order (including any applicable one year warranty period), and shall not

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secure any energy savings, measurement and verification obligations, or maintenance/service obligations, which may be guaranteed by NORESCO under this Construction Work Order.

(e) Customer will provide and maintain insurance as described in Section 12(i) of this Construction Work Order, naming NORESCO as additional named insured and waiving subrogation. NORESCO shall be primary on such insurance.

SECTION 18 INDEMNIFICATION AND LIMITATION OF LIABILITY

(a) Notwithstanding any other provision of this Construction Work Order, NORESCO's, its officers, employees, agents, affiliates, or subcontractors' aggregate liability in contract, tort, or otherwise, without limitation, under this Construction Work Order, shall in all cases be limited to the sum of the payments received by NORESCO pursuant to this Construction Work Order.

(b) Each Party (hereinafter referred to as the "Indemnifying Party") agrees to indemnify and hold harmless the other Party from and against any and all claims for damages sustained by third parties arising by reason of bodily injury or damage to third party property caused by the Indemnifying Party's willful misconduct or negligent physical acts (or the willful misconduct or negligent physical acts of any entity under the control, responsibility or direction of the Indemnifying Party). In no event, however, shall the Indemnifying Party be obligated to indemnify the other Party to the extent that any injury or damage is caused by the negligence of the other Party or any entity for which the other Party is legally responsible.

(c) NORESCO shall be solely responsible for and shall indemnify and hold harmless the Customer, its officers, employees, and agents (the "Indemnified Parties") from and against any and all liabilities, losses, costs, expenses (including, without limitation, reasonable attorneys' fees and disbursements), and damages ("Losses"), arising out of or in connection with any negligent acts or omissions of NORESCO or a NORESCO Agent, regardless of whether taken pursuant to or authorized by this Construction Work Order and regardless of whether due to negligence, fault, or default, including Losses in connection with any threatened investigation, litigation or other proceeding or preparing a defense to or prosecuting the same; provided, however, that NORESCO shall not be responsible for that portion, if any, of a Loss that is caused by the negligence or wrongful act of the Customer.

(d) NORESCO shall, upon the Customer's demand and at the Customer's direction, promptly and diligently defend, at NORESCO's own risk and expense, any and all suits, actions, or proceedings which may be brought or instituted against one or more Indemnified Parties for which NORESCO is responsible under this Section and NORESCO shall pay and satisfy any judgment, decree, loss, or settlement in connection therewith.

(e) NORESCO shall, and shall cause NORESCO Agents to, cooperate with the Customer in connection with the investigation, defense, or prosecution of any action, suit, or proceeding in connection with this Construction Work Order including the acts or omissions of NORESCO and/or a NORESCO Agent in connection with this Construction Work Order.

(f) The provisions of this Section shall survive the termination of this Construction Work Order.

(g) Anything herein notwithstanding, in no event shall either Customer or NORESCO be liable to the other party for special, indirect, incidental or consequential damages, including commercial loss, loss of use, or lost profits, even if either party has been advised of the possibility of such damages.

SECTION 19 AGREEMENT INTERPRETATION AND PERFORMANCE

The interpretation and performance of this Construction Work Order, and the interpretation and enforcement of the rights of the Parties hereunder, shall be in accordance with and controlled by

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the laws of the Commonwealth of Massachusetts. In the event of any ambiguity or conflict in meaning, the terms of this Construction Work Order shall not be construed against the drafting Party based upon that Party's having drafted this Construction Work Order.

SECTION 20 PRIVILEGED AND PROPRIETARY INFORMATION

NORESCO's systems, means, cost, and methodologies of evaluating, implementing, accomplishing, and determining energy savings and the terms of the Construction Work Order for this project shall be considered privileged and proprietary information. Customer shall use the same level of effort to protect and safeguard such information as it employs to safeguard its own confidential information. Customer shall not disclose such proprietary information without the express written consent of an officer of NORESCO unless required to do so by statute or regulation. When any request for disclosure of such information is made under any applicable freedom of information law ("FOIL"), Customer will provide prompt verbal and written notice to NORESCO such that NORESCO will have the opportunity to timely object under FOIL should it desire to object to such disclosure of that information in whole or in part. In the event that Customer is required to make a filing with any agency or other governmental body, which includes such information, Customer shall notify NORESCO and cooperate with NORESCO in order to seek confidential treatment of such information included within any such filing or, if all such information cannot be protected from disclosure, to request that Customer be permitted to redact portions of such information, as NORESCO may designate, from that portion of said filing which is to be made available to the public.

SECTION 21 SEVERABILITY

In the event that any clause or provision of this Construction Work Order or any part thereof shall be declared invalid by any court having jurisdiction, such invalidity shall not affect the validity or enforceability of the remaining portions of this Construction Work Order.

SECTION 22 ASSIGNMENTS AND SUBCONTRACTING

(a) NORESCO may elect to use subcontractors and outside professionals in meeting its obligations hereunder. Customer shall be provided a list of all subcontractors and outside professionals in advance of performance of specific work intended to be performed by the subcontractors or outside professionals, and the Customer shall approve all subcontractors and outside professionals. Such approval shall not be unreasonably withheld or delayed. Customer shall have the right to inspect and audit all of NORESCO's records related to the Construction Work Order, specifically, the procurement of subcontractors and outside professionals, and financial documentation, for up to five (5) years after completion of the Construction Work Order.

(b) Customer shall not assign, transfer, or otherwise dispose of this Construction Work Order, the ECMs, or any interest therein, or sublet or lend the ECMs or permit the ECMs to be used by anyone other than the Customer and Customer's employees without the prior express written consent of NORESCO (or, if applicable, the potential Lessor) such consent not to be unreasonably withheld. If Customer transfers ownership or its interest in the Property, the Customer will terminate this Construction Work Order as provided for in Section 16.

(c) NORESCO shall not assign this Construction Work Order in whole or in part to any other party without first obtaining the written consent of Customer prior to assignment, which consent shall not be unreasonably withheld. Notwithstanding the foregoing, NORESCO may assign, without obtaining the consent of Customer, its rights and obligations under this Construction Work Order in whole or in part to any affiliated or associated company of NORESCO and its rights for payments under this Construction Work Order to any financial institution, lender, or investor in connection with a leasing or financing arrangement for the ECMs.

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SECTION 23 WAIVER

The failure of either Party to require compliance with any provision of this Construction Work Order shall not affect that Party's right to later enforce the same. It is agreed that the waiver by either Party of performance of any other terms of this Construction Work Order or of any breach thereof will not be held or deemed to be a waiver by that Party of any subsequent failure to perform the same or any other term or condition of this Construction Work Order or any breach thereof.

SECTION 24 FORCE MAJEURE

(a) If either Party shall be unable to carry out any part of its obligations under this Construction Work Order (except Customer's obligation to make payments when due) due to causes beyond its control ("Force Majeure"), including but not limited to an act of God, epidemics, pandemics, strikes, lockouts or other industrial disturbances, acts of public enemies, orders or restraints of any kind of the government of the United States or any state or any of their departments, agencies, or officials, or any other civil governmental, transportation delays, military or judicial authority, war, blockage, insurrection, riot, sudden action of the elements, fire, explosion, flood, earthquake, storms, drought, landslide, explosion, or nuclear emergency, this Construction Work Order shall remain in effect but the affected Party's obligations shall be suspended for a period equal to the disabling circumstances, provided that:

(i) the non-performing Party gives the other Party prompt written notice describing the particulars of the Force Majeure, including but not limited to the nature of the occurrence and its expected duration, and continues to furnish timely regular reports with respect thereto during the period of Force Majeure;

(ii) the suspension of performance is of no greater scope and of no longer duration than is required by the Force Majeure;

(iii) no obligations of either Party that arose before the Force Majeure causing the suspension of performance are excused as a result of the Force Majeure;

(iv) the non-performing Party uses reasonable efforts to remedy its inability to perform; and

(v) the Term of this Construction Work Order, at NORESCO's option, shall be extended for a period equal to the number of days that the Force Majeure prevented the non-performing Party from performing.

(b) Any decision by the Customer to close or change the use of the facilities or ECMs at the Property shall not constitute a Force Majeure excusing Customer's performance under this Construction Work Order.

SECTION 25 RECORDS

To assist NORESCO in its performance of this Construction Work Order, Customer shall (to the extent it has not already done so) furnish (or cause its energy suppliers to furnish) to NORESCO, upon its request, accurate and complete data (kept by Customer or Customer's energy suppliers in the regular course of their respective businesses) concerning energy usage for the existing facilities at the Property, including the following data for the most current thirty-six (36) month period: utility records, occupancy information; descriptions of any changes in building structure or heating, cooling, or other systems or energy requirements; descriptions of all energy consuming or saving equipment used on Property; descriptions of all energy management procedures presently utilized.

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SECTION 26 ESCO NOT A MUNICIPAL ADVISOR

The Customer acknowledges and agrees that NORESCO has not acted as a municipal financial advisor to the Customer and that the Customer has not relied on NORESCO for any matters relating to the financing of the project, including issuance of any bonds.

SECTION 27 ABSENCE OF FRAUD OR COLLUSION

NORESCO hereby certifies, by its execution of this Construction Work Order, that no official or employee of Customer has any pecuniary interest in this Construction Work Order or in the expected profits to arise here from, and that this Construction Work Order is made in good faith without fraud or collusion with any other person involved in the bidding process.

SECTION 28 NEGLIGENT/WRONGFUL ACTS

It is understood and agreed that neither Party to this Construction Work Order shall be liable for any negligent or wrongful acts, either of commission or omission, chargeable to the other, unless such liability is imposed by law, and that this Construction Work Order shall not be construed as seeking to either enlarge or diminish any obligation or duty owed by one Party against the other or against third parties.

SECTION 29 FURTHER DOCUMENTS AND EVENTS

The Parties shall execute and deliver all documents and perform all further acts that may be reasonably necessary to effectuate the provisions of this Construction Work Order, in that regard, it being understood and agreed that NORESCO covenants and agrees to execute or procure the execution of all documents reasonably required to release any lien held by NORESCO or its assignees upon the termination of this Construction Work Order and payment of all amounts required to be paid by Customer to NORESCO, pursuant to this Construction Work Order, including but not limited to the Termination Value, if any. It being further agreed and understood that Customer agrees to execute all documents which may be reasonably required by an entity which provides funds for any financing contemplated herein and to cooperate with NORESCO in obtaining such funds.

It is further understood that Customer agrees to execute all documents which may be reasonably required to obtain all licenses, permits, and governmental approvals required by NORESCO for installation and operation of the ECMs. NORESCO's obligations hereunder are also subject to obtaining any such licenses, permits, and governmental approvals.

SECTION 30 NOTIFICATIONS OF GOVERNMENTAL ACTION - OCCUPATIONAL SAFETY AND HEALTH

The Parties agree to notify each other as promptly as is reasonably possible upon becoming aware of an inspection under, or any alleged violation of, the Occupational Safety and Health Act or any other provision of Federal, State or Local law, relating in any way to the undertakings of either Party under this Construction Work Order.

SECTION 31 REFERENCES

Unless otherwise stated all references to a particular Attachment or to Attachments herein are to the referenced Attachment or Attachments which are attached to this Construction Work Oder and all such referenced Attachments are incorporated by reference within this Construction Work Order. All references herein to a Section shall refer to a Section of this Construction Work Order unless specifically stated otherwise.

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SECTION 32 CHANGE ORDERS

This Construction Work Order may not be modified or amended except in writing by a Change Order signed by both Parties as defined by Section 10.

SECTION 33 CANCELLATION FOR CONFLICT OF INTEREST

The Agreement is subject to the cancellation provisions of A.R.S. § 38-511.

SECTION 34 NORESCO'S WARRANTY

NORESCO warrants that it complies with all Federal Immigration laws and regulations that relate to its employees and complies with A.R.S. § 23-214.A, Verification of Employment Eligibility. NORESCO shall not employ aliens in accordance with A.R.S. § 34-301, Employment of Aliens on Public Works Prohibited. NORESCO acknowledges that pursuant to A.R.S. § 41-4401, Government Procurement; E-Verify Requirement; Definitions, a breach of this warranty is a material breach subject to penalties up to and including termination of the Construction Work Order, and that Customer retains the legal right to inspect the papers of any employee who works on the Construction Work Order to ensure compliance with this warranty.

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EXHIBIT A,

ATTACHMENT B

PROPERTY DESCRIPTION

[TO BE DETERMINED]

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EXHIBIT A,

ATTACHMENT C

SCOPE OF SERVICES

DESCRIPTION OF THE ENERGY EFFICIENCY MEASURES
AND THE EQUIPMENT

The following is a brief description of the ECMs and related equipment to be installed by NORESCO at the Property.

[Description]

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EXHIBIT A,

ATTACHMENT D

EQUIPMENT LEASE DOCUMENTS (IF APPLICABLE)

[Reserved, if not applicable]

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EXHIBIT A,

ATTACHMENT E-1

DELIVERY AND ACCEPTANCE CERTIFICATE UPON SUBSTANTIAL COMPLETION

Customer hereby acknowledges receipt of the Energy Conservation Measure(s) described in Construction Work Order No. _____ between Customer and NORESCO (which are listed and attached hereto), as fully installed and in good working condition. Customer hereby accepts these Energy Conservation Measure(s) after full inspection thereof as satisfactory for all purposes of the Agreement and the Construction Work Order. Customer agrees to make the related payment(s) to NORESCO as set forth in Section 4 and Attachment G of the Construction Work Order.

Substantial Completion Date:

ECM(s):

Date Accepted by Customer: _____

Accepted for: **Customer**

Accepted by: _____

Name: _____

Title: _____

Note: ECM(s) to which this Delivery and Acceptance Certificate relates is/are attached hereto.

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EXHIBIT A,

ATTACHMENT E-2

FINAL DELIVERY AND ACCEPTANCE CERTIFICATE
FINAL ACCEPTANCE OF PROJECT

Customer hereby acknowledges Final Acceptance of all Energy Conservation Measures described in Construction Work Order No.____ between Customer and NORESCO. The date of Final Acceptance is the date certified by the Customer that the Work has been installed, functionally tested, and all punchlist items completed in accordance with the Contract Documents, so that the Customer has possession of the work and can use it for its intended use. Customer hereby accepts the Energy Conservation Measure(s) listed hereto after full inspection thereof as satisfactory for all purposes of the Agreement and the Construction Work Order. Customer agrees to make the required payment(s) to NORESCO as set forth in Section 4 and Attachment G of the Construction Work Order.

Date Accepted by Customer: _____

Accepted for: **Customer**

Accepted by: _____

Name:_____

Title:_____

Note: ECMs to which this Delivery and Acceptance Certificate relates are attached hereto.

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EXHIBIT A,

ATTACHMENT F

GUARANTY OF ENERGY COST SAVINGS

1. DEFINITIONS

When used in this Construction Work Order, the following capitalized words shall have the meaning ascribed to them below:

"Baseline Period" is the period of time that defines the Baseline Usage and is representative of the facilities operations, consumption, and usage that is used as the benchmark for determining cost avoidance.

"Baseline Usage" is the calculated energy usage of the Facilities prior to the implementation of the ECMs.

"Baseline Demand" is the calculated energy demand of a piece of equipment or a site prior to the implementation of the ECMs. Baseline physical conditions, such as equipment counts, nameplate data, and control strategies, will typically be determined through building occupancy, energy end-use survey and plug load surveys of the Facilities.

"Cumulative Excess Verified Savings" is the total amount of Excess Verified Savings based on the results of the Measurement & Verification Plan in the Guaranteed Savings Reconciliation Report carried over to subsequent Guaranty Periods.

"Energy and Operational Cost Avoidance Guarantee Practices" are those practices identified in The Schedule of Savings, intended to achieve avoided costs in energy and/or operating expenses.

"Energy Costs" may include the cost of electricity and fuels to operate HVAC equipment, cogeneration system, facility mechanical and lighting systems, and energy management systems, and the cost of water and sewer usage, as applicable.

"ECM" the Energy Conservation Measure (ECM) is the installation of equipment or systems, or modification of equipment or systems as described in Attachment C.

"Excess Verified Savings" is the amount of Verified Savings minus Guaranteed Savings in a Guaranteed Period.

"Facilities" shall mean those described in Attachment B.

"F.E.M.P." shall mean the Federal Energy Management Program of the U.S. Department of Energy and its Measurement and Verification Guidelines for Federal Energy Projects (DOE/GO 10096-248, February 1996, or later versions). The F.E.M.P. guidelines classify measurement & verification approaches as Option A, Option B, Option C, and Option D.

"First Guarantee Period" is defined as the period beginning on the first (1st) day of the month following the date of execution of the Delivery and Acceptance Certificate (Attachment E-2)

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upon Final Acceptance of this Project by the Customer and ending on the day prior to the first (1st) twelve-month anniversary thereof.

"Guarantee Period" is defined as the First Guarantee Period and each of the successive twelve (12) month periods commencing on the anniversary of the commencement of the First Guarantee Period throughout the Term of this Construction Work Order.

"Guaranteed Savings" is defined as the amount of avoided Energy and Operational Costs guaranteed to the Customer in each Guarantee Period.

"Guaranteed Savings Reconciliation Report" is defined as the process and report for determining the Verified Savings in each Guarantee Period and reconciling it to the Guaranteed Savings in the same Guarantee Period.

"IPMVP" shall mean the International Performance Measurement and Verification Protocol and its Measurement and Verification Guidelines for energy savings performance contract projects. The IPMVP guidelines classify measurement & verification approaches as Option A, Option B, Option C, and Option D.

"Measurement and Verification Plan" (M&V Plan) is defined as the plan providing details on how the Guarantee Savings will be verified.

"Operational Costs" shall include the cost of operating and maintaining the Facilities, such as, but not limited to, the cost of inside and outside labor to repair and maintain Covered Systems and Equipment, the cost of custodial supplies, the cost of replacement parts, the cost of deferred maintenance, the cost of lamp and ballast disposal, and the cost of new capital equipment.

"Post Installation Report" is defined as the process and report for determining the Expected Savings for the First Guarantee Period after the completion of construction.

"Term" shall be twenty (20) years from acceptance.

"Verified Savings" is the defined as the summation of avoided Energy and Operational Costs as determined by the Measurement & Verification Plan for the Facilities in each Guarantee Period as a result of the ECMs provided by NORESCO as well as Excess Verified Savings, if any carried forward from previous years.

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2. TERM AND TERMINATION

2.1 Guarantee Term. The Term of this Guarantee shall commence on the first (1st) day of the month following the date of execution of the Final Delivery and Acceptance Certificate (Attachment E-2) upon Final Acceptance of this Project by the Customer and shall terminate at the end of twenty (20) years unless terminated earlier as provided for herein.

2.2 Guarantee Termination. Should this Construction Work Order be terminated (including, as applicable, the Maintenance or Measurement & Verification Services) in whole or in part for any reason prior to the end of the Term, the Guaranteed Savings for the Guarantee Period in which such termination becomes effective shall be prorated as of the effective date of such termination, with a reasonable adjustment for seasonal fluctuations, if any, in Energy and Operational Costs, and the Guaranteed Savings for all subsequent Guarantee Periods shall be

null and void.

3. SAVINGS GUARANTEE

3.1 Guaranteed Savings: **Table F.1** lists the amount of Guaranteed Savings resulting from the ECMs to be installed by NORESCO.

Year	$ Amount

3.1.1 Additional Savings. Additional energy and/or operational cost avoidance that can be demonstrated as a result of NORESCO's efforts that result in no additional costs to Customer beyond the costs identified in this Construction Work Order will be included in the Guarantee Savings Reconciliation Report for the applicable Guarantee Period (s).

3.1.2 Savings Prior to Final Retrofit Acceptance. All energy and operational cost avoidance realized by Customer and as calculated through the Measurement & Verification Plan that result from activities undertaken by NORESCO prior to Final Acceptance may be applied to the Verified Savings for the First Guaranty Period.

3.1.3 Cumulation of Savings. The Guaranteed Savings in each Guarantee Period are considered satisfied if the Verified Savings for such Guarantee Period equals or exceeds the Guaranteed Savings for such Guarantee Period.

3.1.4 Savings Shortfalls. In the event that the Verified Savings in any Guarantee Period is less than the Guaranteed Savings required for that Guarantee Period, after giving credit for any Excess Verified Savings carried forward from previous Guarantee Periods, NORESCO shall, upon receipt of written demand from Customer, compensate Customer the amount of any such shortfall, limited by the value of the guarantee, within thirty (30) calendar days. Resulting compensation shall be NORESCO's sole liability for any shortfall in the Guaranteed Savings.

3.2 Post Installation Documentation. NORESCO will provide Customer with a Post Installation Report (PIR) detailing the Expected Savings for the First Guarantee Period within 120 days following the commencement of the First Guarantee Period. Customer will assist NORESCO in generating the PIR by providing NORESCO's receipt thereof, together with access to relevant records relating to such Energy Costs and Operating Costs. Customer will also assist NORESCO by permitting access to any energy billing information, maintenance records, drawings, or other data deemed necessary by NORESCO to generate the said report. Data and calculations utilized by NORESCO in the preparation of its PIR will be made available to Customer, along with such explanations and clarifications as Customer may reasonably request.

3.2.1 Acceptance of Post Installation Report. From the time of receipt, Customer will have

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ninety (90) days to review the PIR and provide written notice to NORESCO of non-acceptance of the PIR. In the event that Customer does not approve or disapprove of the PIR with ninety (90) days of its submission, NORESCO shall provide a notice Customer has passed its review deadline and has three (3) additional days to review. In the event Customer does not approve or disapprove of the PIR within three (3) days of receipt of that notice, Customer shall be deemed to have accepted the PIR and its findings.

3.3 Savings Reconciliation Documentation. NORESCO will provide Customer with a Guarantee Savings Reconciliation Report after each Guarantee Period within 120 days. Customer will assist NORESCO in generating the savings reconciliation report by providing NORESCO's receipt thereof, together with access to relevant records relating to such Energy and Operating Costs. Customer will also assist NORESCO by permitting access to any energy billing information, maintenance records, drawings, or other data deemed necessary by NORESCO to generate the said report. Data and calculations utilized by NORESCO in the preparation of its Guarantee Savings Reconciliation Report will be made available to Customer, along with such explanations and clarifications as Customer may reasonably request.

3.3.1 Acceptance of Guarantee Savings Reconciliation Report. At the end of each Guarantee Period, Customer will have forty-five (45) days to review the Guarantee Savings Reconciliation Report and provide written notice to NORESCO of non-acceptance of the Guarantee Savings Reconciliation Report for that Guarantee Year. Failure to provide written notice within forty-five (45) days of the receipt of the Guarantee Savings Reconciliation Report shall constitute the deemed acceptance of the Report and its findings by the Customer.

3.3.2 Guarantee Savings Reconciliation. Verified Savings will be determined in accordance with the methodology(s), operating parameters, formulas, and constants as described below and/or defined in the Measurement & Verification Plan and/or additional methodologies defined by NORESCO that may be negotiated with Customer at any time. Actual savings reduction in utility bills may vary from the Verified Savings for reasons outside of NORESCO's control including but not limited to: changes in energy and other utility rates and tariffs, changes in Customer operating schedules and usage patterns, changes in Customer loads due to addition or reductions in energy and water consuming devices, changes in weather, impacts due to the operations of ECMs, impacts due to the maintenance of ECMs maintained by Customer, and additions to and/or reduction in facility space usage. For the purposes of calculating any shortfalls or excesses of Verified Savings versus Guaranteed Savings, the Measurement & Verification Plan will be utilized.

3.3.3 Activities and Events Adversely Impacting Savings. Customer must promptly notify NORESCO of any activities known to Customer, which adversely impacts NORESCO's ability to realize the Guaranteed Savings and NORESCO shall be entitled to reduce the Guaranteed Savings by the amount of any such adverse impact to the extent that such adverse impact is beyond NORESCO's reasonable control.

3.2.2 Guarantee Adjustment. NORESCO's Guaranteed Savings obligations under this Construction Work Order are contingent upon: (1) Customer following the operations and maintenance requirements for the ECMs in accordance with the Construction Work Order; (2) no alterations or additions being made by the Customer without prior notice and written agreement of the Parties; (3) Customer sending all current utility bills to NORESCO within two (2) weeks after receipt; and (4) NORESCO'S ability to render services not being impaired by circumstances beyond its control. To the extent that the Customer defaults or fails to perform fully any of its obligations under this Construction Work Order, NORESCO may, in its sole

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discretion, adjust the Guaranteed Savings obligation; provided, however, that no adjustment hereunder shall be effective unless NORESCO has first provided the Customer with written notice of Customer's default(s) or failure(s) to perform and Customer has failed to cure its default(s) and failure(s) to perform within thirty (30) days after receipt of such notice.

3.2.3 Energy Rates. TO BE DETERMINED.

4. MEASUREMENT & VERIFICATION PLAN

4.1 Measurement and Verification. Measurement and Verification. NORESCO and the Customer agree that the Verified Savings by ECM will be determined using the following Measurement & Verification plans further described in this section. Through this plan, the guaranteed savings generated by the ECMs installed in the Facilities will be validated. The M&V methodologies proposed for these ECMs are based on the version 2.2 of the F.E.M.P. Measurement and Verification Guidelines. The objective of the plan is to quantify the actual electrical and fossil fuel and compare those to the specific Baseline Usage for each Facility, the difference of which is the Verified Savings.

4.2 During the term of the Construction Work Order, NORESCO will make adjustments to energy savings due to changes in building occupancy, weather data, and utility rate schedules, etc. The unit costs of energy will be applied to the energy savings calculated by this M&V plan. Current utility cost will be used as a basis for determining the unit cost, with floor and ceiling prices set by baseline rate information, presented herein this Attachment.

4.3 M&V Descriptions: TO BE DETERMINED

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EXHIBIT A,

ATTACHMENT G

CONTRACT COST AND ANNUAL SERVICES

(a) Customer agrees to pay to NORESCO, the amount equal to the Project Cost, as listed below, in accordance with the terms described in Section 4 of the Construction Work Order. The proposed monthly progress payments shall be substantially the same as those found in Attachment G-1, Proposed Progress Payments, attached hereto.

Project Cost = $XX,XXX,XXX.XX

Proposed Monthly Progress Payments are attached hereto as Attachment G-1.

(b) Maintenance Fee: To the extent applicable, Customer shall pay NORESCO for annual maintenance provided under this Construction Work Order that the Parties mutually agree to have NORESCO perform. To the extent applicable, Customer agrees to pay the annual Maintenance Fee as provided for below with respect to such agreed upon services.

Maintenance Fee(s) = $X,XXX.XX (annually)

(c) Measurement & Verification Fee: To the extent applicable, Customer shall pay NORESCO for annual measurement and verification services provided under this Construction Work Order that the Parties mutually agree to have NORESCO perform. To the extent applicable, Customer agrees to pay the annual Measurement & Verification fee as provided for below with respect to such agreed upon services.

Year 1 M&V Fee: $X,XXX.XX
Year 2 M&V Fee: $X,XXX.XX

(d) Performance Period Fee: The annual performance period fee shall be the sum of the Maintenance Fee and the Measurement and Verification Fee listed above. Specifically, where applicable, Customer agrees to pay the following Performance Period Fees.

Year	Annual Amount
1	
2	
3	
4	
5	

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EXHIBIT A,

ATTACHMENT H

CHANGE ORDER FORM

(Request & Agreement for Change in Plans and/or Specifications and/or Terms)

Change Request No. _____

Customer:_____
Department:_____

Project No._____ Contract No._____ Site:_____

Title:_____

I. REQUEST Date:_____

(a) Requested by_____ Of_____

(b) Description of change _____
_____

II. NORESCO's AGREEMENT

For all costs involved in this change including extensions of time herein requested NORESCO proposes to perform the work described in accordance with the provisions of the subject Construction Work Order and certifies that the attached cost data is accurate, complete and current, and mathematically correct.

Payment shall be made on the basis of:

If necessary, attach detailed estimates and breakdown for above in accordance with change order instruction. A claim for work performed under protest may be submitted in writing.

An extension of contract time of _____ calendar days to _____ is requested.

NORESCO_____ by_____ Date:_____

CUSTOMER APPROVAL: Date:_____

	Contract Award	$
Customer_____	Previous Additions	$
	Previous Deductions	$
By:_____	Net Total	$
Title:_____	This Change	$
	Total	$

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EXHIBIT A,

ATTACHMENT I

MAINTENANCE SERVICES

Maintenance services provided by NORESCO are limited to annual oversight activities as described in the M&V Plan in the Detailed Energy Audit dated _____, as may be amended by the Parties. Oversight activities are limited to annual confirmation that the Customer continues to operate, maintain, and repair the ECMs in a manner consistent with contract requirements to ensure the persistence of guarantees savings over the term of the Project. NORESCO shall submit an annual report indicating the results of its maintenance oversight functions.

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EXHIBIT A,

ATTACHMENT J

NORESCO INSTALLED EQUIPMENT

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EXHIBIT A,

ATTACHMENT K

STANDARDS OF SERVICE

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CONSTRUCTION WORK ORDER NO. 1
AND NOTICE TO PROCEED

1. This Construction Work Order No. 1, executed between NORESCO and Customer and dated _____ ("Construction Work Order Effective Date"), is issued pursuant to the Agreement dated _____, between NORESCO and Customer. All terms of the Agreement are incorporated herein.
2. The terms applicable to this Construction Work Order are set forth in the Agreement, this Construction Work Order, and attachments hereto.
3. Customer hereby requests that NORESCO complete the Construction Work described in this Construction Work Order and NORESCO agrees to complete the Construction Work described in this Construction Work Order.
4. Customer hereby acknowledges that this Construction Work Order constitutes a valid Notice to Proceed issued by the Customer for the work discussed herein.

By signing below, the Parties agree to the terms of this Construction Work Order.

NORESCO, LLC

Signature: _____

Printed Name: _____

Title: _____

Date: _____

City of Flagstaff

Signature: _____

Printed Name: _____

Title: _____

Date: _____

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney's Office

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ATTACHMENT A

TERMS FOR CONSTRUCTION WORK

All Capitalized terms not defined herein, shall have the definition as set for the in the Agreement.

SECTION 1 SCOPE OF SERVICES

(a) Construction Work: NORESCO shall furnish all labor, materials, and equipment and perform all work required for the completion of the Scope of Services set forth in Attachment C at Customer's buildings/land, premises described in Attachment B ("Property"), including the installation of the energy conservation measures listed therein, as such Scope of Services and such Attachments may be modified in accordance with this Construction Work Order. Customer and NORESCO shall mutually plan the scheduling of the construction work. The construction work will be planned to minimize the interruption of the daily routine of Customer's staff and students except as permitted in writing by Customer. NORESCO will list installed equipment on Attachment J hereto and made a part hereof at the time that construction is complete. Attachment J may be modified as provided for herein.

(b) Hazardous Materials: Unless explicitly and specifically identified in Attachment C, NORESCO's Scope of Services is predicated on the viability of this Project without any asbestos or hazardous materials abatement being required by NORESCO. For the avoidance of doubt, unless explicitly and specifically identified in Attachment C or in Section 1(c) below, the Scope of Services does not include directly or indirectly performing or arranging for the detection, testing, handling, storage, removal, treatment, transportation, disposal, monitoring, abatement or remediation of any contamination of any premise, Property, site, facility, etc. at which Work is performed and any soil or groundwater at the premise, Property, site, facility, etc. by petroleum or petroleum products (collectively called "Oil"), mold, lead, asbestos, or any hazardous, toxic, radioactive or infectious substances, including any substances regulated under RCRA, CERCLA or any Applicable Law (collectively called "Hazardous Materials"), including without limitation: ionization smoke detectors, ballasts, mercury bulb thermostats, used oil, contaminated filters, contaminated absorbents, asbestos, lead-containing paint, mold, and refrigerant. Except as explicitly and specifically identified in Attachment C, the Customer represents and warrants that, to the best of its knowledge following due inquiry, there are no Hazardous Materials or Oil present where the Work is to be performed. All services have been priced and agreed to by NORESCO in reliance on the Customer's representations as set forth in this Article. In the event that (i) NORESCO encounters any Hazardous Materials which are in the immediate vicinity of NORESCO's work, or (ii) NORESCO determines that its work will result in the disturbance of Hazardous Materials, or (iii) NORESCO determines that the presence of Hazardous Materials will impede NORESCO's work, NORESCO will notify Customer of the same and Customer will, at its cost, cause the Hazardous Materials to be promptly and properly removed, enclosed, encapsulated or otherwise abated in accordance with applicable laws and regulations, or alternatively, Customer, at its cost, may provide written test reports showing that Hazardous Materials in that area have been properly removed, enclosed encapsulated or otherwise abated in accordance with applicable laws. In the event NORESCO cannot determine whether any particular material does or does not contain Hazardous Materials, Customer, upon NORESCO's written request, will, at its cost, promptly perform tests or cause tests to be performed in order to determine whether or not such material is a Hazardous Material and/or whether there are unacceptable levels of airborne particulate material containing asbestos or such other Hazardous particulate(s) or provide such a test report. Under no

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circumstances, shall NORESCO be required to handle Hazardous materials.

(c) Disposal: NORESCO, at its cost, shall be responsible for disposal of all non-hazardous equipment and materials which are rendered useless and removed as a result of the installation of the ECMs pursuant to this Construction Work Order. In addition, NORESCO shall, at its cost, cause all lamps and PCB-contaminated ballasts, if any, which have been rendered useless and removed as a result of the installations of the ECMs to be transported and disposed of via recycling and incineration, respectively. All other existing PCB-contaminated ballasts, lamps and any other hazardous substances, however, remain the responsibility of Customer and NORESCO shall assume no liability in connection with their removal, handling, transportation, and/or disposal. In all instances, with the only exception being those hazardous materials that NORESCO brings to the site, the Customer will be the "Generator" of record and sign any and all disposal documents (i.e. manifests, bills of lading, etc.) in order to document the abatement or removal of any such Hazardous Materials from Customer's site or Premises.

(d) Maintenance: To the extent provided for in Attachment I "Maintenance Services," NORESCO will service and maintain the equipment that is specifically identified therein, at a cost to the Customer which is provided for in Attachment G, for the Term of this Construction Work Order. Except for ECMs (or other equipment) which are to be maintained by NORESCO, Customer shall be responsible for servicing and maintaining the ECMs (and such other equipment) at its own cost.

(e) Measurement & Verification: To the extent provided for in Attachment F – "Guaranty of Energy Cost Savings" - NORESCO will also supply such ongoing Measurement & Verification services to the Customer which may be agreed upon between the Parties at an annual fee to be set forth in Attachment G.

(f) Compliance With Law: NORESCO shall comply with and obtain, at its expense, all licenses and permits required by Federal, state and local laws in connection with the installation of the ECMs. To the extent that NORESCO agrees to perform operations and/or maintenance of specified ECMs or other equipment, it shall comply with and obtain, at its expense, all licenses and permits which may be required by Federal, state and local laws in connection with the operation and/or maintenance of such specified ECMs. In the event that NORESCO cannot procure any such license or permit in light of a requirement that Customer is required to do so, Customer will procure the same. Should a change in law occur subsequent to the date of execution of the Construction Work Order that increases NORESCO's Project costs, the parties shall, to the extent allowed by law, negotiate an equitable resolution. NORESCO shall pay the required prevailing wage rates for work in connection with this Project to the extent required by Arizona law.

(g) Taxes: Notwithstanding any other provision herein, Customer shall be responsible for all taxes arising from or in connection with Customer's participation in this Construction Work Order and the benefits to Customer hereunder. Customer shall reimburse NORESCO for any taxes, permits, tariffs, or fees not in effect on the date of this Construction Work Order, but for which NORESCO may become liable, directly or indirectly, during the Term of this Construction Work Order. If Customer is a tax-exempt entity, it shall cooperate reasonably with NORESCO to ensure purchases of materials or equipment required under this Construction Work Order enjoy any reasonable favorable tax considerations available under applicable State or local law or regulation.

(h) Non-Discrimination: NORESCO agrees not to knowingly or willfully discriminate against any employee, or applicant for employment, to be employed in the performance of this Construction Work Order, with respect to hire, tenure, terms, conditions, or privileges of employment, or any matter directly or indirectly related to employment, because of age, sex,

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race, disability, color, religion, national origin, Vietnam era military service, or ancestry in accordance with applicable Federal, State, or local laws.

(i) Standards of Service and Comfort: Customer shall operate the ECMs in a manner that shall provide the standards of service and comfort provided for in Attachment K hereto.

(j) Specifications: Prior to beginning the work hereunder, NORESCO may provide (or Customer, at its option, may reasonably request to have NORESCO provide) written specification of, any ECMs to be installed. Customer shall furnish its written approval or disapproval of each such written specification within ten (10) working days following its receipt of written notice by NORESCO of completion of each such sample installation or the provision of such written specifications to Customer. If Customer disapproves any such ECM, NORESCO shall have the right to provide a substitute ECM which conforms to the applicable specifications or is equivalent to any applicable sample provided and approved by Customer hereunder, for Customer's approval. In the event Customer approves the substitute ECMs (in writing), NORESCO shall revise the Attachments to reflect each such substitution, subject to Customer's written approval of each revised Attachment. In the event that Customer does not approve or disapprove of any ECM(s) within ten (10) working days following NORESCO 's written notice to Customer that the written specification is ready for inspection, Customer shall be deemed to have given its approval. If, however, Customer again does not approve of any such substituted ECMs or specifications, the Parties hereby agree to negotiate a mutually acceptable solution. Customer shall not unreasonably withhold any approval provided for herein.

(k) Duties, Obligations and Responsibilities of NORESCO:

(i) All labor furnished under this Construction Work Order shall be competent to perform the tasks undertaken, that all materials and equipment provided shall be new and of appropriate quality, and that the completed work shall comply with the requirements of this Construction Work Order.

(ii) NORESCO shall maintain the Project site in a reasonably clean condition during the performance of the construction work.

(iii) NORESCO shall thoroughly and regularly clean the Project site of all nonhazardous debris, trash and excess material or equipment.

(iv) At all times relevant to this Construction Work Order, NORESCO shall permit Customer or any of its representatives to enter upon the Project site to review or inspect the construction work without formality or other procedure.

(v) NORESCO will provide equipment manuals and other appropriate information regarding equipment installed hereunder to Customer at or about the time of Substantial Completion.

SECTION 2 OWNERSHIP OF ECMS

Ownership of and title to the ECMs referenced in Attachment E(1) to each Delivery and Acceptance Certificate (Attachment E) will automatically transfer to the Customer upon both: (a) the delivery of each such Delivery and Acceptance Certificate and Attachment E(1) by Customer to NORESCO, the execution and delivery of which shall not be unreasonably withheld or delayed, and (b) completion of all Customer’s payment obligations to NORESCO, excluding payment obligations related to maintenance or other annual services hereunder.

Subject and subordinate to Lessors rights pursuant to the potential Lease, as defined below, NORESCO under this Construction Work Order shall be entitled to all rights, benefits, and remedies afforded a secured party under law with respect to the equipment installed pursuant to this Construction Work Order, including but not limited to those under the Uniform Commercial

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Code, as adopted in the State of Arizona or any other applicable state ("Code"). NORESCO shall retain such security interest in the ECMs, pursuant to this Construction Work Order, for equipment installed hereunder until Customer shall have accepted the same and title has transferred to Customer. If requested by NORESCO in connection therewith, Customer agrees to provide to NORESCO appropriate financing statements and other documents necessary in order for NORESCO and/or any bank, lender or financial institution to which NORESCO has assigned any interest in this Construction Work Order, to perfect said subordinate security interest in the ECMs.

SECTION 3 FINANCIAL SERVICES

Energy Performance Contract Municipal Lease and Option to Purchase Agreement:

- Customer hereby represents and warrants to NORESCO that if the Customer enters into a lease ("Lease") with a third party lessor, Customer's obligation to make payments pursuant to the Lease will commence on the date that funds are deposited in the Escrow Fund.

- Customer acknowledges and understands that the amount of the potential Lease payments will be subject to current market conditions at the time of final credit approval and that the effectiveness of the potential Lease will be subject to final credit approval. Customer further acknowledges that its responsibility for the payments described in this Construction Work Order are in no way contingent on the effectiveness of the potential Lease.

SECTION 4 APPROPRIATION

Customer warrants and represents that Customer has on-hand, or shall obtain complete Project funding to compensate NORESCO for their services, in accordance with this Agreement, before Notice to Proceed shall be issued.

SECTION 5 COMPENSATION AND PAYMENT

(a) During the period beginning on the date of execution of this Construction Work Order and continuing through the Date of Substantial Completion for this Construction Work Order, Customer will make monthly progress payments to NORESCO based upon the portion of the work completed at the end of each month, as respectively provided for in Attachment G for which payment is being made. Customer shall (within five (5) days of receipt) execute and deliver to NORESCO completed forms E-1 (Attachment E-1) upon completion by NORESCO of each ECM. A Final Delivery and Acceptance Certificate (Attachment E-2) shall be executed by Customer upon final completion of the ECMs. Customer shall not unreasonably withhold or delay the execution of any Delivery and Acceptance Certificate, which shall be deemed approved by NORESCO if Customer has not taken action with respect to any Certificate within ten (10) days of its receipt thereof. For the purposes of this Construction Work Order the term "Substantial Completion" shall mean that the subject ECM has been demonstrated by NORESCO to be operating in a manner consistent with its manufacturer's intended use. For the purposes of this Construction Work Order, the terms "Final Completion" or "Final Acceptance" shall mean that NORESCO has fulfilled all of its construction obligations for all ECMs installed under this Construction Work Order. This shall include the completion of all punchlist items and the submission of all required documentation.

(b) During the month following each successive twelve (12) month period beginning with the first day of the month following the date on which the Customer executes a Final Delivery and Acceptance Certificate (Attachment E-2), Customer shall pay the annual maintenance and measurement and verification (M&V) service fees (collectively, the "Performance Period Fee") set forth in Attachment G.

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(c) Thirty (30) days after the date of an invoice on account of work done by NORESCO, Customer shall pay NORESCO 95% of the value of NORESCO's work. The remaining 5% retained shall be held as additional security for the faithful performance by NORESCO of all the work required under this Construction Work Order and shall be paid to NORESCO within thirty (30) days after Final Acceptance.

(d) Amounts not paid to NORESCO on or before the due dates specified in Sections 5(a)-(c) above will accrue interest at the rate of the prime interest rate plus four (4) percent for the number of days following the due date until such time as such amount due has been paid in full.

SECTION 6 COMMENCEMENT DATE AND TERM

The Commencement Date shall be the first (1st) day of the month following the date of execution of the Delivery and Acceptance Certificate (Attachment E-2) upon Final Acceptance. Subject to the following sentence, the Term of this Construction Work Order shall begin on the Commencement Date and shall end exactly twenty (20) years from the commencement date, unless terminated prior to such date, as provided for in Section 13 and/or Section 16 of this Construction Work Order. If not otherwise terminated as provided for herein, the Term of this Construction Work Order shall terminate simultaneously with any termination of the potential Lease or termination of the Measurement and Verification Services. Nonetheless, the Construction Work Order shall be effective and binding upon the parties immediately upon its execution, and the period from contract execution until the Commencement Date shall be known as the "Interim Period".

SECTION 7 PUBLICITY

Customer hereby grants to NORESCO and its directors, officers, employees, and affiliates (its "Authorized Representatives"):

- authorization to use Customer's name in NORESCO's client list;
- authorization to disclose the nature of Customer's relationship with NORESCO and certain summary "Project Information" (as defined below) in connection with the work for use in NORESCO's marketing efforts (the "Marketing Works");
- an non-exclusive, nontransferable, royalty-free license to copy any Project progress photos taken by NORESCO, or photos or other copyrighted material supplied by the Customer regarding the Project (the "Licensed Material") or any portion thereof, solely as needed to create Marketing Works, and
- authorization allowing NORESCO to publicly display the Licensed Material included in the Marketing Works.

Summary "Project Information" may include the location of the project, services provided by NORESCO in connection with the project, project price and any recognition or certification (e.g., LEED® certification) associated with the project. Authorized marketing materials which include summary Project Information–and/or Customer's name shall include internal newsletters or publications, press releases, case studies, photos, promotional brochures, and other publications (e.g. annual reports) created by or on behalf of NORESCO (the "Marketing Works"). Customer warrants that it owns the copyrights in the Licensed Material and waives any fees or royalties for use of the Licensed Material in the Marketing Works. For the avoidance of doubt, none of NORESCO, its Authorized Representatives, successors, or assigns has authorization from the Customer to publicize the Customer name, summary Project Information or Licensed Material for any other purpose.

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SECTION 8 GUARANTEE OF ENERGY SAVINGS

NORESCO will guarantee to the Customer the amount of energy savings determined in accordance with Attachment F, “Guaranty of Energy Cost Savings”.

SECTION 9 RIGHT OF ENTRY/SPACE

During the Term of this Construction Work Order, Customer shall provide NORESCO, and its employees, agents and subcontractors, including any utility which provides or may provide any payment under this Construction Work Order, access to the Property for the purpose of fulfilling NORESCO's obligations under this Construction Work Order. Customer shall provide mutually satisfactory space for the installation and operation of the ECMs and shall protect such equipment in the same careful manner that Customer protects its Property. Additionally, Customer shall provide NORESCO remote electronic access to the Energy Management System (if required) during the Term of this Construction Work Order. NORESCO shall obey and abide by any and all reasonable rules of Customer relative to the Property as they would directly relate to NORESCO's performance of its obligations under this Construction Work Order.

SECTION 10 CHANGES IN WORK

▸ The quantity, quality, dimensions, type, or other characteristics of the ECMs may be changed only by written consent of the Customer and NORESCO (and, where required by the potential Lease, the Lessor), via the execution of a Change Order Form (Attachment H). For any such Change Order request, NORESCO shall provide documentation substantiating the price increase.

▸ Changes not within the context of the original Scope of Services and/or an increase in the amount of the Construction Work Order exceeding $50,000 may not be accomplished through the Change Order process, but shall require an amendment to the associated Construction Work Order and City Council approval.

▸ The parties agree that the Project Cost is based on prices of materials and labor in effect as of the date of the Agreement. Unless constituting a change to the original Scope of Services and/or an increase in the amount of the Construction Work Order exceeding $50,000, the Project Cost may be adjusted via Change Order if changes in tariffs, import duties, trade policy, epidemics, applicable laws, market conditions, or related impacts result in substantial inequity (i.e. increase in over 5% of the Project Cost) to NORESCO, or its subcontractors/suppliers at any tier.

SECTION 11 WARRANTIES

(a) NORESCO warrants that the design, engineering, and installation services it performs will be performed consistent with good engineering practices and that such work is warranted to be free from defects in materials and workmanship for a period of two (2) years from the date of execution of the Delivery and Acceptance Certificate by the Customer with respect to Substantial Completion. Any manufacturers' warranties which exceed this two (2) year period shall be assigned to Customer to the extent allowed by the manufacturer. This warranty shall survive termination or expiration of the Agreement.

▸ Upon receipt of written notice from Customer, NORESCO at its’ own expense shall promptly correct work rejected as defective or as failing to conform to the Agreement, whether observed before or after acceptance, and whether or not fabricated, installed or completed by NORESCO, and shall bear all costs of correction. If NORESCO does not correct deficiencies within a reasonable time specified in the written notice from Customer, Customer may perform

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the work and NORESCO shall be liable for the costs. This two (2) year warranty is in addition to and does not limit NORESCO's other obligations herein. This warranty shall survive termination or expiration of the Agreement.

SECTION 12 CUSTOMER ROLE AND RESPONSIBILITIES

(a) Operations: The Customer shall operate the equipment installed hereunder in accordance with the manufacturers' recommendations and the procedures supplied to the Customer by NORESCO.

(b) Maintenance: The Customer shall, at its expense, maintain the Property in good working order during the Term of this Construction Work Order. Except as may otherwise be provided for in Attachment I, the Customer will maintain, at Customer's expense: (i) the equipment and all other components which comprise the ECMs (following the date of Substantial Completion), and (ii) all other equipment which is attached thereto and/or is integral to the proper functioning of the ECMs.

(c) Malfunctions: The Customer will notify NORESCO immediately in the event of any malfunction in the operation of the ECMs or the equipment installed hereunder.

(d) Protection of ECMs: Except in the case of emergency, the Customer will not remove, move, alter, turn off, or otherwise significantly affect the operation of the equipment installed hereunder or the operation of the ECMs, or any individual part thereof, without the prior approval of NORESCO, which approval shall not be unreasonably withheld. After receiving NORESCO's approval, Customer shall proceed as instructed. Customer shall act reasonably to protect the ECMs from damage or injury, if, due to an emergency, it is not reasonable to notify NORESCO before acting. Customer agrees to protect and preserve the facility envelope and the operating condition of all ECMs, mechanical systems, and other energy consuming systems located on the Property.

(e) Measurement & Verification System: Customer shall not alter, move, modify, or otherwise change the measurement and verification system or any component thereof without the written consent of NORESCO unless such action is in accordance with operating procedures provided by NORESCO.

(f) Adjustment to Baseline: If, in the reasonable opinion of NORESCO, the Customer does not reasonably protect the ECMs and/or maintain the Property in good repair and good working condition, then NORESCO will equitably adjust the baseline, as referenced in Attachment F, for any increased energy usages at the Property.

(g) Changes to Property: The Customer will notify NORESCO in writing at least thirty (30) days prior to making any change to the Property that would significantly affect the energy usage at the Property, including but not limited to changes in the hours or days that the Property is occupied or operated, the number of occupants (including, but not limited to, staff, faculty and students), the activity conducted, the equipment, or the size of the Property. In the event NORESCO receives such notification or otherwise determines that such a change has occurred, it will make the appropriate revisions to the Attachments or take such other action as may be provided for hereunder.

(h) Energy Usage Data: The Customer will make available to NORESCO, on a monthly basis for the Term of this Construction Work Order, copies of all energy bills, energy usage data, and any and all other such documentation maintained by the Customer, as requested by NORESCO, which is necessary for NORESCO to determine and satisfy all of its obligations under this Construction Work Order.

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(i) Insurance and Risk of Loss or Damage:

Prior to the Customer's receipt of ownership and title, at all times during the Term of this Construction Work Order, NORESCO assumes all risk of loss of or damage to the ECMs from any cause whatsoever.

Without limiting any of its obligations or liabilities under this Construction Work Order, upon receipt of ownership and title to the ECMs referenced in Attachment E(1), the Customer will, at its expense, provide and maintain sufficient insurance against the loss or theft of or damage to the ECMs related equipment and all components installed hereunder, for the full replacement value thereof.

If, following Customer's execution of the Delivery and Acceptance Certificate to be provided upon Substantial Completion and subsequent to Customer's complete payment to NORESCO in accordance with Section 5(a), as that amount may then have been modified in accordance with this Construction Work Order, any fire, flood, other casualty, or condemnation renders a majority of the Property incapable of being occupied and renders the ECMs or the equipment installed hereunder inoperable and, in the case of a casualty, the affected portion of such ECMs or equipment is not reconstructed or restored within one hundred and twenty (120) days from the date of such casualty, NORESCO and/or Customer may terminate this Construction Work Order by delivery of a written notice to the other Party. Upon such termination, Customer shall pay NORESCO any amounts, or pro-rata portions thereof, accrued under Section 5(b)-(e), and the applicable Termination Value, if any, set forth in Section 5. NORESCO shall not be responsible for any savings deficiencies resulting from ECMs being rendered useless for the period of time prior to reconstruction of the ECM. The savings guaranty will be adjusted to account for the unavailability of the ECM.

(j) Telephone/Broadband: Customer is responsible for installing and maintaining either telephone lines or providing broadband access to the energy management system via Customer's Local Area Network (LAN). Customer is responsible for all associated costs for the energy management system's telephone lines or broadband access.

(k) Protection. Customer shall at all times act reasonably to protect the ECMs from damage, theft or injury to the same extent and in the same manner in which it protects its other Property.

(l) Alteration: Customer agrees not to move, alter, or change the ECMs in any way that causes a reduction in the level of efficiency or savings generated by any ECM or the equipment installed hereunder without obtaining NORESCO's prior written approval which shall not be unreasonably withheld.

(m) Storage: Customer will provide reasonable rent free space for NORESCO, or any of its subcontractors, to mobilize and store its supplies, tools, and equipment during installation of the ECMs or other activities by NORESCO within the Property pursuant to this Construction Work Order for which such storage may be required. Said storage space shall be provided with locking capacity acceptable to NORESCO. Only NORESCO, or any of NORESCO's subcontractors, and the Customer's assigned personnel shall have access to the storage. Customer assumes no responsibility nor will Customer provide any additional security for the storage provided.

(n) Fuel: Customer shall procure and pay for all energy and fuel for the operation of the Property.

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SECTION 13 DEFAULTS BY CUSTOMER AND NORESCO

(a) Customer shall be in default under this Construction Work Order upon the occurrence of any of the following:

(v) Customer fails to pay when due any amount to be paid under this Construction Work Order and such failure continues for a period of five (5) working days after notice of overdue payment is delivered by NORESCO to the Customer;

(vi) Customer fails to perform or meet any of its required duties or obligations under this Construction Work Order and fails to cure such failure and the effects of such failure within thirty (30) days of receipt of written notice of default, unless such failures and effects cannot be completely cured within thirty (30) days after said written notice, in which case a default shall exist only if Customer does not commence and diligently pursue to cure such failure and effects as soon as possible;

(vii) Customer goes into receivership, or makes an assignment for the benefit of creditors whether voluntary or involuntary, or a petition is filed by or against the Customer under any bankruptcy, insolvency or similar law and such petition is not dismissed within sixty (60) days.

(viii) Customer becomes aware that the allocated funds associated with this Agreement have been reduced (or are no longer available) to an amount insufficient to meet its outstanding obligations on the Project;

(b) NORESCO shall be in default under this Construction Work Order upon the occurrence of the following:

(i) NORESCO fails to perform or meet any of its required duties or obligations under this Construction Work Order and fails to cure such failure or effects of such failure within thirty (30) days of receipt of written notice of default, unless such failure or effects cannot be completely cured within thirty (30) days after said written notice, in which case a default shall exist only if NORESCO does not commence and diligently pursue to cure such failure as soon as possible.

SECTION 14 REMEDIES FOR DEFAULTS

(a) In the event Customer defaults under this Construction Work Order, NORESCO:

(i) may bring actions for any remedies available at law or in equity or other appropriate proceedings for the recovery of direct damages, (including amounts past due), and/or bring an action in equity for specific performance; and

(ii) without recourse to legal process, may terminate this Construction Work Order by delivery of written notice of termination.

(b) In the event NORESCO defaults under this Construction Work Order, Customer may terminate this Construction Work Order and bring an action in law for direct damages.

SECTION 15 ARBITRATION

In the event of any dispute whatsoever between the Parties, they shall exhaust every reasonable effort to settle or dispose of the same, including a discussion of the matter between senior executives of each Party.

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Any controversy or claim arising out of or relative to this Construction Work Order or the breach thereof, not adjusted or disposed of by mutual agreement between the Parties, shall be first settled by mediation and then (in the absence of settlement after mediation), by arbitration under the American Arbitration Association Construction Arbitration Rules then in effect, and judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof, and arbitration decision shall be final and binding on the Parties and on all Parties subject to the following. Said arbitration proceedings shall be filed in the Regional office of the American Arbitration Association nearest to the project site. All arbitrators shall be bound by the terms of this Construction Work Order. The expenses of any arbitration shall be borne equally by the Parties to the arbitration, provided that each Party shall pay for and bear the cost of its own experts, evidence, and counsel.

SECTION 16 TERMINATION

▶ At any time after execution Customer may terminate all or a portion of the Construction Work Order in whole or part for convenience upon thirty (30) days written notice to NORESCO, without further penalty and liability to NORESCO provided that Customer has paid to NORESCO: (a) all amounts due as set forth in Section 5 and on Attachment G (other than amounts due for future performance by NORESCO) as further agreed upon in writing by the Parties.

• Customer may terminate all or a portion of the Construction Work Order due to budget constraints and non-appropriation of funds for the following fiscal year, without penalty or liability to NORESCO. In the event the City terminates the contract for budget constraints and non-appropriation of funds for the following fiscal year, City shall pay NORESCO for materials and/or services accepted by the City prior to the date of termination.

▶

SECTION 17 INSURANCE

Without limiting any of its obligations or liabilities under this Construction Work Order, NORESCO shall provide and maintain at its expense the following minimum insurance coverage's where reasonable market availability for such insurance exists:

(a) Workers' Compensation and Employer's Liability Insurance at the level required by the laws of the State of Arizona.

(b) Comprehensive General Liability Insurance, including contractual liability: Bodily Injury per person, $1 million; Bodily Injury per occurrence, $1 million; Property Damage per occurrence, $1 million; Personal Injury per occurrence, $1 million; and Excess Liability, $5 million.

(c) Comprehensive Automobile Liability Insurance, including owned, non-owned and hired automotive equipment: Bodily Injury per person, $1 million; Bodily Injury per occurrence, $1 million; Property Damage per occurrence, $1 million; and Excess Liability, $5 million.

(d) Payment and Performance Bond. NORESCO shall within thirty (30) days of execution of this Construction Work Order, deliver to the Customer Performance and Payment Bonds in a sum equal to the contract price with sureties satisfactory to the Customer, conditioned upon the faithful performance by NORESCO, for the implementation of the ECMs as it may be from time to time modified by Change Orders, such bonds to be in such form and otherwise to contain such provisions as are reasonably satisfactory to the Customer. NORESCO shall deliver to Customer the Payment and Performance Bond prior to commencement of construction of any work in respect of this Construction Work Order. The Payment and Performance Bonds required hereunder shall expire upon final acceptance of all ECMs required under this

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Construction Work Order (including any applicable one year warranty period), and shall not secure any energy savings, measurement and verification obligations, or maintenance/service obligations, which may be guaranteed by NORESCO under this Construction Work Order.

(e) Customer will provide and maintain insurance as described in Section 12(i) of this Construction Work Order, naming NORESCO as additional named insured and waiving subrogation. NORESCO shall be primary on such insurance.

SECTION 18 INDEMNIFICATION AND LIMITATION OF LIABILITY

(a) Notwithstanding any other provision of this Construction Work Order, NORESCO's, its officers, employees, agents, affiliates, or subcontractors' aggregate liability in contract, tort, or otherwise, without limitation, under this Construction Work Order, shall in all cases be limited to the sum of the payments received by NORESCO pursuant to this Construction Work Order.

(b) Each Party (hereinafter referred to as the "Indemnifying Party") agrees to indemnify and hold harmless the other Party from and against any and all claims for damages sustained by third parties arising by reason of bodily injury or damage to third party property caused by the Indemnifying Party's willful misconduct or negligent physical acts (or the willful misconduct or negligent physical acts of any entity under the control, responsibility or direction of the Indemnifying Party). In no event, however, shall the Indemnifying Party be obligated to indemnify the other Party to the extent that any injury or damage is caused by the negligence of the other Party or any entity for which the other Party is legally responsible.

(c) NORESCO shall be solely responsible for and shall indemnify and hold harmless the Customer, its officers, employees, and agents (the "Indemnified Parties") from and against any and all liabilities, losses, costs, expenses (including, without limitation, reasonable attorneys' fees and disbursements), and damages ("Losses"), arising out of or in connection with any negligent acts or omissions of NORESCO or a NORESCO Agent, regardless of whether taken pursuant to or authorized by this Construction Work Order and regardless of whether due to negligence, fault, or default, including Losses in connection with any threatened investigation, litigation or other proceeding or preparing a defense to or prosecuting the same; provided, however, that NORESCO shall not be responsible for that portion, if any, of a Loss that is caused by the negligence or wrongful act of the Customer.

(d) NORESCO shall, upon the Customer's demand and at the Customer's direction, promptly and diligently defend, at NORESCO's own risk and expense, any and all suits, actions, or proceedings which may be brought or instituted against one or more Indemnified Parties for which NORESCO is responsible under this Section and NORESCO shall pay and satisfy any judgment, decree, loss, or settlement in connection therewith.

(e) NORESCO shall, and shall cause NORESCO Agents to, cooperate with the Customer in connection with the investigation, defense, or prosecution of any action, suit, or proceeding in connection with this Construction Work Order including the acts or omissions of NORESCO and/or a NORESCO Agent in connection with this Construction Work Order.

(f) The provisions of this Section shall survive the termination of this Construction Work Order.

(g) Anything herein notwithstanding, in no event shall either Customer or NORESCO be liable to the other party for special, indirect, incidental or consequential damages, including commercial loss, loss of use, or lost profits, even if either party has been advised of the possibility of such damages.

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SECTION 19 AGREEMENT INTERPRETATION AND PERFORMANCE

The interpretation and performance of this Construction Work Order, and the interpretation and enforcement of the rights of the Parties hereunder, shall be in accordance with and controlled by the laws of the Commonwealth of Massachusetts. In the event of any ambiguity or conflict in meaning, the terms of this Construction Work Order shall not be construed against the drafting Party based upon that Party's having drafted this Construction Work Order.

SECTION 20 PRIVILEGED AND PROPRIETARY INFORMATION

NORESCO's systems, means, cost, and methodologies of evaluating, implementing, accomplishing, and determining energy savings and the terms of the Construction Work Order for this project shall be considered privileged and proprietary information. Customer shall use the same level of effort to protect and safeguard such information as it employs to safeguard its own confidential information. Customer shall not disclose such proprietary information without the express written consent of an officer of NORESCO unless required to do so by statute or regulation. When any request for disclosure of such information is made under any applicable freedom of information law ("FOIL"), Customer will provide prompt verbal and written notice to NORESCO such that NORESCO will have the opportunity to timely object under FOIL should it desire to object to such disclosure of that information in whole or in part. In the event that Customer is required to make a filing with any agency or other governmental body, which includes such information, Customer shall notify NORESCO and cooperate with NORESCO in order to seek confidential treatment of such information included within any such filing or, if all such information cannot be protected from disclosure, to request that Customer be permitted to redact portions of such information, as NORESCO may designate, from that portion of said filing which is to be made available to the public.

SECTION 21 SEVERABILITY

In the event that any clause or provision of this Construction Work Order or any part thereof shall be declared invalid by any court having jurisdiction, such invalidity shall not affect the validity or enforceability of the remaining portions of this Construction Work Order.

SECTION 22 ASSIGNMENTS AND SUBCONTRACTING

(a) NORESCO may elect to use subcontractors and outside professionals in meeting its obligations hereunder. Customer shall be provided a list of all subcontractors and outside professionals in advance of performance of specific work intended to be performed by the subcontractors or outside professionals, and the Customer shall approve all subcontractors and outside professionals. Such approval shall not be unreasonably withheld or delayed. Customer shall have the right to inspect and audit all of NORESCO's records related to the Construction Work Order, specifically, the procurement of subcontractors and outside professionals, and financial documentation, for up to five (5) years after completion of the Construction Work Order.

(b) Customer shall not assign, transfer, or otherwise dispose of this Construction Work Order, the ECMs, or any interest therein, or sublet or lend the ECMs or permit the ECMs to be used by anyone other than the Customer and Customer's employees without the prior express written consent of NORESCO (or, if applicable, the Lessor) such consent not to be unreasonably withheld. If Customer transfers ownership or its interest in the Property, the Customer will terminate this Construction Work Order as provided for in Section 16.

(c) NORESCO shall not assign this Construction Work Order in whole or in part to any other party without first obtaining the written consent of Customer prior to assignment, which consent shall not be unreasonably withheld. Notwithstanding the foregoing, NORESCO may assign,

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without obtaining the consent of Customer, its rights and obligations under this Construction Work Order in whole or in part to any affiliated or associated company of NORESCO and its rights for payments under this Construction Work Order to any financial institution, lender, or investor in connection with a leasing or financing arrangement for the ECMs.

SECTION 23 WAIVER

The failure of either Party to require compliance with any provision of this Construction Work Order shall not affect that Party's right to later enforce the same. It is agreed that the waiver by either Party of performance of any other terms of this Construction Work Order or of any breach thereof will not be held or deemed to be a waiver by that Party of any subsequent failure to perform the same or any other term or condition of this Construction Work Order or any breach thereof.

SECTION 24 FORCE MAJEURE

(a) If either Party shall be unable to carry out any part of its obligations under this Construction Work Order (except Customer's obligation to make payments when due) due to causes beyond its control ("Force Majeure"), including but not limited to an act of God, epidemics, pandemics, strikes, lockouts or other industrial disturbances, acts of public enemies, orders or restraints of any kind of the government of the United States or any state or any of their departments, agencies, or officials, or any other civil governmental, transportation delays, military or judicial authority, war, blockage, insurrection, riot, sudden action of the elements, fire, explosion, flood, earthquake, storms, drought, landslide, explosion, or nuclear emergency, this Construction Work Order shall remain in effect but the affected Party's obligations shall be suspended for a period equal to the disabling circumstances, provided that:

(i) the non-performing Party gives the other Party prompt written notice describing the particulars of the Force Majeure, including but not limited to the nature of the occurrence and its expected duration, and continues to furnish timely regular reports with respect thereto during the period of Force Majeure;

(ii) the suspension of performance is of no greater scope and of no longer duration than is required by the Force Majeure;

(iii) no obligations of either Party that arose before the Force Majeure causing the suspension of performance are excused as a result of the Force Majeure;

(iv) the non-performing Party uses reasonable efforts to remedy its inability to perform; and

(v) the Term of this Construction Work Order, at NORESCO's option, shall be extended for a period equal to the number of days that the Force Majeure prevented the non-performing Party from performing.

(b) Any decision by the Customer to close or change the use of the facilities or ECMs at the Property shall not constitute a Force Majeure excusing Customer's performance under this Construction Work Order.

SECTION 25 RECORDS

To assist NORESCO in its performance of this Construction Work Order, Customer shall (to the extent it has not already done so) furnish (or cause its energy suppliers to furnish) to NORESCO, upon its request, accurate and complete data (kept by Customer or Customer's energy suppliers in the regular course of their respective businesses) concerning energy usage for the existing facilities at the Property, including the following data for the most current thirty-six (36) month period: utility records, occupancy information; descriptions of any changes in

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building structure or heating, cooling, or other systems or energy requirements; descriptions of all energy consuming or saving equipment used on Property; descriptions of all energy management procedures presently utilized.

SECTION 26 ESCO NOT A MUNICIPAL ADVISOR

The Customer acknowledges and agrees that NORESCO has not acted as a municipal financial advisor to the Customer and that the Customer has not relied on NORESCO for any matters relating to the financing of the project, including issuance of any bonds.

SECTION 27 ABSENCE OF FRAUD OR COLLUSION

NORESCO hereby certifies, by its execution of this Construction Work Order, that no official or employee of Customer has any pecuniary interest in this Construction Work Order or in the expected profits to arise here from, and that this Construction Work Order is made in good faith without fraud or collusion with any other person involved in the bidding process.

SECTION 28 NEGLIGENT/WRONGFUL ACTS

It is understood and agreed that neither Party to this Construction Work Order shall be liable for any negligent or wrongful acts, either of commission or omission, chargeable to the other, unless such liability is imposed by law, and that this Construction Work Order shall not be construed as seeking to either enlarge or diminish any obligation or duty owed by one Party against the other or against third parties.

SECTION 29 FURTHER DOCUMENTS AND EVENTS

The Parties shall execute and deliver all documents and perform all further acts that may be reasonably necessary to effectuate the provisions of this Construction Work Order, in that regard, it being understood and agreed that NORESCO covenants and agrees to execute or procure the execution of all documents reasonably required to release any lien held by NORESCO or its assignees upon the termination of this Construction Work Order and payment of all amounts required to be paid by Customer to NORESCO, pursuant to this Construction Work Order, including but not limited to the Termination Value, if any. It being further agreed and understood that Customer agrees to execute all documents which may be reasonably required by an entity which provides funds for any financing contemplated herein and to cooperate with NORESCO in obtaining such funds.

It is further understood that Customer agrees to execute all documents which may be reasonably required to obtain all licenses, permits, and governmental approvals required by NORESCO for installation and operation of the ECMs. NORESCO's obligations hereunder are also subject to obtaining any such licenses, permits, and governmental approvals.

SECTION 30 NOTIFICATIONS OF GOVERNMENTAL ACTION - OCCUPATIONAL SAFETY AND HEALTH

The Parties agree to notify each other as promptly as is reasonably possible upon becoming aware of an inspection under, or any alleged violation of, the Occupational Safety and Health Act or any other provision of Federal, State or Local law, relating in any way to the undertakings of either Party under this Construction Work Order.

SECTION 31 REFERENCES

Unless otherwise stated all references to a particular Attachment or to Attachments herein are to the referenced Attachment or Attachments which are attached to this Construction Work Oder and all such referenced Attachments are incorporated by reference within this Construction Work Order. All references herein to a Section shall refer to a Section of this Construction Work Order unless specifically stated otherwise.

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SECTION 32 CHANGE ORDERS

This Construction Work Order may not be modified or amended except in writing by a Change Order signed by both Parties as defined by Section 10.

SECTION 33 CANCELLATION FOR CONFLICT OF INTEREST

The Agreement is subject to the cancellation provisions of A.R.S. § 38-511.

SECTION 34 NORESCO'S WARRANTY

NORESCO warrants that it complies with all Federal Immigration laws and regulations that relate to its employees and complies with A.R.S. § 23-214.A, Verification of Employment Eligibility. NORESCO shall not employ aliens in accordance with A.R.S. § 34-301, Employment of Aliens on Public Works Prohibited. NORESCO acknowledges that pursuant to A.R.S. § 41-4401, Government Procurement; E-Verify Requirement; Definitions, a breach of this warranty is a material breach subject to penalties up to and including termination of the Construction Work Order, and that Customer retains the legal right to inspect the papers of any employee who works on the Construction Work Order to ensure compliance with this warranty.

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ATTACHMENT B

PROPERTY DESCRIPTION

Facility	*Address*	*Square Footage*	*Year Built*
Aquaplex Center	1702 N. 4th St.	52,500	2008
Cemetery	1300 S. San Francisco	4,212	1990
Cinder Lake Landfill	6770 Landfill Road	13,017	1985
City Hall	211 W. Aspen	49,400	1983
City Hall Courthouse	101 W. Cherry	39,500	2020
City Warehouse	5477 E. Commerce	5,600	1986
Coconino Warehouse	511 W. Coconino	4,400	1965
Fire Station #1	1972 S. Thompson Rd	8,620	2007
Fire Station #10 (Old Airport Ops Building)	6629 S. Cessna Circle	2,000	1954/1974
Fire Station #2	1701 E. Ponderosa Pkwy	14,631	2011
Fire Station #3	4500 E. Nestle-Purina	8,620	2009
Fire Station #4	4040 E. Butler	5,600	1987
Fire Station #5	2525 N. Fort Valley Road	8,620	2008
Fire Station #6	3877 S. Lake Mary Rd.	9,000	1999
Hal Jensen Recreation Center	2403 N. Izabel	16,808	1970
J. Lively Ice Rink / McPherson	1850 N. Turquoise	37,091	1975
Joe C. Montoya Community and Senior Center	245 N. Thorpe	9,246	1978
Lake Mary Water Treatment Plant	4500 S. Lake Mary Rd	28,918	1964
Library Main	300 W. Aspen	35,000	1987
Milligan House	323 W. Aspen	3,514	1904
Murdoch Center	220 E Brannen	2,000	1965
NACET Accelerator	2201 N. Gemini Drive	28,053	2015
NACET Incubator	2225 N. Gemini Drive	10,285	2008
Public Works	3200 W. Route 66	76,245	2018
Public Works / Sustainability	419 N. Mogollon	25,338	1945/1984/2005
Pulliam Airport	6200 S Pulliam Drive	137,605	1995
Rio De Flag Wastewater Plant	600 Babbitt Way	29,098	1993
Theatrikos Building	11 W Cherry	8,500	1940
Thorpe Shop	600 N. Thorpe Road	4,000	1975
USGS #5	2255 N Gemini	9,163	1976
USGS #6	2255 N Gemini	27,525	2002
Utilities Shop	5401 E. Commerce	17,388	1999
Visitor's Center	1 W. Rte. 66	5,000	1937
Water Services / Housing East Side Annex	2323 N. Walgreens	8,623	1992

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Facility	*Address*	*Square Footage*	*Year Built*
Wildcat Hill Wastewater Plant	2800 N. Elpaso Flag rd	89,686	1982
Woody Mountain Clarifier	Woody Mountain Well Field	3,215	1959
TOTAL		838,021	

Park	*Address*	*Acres*
Arroyo Park	850 E Ridgecrest Dr.	8.0
Bow and Arrow Park	3701 N Cochise Dr.	3.0
Buffalo Park	2400 N Gemini Road	215.0
Bushmaster Park	3150 N Alta Vista	20.0
Cheshire Park	3000 N Fremont Boulevard	13.8
Coconino Park	2196 N Lantern Lane	0.3
Colton Park	250 W Route 66	
Continental Park	5650 E Old Walnut Cyn.	105.9
Foxglenn Park	4200 E Butler Avenue	28.3
Guadalupe Park	805 W Clay Avenue	0.8
Jim Cullen Memorial Park	519 W Piute Road	1.3
Joel Montalvo Park	2211 E First Avenue	2.1
McMillan Mesa Park	1140 Ponderosa Parkway	2.5
McPherson Park	1650 N Turquoise Dr.	40.3
Mobile Haven Park	4280 N Hamblin Street	1.8
Old Town Springs Park	913 W Lower Coconino	0.3
Plaza Vieja Park	526 W Clay Avenue	0.3
Ponderosa Park	2512 N First Street	2.5
Ponderosa Trails Park	3875 S Wild West Trail	8.0
Smokerise Park	6065 Native Way	0.8
The Basin / BMX Track	1700 E Sixth Street	2.2
Thorpe Park	191 N Thorpe Road	219.0
University Highlands Park	3888 S Jewell	0.9
Wheeler Park	212 W Aspen Avenue	2.5
TOTAL		679.4

Water System Asset	*Maximum Water Production*
Lake Mary Well #1	125
Lake Mary Well #2	360
Lake Mary Well #4	415
Lake Mary Well #5	290
Lake Mary Well #8	655
Lake Mary Well #9	240

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Water System Asset	***Maximum Water Production***
Woody Mountain Wells 1	125
Woody Mountain Wells 2	245
Woody Mountain Wells 3	570
Woody Mountain Wells 4	320
Woody Mountain Wells 5	280
Woody Mountain Wells 6	405
Woody Mountain Wells 7	550
Woody Mountain Wells 9	400
Woody Mountain Wells 10	280
Woody Mountain Wells 11	355
Continental 2 Well	310
Foxglenn Well	300
Sinagua Well	275
Shop Well	920
Ft. Tuthill Well	1135
Interchange Well	190
Rio Well	200
McAllister Well	TBD
Inner Basin Wells	
Inner Basin Springs	
TOTAL	8,945

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ATTACHMENT C

SCOPE OF SERVICES

DESCRIPTION OF THE ENERGY EFFICIENCY MEASURES
AND THE EQUIPMENT

The following is a brief description of the ECMs and related equipment to be installed by NORESCO at the Property. NORESCO's Investment Grade Audit ("IGA") Report (EXHIBIT C) dated January 2023 is hereby incorporated herein for the limited purpose of providing additional detail to the scope of work described below. In the event of a conflict between the IGA and any other documents, this Attachment C shall govern.

ECM 1a: Interior LED Lighting
ECM 1b: Exterior LED Lighting

NORESCO will provide and install energy efficiency interior and exterior LED lighting including retrofits to existing fixtures and replacements of existing fixtures with new.

Scope of Work

NORESCO will perform demolition, installation, and retrofit of lighting fixtures per Tables C.1 & C.2.

Equipment Descriptions

Lighting components will be manufactured by the following or NORESCO approved equal:

- **A.** Lithonia – 1170 Peachtree Street, NE Suite 2300 Atlanta GA 30309-7676, 800-922-9641
- **B.** Cooper – 1121 Highway, 74 South Peachtree City GA 30269, 800-553-3879
- **C.** QSSI – 12802 Commodity Place Tampa FL 33626, 813-855-9416
- **D.** Light Efficient Design - 188 S. Northwest Highway, Cary IL 60013, 847-380-3540
- **E.** Green Creative - 519 Codisco Way Sanford Florida 32881, 844-455-8687
- **F.** Keystone Technologies – 2750 Morris Road, Lansdale Pa 19446, 800-464-2680
- **G.** Monmouth Lighting Corp – 7A Marlen Dr, Hamilton NJ 08691, 609-586-7900
- **H.** SensorSwitch (An Acuity Brand) – 900 Northrup Rd Ste A, Wallingford CT 06492, 203-265-2842

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Table C.1: Interior Lighting Scope of Services

Facility	Interior Fixtures Upgraded to LED	New Lighting Controls
AQUAPLEX CENTER	371	1
CEMETERY	28	3
CINDER LAKE LANDFILL	125	4
CITY HALL	994	114
CITY WAREHOUSE	39	0
COCONINO WAREHOUSE	47	0
FIRE STATION #1	124	4
FIRE STATION #10 (OLD AIRPORT OPS BUILDING)	72	1
FIRE STATION #2	141	2
FIRE STATION #3	113	7
FIRE STATION #4	86	4
FIRE STATION #5	118	4
FIRE STATION #6	154	1
HAL JENSEN RECREATION CENTER	168	16
J. LIVELY ICE RINK / MCPHERSON	203	1
JOE C. MONTOYA COMMUNITY AND SENIOR CENTER	174	6
LAKE MARY WATER TREATMENT PLANT	258	5
LIBRARY MAIN	453	5
MILLIGAN HOUSE	19	6
MURDOCH CENTER	39	3
NACET INCUBATOR	163	33
PUBLIC WORKS / SUSTAINABILITY	131	9
RIO DE FLAG WASTEWATER PLANT	113	0
THEATRIKOS BUILDING	83	1
THORPE SHOP	71	1
USGS #5	74	10
USGS #6	316	60
UTILITIES SHOP	143	7
VISITOR'S CENTER	61	0
WILDCAT HILL WASTEWATER PLANT	525	4
WOODY MOUNTAIN CLARIFIER	1	0
BUSHMASTER PARK	5	0
CONTINENTAL PARK	7	0
GUADALUPE PARK	4	0
JOEL MONTALVO PARK	5	0

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THORPE PARK	45	0
TOTAL	5473	312

Table C.2: Exterior Lighting Scope of Services

Facility	Upgraded Exterior Fixtures
AQUAPLEX CENTER	27
CEMETERY	6
CINDER LAKE LANDFILL	10
CITY HALL	18
COCONINO WAREHOUSE	6
FIRE STATION #1	18
FIRE STATION #10 (OLD AIRPORT OPS BUILDING)	5
FIRE STATION #2	22
FIRE STATION #3	12
FIRE STATION #4	13
FIRE STATION #5	14
FIRE STATION #6	4
HAL JENSEN RECREATION CENTER	1
J. LIVELY ICE RINK / MCPHERSON	27
JOE C. MONTOYA COMMUNITY AND SENIOR CENTER	15
LAKE MARY WATER TREATMENT PLANT	45
LIBRARY MAIN	9
MILLIGAN HOUSE	2
MURDOCH CENTER	2
NACET INCUBATOR	16
PUBLIC WORKS / SUSTAINABILITY	10
RIO DE FLAG WASTEWATER PLANT	31
THORPE SHOP	5
USGS #5	1
USGS #6	28
USGS SITE	19
UTILITIES SHOP	24
VISITOR'S CENTER	20
WATER SERVICES / HOUSING EAST SIDE ANNEX	4
WILDCAT HILL WASTEWATER PLANT	116
BUSHMASTER PARK	6
CHESHIRE PARK	2
CONTINENTAL PARK	26

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FOX GLEN PARK	34
JOEL MONTALVO PARK	2
OLD TOWN SPRINGS PARK	2
PLAZA VIEJO PARK	1
PONDEROSA PARK	8
WHEELER PARK	5
Total	**616**

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ECM 2a: Energy Management System Upgrades

The Customer has elected to self-perform the work described in this ECM; NORESCO will NOT perform any work associated with ECM 2a. The following is for information purposes only.

Customer will provide and install a new 10,000-point enteliWEB (version 4.12 or newer) license and graphics package on a new Customer-provided Windows-based server and implement energy savings controls strategies as identified below.

Scope of Work

Customer will:

a) Install a new 10,000-point enteliWEB license and configure software on windows-based service provided by the Customer.

b) Customer shall implement energy savings controls strategies as identified in Attachment K: Standards of Service.

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ECM 2b: Heat Pump Heating and Cooling

NORESCO will provide and install new packaged heat pumps in place of existing gas-fired package units and split systems as identified in Table C.3, per NORESCO-issued drawings in Appendix 2 of the IGA.

Scope of Work

Demolition

NORESCO will:

1) Demolish equipment and materials shown in NORESCO-issued drawings in Appendix 2 of the IGA.

2) Demolish and remove existing electrical installation for existing package units, unit heaters, and furnaces listed in Table C.3, including the disconnect, conductors, conduit, and ancillary equipment back to the source, unless otherwise indicated in NORESCO-issued drawings in Appendix 2 of the IGA.

3) Demolish and remove existing package units and furnaces to be replaced as a part of this ECM.

4) Remove natural gas piping back to the main and cap.

Installation of New Equipment

NORESCO will furnish and install the equipment included in this ECM as shown in NORESCO-issued drawings in Appendix 2 of the IGA, scope descriptions below, and manufacturer's recommendations.

Joe C. Montoya Community and Senior Center

NORESCO will:

1. Furnish and install five (5) new roof-mounted package heat pumps as identified in Table C.3, on existing roof curbs. We will provide curb adapters as required for mounting of the new units and will coordinate final curb adapter configuration with the manufacturer.
2. Furnish and install five (5) new 7-day programmable thermostats to control the new heat pumps. Thermostats shall be placed in same location as existing.
3. Connect the existing supply and return air ducts to the new packaged heat pump plenum connections. Exterior ductwork will be internally lined.
4. Perform pre-TAB measurements and post-TAB balancing to meet or exceed pre-TAB measurements. We will perform measurements at the discharge of the five (5) existing gas-fired package units and at the discharge of the five (5) new packaged heat pumps.
5. Furnish and install a new electric unit heater as identified in Table C.3, per manufacturer's recommendation, in place of the existing non-functional gas unit heater in the kitchen.
6. Provide a new 800A electrical service.
7. Coordinate with Arizona Public Service (APS) the installation of a new pad-mounted transformer. The transformer will be sized by APS.
8. Install underground conduit and conductors from the new pad-mounted transformer to the energy meter at the exterior wall of the building. Underground feeders route will be through the parking lot and grass area. We will coordinate trench, conduit, and conductors with APS and their requirements.
9. Install a new 800A energy meter and service-rated NEMA 3R disconnect switch.

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10. Install a new service-rated 800A 120/240V 1-Phase 3W NEMA 3R surface-mounted panel board.
11. Provide electrical installation for the five (5) new rooftop packaged heat pumps, including conductors, conduit, disconnects, circuit breakers, and other accessories required for the proper electrical connection.
12. Provide electrical installation for the one (1) new electric unit heater, including conductors, conduit, disconnects, circuit breakers, and other accessories required for the proper electrical connection.
13. Coordinate the installation of the new underground components of the equipment with the existing underground utilities. Landscaping, pavement, sidewalks, and curbs disturbed during the installation will be repaired to match the pre-construction conditions as closely as possible.

Equipment Descriptions

NORESCO will install the equipment shown in Table C.3, or NORESCO-approved equal.

Table C.3: New Equipment

Designation	Description	Mfg.	Model#
Joe C. Montoya RTU-1	5-ton Packaged Heat Pump Located on Rooftop, Serving Multipurpose Room	Carrier	50GCQM06B2A3-2A4F0
Joe C. Montoya RTU-2	4-ton Packaged Heat Pump Located on Rooftop, Serving Gathering/Billiards	Carrier	50GCQM05B2A3-2A4F0
Joe C. Montoya RTU-3	3-ton Packaged Heat Pump Located on Rooftop, Serving Crafts/Office	Carrier	50GCQM04B2A3-2A4F0
Joe C. Montoya RTU-4	3-ton Packaged Heat Pump Located on Rooftop, Serving Meeting Room	Carrier	50GCQM04B2A3-2A4F0
Joe C. Montoya RTU-5	5-ton Packaged Heat Pump Located on Rooftop, Serving Fitness Center	Carrier	50GCQM06B2A3-2A4F0
Joe C. Montoya UH-1	7.5-kW Unit Heater, Ceiling-hung in Kitchen	Modine	HER75

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ECM 3: Electric Rate Switch for Pumping Accounts

NORESCO will work with the Customer and APS to switch the electric rate for Lake Mary Well #8 from its current Medium General Service Rate (E-32 M) to a Pumping Rate (E-221), reducing the overall annual bill charge.

Scope of Work

There will be no physical work performed as a part of this ECM. NORESCO will work with the Customer and contacts at APS to complete the rate switch described above.

Equipment Descriptions

There will be no new equipment installed as a part of this ECM.

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ECM 4a: Weatherization

NORESCO will install weatherstripping on select exterior doors and interior doors separating conditioned and unconditioned spaces, reseal specific windows at corners where gaskets have shrunk, and install spray foam insulation in specific locations where insulation is missing or where building penetrations need to be resealed.

Scope of Work

NORESCO will weatherstrip doors and seal windows, building penetrations, and the joints between the roof and top of the wall, as detailed in Table C.4.

Table C.4: Building Weatherization

Building	Doors to be Weather-stripped	Windows to be Sealed	Overhead Doors to be Weather-stripped	Penetrations to be Sealed	Roof-Wall Joint Sealing
Aquaplex Center	25	15 linear feet	-	-	-
Cemetery	5		3		
Cinder Lake Landfill	10	-	3	-	-
City Hall	18	-	-	-	-
City Warehouse	2		4	2	
Coconino Warehouse	4		4	1	5 square feet
Fire Station #1	6		4		
Fire Station #10 (Old Airport Ops Building)	6		5		
Fire Station #2	11		10		
Fire Station #3	8	1	6		
Fire Station #4	6		4		3 square feet
Fire Station #5	4		4		
Fire Station #6	9	40 linear feet	4		
Hal Jensen Recreation Center	11	6 windows	-	3[1]	-
J. Lively Ice Rink / McPherson	33	-	1	-	-
Joe C. Montoya Community and Senior Center	8	-	-	-	-
Library Main	14	-	3	-	-
Milligan House	2	-	-	-	-
NACET Accelerator	12	10 linear feet			
NACET IncubatorNACET Incubator	15	5 linear feet			
Public Works / Sustainability	2	-		9	
Rio De Flag Wastewater Plant	23		5		

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Building	Doors to be Weather-stripped	Windows to be Sealed	Overhead Doors to be Weather-stripped	Penetrations to be Sealed	Roof-Wall Joint Sealing
Theatrikos Building	8	-	-	-	-
Thorpe Shop	4		2		2 covers
USGS #5	4	2 windows	3	-	-
USGS #6	13	-	-	-	-
Utilities Shop	8		2	1	25 linear feet
Visitor's Center	13	-	-	20.5 feet[2]	-
Water Services / Housing East Side Annex	9	5 linear feet	2	32 linear feet	140 linear feet
Wildcat Hill Wastewater Plant	43		6		

[1] Three pipe penetrations to be sealed
[2] 20 feet for two exterior doors in garage to be sealed from the interior. 0.5 feet of penetrations in staircase area to be sealed.

Equipment Descriptions

NORESCO will install the following materials, or NORESCO-approved equal, in locations identified in Table C.4.

- Caulking or equivalent to seal cracks and gaps. Caulking will have a 50-year warranty from the manufacturer.

- Expanding foam to seal penetrations and the joint between the roof and the upper part of the wall. The foam has a manufacturer rated lifespan of 25 years.

- Sweeps and weatherstrips on doors that seal conditioned from unconditioned spaces or the outdoors. Door sealing materials consist of a heavy metal aluminum carrier, and strip of Q-lon which is a formed and angled sponge wrapped in vinyl. It is applied to the door frames, secured with screws, and caulked for added durability and air sealing through the carrier. The sweeps use a double fin film seal between a set of brushes, also embedded in a heavy aluminum carrier. The material is typically placed under the kick plate of the door and secured in the same method as the rest of the door seal.

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ECM 4b: Ice Rink Automated Door Closer and Air Curtains

NORESCO will install air curtains on the double doors separating the lobby from the arena and will install an automatic opener on the existing roll-up door at the ice resurfacing machine exit at the south end of the arena, at the J. Lively Ice Rink. These upgrades will help reduce infiltration of warm air into the arena, reducing the condensation and humidity issues currently experienced during warm or humid weather.

Scope of Work

NORESCO will:

a) Furnish and install the two (2) air curtains and one (1) jack-shaft operator (motorized overhead door opener) listed below in accordance with manufacturer's recommendations.

b) Furnish and install required electrical installations to feed two (2) air curtains and (1) jackshaft operator from existing panels including circuit breakers, conduit, and conductors.

Equipment Descriptions

NORESCO will furnish and install the following equipment:

c) Two (2) unconditioned air curtains with surface-mounted switch activation, one for each of the double doors serving as the patron entrance to the arena from the lobby. ½ horsepower, 115-volt, single phase.

d) One (1) standard-duty jackshaft operator for the ice resurfacing machine door, ½ horsepower, 115/208/230-volt, single phase.

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ECM 5: Electric Vehicle Charging Stations

NORESCO will install nine (9) dual-port level-2 electric vehicle (EV) charging stations at Customer Facilities to charge Customer-purchased EVs. These chargers will not be accessible to the public and are intended for use by Customer fleet vehicles.

Scope of Work

NORESCO will furnish and install EV charging stations listed in Table C.5, per NORESCO-issued drawings in Appendix 2 of the IGA and manufacturer's recommendations. Electrical engineering plans will comply with City of Flagstaff building codes at date of this document submission.
Note that additional EV charging stations are shown on the NORESCO-issued drawings in Appendix 2 of the IGA, but these are not included in the scope of this ECM. EV charging stations were removed from the project scope of work at the request of the Customer after the drawings were created. In the event of conflict between documents, Table C.5 will prevail. Specifically, no EV chargers will be installed at the Main Library.
NORESCO will not provide any vehicles as a part of this ECM.

Public Works (Fleet Building)

NORESCO will:

a) Provide professional electrical engineering plans for Customer review.
b) Furnish and install one (1) EV dual-port bollard-mounted charging station.
c) Provide and install a new 37.5 kVA low-voltage transformer (480V to 208/120V)
d) Provide and install concrete equipment pad for new electrical equipment.
e) Install a new 100A breaker in the existing panel FMH-1.
f) Install a new 125A, 240/120V, 1-phase, 3W panelboard to serve the new EV charger.
g) Install new feeders from the existing FMH-1 panel to the new transformer and 125A panel.
h) Provide and install new breakers and branch feeders to the new EV charger.

Public Works (Solid Waste Building)

NORESCO will:

i) Provide professional electrical engineering plans for Customer review.
j) Furnish and install three (3) EV dual-port bollard-mounted charging stations.
k) Provide and install a new 75 kVA low-voltage transformer (480V to 208/120V)
l) Provide and install concrete equipment pad for new electrical equipment.
m) Install a new 225A breaker in the existing panel SWH.
n) Install a new 600A, 240/120V, 1-phase, 3W panelboard to serve the new EV chargers.
o) Install new feeders from the existing SWH panel to the new transformer and 600A panel.
p) Provide and install new breakers and branch feeders to the new EV chargers.

Public Works (Admin Office)

NORESCO will:

q) Provide professional electrical engineering plans for Customer review.

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r) Furnish and install two (2) EV dual-port bollard-mounted charging stations.
s) Provide and install a new 75 kVA low-voltage transformer (480V to 208/120V)
t) Provide and install concrete equipment pad for new electrical equipment.
u) Install a new 100A breaker in the existing panel ADH-1.
v) Install a new 125A, 240/120V, 1-phase, 3W panelboard to serve the new EV chargers.
w) Install new feeders from the existing ADH-1 panel to the new transformer and 125A panel.
x) Provide and install new breakers and branch feeders to the new EV chargers.

Sustainability Building

NORESCO will:
y) Provide professional electrical engineering plans for Customer review.
z) Furnish and install one (1) EV dual-port wall-mounted charging station.
aa) Install a new 50A breaker in the existing panel main service panel and branch feeders to the new EV charger.

Main Library

c) No EV charging station work at this building.

Equipment Descriptions

NORESCO will install the EV chargers listed in Table C.5, or NORESCO-approved equal.

Table C.5: New Equipment

Location	Description	Mfg.	Model	Quantity/ Plugs	Charging Voltage	Maximum Charging Capacity
Public Works (Fleet Building)	Dual Bollard Type Level-2 EV Charging Station	ChargePoint	CPF50	1/2	208V-AC	6.6 kW ea
Public Works (Solid Waste)	Dual Bollard Type Level-2 EV Charging Station	ChargePoint	CPF50	3/6	208V-AC	6.6 kW ea
Public Works (Admin Office)	Dual Bollard Type Level-2 EV Charging Station	ChargePoint	CPF50	2/4	208V-AC	6.6 kW ea
Sustainability Office	Dual Bollard Type Level-2 EV Charging Station	ChargePoint	CPF50	1/2	208V-AC	6.6 kW ea

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ECM 6a: Irrigation Repairs and Re-commissioning

NORESCO will recommission the Customer's existing Hydropoint WeatherTRAK irrigation controls to irrigate more efficiently. The scope of this ECM includes the following:

a) Targeted replacement of inefficient heads and nozzles

b) Addition of flow sensors and master valves to reduce system water loss

c) Expanded programming to fully leverage the features of the existing controller functions

Scope of Work

NORESCO will perform a wet check of the parks identified in Table C.6. The results of the wet check will be presented to the Customer. Included in the ECM are 357 irrigation head replacements, 16 master control valves and 17 flow sensors. NORESCO has budgeted additional funds as a contingency for this measure and for additional improvements required to maintain the operation of the system. NORESCO will work with the Customer to prioritize what irrigation repairs or improvements should be funded by this allowance. The Customer will have final approval of how the allowance is spent.
NORESCO will work with Hydropoint to perform the work included in this ECM.

NORESCO Implementation Responsibilities

bb) Auditing, engineering, and design specification services

cc) Installation of new irrigation equipment and recommissioning of existing controllers

dd) Irrigation equipment verification, testing, and commissioning as needed during and after construction

ee) Training personnel/staff on proper O&M procedures

ff) Delivery of complete project closeout documentation, equipment listings, and O&M training manuals

Customer Implementation Responsibilities

gg) Facilitate the full evaluation of each of the in-scope park irrigation systems with NORESCO and HydroPoint

hh) Continue maintenance on existing irrigation systems after the upgrade and recommissioning, including equipment installed as part of this ECM.

Table C.6: Parks Included in the Scope of Work for this ECM.

Site	**Total Controllers**
Bow & Arrow Park	1

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Site	Total Controllers
Bushmaster Park	2
Cheshire Park	1
City Hall (library/wheeler)	1
Cogdill Rec Center	1
Continental Sports Park	1
Flagstaff Little League	1
Foxglenn Park	2
Guadalupe Park	1
Hal Jensen Rec Center / Flagstaff Rec Center	1
Joel Montalvo Park	1
Mark Grace Field / Arroyo Park Ballfield	1
Ponderosa Trails Park	1
Smokerise Park	1
Thorpe Complex	2
Thorpe Multi-Purpose Field	1
Thorpe Park	1

Equipment Descriptions

NORESCO's intent is to recommission each of the irrigation control systems included in this ECM so that they work efficiently and provide the Customer with more control. The exact equipment needed at each park will be determined during the detailed irrigation audit performed during the construction period of the project. Examples of equipment that will be replaced are flow sensors, master valves, and sprinkler nozzles/heads.

NORESCO will install components from the following manufacturer or NORESCO-approved equal:

ii) HydroPoint Data Systems – 1720 Corporate Circle, Petaluma, CA 94954

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ECM 8: Water Meter Testing

Water Meter Testing Installation Scope of Work

To determine the accuracy of the existing meters, we will remove and test a subset per American Water Works Association (AWWA) standards. The removed meters will be replaced with new ultrasonic water meters as listed below. The location of the water meters is based on data provided to NORESCO by the Customer and confirmed by NORESCO during the data review and billing analysis.

Table C.7. Proposed Testing Meter Quantity and Type

Meter Size	Quantity	Existing Meter Description	Replacement Meter
3/4"	68	Positive Displacement Meter	Neptune Mach 10 & Itron 500W ERT
1"	64	Positive Displacement Meter	Neptune Mach 10 & Itron 500W ERT
1.5"	23	Positive Displacement Meter	Neptune Mach 10 & Itron 500W ERT
2"	24	Positive Displacement Meter	Neptune Mach 10 & Itron 500W ERT

Replacements will consist of Neptune Mach 10 meters with Itron encoder receiver transmitters (ERT), per the above table.

Implementation

Unless otherwise defined below, the meters will be replaced like for like. Installation of strainers, test valves, bypasses or piping modifications is not included. NORESCO will supply gaskets and flange fasteners as required for the installation of the new meters.
The following are not included as part of installation:

(a) bad/broken curb stops
(b) piping modifications
(c) repair of pre-existing leaks or deteriorated piping
(d) replacement of meter boxes

Area of warranty coverage will be within 2' of the meter upstream and downstream. Any leaks or repairs needed after installation in this 2' zone will be repaired by NORESCO at no additional charge. Any leaks or repairs needed outside of this 2' zone will be the responsibility of the Customer.
As part of the cost to test and replace existing meters, we have included a line item for contingency of incidentals. The contingency funds are controlled by the City and will allow for NORESCO to address any issues beyond standard meter installation such as replacing meter boxes or lids. A list of incidental work with associated pricing is provided. In addition:

(e) NORESCO and its subcontractors will work directly with the billing personnel to provide daily electronic change-out information for the Customer to input in their database and/or billing systems.
(f) The Customer agrees to receive and provide temporary storage of new meters from the Neptune/Itron distributor for installation by NORESCO and its subcontractors.
(g) As routes are completed, the Customer agrees to complete their inspections and sign offs according to the NORESCO route acceptance and sign off procedures.
(h) Customer agrees to provide support for hard-to-find meter locations and system isolation assistance when needed.
(i) Customer agrees to provide a designated representative to interface with NORESCO and its subcontractors on all issues relating to the water meter installations.

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Table C-8. Incidental Contingency Work Pricing

#	Item	Line/Box Size	Unit Labor Price	Unit Material Price	Note
1	Replace Defective Curb Stops/Ball Valves/Gate Valves	3/4"	$45.00	$65.00	
		1"	$45.00	$90.00	
		1.5"	$160.00	$155.00	
		2"	$160.00	$204.00	
2	Replacing Defective/Broken Meter Boxes with plastic boxes and plastic lids (Dallas Specialty & MFG Boxes & Lids)	5/8" through 1"	$35.00	$47.00	Material includes DS1200BI (BLACK); If different box required, material and freight will be charged plus 25%
		1.5" & 2"	$55.00	$58.00	Material includes DS1500IB (BLACK); If different box required, material and freight will be charged plus 25%
3	Pipe Length Modifications to accommodate changes in meter type; Convert threaded to flanged or repipe improper screwed meter connections	1.5"	$240.00	$144.00	
		2"	$240.00	$152.00	
4	Pull and reinstall existing meter box due to misposition in relation to meter (meter boxes only, not including vaults); box resets	3/4"	$35.00	N/A	
		1"	$35.00	N/A	
		1.5"	$55.00	N/A	
		2"	$55.00	N/A	
5	Replace existing defective or leaking pipe/pipe modifications/repiping a direct connected meter on customer side	3/4"	$90.00	$78.00	
		1"	$90.00	$118.00	
		1.5"	$320.00	$204.00	
		2"	$320.00	$277.00	
6	Remove and Replace Concrete/Asphalt for Meter Access (includes use of Quikcrete or similar material mixed onsite; does not include 3rd party certified concrete work)	3/4"	$200.00	N/A	
		1"	$200.00	N/A	
		1.5"	$450.00	N/A	
		2"	$450.00	N/A	
7	Raise Meter Set Service (labor & material for piping only)	3/4"		N/A	
		1"		N/A	
8	Lower Meter Set Service (labor & material for piping only)	3/4"	$200.00	N/A	
		1"	$250.00	N/A	
9	Replace Meter Coupling; shorter couplings used for tight meter access	3/4"	$25.00	$15.00	
		1"	$25.00	$20.00	
10	Replace Meter Box Lid	1" & Below	$5.00	See Note	Material and freight will be charged plus 25%
		1.5" & 2"	$10.00	See Note	Material and freight will be charged plus 25%

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ATTACHMENT D

EQUIPMENT LEASE DOCUMENTS (IF APPLICABLE)

[Reserved, if not applicable]

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ATTACHMENT E-1

DELIVERY AND ACCEPTANCE CERTIFICATE UPON SUBSTANTIAL COMPLETION

Customer hereby acknowledges receipt of the Energy Conservation Measure(s) described in Construction Work Order No. _____ between Customer and NORESCO (which are listed and attached hereto), as fully installed and in good working condition. Customer hereby accepts these Energy Conservation Measure(s) after full inspection thereof as satisfactory for all purposes of the Agreement and the Construction Work Order. Customer agrees to make the related payment(s) to NORESCO as set forth in Section 5 and Attachment G of the Construction Work Order.

Substantial Completion Date:

ECM(s):

Date Accepted by Customer: _____

Accepted for: **Customer**

Accepted by: _____

Name:_____

Title:_____

Note: ECM(s) to which this Delivery and Acceptance Certificate relates is/are attached hereto.

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ATTACHMENT E-2

FINAL DELIVERY AND ACCEPTANCE CERTIFICATE
FINAL ACCEPTANCE OF PROJECT

Customer hereby acknowledges Final Acceptance of all Energy Conservation Measures described in Construction Work Order No.____ between Customer and NORESCO. The date of Final Acceptance is the date certified by the Customer that the Work has been installed, functionally tested, and all punchlist items completed in accordance with the Contract Documents, so that the Customer has possession of the work and can use it for its intended use. Customer hereby accepts the Energy Conservation Measure(s) listed hereto after full inspection thereof as satisfactory for all purposes of the Agreement and the Construction Work Order. Customer agrees to make the required payment(s) to NORESCO as set forth in Section 5 and Attachment G of the Construction Work Order.

Date Accepted by Customer: _____

Accepted for: **Customer**

Accepted by: _____

Name:_____

Title:_____

Note: ECMs to which this Delivery and Acceptance Certificate relates are attached hereto.

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ATTACHMENT F

GUARANTY OF ENERGY COST SAVINGS

1. DEFINITIONS

When used in this Construction Work Order, the following capitalized words shall have the meaning ascribed to them below:

"Baseline Period" is the period of time that defines the Baseline Usage and is representative of the facilities operations, consumption, and usage that is used as the benchmark for determining cost avoidance.

"Baseline Usage" is the calculated energy usage of the Facilities prior to the implementation of the ECMs.

"Baseline Demand" is the calculated energy demand of a piece of equipment or a site prior to the implementation of the ECMs. Baseline physical conditions, such as equipment counts, nameplate data, and control strategies, will typically be determined through building occupancy, energy end-use survey and plug load surveys of the Facilities.

"Cumulative Excess Verified Savings" is the total amount of Excess Verified Savings based on the results of the Measurement & Verification Plan in the Guaranteed Savings Reconciliation Report carried over to subsequent Guaranty Periods.

"Energy and Operational Cost Avoidance Guarantee Practices" are those practices identified in The Schedule of Savings, intended to achieve avoided costs in energy and/or operating expenses.

"Energy Costs" may include the cost of electricity and fuels to operate HVAC equipment, cogeneration system, facility mechanical and lighting systems, and energy management systems, and the cost of water and sewer usage, as applicable.

"ECM" the Energy Conservation Measure (ECM) is the installation of equipment or systems, or modification of equipment or systems as described in Attachment C.

"Excess Verified Savings" is the amount of Verified Savings minus Guaranteed Savings in a Guaranteed Period.

"Facilities" shall mean those described in Attachment B.

"F.E.M.P." shall mean the Federal Energy Management Program of the U.S. Department of Energy and its Measurement and Verification Guidelines for Federal Energy Projects (DOE/GO 10096-248, February 1996, or later versions). The F.E.M.P. guidelines classify measurement & verification approaches as Option A, Option B, Option C, and Option D.

"First Guarantee Period" is defined as the period beginning on the first (1st) day of the month following the date of execution of the Delivery and Acceptance Certificate (Attachment E-2) upon Final Acceptance of this Project by the Customer and ending on the day prior to the first (1st) twelve-month

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anniversary thereof.

“Guarantee Period” is defined as the First Guarantee Period and each of the successive twelve (12) month periods commencing on the anniversary of the commencement of the First Guarantee Period throughout the Term of this Construction Work Order.

“Guaranteed Savings” is defined as the amount of avoided Energy and Operational Costs guaranteed to the Customer in each Guarantee Period.

“Guaranteed Savings Reconciliation Report” is defined as the process and report for determining the Verified Savings in each Guarantee Period and reconciling it to the Guaranteed Savings in the same Guarantee Period.

“IPMVP” shall mean the International Performance Measurement and Verification Protocol and its Measurement and Verification Guidelines for energy savings performance contract projects. The IPMVP guidelines classify measurement & verification approaches as Option A, Option B, Option C, and Option D.

“Measurement and Verification Plan” (M&V Plan) is defined as the plan providing details on how the Guarantee Savings will be verified.

“Operational Costs” shall include the cost of operating and maintaining the Facilities, such as, but not limited to, the cost of inside and outside labor to repair and maintain Covered Systems and Equipment, the cost of custodial supplies, the cost of replacement parts, the cost of deferred maintenance, the cost of lamp and ballast disposal, and the cost of new capital equipment.

“Post Installation Report” is defined as the process and report for determining the Expected Savings for the First Guarantee Period after the completion of construction.

“Term” shall be twenty (20) years from acceptance.

“Verified Savings” is the defined as the summation of avoided Energy and Operational Costs as determined by the Measurement & Verification Plan for the Facilities in each Guarantee Period as a result of the ECMs provided by NORESCO as well as Excess Verified Savings, if any carried forward from previous years.

2. TERM AND TERMINATION

2.1 Guarantee Term. The Term of this Guarantee shall commence on the first (1st) day of the month following the date of execution of the Final Delivery and Acceptance Certificate (Attachment E-2) upon Final Acceptance of this Project by the Customer and shall terminate at the end of twenty years unless terminated earlier as provided for herein.

2.2 Guarantee Termination. Should this Construction Work Order be terminated (including, as applicable, the Maintenance or Measurement & Verification Services) in whole or in part for any reason prior to the end of the Term, the Guaranteed Savings for the Guarantee Period in which such termination becomes effective shall be prorated as of the effective date of such termination, with a reasonable adjustment for seasonal fluctuations, if any, in Energy and Operational Costs, and the Guaranteed Savings for all subsequent Guarantee Periods shall be null and void.

3. SAVINGS GUARANTEE

3.1 Guaranteed Savings: **Table F.1** lists the amount of Guaranteed Savings resulting from the

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ECMs to be installed by NORESCO.

Table F.1 Guaranteed Savings

Year	$ Amount
1	$224,323
2	$231,341
3	$238,593
4	$246,089
5	$253,835
6	$261,844
7	$270,120
8	$278,675
9	$287,521
10	$296,665
11	$306,119
12	$315,894
13	$326,003
14	$336,454
15	$347,264
16	$358,442
17	$370,002
18	$381,959
19	$394,328
20	$407,121
Total	$6,132,591

3.1.1 Additional Savings. Additional energy and/or operational cost avoidance that can be demonstrated as a result of NORESCO's efforts that result in no additional costs to Customer beyond the costs identified in this Construction Work Order will be included in the Guarantee Savings Reconciliation Report for the applicable Guarantee Period (s).

3.1.2 Savings Prior to Final Retrofit Acceptance. All energy and operational cost avoidance realized by Customer and as calculated through the Measurement & Verification Plan that result from activities undertaken by NORESCO prior to Final Acceptance may be applied to the Verified Savings for the First Guaranty Period.

3.1.3 Cumulation of Savings. The Guaranteed Savings in each Guarantee Period are considered satisfied if the Verified Savings for such Guarantee Period equals or exceeds the Guaranteed Savings for such Guarantee Period.

3.1.4 Savings Shortfalls. In the event that the Verified Savings in any Guarantee Period is less than the Guaranteed Savings required for that Guarantee Period, after giving credit for any Excess Verified Savings carried forward from previous Guarantee Periods, NORESCO shall, upon receipt of written demand from Customer, compensate Customer the amount of any such shortfall, limited by the value of the guarantee, within thirty (30) calendar days. Resulting compensation shall be NORESCO's sole liability for any shortfall in the Guaranteed Savings.

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3.2 Post Installation Documentation. NORESCO will provide Customer with a Post Installation Report (PIR) detailing the Expected Savings for the First Guarantee Period within 120 days following the commencement of the First Guarantee Period. Customer will assist NORESCO in generating the PIR by providing NORESCO's receipt thereof, together with access to relevant records relating to such Energy Costs and Operating Costs. Customer will also assist NORESCO by permitting access to any energy billing information, maintenance records, drawings, or other data deemed necessary by NORESCO to generate the said report. Data and calculations utilized by NORESCO in the preparation of its PIR will be made available to Customer, along with such explanations and clarifications as Customer may reasonably request.

3.2.1 Acceptance of Post Installation Report. From the time of receipt, Customer will have ninety (90) days to review the PIR and provide written notice to NORESCO of non-acceptance of the PIR. In the event that Customer does not approve or disapprove of the PIR with ninety (90) days of its submission, NORESCO shall provide a notice Customer has passed its review deadline and has three (3) additional days to review. In the event Customer does not approve or disapprove of the PIR within three (3) days of receipt of that notice, Customer shall be deemed to have accepted the PIR and its findings.

3.3 Savings Reconciliation Documentation. NORESCO will provide Customer with a Guarantee Savings Reconciliation Report after each Guarantee Period within 120 days. Customer will assist NORESCO in generating the savings reconciliation report by providing NORESCO's receipt thereof, together with access to relevant records relating to such Energy and Operating Costs. Customer will also assist NORESCO by permitting access to any energy billing information, maintenance records, drawings, or other data deemed necessary by NORESCO to generate the said report. Data and calculations utilized by NORESCO in the preparation of its Guarantee Savings Reconciliation Report will be made available to Customer, along with such explanations and clarifications as Customer may reasonably request.

3.3.1 Acceptance of Guarantee Savings Reconciliation Report. At the end of each Guarantee Period, Customer will have forty-five (45) days to review the Guarantee Savings Reconciliation Report and provide written notice to NORESCO of non-acceptance of the Guarantee Savings Reconciliation Report for that Guarantee Year. Failure to provide written notice within forty-five (45) days of the receipt of the Guarantee Savings Reconciliation Report shall constitute the deemed acceptance of the Report and its findings by the Customer.

3.3.2 Guarantee Savings Reconciliation. Verified Savings will be determined in accordance with the methodology(s), operating parameters, formulas, and constants as described below and/or defined in the Measurement & Verification Plan and/or additional methodologies defined by NORESCO that may be negotiated with Customer at any time. Actual savings reduction in utility bills may vary from the Verified Savings for reasons outside of NORESCO's control including but not limited to: changes in energy and other utility rates and tariffs, changes in Customer operating schedules and usage patterns, changes in Customer loads due to addition or reductions in energy and water consuming devices, changes in weather, impacts due to the operations of ECMs, impacts due to the maintenance of ECMs maintained by Customer, and additions to and/or reduction in facility space usage. For the purposes of calculating any shortfalls or excesses of Verified Savings versus Guaranteed Savings, the Measurement & Verification Plan will be utilized.

3.3.3 Activities and Events Adversely Impacting Savings. Customer must promptly notify NORESCO of any activities known to Customer, which adversely impacts NORESCO's ability to realize the Guaranteed Savings and NORESCO shall be entitled to reduce the Guaranteed Savings by the amount of any such adverse impact to the extent that such adverse impact is beyond NORESCO's reasonable control.

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3.3.4 Guarantee Adjustment. NORESCO's Guaranteed Savings obligations under this Construction Work Order are contingent upon: (1) Customer following the operations and maintenance requirements for the ECMs in accordance with the Construction Work Order; (2) no alterations or additions being made by the Customer without prior notice and written agreement of the Parties; (3) Customer sending all current utility bills to NORESCO within two (2) weeks after receipt; and (4) NORESCO'S ability to render services not being impaired by circumstances beyond its control. To the extent that the Customer defaults or fails to perform fully any of its obligations under this Construction Work Order, NORESCO may, in its sole discretion, adjust the Guaranteed Savings obligation; provided, however, that no adjustment hereunder shall be effective unless NORESCO has first provided the Customer with written notice of Customer's default(s) or failure(s) to perform and Customer has failed to cure its default(s) and failure(s) to perform within thirty (30) days after receipt of such notice.

3.3.5 Energy Rates. **Table F.2** provides the base rates that will be applied to savings for applicable ECM's. These values will be combined with annual escalation factors in Table F.3 to calculate Verified Savings in each Program Year.

Table F.2 Utility Rates

Building	Demand $/kW	Electric $/kWh	Natural Gas $/Therm	Propane $/Gallon	Gasoline $/Gallon	Reclaim Water $/kgal	Water $/kgal	Sewer $/kgal
Aquaplex Center	$11.22	$0.06491	$0.6850	-	-	$1.95	$6.01	$5.68
Cemetery	$0.00	$0.09451	$0.6855	-	-	$1.95	$5.77	$5.35
Cinder Lake Landfill	$0.00	$0.09451	-	$1.8803	-	$1.95	$6.01	$5.68
City Hall	$11.22	$0.06491	$0.6855	-	-	$1.95	$6.01	$5.68
City Hall Courthouse	$16.01	$0.07487	-	-	-	$1.95	$6.01	$5.68
City Warehouse	$0.00	$0.09451	$0.6855	-	-	$1.95	$6.01	$5.68
Coconino Warehouse	$0.00	$0.09451	$0.6855	-	-	$1.95	$6.01	$5.68
Fire Station #1	$16.01	$0.07487	$0.6855	-	-	$1.95	$6.01	$5.68
Fire Station #10 (Old Airport Ops Building)	$0.00	$0.09451	$0.6850	-	-	$1.95	$6.01	$5.68
Fire Station #2	$16.01	$0.07487	$0.6850	-	-	$1.95	$6.01	$5.68
Fire Station #3	$16.01	$0.07487	$0.6850	-	-	$1.95	$6.01	$5.68
Fire Station #4	$0.00	$0.09451	$0.6855	-	-	$1.95	$6.01	$5.68
Fire Station #5	$0.00	$0.09451	$0.6855	-	-	$1.95	$6.01	$5.68
Fire Station #6	$0.00	$0.09451	$0.6855	-	-	$1.95	$6.01	$5.68
Hal Jensen Recreation Center	$0.00	$0.09451	$0.6855	-	-	$1.95	$6.01	$5.68
J. Lively Ice Rink / McPherson	$11.22	$0.06491	$0.6855	-	-	$1.95	$6.01	$5.68
Joe C. Montoya Community and Senior Center	$16.01	$0.07487	$0.6855	-	-	$1.95	$6.01	$5.68
Lake Mary Water Treatment Plant	$7.97	$0.08215	$0.6855	-	-	$1.95	$6.01	$5.68
Library Main	$10.91	$0.06775	$0.6855	-	$4.70	$1.95	$6.01	$5.68
Milligan House	$0.00	$0.09451	$0.6855	-	-	$1.95	$6.01	$5.68
Murdoch Center	$0.00	$0.09451	$0.6855	-	-	$1.95	$6.01	$5.68
NACET Accelerator	$16.01	$0.06775	$0.6855	-	-	$1.95	$6.01	$5.68

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Building	Demand $/kW	Electric $/kWh	Natural Gas $/Therm	Propane $/Gallon	Gasoline $/Gallon	Reclaim Water $/kgal	Water $/kgal	Sewer $/kgal
NACET Incubator	$16.01	$0.06775	$0.6855	-	-	$1.95	$6.01	$5.68
Public Works	$16.01	$0.06775	$0.6855	-	$4.70	$1.95	$6.01	$5.68
Public Works / Sustainability	$0.00	$0.09451	$0.6855	-	$4.70	$1.95	$6.01	$5.68
Pulliam Airport	$16.01	$0.06775	$0.6855	-	-	$1.95	$6.01	$5.68
Rio De Flag Wastewater Plant	$11.22	$0.06491	$0.6855	-	-	$1.95	$5.95	$6.09
Theatrikos Building	$0.00	$0.09451	$0.6855	-	-	$1.95	$6.01	$5.68
Thorpe Shop	$0.00	$0.09451	$0.6855	-	-	$1.95	$6.01	$5.68
USGS #5	$0.00	$0.09451	-	$1.8803	-	$1.95	$6.01	$5.68
USGS #6	$11.22	$0.06491	$0.6855	-	-	$1.95	$6.01	$5.68
Utilities Shop	$16.01	$0.07487	$0.6855	-	-	$1.95	$6.01	$5.68
Visitor's Center	$0.00	$0.09451	$0.6855	-	-	$1.95	$6.01	$5.68
Water Services / Housing East Side Annex	$0.00	$0.09451	$0.6855	-	-	$1.95	$6.01	$5.68
Wildcat Hill Wastewater Plant	$21.95	$0.05329	$0.5414	-	-	$1.95	$6.01	$5.68
Woody Mountain Clarifier	$21.95	$0.05329	-	-	-	$1.95	$6.01	$5.68
Parks	$0.00	$0.09451	-	-	-	$1.95	$6.01	$5.68
Water Systems	$21.95	$0.05329	$0.6855	-	-	$1.95	$6.01	$5.68

Table F.3 lists the utility rate escalation forecasts for electricity, gasoline, pool chemicals and operations and maintenance (O&M). These rate forecasts were reviewed and approved by the Customer. The escalated energy rates will be compared to actual utility rates during each Guarantee Period, throughout the Agreement term, and the higher of the listed energy rates (the floor rates) and the actual rates in force will be used to determine savings.

The utility rate escalation factors to be used are summarized in the Table F.3. The energy escalation factors in Table F.3: Escalation Factors will be applied to the energy rates in Table F.2: Utility Rates to determine the rates for each successive year.

Table F.3 Escalation Rates

Utility	Escalation Rate
Electricity	2.30%
Natural Gas	3.78%
Propane	3.78%
Gasoline	3.78%
Water & Sewer	4.00%
Maintenance (material) Savings	2.30%

A summary of units of energy saved is shown below in Table F.4.

Table F.4 Summary of Energy Units Saved

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#	ECM	Annual Electric Demand (kW)	Electric Consumption (kWh)	Natural Gas (therms)	Propane (gallons)	Gasoline (gallons)	Utility Bill Savings Dollars	Reclaim Water (kgal)	Water (kgal)
1a & 1b	Interior & Exterior LED Lighting	2,236	768,482	(7,953)	(173)	0	0	0	0
2a	Energy Management System Upgrades	299.3	145,434	15,808	0	0	0	0	0
2b	Heat Pump Heating and Cooling	(145.4)	(35,950)	4,344	0	0	0	0	0
3	Electric Rate Switch for Pumping Accounts	0	0	0	0	0	$9,733	0	0
4A	Weatherization	0	5,216	15,001	1,151	0	0	0	0
4B	Ice Rink Automated Door Closer and Air Curtains	0	5,291	292	0	0	0	0	0
5	Electric Vehicle Charging Stations	(100)	(25,861)	0	0	5,666	0	0	0
6A	Irrigation Repairs & Re-Commissioning	0	0	0	0	0	0	10,432	6,751
8	Water Meter Testing	0	0	0	0	0	0	0	0
	Totals	2,290	862,612	27,492	978	5,666	$9,733	10,432	6,751

4. MEASUREMENT & VERIFICATION PLAN

4.4 Measurement and Verification. NORESCO and the Customer agree that the Verified Savings by ECM will be determined using the following Measurement & Verification plans further described in this section. Through this plan, the guaranteed savings generated by the ECMs installed in the Facilities will be validated. The M&V methodologies proposed for these ECMs are based on the version 2.2 of the F.E.M.P. Measurement and Verification Guidelines. The objective of the plan is to quantify the actual electrical and fossil fuel and compare those to the specific Baseline Usage for each Facility, the difference of which is the Verified Savings.

During the term of the Construction Work Order, NORESCO will make adjustments to energy savings due to changes in building occupancy, weather data, and utility rate schedules, etc. The unit costs of energy will be applied to the energy savings calculated by this M&V plan. Current utility cost will be used as a basis for determining the unit cost, with floor and ceiling prices set by baseline rate information, presented herein this Attachment.

4.5 M&V Descriptions: NORESCO developed an ECM-specific Measurement and Verification (M&V) Plan for each of the ECMs proposed, which will provide cost-effective verification of savings throughout the Guarantee Period. The M&V Plan was developed for each ECM based on the following criteria:

- Compliance with IPMVP

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- Accurate predictions of energy savings
- Cost-effective minimization of uncertainty in Verified Savings
- Verified Savings reflect actual post installation operating conditions
- M&V activities support ongoing energy management activities

Full M&V Descriptions are provided in EXHIBIT C: IGA Section 4.2.

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ATTACHMENT G

CONTRACT COST AND ANNUAL SERVICES

- Customer agrees to pay to NORESCO, the amount equal to the Project Cost, as listed below, in accordance with the terms described in Section 4 of the Construction Work Order. The proposed monthly progress payments shall be substantially the same as those found in Attachment G-1, Proposed Progress Payments, attached hereto.

  Project Cost = $4,423,547

  Proposed Monthly Progress Payments are attached hereto as Attachment G-1.

- Maintenance Fee: Reserved

- Measurement & Verification Fee: Customer shall pay NORESCO for annual measurement and verification services provided under this Construction Work Order that the Parties mutually agree to have NORESCO perform. Customer agrees to pay the annual Measurement & Verification fee as provided for below with respect to such agreed upon services.

Year	Annual Amount
1	$14,821
2	$9,731
3	$10,023
4	$10,324
5	$10,633
6	$10,952
7	$11,281
8	$11,619
9	$11,968
10	$12,327
11	$12,697
12	$13,078
13	$13,470
14	$13,874
15	$14,290
16	$14,719
17	$15,161
18	$15,615
19	$16,084
20	$16,566
Total	$259,235

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ATTACHMENT G-1

PROPOSED MONTHLY PROGRESS PAYMENTS

Month of Construction	Projected Progress Payment
WO#1 Signature/ Mobilization	$442,355
1	$663,532
2	$530,826
3	$530,826
4	$530,826
5	$575,061
6	$353,884
7	$0
8	$0
9	$0
10	$0
11	$0
12	$0
13	$0
14	$353,884
15	$44,235
16	$44,235
17	$44,235
18	$44,235
19	$44,235
20	$221,177
Total	$4,423,547

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ATTACHMENT H

CHANGE ORDER FORM

(Request & Agreement for Change in Plans and/or Specifications and/or Terms)

Change Request No. _____

Customer:_____
Department:_____

Project No._____ Contract No._____ Site:_____

Title:_____

I. REQUEST Date:_____

(a) Requested by_____ Of_____

(b) Description of change _____
_____

II. NORESCO's AGREEMENT

For all costs involved in this change including extensions of time herein requested NORESCO proposes to perform the work described in accordance with the provisions of the subject Construction Work Order and certifies that the attached cost data is accurate, complete and current, and mathematically correct.

Payment shall be made on the basis of:

If necessary, attach detailed estimates and breakdown for above in accordance with change order instruction. A claim for work performed under protest may be submitted in writing.

An extension of contract time of _____ calendar days to _____ is requested.

NORESCO_____ by_____ Date:_____

CUSTOMER APPROVAL: Date:_____

	Contract Award	$
Customer_____	Previous Additions	$
	Previous Deductions	$
By:_____	Net Total	$
Title:_____	This Change	$
	Total	$

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ATTACHMENT I

MAINTENANCE SERVICES

Maintenance services provided by NORESCO are limited to annual oversight activities as described in the M&V Plan in the Detailed Energy Audit included as EXHIBIT C, as may be amended by the Parties. Oversight activities are limited to annual confirmation that the Customer continues to operate, maintain, and repair the ECMs in a manner consistent with contract requirements to ensure the persistence of guarantees savings over the term of the Project. NORESCO shall submit an annual report indicating the results of its maintenance oversight functions.

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ATTACHMENT J

NORESCO INSTALLED EQUIPMENT

#	ECM
1	**Interior & Exterior LED Lighting**
1A	Interior LED Lighting
1B	Exterior LED Lighting
2	**Mechanical Upgrades**
2A	Not Applicable – Customer Self-Performing
2B	Heat Pump Heating and Cooling
3	**Electric Rate Switch for Pumping Accounts**
4	**Building Envelope Improvements**
4A	Weatherization
4B	Ice Rink Automated Door Closer and Air Curtains
5	**Electric Vehicle Charging Stations**
6	**Water Conservation**
6A	Irrigation Repairs & Re-Commissioning
8	**Water Meter Testing**

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ATTACHMENT K

STANDARDS OF SERVICE

As part of the Investment Grade Audit (IGA), NORESCO documented the existing operating parameters for equipment at Customer Facilities. As part of the energy conservation measures (ECMs), NORESCO has identified the proposed changes to the existing operating parameters (such as operating hours, setpoints, control sequences, equipment efficiencies, etc.) that will generate energy savings. This information is the basis for establishing the existing and proposed ECM operation parameters and standards of comfort and service. The tables contained herein are summarized below.

Table K.1: Lighting Operating Hours

Table K.2: Pre-Retrofit Lighting Fixture Wattages

Table K.3: Post-Retrofit Lighting Fixture Wattages

Table K.4: Existing and Proposed HVAC Schedules and Setpoints

NORESCO's Investment Grade Audit ("IGA") Report dated January 2023 is hereby incorporated herein for the limited purpose of providing additional detail to the Standards of Service described herein. In the event of a conflict between the IGA and any other documents, this Attachment K shall govern.

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NORESCO performed a detailed audit of the lighting systems at the Premises. The audit identified lighting estimated operating hours, quantities, types of fixtures, and fixture wattages. The lighting operating hours were determined from discussions with Customer staff, and we reconciled against provided electric utility data. Data loggers were not used to determine operating hours, since facility operating hours and occupancy were affected by Covid-19 restrictions during the audits. Lighting systems with similar annual operating hours were grouped into Hour Codes, as shown in Table K.1, which were used to model the baseline energy consumption for the lighting savings calculations.

Table K.1: Lighting Operating Hours

Burn Code	Area Description	Est. Average Hours BEFORE/ AFTER	Est. Average Hours WITH SENSORS	% ON AFTER SENSOR	% Contribution to demand charge
0.5H5D	0.5 HOURS 5 DAYS A WEEK	130	130	100%	10%
0.5H6D	0.5 HOURS 6 DAYS A WEEK	156	156	100%	10%
1.5H5D-ES	1.5 HOURS 5 DAYS A WEEK - EXISTING SENSOR	390	390	100%	40%
1.5H7D-ES	1.5 HOURS 7 DAYS A WEEK - EXISTING SENSOR	548	548	100%	40%
1.75H6D-ES	1.75 HOURS 6 DAYS A WEEK	546	546	100%	40%
10.5H5D	10.5 HOURS 5 DAYS A WEEK	2,730	2,730	100%	95%
10.5H5D-OS80	10.5 HOURS 5 DAYS A WEEK - ADD SENSOR 80% USAGE	2,730	2,184	80%	95%
10H5D	10 HOURS 5 DAYS A WEEK	2,600	2,600	100%	95%
10H5D-OS70	10 HOURS 5 DAYS A WEEK - ADD SENSOR 70% USAGE	2,600	1,820	70%	95%
10H5D-OS80	10 HOURS 5 DAYS A WEEK - ADD SENSOR 80% USAGE	2,600	2,080	80%	95%
10H6D	10 HOURS 6 DAYS A WEEK	3,120	3,120	100%	95%
10H6D/7H1D	10 HOURS 6 DAYS + 7 HOURS 1 DAY A WEEK	3,484	3,484	100%	95%
10H7D	10 HOURS 7 DAYS A WEEK	3,650	3,650	100%	95%
10H7D-ES	10 HOURS 7 DAYS A WEEK - EXISTING SENSOR	3,650	3,650	100%	95%
10H7D-	10 HOURS 7 DAYS A WEEK - ADD SENSOR	3,650	2,920	80%	95%

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Burn Code	Area Description	Est. Average Hours BEFORE/ AFTER	Est. Average Hours WITH SENSORS	% ON AFTER SENSOR	% Contribution to demand charge
OS80	80% USAGE				
12.5H7D-OS40	12.5 HOURS 7 DAYS A WEEK - ADD SENSOR 40% USAGE	4,563	1,825	40%	95%
12H5D	12 HOURS 5 DAYS A WEEK	3,120	3,120	100%	95%
12H7D	12 HOURS 7 DAYS A WEEK	4,380	4,380	100%	95%
12H7D-ES	12 HOURS 7 DAYS A WEEK - EXISTING SENSOR	4,380	4,380	100%	95%
12H7D-OS80	12 HOURS 7 DAYS A WEEK - ADD SENSOR 80% USAGE	4,380	3,504	80%	95%
13.5H7D	13.5 HOURS 7 DAYS A WEEK	4,928	4,928	100%	95%
13H5D	13 HOURS 5 DAYS A WEEK	3,380	3,380	100%	95%
14.5H7D	14.5 HOURS 7 DAYS A WEEK	5,293	5,293	100%	95%
14H7D	14 HOURS 7 DAYS A WEEK	5,293	5,293	100%	95%
14H7D-OS70	14 HOURS 7 DAYS A WEEK - ADD SENSOR 70% USAGE	5,110	3,577	70%	95%
14H7D-OS80	14 HOURS 7 DAYS A WEEK - ADD SENSOR 80% USAGE	5,110	4,088	80%	95%
15H7D	15 HOURS 7 DAYS A WEEK	5,475	5,475	100%	95%
15H7D-OS70	15 HOURS 7 DAYS A WEEK - ADD SENSOR 70% USAGE	5,475	3,833	70%	95%
17H7D	17 HOURS 7 DAYS A WEEK	6,205	6,205	100%	95%
17H7D-OS70	17 HOURS 7 DAYS A WEEK - ADD SENSOR 70% USAGE	6,205	4,344	70%	95%
18.5H7D	18.5 HOURS 7 DAYS A WEEK	6,753	6,753	100%	95%
1H5D	1 HOUR 5 DAYS A WEEK	260	260	100%	10%
1H7D	1 HOUR 7 DAYS A WEEK	365	365	100%	10%
2.5H6D	2.5 HOURS 6 DAYS A WEEK	780	780	100%	40%
2.5H7D	2.5 HOURS 7 DAYS A WEEK	913	913	100%	40%
2.5H7D-ES	2.5 HOURS 7 DAYS A WEEK - EXISTING	913	913	100%	40%

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Burn Code	Area Description	Est. Average Hours BEFORE/ AFTER	Est. Average Hours WITH SENSORS	% ON AFTER SENSOR	% Contribution to demand charge
	SENSOR				
20H7D	20 HOURS 7 DAYS A WEEK	7,300	7,300	100%	95%
20H7D-OS50	20 HOURS 7 DAYS A WEEK - ADD SENSOR 50% USAGE	7,300	3,650	50%	95%
2H4D	2 HOURS 4 DAYS A WEEK	416	416	100%	40%
2H5D	2 HOURS 5 DAYS A WEEK	520	520	100%	40%
2H5D-OS40	2 HOURS 5 DAYS A WEEK - ADD SENSOR 40% USAGE	520	208	40%	40%
2H5D-OS70	2 HOURS 5 DAYS A WEEK - ADD SENSOR 70% USAGE	520	364	70%	40%
2H6D	2 HOURS 6 DAYS A WEEK	624	624	100%	40%
2H7D	2 HOURS 7 DAYS A WEEK	730	730	100%	40%
2H7D-OS80	2 HOURS 7 DAYS A WEEK - ADD SENSOR 80% USAGE	730	584	80%	40%
3.5H6D-ES	3.5 HOURS 6 DAYS A WEEK - EXISTING SENSOR	1,092	1,092	100%	40%
3.5H7D	3.5 HOURS 7 DAYS A WEEK	1,278	1,278	100%	40%
3.5H7D-ES	3.5 HOURS 7 DAYS A WEEK - EXISTING SENSOR	1,278	1,278	100%	40%
3H4D	3 HOURS 4 DAYS A WEEK	624	624	100%	40%
3H5D	3 HOURS 5 DAYS A WEEK	780	780	100%	40%
3H5D-ES	3 HOURS 5 DAYS A WEEK - EXISTING SENSOR	780	780	100%	40%
3H5D-OS40	3 HOURS 5 DAYS A WEEK - ADD SENSOR 40% USAGE	780	312	40%	40%
3H5D-OS80	3 HOURS 5 DAYS A WEEK - ADD SENSOR 80% USAGE	780	624	80%	40%
3H6D	3 HOURS 6 DAYS A WEEK	936	936	100%	40%
3H7D	3 HOURS 7 DAYS A WEEK	1,095	1,095	100%	40%

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Burn Code	Area Description	Est. Average Hours BEFORE/ AFTER	Est. Average Hours WITH SENSORS	% ON AFTER SENSOR	% Contribution to demand charge
3H7D-ES	3 HOURS 7 DAYS A WEEK - EXISTING SENSOR	1,095	1,095	100%	40%
3H7D-OS40	3 HOURS 7 DAYS A WEEK - ADD SENSOR 40% USAGE	1,095	438	40%	40%
3H7D-OS80	3 HOURS 7 DAYS A WEEK - ADD SENSOR 80% USAGE	1,095	876	80%	40%
4.5H5D-ES	4.5 HOURS 5 DAYS A WEEK - EXISTING SENSOR	1,170	1,170	100%	60%
4H5D	4 HOURS 5 DAYS A WEEK	1,040	1,040	100%	60%
4H5D/1H2D	4 HOURS 5 DAYS + 1 HOUR 2 DAYS A WEEK	1,144	1,144	100%	60%
4H5D-OS80	4 HOURS 5 DAYS A WEEK - ADD SENSOR 80% USAGE	1,040	832	80%	60%
4H6D	4 HOURS 6 DAYS A WEEK	1,248	1,248	100%	60%
4H7D	4 HOURS 7 DAYS A WEEK	1,460	1,460	100%	60%
4H7D-OS40	4 HOURS 7 DAYS A WEEK - ADD SENSOR 40% USAGE	1,460	584	40%	60%
4H7D-OS80	4 HOURS 7 DAYS - ADD SENSOR 80% USAGE	1,460	1,168	80%	60%
5.5H7D-ES	5.5 HOURS 7 DAYS - EXISTING SENSOR	2,002	2,002	100%	60%
5H5D	5 HOURS 5 DAYS A WEEK	1,300	1,300	100%	60%
6.5H6D-ES	6.5 HOURS 6 DAYS A WEEK - EXISTING SENSOR	2,028	2,028	100%	80%
6.5H7D	6.5 HOURS 7 DAYS A WEEK	2,373	2,373	100%	80%
6.5H7D-ES	6.5 HOURS 7 DAYS A WEEK- EXISTING SENSOR	2,373	2,373	100%	80%
6H4D	6 HOURS 4 DAYS A WEEK	1,248	1,248	100%	80%
6H4D-OS80	6 HOURS 4 DAYS A WEEK - ADD SENSOR 80% USAGE	1,248	998	80%	80%
6H5D	6 HOURS 5 DAYS A WEEK	1,560	1,560	100%	80%
6H5D-OS80	6 HOURS 5 DAYS A WEEK - ADD SENSOR 80% USAGE	1,560	1,248	80%	80%

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Burn Code	Area Description	Est. Average Hours BEFORE/ AFTER	Est. Average Hours WITH SENSORS	% ON AFTER SENSOR	% Contribution to demand charge
6H7D	6 HOURS 7 DAYS A WEEK	2,190	2,190	100%	80%
6H7D-ES	6 HOURS 7 DAYS A WEEK - EXISTING SENSOR	2,190	2,190	100%	80%
7.5H7D-ES	7.5 HOURS 7 DAYS A WEEK - EXISTING SENSOR	2,738	2,738	100%	80%
7H5D	7 HOURS 5 DAYS A WEEK	1,820	1,820	100%	80%
7H5D-ES	7 HOURS 5 DAYS A WEEK - EXISTING SENSOR	1,820	1,820	100%	80%
7H5D-OS80	7 HOURS 5 DAYS A WEEK - ADD SENSOR 80% USAGE	1,820	1,456	80%	80%
8.5H5D	8.5 HOURS 5 DAYS A WEEK	2,210	2,210	100%	95%
8.5H5D-OS80	8.5 HOURS 5 DAYS A WEEK, ADD SENSOR 80% USAGE	2,210	1,768	80%	95%
8H5D	8 HOURS 5 DAYS A WEEK	2,080	2,080	100%	95%
8H5D-ES	8 HOURS 5 DAYS A WEEK - EXISTING SENSOR	2,080	2,080	100%	95%
8H5D-OS80	8 HOURS 5 DAYS A WEEK - ADD SENSOR 80% USAGE	2,080	1,664	80%	95%
8H6D	8 HOURS 6 DAYS A WEEK	2,496	2,496	100%	95%
8H6D-ES	8 HOURS 6 DAYS A WEEK - EXISTING SENSOR	2,496	2,496	100%	95%
8H6D-OS80	8 HOURS 6 DAYS A WEEK - ADD SENSOR 80% USAGE	2,496	1,997	80%	95%
8H7D	8 HOURS 7 DAYS A WEEK	2,920	2,920	100%	95%
8H7D-ES	8 HOURS 7 DAYS A WEEK - EXISTING SENSOR	2,920	2,920	100%	95%
8H7D-OS80	8 HOURS 7 DAYS A WEEK - ADD SENSOR 80% USAGE	2,920	2,336	80%	95%
9.5H5D	9.5 HOURS 5 DAYS A WEEK	2,470	2,470	100%	95%
9H5D	9 HOURS 5 DAYS A WEEK	2,340	2,340	100%	95%

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Burn Code	Area Description	Est. Average Hours BEFORE/ AFTER	Est. Average Hours WITH SENSORS	% ON AFTER SENSOR	% Contribution to demand charge
9H5D/1H2D	9 HOURS 5 DAYS + 1 HOUR 2 DAYS A WEEK	2,444	2,444	100%	95%
9H5D-OS40	9 HOURS 5 DAYS A WEEK - ADD SENSOR 40% USAGE	2,340	936	40%	95%
9H5D-OS80	9 HOURS 5 DAYS A WEEK - ADD SENSOR 80% USAGE	2,340	1,872	80%	95%
9H6D	9 HOURS 6 DAYS A WEEK	2,808	2,808	100%	95%
9H6D-OS40	9 HOURS 6 DAYS A WEEK - ADD SENSOR 40% USAGE	2,808	1,123	40%	95%
9H7D	9 HOURS 7 DAYS A WEEK	3,285	3,285	100%	95%
V	VACANT	0	0	100%	0%
X	EXTERIOR	4,380	4,380	100%	10%
X1	ARROYO PARK BALLFELD LIGHTING	372	372	100%	10%
X2	BUSHMASTER PARK TENNIS AND BASKETBALL HOURS	185	185	100%	10%
X3	CONTINENTAL PARK BALLFIELD LIGHTING	244	244	100%	10%
X3A	CONTINENTAL PARK SITE LIGHTING	4,419	4,419	100%	10%
X4	GUADALUPE PARK CONCESSIONS AND PRESS BOX	372	372	100%	10%
X5	JOEL MONTALVO PARK BALLFIELD LIGHTING	102	102	100%	10%
X6	CONTINENTAL PARK - FIELD 1	322	322	100%	10%
X7	CONTINENTAL PARK - FIELD 2	358	358	100%	10%
X8	CONTINENTAL PARK - FIELD 3	401	401	100%	10%
X9	CONTINENTAL PARK - FIELD 4	304	304	100%	10%
Z	24 HOURS 7 DAYS A WEEK	8,760	8,760	100%	100%

As part of the IGA, NORESCO performed a detailed lighting audit at the Premises to identify the various types of lighting fixtures. NORESCO has identified changes to lighting systems that will generate energy savings. Similar fixtures were grouped together and assigned a pre-retrofit code (“Pre Code”), as shown in Table K.2. The fixture wattages are based on published manufacturer data, which were used to model the pre-retrofit energy consumption for the lighting savings calculations. During the audit phase, fixture

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wattages were measured as defined in Schedule N (Methods of Savings Measurement and Verification).

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Table K.2: Pre-Retrofit Lighting Fixture Wattages

Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
1DID3'T8-WALL-HARD	32	1 LAMP 3' T8 FLUORESCENT DIRECT/INDIRECT FIXTURE, WALL MOUNTED, HARD INSTALL	26
1DIDT8-WALL-HARD	6	1 LAMP T8 FLUORESCENT DIRECT/INDIRECT FIXTURE, WALL MOUNTED, HARD INSTALL	24.7
1IT8	7	1 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE	24.7
1LPCT8-16"X4'-RA	4	1 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, PARABOLIC LENS, 16"X4', RETURN AIR	24.7
1LPRT8-16"X4'-RA	669	1 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, PARACUBE LENS, 16"X4', RETURN AIR	24.7
1LPRT8-16"X4'-RA-27K	15	1 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, PARABOLIC LENS, 16"X4', RETURN AIR, 2700K	24.7
1LT8/D2	3	1 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, DELAMPED FROM 2	35.65
1LT8-16"X4'	11	1 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, 16"X4'	24.7
1S	1	1 LAMP T12 FLUORESCENT COMMERCIAL STRIP FIXTURE	43
1S2'T8	1	1 LAMP 2' T8 FLUORESCENT COMMERCIAL STRIP FIXTURE	18
1ST8	2	1 LAMP T8 FLUORESCENT COMMERCIAL STRIP FIXTURE	24.7
1ST8-COVE-HARD	14	1 LAMP T8 FLUORESCENT COMMERCIAL STRIP FIXTURE, COVE LIGHT, HARD INSTALL	24.7
1ST8-COVE-VHARD	16	1 LAMP T8 FLUORESCENT COMMERCIAL STRIP FIXTURE, COVE LIGHT, VERY HARD INSTALL	24.7
1UC2'T8	6	1 LAMP 2' T8 FLUORESCENT UNDER CABINET FIXTURE	18
1UC3'T8	12	1 LAMP 3' T8 FLUORESCENT UNDER CABINET FIXTURE	26
1UCF15T8	10	1 LAMP 2' T8 FLUORESCENT UNDER CABINET FIXTURE, 15 WATT LAMP	19

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
1UCT8	5	1 LAMP T8 FLUORESCENT UNDER CABINET FIXTURE	24.7
1V(V)T8	1	1 LAMP T8 FLUORESCENT VANITY FIXTURE, MISSING OR BROKEN LENS	24.7
1V2'T5	2	1 LAMP 2' T5 FLUORESCENT VANITY FIXTURE	18
1V2'T8	2	1 LAMP 2' T8 FLUORESCENT VANITY FIXTURE	18
1VT8	1	1 LAMP T8 FLUORESCENT VANITY FIXTURE	24.7
1W(W)T8	1	1 LAMP T8 FLUORESCENT WRAP FIXTURE, MISSING OR BROKEN LENS	24.7
1WT8	6	1 LAMP T8 FLUORESCENT WRAP FIXTURE	24.7
1WTT8	28	1 LAMP T8 FLUORESCENT WRAP FIXTURE, BUTTED END TO END	24.7
1X82ST8-HARD	17	1X8 2 LAMP T8 FLUORESCENT COMMERCIAL STRIP FIXTURE, HARD INSTALL	51
1X82ST8-HARD-HT	1	1X8 2 LAMP T8 FLUORESCENT COMMERCIAL STRIP FIXTURE, HARD INSTALL, HIGH INSTALL	51
1X82ST8-VHARD	5	1X8 2 LAMP T8 FLUORESCENT COMMERCIAL STRIP FIXTURE, VERY HARD INSTALL	51
1X82W(W)T8-HARD	1	1X8 2 LAMP T8 FLUORESCENT WRAP FIXTURE, MISSING OR DAMAGED LENS, HARD INSTALL	51
1X82WT8-BB-HARD	1	1X8 2 LAMP T8 FLUORESCENT WRAP STRIP FIXTURE, BATTERY BACKUP, HARD INSTALL	51
1X82WT8-HARD	35	1X8 2 LAMP T8 FLUORESCENT WRAP STRIP FIXTURE, HARD INSTALL	51
1X84DIDPT8-HARD	153	1X8 4 LAMP T8 FLUORESCENT DRECT/INDIRECT FIXTURE, PENDANT MOUNTED, HARD INSTALL	146.9
1X84DIDT8-WALL-HARD	30	1X8 4 LAMP T8 FLUORESCENT DIRECT/INDIRECT FIXTURE, WALL MOUNTED, HARD INSTALL	146.9
1X84DPT8-HARD	17	1X8 4 LAMP T8 FLUORESCENT DIRECT FIXTURE, PENDANT MOUNTED, HARD INSTALL	146.9

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
1X84IT8-BB-HARD	1	1X8 4 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE, BATTERY BACKUP, HARD INSTALL	146.9
1X84IT8-HARD	8	1X8 4 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE, HARD INSTALL	146.9
1X84ST8-HARD	41	1X8 4 LAMP T8 FLUORESCENT COMMERCIAL STRIP FIXTURE, HARD INSTALL	146.9
1X84ST8-HARD-HT	87	1X8 4 LAMP T8 FLUORESCENT STRIP FIXTURE, HARD INSTALL, HIGH INSTALL	146.9
1X84WPRT8-LP-HARD-HT	100	1X8 4 LAMP T8 FLUORESCENT REFLECTORIZED WRAP FIXTURE, LOW POWER BALLAST, HARD INSTALL, HIGH INSTALL	98
1X84WRT8-DIM-HARD	4	1X8 4 LAMP T8 FLUORESCENT REFLECTORIZED WRAP FIXTURE, DIMMABLE, HARD INSTALL	146.9
1X84WT8-HARD	42	1X8 4 LAMP T8 FLUORESCENT WRAP FIXTURE, HARD INSTALL	146.9
1X84WWP-HARDPIPED-HARD	42	1X8 4 LAMP T12 FLUORESCENT VAPOR TIGHT FIXTURE, HARD PIPED, HARD INSTALL	142.8
1X84WWPT8-HARD	15	1X8 4 LAMP T8 FLUORESCENT VAPOR TIGHT FIXTURE, HARD INSTALL	146.9
1X84WWPT8-HARD-HT	8	1X8 4 LAMP T8 FLUORESCENT VAPOR TIGHT FIXTURE, HARD INSTALL, HIGH INSTALL	146.9
1X88DIDPT8-HARD	30	1X8 8 LAMP T8 FLUORESCENT DIRECT/INDIRECT PENDANT MOUNTED FIXTURE, HARD INSTALL	293.8
2B(B)T8-1X4-DROP	1	2 LAMP T8 FLUORESCENT 1X4 BOX FIXTURE, DROP LENS, BROKEN LENS	51
2BR2'T8	45	2 LAMP T8 FLUORESCENT 2X2 REFLECTORIZED BOX FIXTURE	33
2BRT8-1X4	4	2 LAMP T8 FLUORESCENT 2X4 REFLECTORIZED BOX FIXTURE	51
2BRT8-LP	21	2 LAMP T8 FLUORESCENT 2X4 REFLECTORIZED BOX FIXTURE, LOW POWER BALLAST	51
2BRT8-WOOD	12	2 LAMP T8 FLUORESCENT 2X4 REFLECTORIZED BOX FIXTURE, WOOD TONE	51

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
2BT8	11	2 LAMP T8 FLUORESCENT 2X4 BOX FIXTURE	51
2BT8-1X4	22	2 LAMP T8 FLUORESCENT 1X4 BOX FIXTURE	51
2BT8-1X4-BB	3	2 LAMP T8 FLUORESCENT 1X4 BOX FIXTURE, BATTERY BACKUP	51
2BT8-1X4-DROP	7	2 LAMP T8 FLUORESCENT 1X4 BOX FIXTURE, DROP LENS	51
2BT8-1X4-HARDPIPED	13	2 LAMP T8 FLUORESCENT 1X4 BOX FIXTURE, HARD PIPED	51
2BT8-WALL	7	2 LAMP T8 FLUORESCENT 2X4 BOX FIXTURE, WALL MOUNTED	51
2D3'T8	4	2 LAMP 3' T8 FLUORESCENT DIRECT BOX FIXTURE, PENDANT MOUNTED	46
2D3'T8-BB	2	2 LAMP 3' T8 FLUORESCENT DIRECT BOX FIXTURE, PENDANT MOUNTED, BATTERY BACKUP	46
2DIDPT8-HARD	3	2 LAMP T8 FLUORESCENT DIRECT/INDIRECT FIXTURE, PENDANT MOUNTED, HARD INSTALL	51
2DIDT5HO-WALL-HARD	12	2 LAMP T5 HIGH OUTPUT FLUORESCENT DIRECT/INDIRECT FIXTURE, WALL MOUNTED, HARD INSTALL	117
2DIDT8-WALL-BB-HARD	2	2 LAMP T8 FLUORESCENT DIRECT/INDIRECT FIXTURE, WALL MOUNTED, BATTERY BACKUP, HARD INSTALL	51
2DIDT8-WALL-HARD	32	2 LAMP T8 FLUORESCENT DIRECT/INDIRECT FIXTURE, WALL MOUNTED, HARD INSTALL	51
2DPT8-BB	2	2 LAMP T8 FLUORESCENT DIRECT BOX FIXTURE, PENDANT MOUNTED, BATTERY BACKUP	51
2DT8	1	2 LAMP T8 FLUORESCENT DIRECT BOX FIXTURE	51
2I-RECESSED	12	2 LAMP T12 FLUORESCENT INDUSTRIAL STRIP FIXTURE, RECESSED	96.7
2IRT8-LP	2	2 LAMP T8 FLUORESCENT REFLECTORIZED INDUSTRIAL FIXTURE	51
2IRT8-LP-HARD-VHT	30	2 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE, HARD INSTALL, VERY HIGH INSTALL	51
2IT8	127	2 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE	51

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
2IT8-BB	5	2 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE, BATTERY BACKUP	51
2IT8-HARD	8	2 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE, HARD INSTALL	51
2IT8-HARDPIPED	8	2 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE, HARDPIPED	51
2IT8-HT	8	2 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE, HIGH INSTALL	51
2IT8-TG	5	2 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE, TUBE GUARDS	51
2IT8-TURRET	153	2 LAMP T8 FLUORESCENT INDUSTRIAL TURRET FIXTURE	51
2IT8-TURRET-BB	1	2 LAMP T8 FLUORESCENT INDUSTRIAL TURRET FIXTURE, BATTERY BACKUP	51
2IT8-TURRET-HARD	4	2 LAMP T8 FLUORESCENT INDUSTRIAL TURRET FIXTURE, HARD INSTALL	51
2IT8-TURRET-HARDPIPED	11	2 LAMP T8 FLUORESCENT INDUSTRIAL TURRET FIXTURE	51
2IT8-TURRET-HARDPIPED-VHARD	1	2 LAMP T8 FLUORESCENT INDUSTRIAL TURRET FIXTURE, HARDPIPED, VERY HARD INSTALL	51
2IT8-TURRET-VHARD	13	2 LAMP T8 FLUORESCENT INDUSTRIAL TURRET FIXTURE, VERY HARD INSTALL	51
2IT8-VHARD	2	2 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE, VERY HARD INSTALL	51
2I-TURRET	62	2 LAMP T12 FLUORESCENT INDUSTRIAL TURRET FIXTURE	96.7
2L(L)	2	2 LAMP T12 FLUORESCENT LAY-IN (RECESSED) FIXTURE, BROKEN OR DAMAGED LENS	96.7
2L(L)RT8-LP	5	2 LAMP T8 FLUORESCENT REFLECTORIZED LAY-IN (RECESSED) FIXTURE, LOW POWER BALLAST, MISSING OR DAMAGED LENS	51
2L(L)T8-1X4	3	2 LAMP T8 FLUORESCENT 1X4 LAY-IN (RECESSED) FIXTURE, MISSING OR DAMAGED LENS	51
2LPRT8	43	2 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, PARABOLIC LOUVER	51
2LPRT8/D3	16	2 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, PARABOLIC LOUVER, DELAMPED FROM 3	66.7

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
2LPRT8-16"X4'	8	2 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, 16"X4'	51
2LPRT8-1X4	1	2 LAMP T8 FLUORESCENT 1X4 LAY-IN (RECESSED) FIXTURE, PARABOLIC LOUVER	51
2LPRT8-1X4-BB	1	2 LAMP T8 FLUORESCENT 1X4 LAY-IN (RECESSED) FIXTURE, PARABOLIC LOUVER, BATTERY BACKUP	51
2LPRT8–BB	26	2 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, PARABOLIC LOUVER, BATTERY BACKUP	51
2LR(L)T8-LP-HT	2	2 LAMP T8 FLUORESCENT REFLECTORIZED LAY-IN (RECESSED) FIXTURE, MISSING OR DAMAGED LENS, HIGH INSTALL, LOW POWER BALLAST	51
2LR2'PC-15W	2	2 LAMP 2' T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, PARABOLIC LOUVER, REFLECTORIZED, 15 WATT LAMPS	31
2LR2'T8	12	2 LAMP 2' T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, REFLECTORIZED	33
2LR2'T8-HT	1	2 LAMP 2' T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, REFLECTORIZED, HIGH INSTALL	33
2LR2'T8-WOOD	12	2 LAMP 2' T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, REFLECTORIZED, WOODEN HOUSING	33
2LRPCT8-LP	31	2 LAMP T8 FLUORESCENT REFLECTORIZED LAY-IN (RECESSED) FIXTURE, PARACUBE LENS, LOW POWER BALLAST	51
2LRPRT8-LP	146	2 LAMP T8 FLUORESCENT REFLECTORIZED LAY-IN (RECESSED) FIXTURE, PARABOLIC LENS, LOW POWER BALLAST	51
2LRPRT8-LP-DIM	4	2 LAMP T8 FLUORESCENT REFLECTORIZED LAY-IN (RECESSED) FIXTURE, PARABOLIC LENS, DIMMING BALLAST	51
2LRT8-LP	163	2 LAMP T8 FLUORESCENT REFLECTORIZED LAY-IN (RECESSED) FIXTURE, LOW POWER BALLAST	51
2LRT8-LP-1X4	16	2 LAMP T8 FLUORESCENT REFLECTORIZED 1X4 LAY-IN (RECESSED) FIXTURE, LOW POWER BALLAST	51

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
2LRT8-LP-HARD-HT	1	2 LAMP T8 FLUORESCENT REFLECTORIZED LAY-IN (RECESSED) FIXTURE, LOW POWER BALLAST, HARD INSTALL, HIGH INSTALL	51
2LRT8-LP-HT	30	2 LAMP T8 FLUORESCENT REFLECTORIZED LAY-IN (RECESSED) FIXTURE, LOW POWER BALLAST, HIGH INSTALL	51
2LT8	38	2 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE	51
2LT8-16"X4-RA	47	2 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, 16"X4', RETURN AIR	51
2LT8-1X4	18	2 LAMP T8 FLUORESCENT 1X4 LAY-IN (RECESSED) FIXTURE	51
2LT8-BB	2	2 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, BATTERY BACKUP	51
2LT8-VNDL-HARD	6	2 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, VANDAL PROOF, HARD INSTALL	51
2LU(LU)T8	2	2 LAMP U-SHAPED T8 FLUORESCENT 2X2 LAY-IN (RECESSED) FIXTURE, MISSING OR DAMAGED LENS	59
2LVOL2'T8	4	2 LAMP T8 FLUORESCENT 2X2 VOLUMETRIC LAY-IN (RECESSED) FIXTURE	33
2LVOL2'T8-BB	10	2 LAMP T8 FLUORESCENT 2X2 VOLUMETRIC LAY-IN (RECESSED) FIXTURE, BATTERY BACKUP	33
2LVOLT8	6	2 LAMP T8 FLUORESCENT VOLUMETRIC LAY-IN (RECESSED) FIXTURE	51
2LVOLT8-BB	4	2 LAMP T8 FLUORESCENT VOLUMETRIC LAY-IN (RECESSED) FIXTURE, BATTERY BACKUP	51
2S	15	2 LAMP T12 FLUORESCENT COMMMERCIAL STRIP FIXTURE	96.7
2S2'T8	1	2 LAMP 2' T8 FLUORESCENT COMMMERCIAL STRIP FIXTURE	33
2S2'T8-COVE-HARD	2	2 LAMP 2' T8 FLUORESCENT COMMMERCIAL STRIP FIXTURE, COVE LIGHT, HARD INSTALL	33
2S3'	2	2 LAMP 3' T12 FLUORESCENT COMMERCIAL STRIP FIXTURE	75

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
2S-40W-HARDPIPED	8	2 LAMP T12 FLUORESCENT COMMMERCIAL STRIP FIXTURE, HARD PIPED, 40 WATT LAMPS	96.7
2S6'F72	2	2 LAMP 6' T12 FLUORESCENT COMMERCIAL STRIP FIXTURE	122
2S-HARDPIPED	2	2 LAMP T12 FLUORESCENT COMMMERCIAL STRIP FIXTURE, HARD PIPED	96.7
2SLI4'	3	2 LAMP 4' SLIMLINE T12 FLUORESCENT INDUSTRIAL FIXTURE	96.7
2SLS	41	2 LAMP 8' SLIMLINE T12 FLUORESCENT COMMERCIAL STRIP FIXTURE	123
2SLS4'	2	2 LAMP 4' SLIMLINE T12 FLUORESCENT COMMERCIAL STRIP FIXTURE	96.7
2SLS-60W	1	2 LAMP 8' SLIMLINE T12 FLUORESCENT COMMERCIAL STRIP FIXTURE, 60 WATT LAMPS	123
2SLST8	4	2 LAMP 8' SLIMLINE T8 FLUORESCENT COMMERCIAL STRIP FIXTURE	110
2ST8	82	2 LAMP T8 FLUORESCENT COMMERCIAL STRIP FIXTURE	51
2ST8-COVE-HARD	20	2 LAMP T8 FLUORESCENT COMMERCIAL STRIP, COVE FIXTURE, HARD INSTALL	51
2ST8-COVE-VHARD	78	2 LAMP T8 FLUORESCENT COMMERCIAL STRIP, COVE FIXTURE, VERY HARD INSTALL	51
2ST8-HARD	36	2 LAMP T8 FLUORESCENT COMMERCIAL STRIP FIXTURE, HARD INSTALL	51
2ST8-HOOD-HARD	6	2 LAMP T8 FLUORESCENT COMMERCIAL STRIP, HOOD FIXTURE, HARD INSTALL	51
2UC2'T8	9	2 LAMP 2' T8 FLUORESCENT UNDER CABINET FIXTURE	33
2UC3'T8	1	2 LAMP 3' T8 FLUORESCENT UNDER CABINET FIXTURE	46
2UCT8	4	2 LAMP T8 FLUORESCENT UNDER CABINET FIXTURE	51
2V(V)T8	1	2 LAMP T8 FLUORESCENT VANITY FIXTURE, MISSING OR DAMAGED LENS	51
2V2'T8	36	2 LAMP 2' T8 FLUORESCENT VANITY FIXTURE	33

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
2V2'T8-15W	6	2 LAMP 2' T8 FLUORESCENT VANITY FIXTURE, 15 WATT LAMPS	31
2V2'T8-CLOUD	10	2 LAMP 2' T8 FLUORESCENT VANITY FIXTURE, CLOUD STYLE	33
2V3'T8-CLOUD-WALL	1	2 LAMP 3' T8 FLUORESCENT VANITY FIXTURE, CLOUD STYLE, WALL MOUNT	46
2VT5HO	1	2 LAMP T5 HIGH OUTPUT FLUORESCENT VANITY FIXTURE	117
2VT8	25	2 LAMP T8 FLUORESCENT VANITY FIXTURE	51
2W	2	2 LAMP T12 FLUORESCENT WRAP FIXTURE	96.7
2W(W)T8	20	2 LAMP T8 FLUORESCENT WRAP FIXTURE, NEED LENS	51
2W2'T8	6	2 LAMP 2' T8 FLUORESCENT WRAP FIXTURE	33
2W3'T8-DEC	2	2 LAMP 3' T8 FLUORESCENT DECORATIVE WRAP FIXTURE	46
2WAT8-TURRET	17	2 LAMP T8 FLUORESCENT WALL ANGLE TURRET FIXTURE	51
2WDIDT8-WALL-HARD	8	2 LAMP T8 FLUORESCENT DIRECT/INDIRECT WRAP FIXTURE, WALL MOUNTED, HARD INSTALL	51
2WRT8	3	2 LAMP T8 FLUORESCENT REFLECTORIZED WRAP FIXTURE	51
2WRT8-HARD	21	2 LAMP T8 FLUORESCENT REFLECTORIZED WRAP FIXTURE, HARD INSTALL	51
2WT8	258	2 LAMP T8 FLUORESCENT WRAP FIXTURE	51
2WT8/N	2	2 LAMP T8 FLUORESCENT WRAP FIXTURE, NEEDS TO BE REPLACED	51
2WT8-BB	5	2 LAMP T8 FLUORESCENT WRAP FIXTURE, BATTERY BACKUP	51
2WT8-BB-HARD	1	2 LAMP T8 FLUORESCENT WRAP FIXTURE, BATTERY BACKUP, HARD INSTALL	51
2WT8-CLOUD	2	2 LAMP T8 FLUORESCENT WRAP FIXTURE, CLOUD STYLE	51
2WT8-DEC	4	2 LAMP T8 FLUORESCENT DECORATIVE WRAP FIXTURE	51
2WT8-HT	5	2 LAMP T8 FLUORESCENT WRAP FIXTURE, HIGH INSTALL	51
2WT8-LP	1	2 LAMP T8 FLUORESCENT REFLECTORIZED WRAP FIXTURE, LOW POWER BALLAST	51

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
2WT8-VHARD-HT	1	2 LAMP T8 FLUORESCENT WRAP FIXTURE, VERY HARD INSTALL, HIGH INSTALL	51
2WT8-WALL	3	2 LAMP T8 FLUORESCENT WRAP FIXTURE, WALL MOUNTED	51
2WT8-WOOD	1	2 LAMP T8 FLUORESCENT WRAP FIXTURE, WOOD HOUSING	51
2WTT8-WALL	2	2 LAMP T8 FLUORESCENT WRAP FIXTURE, WALL MOUNTED, BUTTED END TO END	51
2WW(WW)RT8-LP	2	2 LAMP T8 FLUORESCENT REFLECTORIZED WRAP FIXTURE, MISSING OR DAMAGED LENS, LOW POWER BALLAST	51
2WW(WW)T8	1	2 LAMP T8 FLUORESCENT WIDE WRAP FIXTURE, MISSING OR DAMAGED LENS	51
2WWP	36	2 LAMP T12 FLUORESCENT VAPOR TIGHT FIXTURE	96.7
2WWP(WWP)T8	1	2 LAMP T8 FLUORESCENT VAPORTIGHT FIXTURE, MISSING OR DAMAGED LENS	51
2WWPT8	108	2 LAMP T8 FLUORESCENT VAPORTIGHT FIXTURE	51
2WWPT8-BB	3	2 LAMP T8 FLUORESCENT VAPORTIGHT FIXTURE, BATTERY BACKUP	51
2WWPT8-HARDPIPED	19	2 LAMP T8 FLUORESCENT VAPORTIGHT FIXTURE, HARD PIPED	51
2WWRT8-LP	66	2 LAMP T8 FLUORESCENT REFLECTORIZED WIDE WRAP FIXTURE, LOW POWER BALLAST	51
2WWRT8-LP-HT	3	2 LAMP T8 FLUORESCENT REFLECTORIZED WIDE WRAP FIXTURE, LOW POWER BALLAST, HIGH INSTALL	51
2WWRT8-LP-VHT	4	2 LAMP T8 FLUORESCENT REFLECTORIZED WIDE WRAP FIXTURE, LOW POWER BALLAST, VERY HIGH INSTALL	51
2WWT8	26	2 LAMP T8 FLUORESCENT WIDE WRAP FIXTURE	51
2WWT8/D4	2	2 LAMP T8 FLUORESCENT WIDE WRAP FIXTURE, DELAMPED FROM 4 LAMPS	75.4
2WWT8-COVE-HARD-HT	3	2 LAMP T8 FLUORESCENT WIDE WRAP FIXTURE, COVE FIXTURE, HARD INSTALL, HIGH INSTALL	51

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
3BPRT8	4	3 LAMP T8 FLUORESCENT BOX FIXTURE, PARABOLIC LOUVER	87.6
3IT8	15	3 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE	87.6
3IT8-BB	8	3 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE, BATTERY BACKUP	87.6
3IT8-VHT	49	3 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE, VERY HIGH INSTALL	87.6
3LDST8	13	3 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, DUAL LEVEL	75.7
3LPRDST8	50	3 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, PARABOLIC LOUVER, DUAL LEVEL	75.7
3LPRDST8-BB	1	3 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, PARABOLIC LOUVER, DUAL LEVEL, BATTERY BACKUP	75.7
3LPRT8	17	3 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, PARABOLIC LOUVER	87.6
3LPRT8-5K	2	3 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, PARABOLIC LOUVER, 5000K LAMPS	87.6
3LT8	87	3 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE	87.6
3LT8-BB	46	3 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, BATTERY BACKUP	87.6
3LVOLT8	10	3 LAMP T8 FLUORESCENT VOLUMETRIC LAY-IN (RECESSED) FIXTURE	87.6
3WWPT8-HT	4	3 LAMP T8 FLUORESCENT VAPOR TIGHT FIXTURE, HIGH INSTALL	87.6
4BT8	11	4 LAMP T8 FLUORESCENT BOX FIXTURE	146.9
4DIDPT8-HARD	9	4 LAMP T8 FLUORESCENT DIRECT/INDIRECT FIXTURE, HARD INSTALL	146.9
4DIDT8-WALL-HARD	6	4 LAMP T8 FLUORESCENT DIRECT/INDIRECT FIXTURE, WALL MOUNTED, HARD INSTALL	146.9
4I	3	4 LAMP T12 FLUORESCENT NDUSTRIAL FIXTURE	142.8
4IT8	43	4 LAMP T8 FLUORESCENT INDUSTRIAL FIXTURE	146.9

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
4L	12	4 LAMP T12 FLUORESCENT LAY-IN (RECESSED) FIXTURE	142.8
4L(L)-HARD	1	4 LAMP T12 FLUORESCENT LAY-IN (RECESSED) FIXTURE, NEED LENS, HARD INSTALL	142.8
4LDST8	38	4 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, DUAL LEVEL	102
4LDST8-BB	6	4 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, DUAL LEVEL, BATTERY BACKUP	102
4LPRT8	16	4 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, PARABOLIC LOUVER	146.9
4LT5HOWA-HARD-VHT	1	4 LAMP T5 FLUORESCENT HIGH OUTPUT WALL ANGLE FIXTURE, VERY HIGH INSTALL	230
4LT5HOWA-VHT	7	4 LAMP T5 FLUORESCENT HIGH OUTPUT WALL ANGLE FIXTURE, VERY HIGH INSTALL	230
4LT8	28	4 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE	146.9
4LT8-16"-4'	5	4 LAMP T8 FLUORESCENT LAY-IN (RECESSED) FIXTURE, 16"X4'	146.9
4LT8HB	8	4 LAMP T8 FLUORESCENT HIGH BAY FIXTURE	146.9
4W	1	4 LAMP T12 FLUORESCENT WRAP FIXTURE	142.8
4WT8	2	4 LAMP T8 FLUORESCENT WRAP FIXTURE	146.9
4WWPT8-VVHARD	19	4 LAMP T8 FLUORESCENT VAPOR TIGHT FIXTURE, VERY VERY HARD INSTALL	146.9
5LT5HOWWPHB	4	5 LAMP T5 FLUORESCENT HIGH OUTPUT VAPOR TIGHT HIGH BAY FIXTURE	298
6BT8	3	6 LAMP 4X4 T8 FLUORESCENT BOX FIXTURE	168.3
6LT5HOHB-HARD	84	6 LAMP T5 FLUORESCENT HIGH OUTPUT HIGH BAY FIXTURE, HARD INSTALL	362
6LT8HB	120	6 LAMP 4X4 T8 FLUORESCENT HIGH BAY FIXTURE	168.3
6LT8HB-HARD	9	6 LAMP 4X4 T8 FLUORESCENT HIGH BAY FIXTURE, HARD INSTALL	168.3
6LT8HB-VHARD	17	6 LAMP 4X4 T8 FLUORESCENT HIGH BAY FIXTURE, VERY HARD	168.3

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
		INSTALL	
6LT8HB-VHARD-VHT	8	6 LAMP 4X4 T8 FLUORESCENT HIGH BAY FIXTURE, VERY HARD INSTALL, VERY HIGH INSTALL	168.3
CF 13A	5	13 WATT COMPACT FLUORESCENT SCREW-IN LAMP	13
CF 13A19-DIM	11	13 WATT COMPACT FLUORESCENT SCREW-IN LAMP, DIMMABLE	13
CF 13C6"	18	13 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA	13
CF 13C6"-2P-VERT	3	13 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE. 6" DIA, 2 PIN, VERTICAL LAMPS	13
CF 13CL6"	2	13 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE WITH LENS, 6" DIA	13
CF 13CL6"-2P-VERT	3	13 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE WITH LENS, 6" DIA, 2 PIN, VERTICAL LAMPS	13
CF 13IDFL-WHT	3	13 WATT COMPACT FLUORESCENT INDIRECT FLOOD FIXTURE, WHITE COLOR	13
CF 13JJ	3	13 WATT COMPACT FLUORESCENT JELLY JAR	13
CF 13JJ-2P	1	13 WATT COMPACT FLUORESCENT JELLY JAR, 2 PIN	13
CF 13JJ-BLUE	3	13 WATT COMPACT FLUORESCENT JELLY JAR, BLUE COLOR LAMP	13
CF 13JJ-RED	2	13 WATT COMPACT FLUORESCENT JELLY JAR, RED COLOR LAMP	13
CF 13NL-2P	14	13 WATT COMPACT FLUORESCENT NIGH LIGHT FIXTURE, 2 PIN	13
CF 13TRACK	3	13 WATT COMPACT FLUORESCENT TRACK FIXTURE	13
CF 13WPK	1	13 WATT COMPACT FLUORESCENT WALL PACK	13
CF 15A	8	15 WATT COMPACT FLUORESCENT SCREW-IN LAMP	15
CF 15A19C6"	1	15 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA, BR 30 LAMP	15
CF 15BR30DEC	4	15 WATT COMPACT FLUORESCENTDECORATIVE FIXTURE, BR	15

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
		30 LAMP	
CF 15C10"	2	15 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 10" DIA	15
CF 15JJ	4	15 WATT COMPACT FLUORESCENT JELLY JAR FIXTURE, 6" DIA	15
CF 15TRACK	4	15 WATT COMPACT FLUORESCENT TRACK FIXTURE	15
CF 20BR40C10"	5	20 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 10" DIA, BR 40 LAMP	20
CF 2-13C6"-2P-VERT	3	(2) 13 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA, 2 PIN, VERTICAL LAMPS	26
CF 2-13C6"-4P	12	(2) 13 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA, 4 ;PIN	26
CF 2-13D(D)"-2P	2	(2) 13 WATT COMPACT FLUORESCENT DRUM FIXTURE, 2 PIN, MISSING OR DAMAGED LENS	26
CF 2-13D14"-2P	1	(2) 13 WATT COMPACT FLUORESCENT DRUM FIXTURE, 2 PIN, 14" DIA	26
CF 2-13DECD	8	(2) 13 WATT COMPACT FLUORESCENT DECORATIVE DRUM FIXTURE	26
CF 2-13L10"	6	(2) 13 WATT COMPACT FLUORESCENT RECESSED SQUARE FIXTURE, 10"	26
CF 2-13NL-2P	14	(2) 13 WATT COMPACT FLUORESCENT NIGH LIGHT FIXTURE, 2 PIN	26
CF 2-13WS-4P	4	(2) 13 WATT COMPACT FLUORESCENT WALL SCONCE FIXTURE, 4 PIN	26
CF 2-26C"-4P	19	(2) 26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 4 PIN	52.9
CF 2-26C10"-4P-BB	3	(2) 26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 10" DIA, 4 PIN, BATTERY BACKUP	52.9
CF 2-26C6"-4P	57	(2) 26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA, 4 PIN	52.9

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
CF 2-26C6"-BB	7	(2) 26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA, BATTERY BACKUP	52.9
CF 2-26C6"-BB-VHARD	2	(2) 26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA, VERY HARD INSTALL	52.9
CF 2-26C8"-4P	75	(2) 26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 8" DIA, 4 PIN	52.9
CF 2-26C8"-4P-BB	2	(2) 26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 8" DIA, 4 PIN, BATTERY BACKUP	52.9
CF 2-26CL6"-4P	19	(2) 26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE WITH LENS, 6" DIA, 4 PIN	52.9
CF 2-26CL8"	3	(2) 26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 8" DIA, 4 PIN	52.9
CF 2-26D12"-2P	1	(2) 26 WATT COMPACT FLUORESCENT DRUM FIXTURE, 12" DIA, 2 PIN	52.9
CF 2-26D14"	6	(2) 26 WATT COMPACT FLUORESCENT DRUM FIXTURE, 14" DIA	52.9
CF 2-26D14"-4P	7	(2) 26 WATT COMPACT FLUORESCENT DRUM FIXTURE, 14" DIA, 4 PIN	52.9
CF 2-26DEC	2	(2) 26 WATT COMPACT FLUORESCENT DECORATIVE FIXTURE	52.9
CF 2-26DECD-4P	11	(2) 26 WATT COMPACT FLUORESCENT DECORATIVE FIXTURE, 4 PIN	52.9
CF 2-26DECWS-4P	3	(2) 26 WATT COMPACT FLUORESCENT DECORATIVE WALL SCONCE FIXTURE, 4 PIN	52.9
CF 2-26L10"-4P	1	(2) 26 WATT COMPACT FLUORESCENT RECESSED SQUARE FIXTURE, 10", 4 PIN	52.9
CF 2-26NL-4P	1	(2) 26 WATT COMPACT FLUORESCENT RECESSED NIGH LIGHT FIXTURE, 4 PIN	52.9
CF 2-26WPK-4P	1	(2) 26 WATT COMPACT FLUORESCENT WALL PACK FIXTURE, 4 PIN	52.9

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
CF 2-26WPK-4P-PC	10	(2) 26 WATT COMPACT FLUORESCENT WALL PACK FIXTURE, 4 PIN, PHOTOCELL	52.9
CF 2-26WPK-DS	6	(2) 26 WATT COMPACT FLUORESCENT WALL PACK FIXTURE, CUTOFF TYPE	52.9
CF 2-26WPK-DS-BB	8	(2) 26 WATT COMPACT FLUORESCENT WALL PACK FIXTURE, CUTOFF TYPE, BATTERY BACKUP	52.9
CF 2-26WPK-SHROUD	2	(2) 26 WATT COMPACT FLUORESCENT WALL PACK FIXTURE, SHROUDED	52.9
CF 23A	12	23 WATT COMPACT FLUORESCENT SCREW-IN LAMP	23
CF 23C4"	15	23 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 4" DIA	23
CF 23C6"-4P	3	23 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA, 4 PIN	23
CF 23CL6"	3	23 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA	23
CF 23JJ-CEIL	1	23 WATT COMPACT FLUORESCENT SCREW-IN LAMP, JELLY JAR, CEILING MOUNTED	23
CF 23TRACK	10	23 WATT COMPACT FLUORESCENT TRACK FIXTURE	23
CF 2-42WPK	1	(2) 42 WATT COMPACT FLUORESCENT SILVER WALL PACK FIXTURE	84
CF 2-42WPK-DS-BB-PC	14	(2) 42 WATT COMPACT FLUORESCENT WALL PACK FIXTURE, DARK SKY, BATTERY BACKUP, PHOTOCELL	84
CF 26A	3	26 WATT COMPACT FLUORESCENT SCREW-IN LAMP	26
CF 26A19TRACK	10	26 WATT COMPACT FLUORESCENT TRACK FIXTURE, A19	26
CF 26C6"-4P	10	26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA, 4 PIN	26
CF 26C6"-4P-BB	4	26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA, 4 PIN, BATTERY BACKUP	26

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
CF 26C6"-4P-VERT	32	26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA, 4 PIN, VERTICAL	26
CF 26C6"-4P-VERT-HT	15	26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA, 4 PIN, VERTICAL, HIGH INSTALL	26
CF 26C7"-4P	3	26 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 7" DIA, 4 PIN	26
CF 26DECCYL-WALL	5	26 WATT COMPACT FLUORESCENT DECORATIVE CYLINDER FIXTURE, WALL MOUNTED	26
CF 26DECCYL-WALL-4P	2	26 WATT COMPACT FLUORESCENT DECORATIVE CYLINDER FIXTURE, WALL MOUNTED, 4 PIN	26
CF 26DECP	4	26 WATT COMPACT FLUORESCENT DECORATIVE FIXTURE, PENDANT MOUNTED	26
CF 26L(L)8"-A19	1	26 WATT COMPACT FLUORESCENT RECESSED SQUARE FIXTURE, 8", A19, NEEDS LENS	26
CF 26L8"-A19	3	26 WATT COMPACT FLUORESCENT RECESSED SQUARE FIXTURE, 8", A19	26
CF 26NL	8	26 WATT COMPACT FLUORESCENT NIGH LIGHT FIXTURE	26
CF 26WPK	1	26 WATT COMPACT FLUORESCENT WALL PACK FIXTURE	26
CF 26WPK-4P	1	26 WATT COMPACT FLUORESCENT WALL PACK FIXTURE, 4 PIN	26
CF 28DECGOOSE-277V	8	28 WATT COMPACT FLUORESCENT DECORATIVE GOOSE NECK FIXTURE, 277 VOLT	28
CF 3-13V	2	(3) 13 LAMP COMPACT FLUORESCENT VANITY FIXTURE	39
CF 3-15BR30DECP	1	(3) 15 WATT COMPACT FLUORESCENT DECORATIVE FIXTURE, PENDANT MOUNTED, BR30 LAMPS	45
CF 32A	2	32 WATT COMPACT FLUORESCENT SCREW IN LAMP	32
CF 32H	3	32 WATT COMPACT FLUORESCENT INDUSTRIAL POKER FIXTURE	32
CF 32WPK-DS	1	32 WATT COMPACT FLUORESCENT WALL PACK FIXTURE, CUT	32

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
		OFF TYPE	
CF 32WS-4P	8	32 WATT COMPACT FLUORESCENT WALL SCONCE FIXTURE, 4 PIN	32
CF 32WS-4P-HARD	1	32 WATT COMPACT FLUORESCENT WALL SCONCE FIXTURE	32
CF 40BIAXCOVE-HARD	32	40 WATT COMPACT FLUORSCENT BIAX COVE FIXTURE, HARD INSTALL	43
CF 4-13CFAN	2	(4) 13 WATT COMPACT FLUORESCENT CEILING FAN	52
CF 4-13V	3	(4) 13 WATT COMPACT FLUORESCENT VANITY FIXTURE	52
CF 4-23EXFAN	1	(4) 23 WATT COMPACT FLUORESCENT EXHAUST FAN FIXTURE	92
CF 42A	6	42 WATT COMPACT FLUORESCENT LAMP	42
CF 42C6"-VERT-4P	53	42 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA, VERTIAL, 4 PIN	42
CF 42C6"-VERT-4P-BB	16	42 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE, 6" DIA, VERTIAL, 4 PIN, BATTERY BACKUP	42
CF 42CL6"-4P	4	42 WATT COMPACT FLUORESCENT RECESSED DOWNLIGHT FIXTURE WITH LENS, 6" DIA, 4 PIN	42
CF 42CYLP-WHT-HARD-HT	21	42 WATT COMPACT FLUORESCENT WHITE CYLINDER FIXTURE, PENDANT MOUNTED, HARD INSTALL, HIGH INSTALL	42
CF 42CYLP-WHT-VERT-VHARD	43	42 WATT COMPACT FLUORESCENT WHITE CYLINDER FIXTURE, PENDANT MOUNTED, VERTICAL LAMPS, VERY HARD INSTALL	42
CF 4-40BIAXDECDP	1	(4) 40 WATT COMPACT FLUORESCENT DECORATIVE DRUM FIXTURE, PENDANT MOUNTED	144
CF 4-42DECP-4P-HARD	4	(4) 42 WATT COMPACT FLUORESCENT DECORATIVE FIXTURE, 4 PIN, HARD INSTALL	168
CF 55WPK	2	55 WATT COMPACT FLUORESCENT WALL PACK FIXTURE	55
CF 8-32CFLHB-BB	20	(8) 32 WATT COMPACT FLUORESCENT HIGH BAY FIXTURE, BATTERY BACKUP	256

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
CF 8-40BIAXDECDP+22CIRCD	2	(8) 40 WATT COMPACT FLUORESCENT DECORATIVE DRUM FIXTURE WITH 22 WATT CIRCLINE LAMP, PENDANT MOUNTED	308
CF 8-40BIAXDECDP+22CIRCD-BB	2	(8) 40 WATT COMPACT FLUORESCENT DECORATIVE DRUM FIXTURE WITH 22 WATT CIRCLINE LAMP, PENDANT MOUNTED, BATTERY BACKUP	308
CIRCD-HARD	1	FLUORESCENT CIRCLINE DRUM FIXTURE, HARD INSTALL	20
FLATPANEL	85	LED FLAT PANEL	30
FLATPANEL-BB	5	LED FLAT PANEL, BATTERY BACKUP	30
FLATPANEL-DIM	1	LED FLAT PANEL, DIMMABLE	30
HPS 100CYL-WALL	7	100 WATT HIGH PRESSURE SODIUM CYLINDER FIXTURE, WALL MOUNTED	138
HPS 100WPK	1	100 WATT HIGH PRESSURE SODIUM WALL PACK	138
HPS 100WPK-SHROUD	1	100 WATT HIGH PRESSURE SODIUM WALL PACK WITH SHROUD	138
HPS 150EXP	2	150 WATT HIGH PRESSURE SODIUM EXPLOSION PROOF FIXTURE	188
HPS 150EXP-VHARD	1	150 WATT HIGH PRESSURE SODIUM EXPLOSION PROOF FIXTURE, VERY HARD INSTALL	188
HPS 250COBRASB	3	250 WATT HIGH PRESSURE SODIUM COBRAHEAD SHOE BOX	295
HPS 2-50DECPT-GRN	10	(2) 50 WATT HIGH PRESSURE SODIUM POST TOP, GREEN	132
HPS 50BOLLARD	5	50 WATT HIGH PRESSURE SODIUM BOLLARD FIXTURE	66
HPS 50DECPT-GRN	10	50 WATT HIGH PRESSURE SODIUM DECORATIVE POST TOP FIXTURE, GREEN COLOR	66
HPS 50DECWS-GRN	11	50 WATT HIGH PRESSURE SODIUM DECORATIVE WALL SCONCE, GREEN COLOR	66
HPS 70DEC-WALL	6	70 WATT HIGH PRESSURE SODIUM DECORATIVE FIXTURE, WALL MOUNTED	95
HPS 70FL-HEIGHT	1	70 WATT HIGH PRESSURE SODIUM FLOOD FIXTURE, HIGH INSTALL	95
I 100A21	1	100 WATT INCANDESCENT PORCELAIN LAMP SOCKET FIXTURE	100

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
I 100JJ-WALL	2	100 WATT INCANDESCENT JELLY JAR FIXTURE, WALL MOUNTED	100
I 100L10"	2	100 WATT INCANDESCENT RECESSED FIXTURE, 10"	100
I 100PAR38C6"-DIM"	12	100 WATT INCANDESCENT RECESSED DOWNLIGHT, 6", PAR 38 LAMPS, DIMMABLE	100
I 2-150PAR38	1	(2) 150 WATT INCANDESCENT SCREW-IN LAMPS, PAR 38	300
I 2-40CFAN-CNDL	9	(2) 40 WATT INCANDESENT SCREW-IN CEILING FAN LIGHTS	80
I 2-50HALFL-ES	1	(2) 50 WATT HALOGEN BR30 FLOOD LAMPS, EXISTIG SENSOR	100
I 2-60CFAN-DIM-CNDL	7	(2) 60 WATT INCANDESCENT CEILING FAN FIXTURE, DIMMABLE, CANDELABRA BASE	120
I 2-60D8"	1	(2) 60 WATT INCANDESCENT 8" BOX FIXTURE, A19 LAMPS	120
I 2-60DEC	1	(2) 60 WATT INCANDESCENT DECORATIVE FIXTURE, A19 LAMPS	120
I 2-60DECD14"	1	(2) 60 WATT INCANDESCENT DECORATIVE FIXTURE, A19 LAMPS, 14"	120
I 29D	1	29 WATT INCANDESCENT DRUM FIXTURE	29
I 29D(D)	1	29 WATT INCANDESCENT DRUM FIXTURE, MISSING OR DAMAGED LENS	29
I 300BASINLIGHT	10	300 WATT INCANDESCENT BASIN LIGHT	300
I 300H	5	300 WATT INDUSTRIAL HOOD FIXTURE	300
I 300H/ZZDD	2	300 WATT INDUSTRIAL HOOD FIXTURE, DISCONNECT/REMOVE	300
I 3-52CFAN	1	(3) 52 WATT INCANDESCENT CEILING FAN	156
I 3-60V	2	(3) 60 WATT INCANDESCENT VANITY FIXTURE	180
I 40BR20CFAN	4	40 WATT INCANDESCENT CEILING FAN FIXTURE, BR 20 LAMP	40
I 40HOOD	2	40 WATT INCANDESCENT HOOD FIXTURE	40
I 40MIRROR-GLOBE	36	40 WATT INCANDESCENT MIRROR LIGHT, GLOBE LAMPS	40
I 4-40GLOBE	1	(4) 40 WATT INCANDESCENT GLOBE LAMPS	160
I 50MR16TRACK	6	50 WATT HALOGEN TRACK FIXTURE, MR16	50
I 60A	18	60 WATT INCANDESCENT SCREW-IN LAMP	60

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
I 60H	1	60 WATT INCANDESCENT INDUSTRIAL HOOD FIXTURE	60
I 60H-NO LAMP	3	60 WATT INCANDESCENT INDUSTRIAL HOOD FIXTURE, NO LAMP	0
I 60JJ	20	60 WATT INCANDESCENT JELLY JAR FIXTURE	60
I 60L12"	2	60 WATT INCANDESCENT LAY-IN (RECESSED) FIXTURE, 12" SQUARE	60
I 60WS	1	60 WATT INCANDESCENT WALL SCONCE FIXTURE	60
I 6-25CHAND-CNDL-HARD	1	(6) 25 WATT INCANDESCENT CHANDELIER, CANDELABRA BASE, HARD INSTALL	150
I 75A	4	75 WATT INCANDESCENT FIXTURE	75
I 75A-BROKEN	1	75 WATT INCANDESCENT FIXTURE, BROKEN	75
I 8-40GLOBEVANITY	1	(8) 40 WATT INCANDESCENT VANITY FIXTURE, GLOBE LAMPS	320
I 90A	1	90 WATT INCANDESCENT FIXTURE	90
LED 10LEDA19WPK-DS	3	10 WATT A19 LED WALL PACK, CUTOFF TYPE	10
LED 10LEDBOLLARD	17	10 WATT A19 LED BOLLARD	10
LED 10LEDDECDP	15	10 WATT LED A19 DECORATIVE FIXTURE, PENDANT MOUNTED	10
LED 10LEDGOSSENECK-BLK	25	10 WATT LED GOOSENECK FIXTURE, BLACK COLOR	10
LED 10LEDIDA	20	10 WATT LED A19 DIRECT/INDIRECT FIXTURE	10
LED 11LEDA27K	7	11 WATT LED A19 FIXTURE, 2700K	11
LED 15LEDA	2	15 WATT LED A19 LAMP	15
LED 15LEDFL	2	15 WATT LED FLOOD	15
LED 15LEDPT	27	15 WATT LED POST TOP	15
LED 17LEDPAR38	1	17 WATT LED PAR38	17
LED 1LEDPR	10	1 LAMP T8 LED LAY-IN (RECESSED) FIXTURE	15
LED 1LPRTLED-RA	25	1 LAMP T8 LED LAY-IN (RECESSED) FIXTURE, PARABOLIC LENS, 16"X4'	15

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
LED 1LPRTLED-RA-3K	4	1 LAMP T8 LED LAY-IN (RECESSED) FIXTURE, PARABOLIC LENS, 16"X4', 3000K	15
LED 1WTLEDTYPEA	1	1 LAMP T8 LED WRAP FIXTURE, TYPE A LAMPS	20
LED 1X82TLEDTYPEA-HARD	12	1X8 2 LAMP T8 LED COMMERCIAL STRIP FIXTURE, TYPE A LAMPS, HARD INSTALL	32
LED 1X84LEDW-HARD	1	1X8 4 LAMP T8 LED WRAP FIXTURE, TYPE A LAMPS, HARD INSTALL	64
LED 1X84SLED-HARD	3	1X8 4 LAMP T8 FLUORESCENT STRIP FIXTURE, TYPE A, HARD INSTALL	64
LED 1X84WWPTLED-HARD	28	1X8 4 LAMP T8 LED VAPOR TIGHT FIXTURE, HARD INSTALL	64
LED 2-15LEDC8"	11	8" DOWNLIGHT WITH (2) 15 WATT LED LAMPS	30
LED 2-9LEDB	2	(2) 9 WATT LED BOX FIXTURE A19 LAMPS	18
LED 2-9LEDC6"	16	(2) 9 WATT LED DOWNLIGHT FIXTURE, A19 LAMPS, 6"	18
LED 2-9LEDD	2	(2) 9 WATT LED DRUM FIXTURE, A19 LAMPS	18
LED 2-9LEDD8"-NO LENS	1	(2) 9 WATT LED DRUM FIXTURE, A19 LAMPS, NO LENS	18
LED 2-9LEDL10"	1	(2) 9 WATT LED RECESSED SQUARE FIXTURE, A19 LAMPS, 10"	18
LED 2-9LEDV	2	(2) 9 WATT LED VANITY FIXTURE	18
LED 2BTLEDTYPEA-1X4	8	3 LAMP T8 LED 1X4 BOX FIXTURE, TYPE A LAMPS	32
LED 2ILED-BB	1	(2) LAMP T8 LED INDUSTRIAL FIXTURE, BATTERY BACKUP	32
LED 2ITLED	9	2 LAMP T8 LED INDUSTRIAL STRIP FIXTURE	32
LED 2L2'FLATPANEL	4	2X2 LED FLAT PANEL FIXTURE	30
LED 2-LEDDECD	11	LED DECORATIVE DRUM WITH (2) 9 WATT LED A19 LAMPS	18
LED 2LEDW	14	2 LAMP T8 LED WRAP FIXTURE, TYPE B LAMPS	32
LED 2LEDW-BB	2	2 LAMP T8 LED WRAP FIXTURE, TYPE B LAMPS, BATTERY BACKUP	32
LED 2LLED-1X4	1	2 LAMP T8 LED 1X4 RECESSED FIXTURE, TYPE B LAMPS	32
LED 2LPRTLED	7	2 LAMP T8 LED LAY-IN (RECESSED) FIXTURE, PARABOLIC LOUVER	32

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
LED 2LTLED	16	2 LAMP LED LAY-IN (RECESSED) FIXTURE WITH TLED LAMPS	32
LED 2LTLED1X4	16	2 LAMP LED 1X4 LAY-IN (RECESSED) FIXTURE WITH TLED LAMPS	32
LED 2SLED	3	2 LAMP T8 LED COMMERCIAL STRIP FIXTURE	32
LED 2SLED-18W	8	2 LAMP T8 LED COMMERCIAL STRIP FIXTURE, 18 WATT LAMPS	36
LED 2STLED	4	2 LAMP TLED COMMERCIAL STRIP FIXTURE	32
LED 2TLED	2	2 LAMP T8 LED RECESSED FIXTURE	32
LED 2TLED-1X4	2	2 LAMP T8 LED 1X4 RECESSED FIXTURE	32
LED 2TLED-TYPEA-HT	25	2 LAMP T8 LED RECESSED FIXTURE, TYPE A LAMPS, HIGH INSTALL	32
LED 2TLED-WALL	6	2 LAMP T8 LED RECESSED FIXTURE, WALL MOUNTED	32
LED 2VTLEDTYPA	6	2 LAMP T8 LED VANITY FIXTURE, TYPE A LAMPS	32
LED 2WLED	19	2 LAMP T8 LED WRAP FIXTURE	32
LED 2WTLED	13	2 LAMP T8 LED WRAP FIXTURE	32
LED 2WTLEDTYPA	2	2 LAMP T8 LED WRAP FIXTURE, TYPE A LAMPS	32
LED 2WWPTLED	4	2 LAMP T8 LED VAPORTIGHT FIXTURE	32
LED 2WWPTLEDTYPEA	14	2 LAMP T8 LED VAPORTIGHT FIXTURE, TYPE A	32
LED 2WWTLED	3	2 LAMP T8 LED WRAP FIXTURE	32
LED 2X4LEDKIT	2	2X4 LED RETRO KIT	32
LED 3-17LEDPAR30	80	(3) 17 WATT LED FLOOD FIXTURE, PAR30 LAMPS	51
LED 3-9CFAN	3	(3) 9 WATT LED CEILING FAN FIXTURE	27
LED 3-9LED9	3	(3) 9 WATT LED DECORATIVE DRUM FIXTURE	27
LED 3BPRTLED	4	3 LAMP T8 LED BOX FIXTURE, PARABOLIC LOUVER	48
LED 3LED-VHT	23	(3) 9 WATT LED FIXTURE, VERY HIGH INSTALL	27
LED 3LPRTLED	2	3 LAMP T8 LED LAY-IN (RECESSED) FIXTURE, PARABOLIC LOUVER	48
LED 4-10LEDCFAN	2	(4) 10 WATT LED CEILING FAN FIXTURE	40
LED 4-10LEDV	1	(4) 10 WATT LED VANITY FIXTURE	40

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
LED 4LEDHB-VHT	8	4 LAMP T8 LED HIGH BAY FIXTURE, VERY HIGH INSTALL	135
LED 4TLED	15	4 LAMP TLED FIXTURE	64
LED 4TLEDTYPEA	1	4 LAMP TLED FIXTURE, TYPE A LAMPS	64
LED 4WTLED	4	4 LAMP TLED WRAP FIXTURE	64
LED 6LLEDHB	3	6 LAMP TLED HIGH BAY FIXTURE	96
LED 6LT8LEDHB	12	6 LAMP 4X4 T8 LED HIGH BAY FIXTURE	96
LED 9LEDA19	7	9 WATT LED SCREW-IN LAMPS, A19	9
LED 9LEDEXFAN	1	9 WATT LED EXAUST FAN	9
LED 9LEDJJ	20	9 WATT LED JELLY JARD	9
LED 9LEDWS-DIM	3	9 WATT LED WALL SCONCE, DIMMABLE	9
LED ALL LED	1	ALL FIXTURES ARE LED	0
LED EXLED	105	LED EXIT SIGN	4
LED EXLED-EM	71	LED EXIT SIGN, EMERGENCY LIGHT	4
LED EXLED-EXP	32	LED EXIT SIGN, EXPLOSION PROOF	4
LED LED2X2	2	LED 2X2 FIXTURE	25
LED LEDA19	7	10 WATT LED A19 LAMP	10
LED LEDBR30	3	15 WATT LED BR30 LAMP	15
LED LEDBR30TRACK	4	15 WATT LED BR30 TRACK FIXTURE	15
LED LEDC	89	20 WATT LED DOWNLIGHT	20
LED LEDC6"	2	LED RECESSED DOWNLIGHT, 6"	22
LED LEDC6"-A19	22	10 WATT LED DOWNLIGHT, A19 LAMP	10
LED LEDC8"	6	20 WATT LED DOWNLIGHT, 8" DIA	20
LED LEDC-BB	4	20 WATT LED DOWNLIGHT, BATTERY BACKUP	20
LED LEDC-DIM	28	20 WATT LED DOWNLIGHT, DIMMABLE	20
LED LEDCHND	3	LED CHANDALIER	30
LED LEDCNPY	16	LED CANOPY	30
LED LEDCOBWPK	11	18 WATT LED WALL PACK, COB LAMP	18

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
LED LEDCOBWPK-DS	4	18 WATT LED WALL PACK, COB LAMP, CUTOFFF	18
LED LEDCOVE-HARD	1	LED COVE FIXTURE, HARD INSTALL	30
LED LED-COVE-HARD-VVHT	43	LED COVE FIXTURE, VERY VERY HIGH, HARD INSTALL	30
LED LEDD	25	22 WATT LED DRUM	22
LED LEDD-BB	14	22 WATT LED DRUM, BATTERY BACKUP	22
LED LEDDEC	1	30 WATT LED DECORATIVE FIXTURE	30
LED LEDDECA19	1	10 WATT LED DEORATIVE FIXTURE, A19 LAMP	10
LED LEDDECBOWL-HARD-VVHT	4	50 WATT LED DECORATIVE FIXTURE, HARD INSTALL, VERY VERY HIGH INSTALL	50
LED LEDDECCHINA	10	10 WATT LED DECORATIVE CHINA HAT FIXTURE	10
LED LEDDID	1	LED DIRECT/INDIRECT FIXTURE	30
LED LEDDPTYPEC	10	LED DIRECT FIXTURE, PENDANT MOUNTED, TYPE C LAMPS	30
LED LEDFL	5	30 WATT LED FLOOD FIXTURE	30
LED LEDH	1	LED INDUSTRIAL HOOD FIXTURE	15
LED LEDHB	54	LED HIGH BAY	150
LED LEDJJ	4	10 WATT LED JELLY JAR	10
LED LEDKIT2X4	22	LED RECESSED TROFFER RETROKIT	30
LED LEDKITSB	2	LED SHOE BOX RETROKIT	50
LED LEDL	3	LED RECESSED TROFFER	30
LED LEDL2TLED	36	LED RECESSED TROFFER, TLED LAMPS	45
LED LEDL2TLED-DIM	11	LED RECESSED TROFFER, TYPE C LAMPS, DIMMABLE	32
LED LEDLB	17	LED LOW BAY FIXTURE	80
LED LEDL-DIM	3	LED RECESSED TROFFER, DIMMABLE	30
LED LEDNL	11	LED NIGHT LIGHT	6
LED LEDPANEL-1X4	4	LED FLAT PANEL, 1X4	20
LED LEDPAR38C10"	4	17 WATT LED DOWNLIGHT, PAR 38, 10" DIA	17
LED LEDPLUGINC10"	8	19 WATT LED DOWNLIGHT, 4 PIN, 10" DIA	19

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
LED LEDSBCOB	6	30 WATT LED SHOE BOX FIXTURE WITH COB LAMP	30
LED LEDV	22	20 WATT LED VANITY FIXTURE	20
LED LEDVOL	30	30 WATT LED VOLUMETRIC FIXTURE	30
LED LEDVOL2'	42	20 WATT 2X2 LED VOLUMETRIC FIXTURE	20
LED LEDVOL2'-BB	8	20 WATT 2X2 LED VOLUMETRIC FIXTURE, BATTERY BACKUP	20
LED LEDW	4	30 WATT LED WRAP FIXTURE	30
LED LEDW-COVE-HARD	20	LED WRAP, COVE FIXTURE, HARD INSTALL	30
LED LEDW-DIM	18	LED WRAP, DIMMABLE	30
LED LEDWPK	34	30 WATT LED WALL PACK	30
LED LEDWPK-DS	9	30 WATT LED WALL PACK, CUTOFFF TYPE	30
LED LEDWPK-SHROUD	3	30 WATT LED WALL PACK, SHROUDED	30
LED LEDWS-VNDL-HARD	14	LED WALL SCONCE, VANDAL PROOF, HARD INSTALL	30
LED LEDWWP	41	30 WATT LED VAPOR TIGHT FIXTURE	30
LED TLEDPR	6	LED PARABOLIC FIXTURE	45
LPS (2)55PT-6"-18'-SPIDER	21	LOW PRESSURE SODIUM POST TOP FIXTURE WITH (2) 55 WATT LAMPS, 6" , 18' POLE, SPIDER MOUNT	160
LPS (2)55SB	5	LOW PRESSURE SODIUM SHOE BOX FIXTURE WITH (2) 55 WATT LAMPS	160
LPS (2)55SB-16'	26	LOW PRESSURE SODIUM SHOE BOX FIXTURE WITH (2) 55 WATT LAMPS, 16' POLE	160
LPS 135COBRASB	5	135 WATT LOW PRESSURE SODIUM SHOE BOX FIXTURE	178
LPS 135SB-6"-BLK-18'	8	135 WATT LOW PRESSURE SODIUM SHOE BOX FIXTURE, BLACK, 18' POLE	178
LPS 2-(2)55SB-6"-SQ	8	2 HEAD LOW PRESSURE SODIUM SHOE BOX FIXTURE EACH WITH (2) 55 WATT LAMPS, 6" SQUARE POLE	320
LPS 55COBRASB	2	55 WATT LOW PRESSURE SODIUM COBRA HEAD SHOE BOX FIXTURE	80

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Pre Code	Pre Fixture Qty	Existing Description	Pre Watts / Fixt
LPS 55COBRASB-WOOD	4	55 WATT LOW PRESSURE SODIUM COBRA HEAD SHOE BOX FIXTURE, WOOD POLE	80
LPS 55SB-13'-SQ-4"	5	55 WATT LOW PRESSURE SODIUM SHOE BOX, 13' 4" SQUARE POLE	80
LPS 55SB-BLK-10'-4"	4	55 WATT LOW PRESSURE SODIUM SHOE BOX, 10' 4" SQUARE POLE, BLACK	80
LPS 55WPK-31"X8"	3	55 WATT LOW PRESSURE SODIUMWALL PACK, 31"X8"	80
MH 150IDFL-HARD-HT	20	150 WATT METAL HALIDE INDIRECT FLOOD FIXTURE, HARD INSTALL, HIGH INSTALL	183
MH 150IDFL-NOT USED	70	150 WATT METAL HALIDE INDIRECT FLOOD FIXTURE, NOT USED	183
MH 150IDFL-VHARD-VVHT	12	150 WATT METAL HALIDE INDIRECT FLOOD FIXTURE, VERY HARD INSTALL, VERY VERY HIGH INSTALL	183
MH 175EXP	22	175 WATT METAL HALIDE EXPLOSION PROOF FIXTURE	180.2
MH 250EXP-HEIGHT	20	250 WATT METAL HALIDE EXPLOSION PROOF FIXTURE, HIGH INSTALL	288
Q 250LB-DIM	4	250 WATT QUARTZ LOW BAY, DIMMABLE	250
Q 75FL-TRACK-DIM	8	75 WATT INCANDESCENT TRACK FIXTURE, DIMMABLE	75
ZZ NO LIGHTS	1	NO EXISTING LIGHT FIXTURE	0

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As part of the Investment Grade Audit (IGA), NORESCO has identified changes to lighting systems that will generate energy savings. Similar fixtures were grouped together and assigned a post-retrofit code ("Post Code"), as shown in Table K.3. The fixture wattages are based on published manufacturer data, which were used to model the post-retrofit energy consumption for the lighting savings calculations. Following construction, fixture wattages will be measured as defined in Exhibit A, Attachment F: Guaranty of Energy Cost Savings.

Table K.3: Post-Retrofit Lighting Fixture Wattages

Post Code	Post Fixture Qty	Proposed Description	Post Watts / Fixt
LED 10LEDPAR38-DIM	20	RETROFIT WITH (1) 10 WATT LED PAR38 DIMMABLE LAMP	10
LED 13LEDA19	69	RETROFIT WITH (1) 13 WATT LED A19 LAMP	13
LED 13LEDA19-27K	1	RETROFIT WITH (1) 13 WATT LED A19 LAMP, 27K	13
LED 15LEDA21	13	RETROFIT WITH (1) 15 WATT LED A21 LAMP	15
LED 2-15LEDPAR38	1	RETROFIT WITH (2) 15 WATT LED SCREW-IN LAMPS, PAR 38	30
LED 2-3.3LEDCNDL-DIM	16	RETROFIT WITH (2) 3.3 WATT LED CANDELABRA BASE LAMPS, DIMMABLE	6.6
LED 25LEDA21HO	10	RETROFIT WITH (1) 25 WATT LED A21 HIGH OUTPUT LAMP	25
LED 2-9LEDA19	2	RETROFIT WITH (2) 9 WATT LED A19 LAMPS	18
LED 3.8LEDGLOBE	36	RETROFIT WITH (1) 3.8 WATT LED GLOBE LAMP	3.8
LED 3-8LEDBR30-DIM	1	RETROFIT WITH (3) 8 WATT LED BR30 LAMPS	24
LED 3-9LEDA19	5	RETROFIT WITH (3) 9 WATT LED A19 LAMPS	27
LED 4-3.8LEDGLOBE	1	RETROFIT WITH (4) 3.8 WATT LED GLOBE LAMPS	15.2
LED 4-9LEDA19	6	RETROFIT WITH (4) 9 WATT LED A19 LAMPS	36
LED 6.5LEDMR16-27K	6	RETROFIT WITH (1) 6.5 WATT LED SCREW-IN MR16 LAMP, 27K COLOR	6.5
LED 6-3.3LEDCNDL-DIM-HARD	1	RETROFIT WITH (6) 3.3 WATT LED CANDELABRA BASE LAMPS, DIMMABLE, HARD INSTALL	19.8
LED 8-3.8LEDGLOBE	1	RETROFIT WITH (8) 3.8 WATT LED GLOBE LAMPS	30.4
LED 8LEDBR30-DIM	9	RETROFIT WITH (1) 8 WATT LED BR30 LAMP, DIMMABLE	8
LED 9LEDA19	114	RETROFIT WITH (1) 9 WATT LED A19 LAMP	9

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Post Code	Post Fixture Qty	Proposed Description	Post Watts / Fixt
LED 9LEDA19-277V	8	RETROFIT WITH (1) 9 WATT LED A19 LAMP, 277 VOLT	9
LED 9LEDA19-BLUE	3	RETROFIT WITH (1) 9 WATT LED A19 LAMP, BLUE COLOR	9
LED 9LEDA19-DIM	11	RETROFIT WITH (1) 9 WATT LED A19 LAMP, DIMMABLE	9
LED 9LEDA19-RED	2	RETROFIT WITH (1) 9 WATT LED A19 LAMP, RED	9
N 115LEDHB-HARD	20	NEW 115 WATT LED HIGH BAY FIXTURE, HARD INSTALL	115
N 129LEDAL-PT-AMBR	21	NEW 129 WATT LED AREA FIXTURE, POST TOP MOUNT, AMBER COLOR TEMP	129
N 12LEDC6"	4	NEW 12 WATT LED 6" RECESSED DOWNLIGHT	10.5
N 12LEDD	1	NEW 12 WATT LED DRUM FIXTURE	12.2
N 132LEDAL-AMBR	31	NEW 132 WATT LED AREA LIGHT AMBER LIMITED WAVELENGTH	132
N 132LEDAL-BLK-AMBR	8	NEW 132 WATT LED AREA LIGHT AMBER LIMITED WAVELENGTH, BLACK COLOR	132
N 143LEDCOBRA-AMBR	8	NEW 143 WATT LED COBRA HEAD FIXTURE, AMBER COLOR TEMP	143
N 155LEDHB-HARD	64	NEW 155 WATT LED HIGH BAY FIXTURE, HARD INSTALL	155
N 15LEDFL-STEM-30K-HEIGHT	1	NEW 15 WATT LED FLOOD FIXTURE, STEM MOUNT, 30K, HIGH INSTALL	15
N 1V-11.5LED4'-TYPE A-LP	1	NEW VANITY FIXTURE WITH (1) 11.5 WATT 4' TLED TYPE A LAMP AND LOW POWER ELECTRONIC BALLAST	12.5
N 20LEDWPK-ADJ	2	NEW 20 WATT LED ADJUSTABLE WALLPACK	20
N 2-132LEDAL-AMBR	8	NEW (2)132 WATT LED AREA LIGHTS AMBER LIMITED WAVELENGTH	264
N 22LEDWPK-AMBR-PC	6	NEW 22 WATT LED WALLPACK FIXTURE, AMBER COLOR TEMP, PHOTOCELL	25
N 25LEDWSK-BB-27K	14	NEW 25 WATT LED TRAPEZOIDAL WALLPACK, BATTERY BACKUP, 27K	25
N 25LEDWSK-BB-PC-27K	14	NEW 25 WATT LED WALL SCONCE WALLPACK FIXTURE, 27K, BATTERY BACKUP, PHOTOCELL	25
N 25LEDWSK-PC-27K	6	NEW 25 WATT LED TRAPEZOIDAL WALLPACK, PHOTOCELL, 27K	25
N 26LEDCYLP-WHT-HARD	21	NEW 26 WATT LED PENDANT MOUNT CYLINDER FIXTURE, HARD INSTALL, WHITE COLOR	27.9

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Post Code	Post Fixture Qty	Proposed Description	Post Watts / Fixt
N 26LEDCYLP-WHT-VHARD	43	NEW 26 WATT LED PENDANT MOUNT CYLINDER FIXTURE, VERY HARD INSTALL, WHITE COLOR	27.9
N 2I-11.5LED4'-TYPE A-LP	5	NEW INDUSTRIAL FIXTURE WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST	25
N 2L-11.5LED4'-TYPE A-LP	2	NEW 2X4 RECESSED TROFFER FIXTURE WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST	25
N 2V-11.5LED4'-TYPE A-LP	1	NEW VANITY FIXTURE WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST	25
N 2W-11.5LED4'-TYPE A-LP	20	NEW WRAP FIXTURE WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST	25
N 2X12LEDFL-BULLET-30K	1	NEW (2) HEADED 12 WATT LED FLOOD FIXTURE, BULLET TYPE, 30K	27.2
N 42LEDAL-AMBR	5	NEW 42 WATT LED AREA FIXTURE, AMBER COLOR TEMP	42
N 42LEDAL-BLK-AMBR	4	NEW 42 WATT LED AREA LIGHT AMBER LIMITED WAVELENGTH, BLACK COLOR	42
N 44LEDCOBRA-AMBR	4	NEW 44 WATT LED COBRA HEAD FIXTURE, AMBER COLOR TEMP	44
N 44LEDCOBRA-AMBR-WALL-PC	2	NEW 44 WATT LED COBRA HEAD FIXTURE, AMBER COLOR TEMP, WALL MOUNT, PHOTOCELL	44
N 90LEDHB	32	NEW 90 WATT LED HIGH BAY FIXTURE	90
N 90LEDHB-BB	20	NEW 90 WATT LED HIGH BAY FIXTURE, BATTERY BACKUP	90
N 90LEDHB-HARD	9	NEW 90 WATT LED HIGH BAY FIXTURE, HARD INSTALL	90
R 1L(W)-11.5LED4'-TYPE A-LP	1	NEW WRAP FIXTURE (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST	12.5
R 1L-11.5LED4'-TYPE A-LP	777	RETROFIT WITH (1) 11.5 WATT 4' TLED TYPE A LAMP AND LOW POWER ELECTRONIC BALLAST	12.5
R 1L-11.5LED4'-TYPE A-LP-2700K	15	RETROFIT WITH (1) 11.5 WATT 4' TLED TYPE A LAMP AND LOW POWER ELECTRONIC BALLAST, 27K LAMPS	12.5

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Post Code	Post Fixture Qty	Proposed Description	Post Watts / Fixt
R 1L-11.5LED4'-TYPE A-LP-HARD	14	RETROFIT WITH (1) 11.5 WATT 4' TLED TYPE A LAMP AND LOW POWER ELECTRONIC BALLAST, HARD INSTALL	12.5
R 1L-11.5LED4'-TYPE A-LP-VHARD	16	RETROFIT WITH (1) 11.5 WATT 4' TLED TYPE A LAMP AND LOW POWER ELECTRONIC BALLAST, VERY HARD INSTALL	12.5
R 1L-13LEDBIAX-TYPE A-NP	32	RETROFIT WITH (1) 13 WATT BIAX TLED TYPE A LAMP AND NORMAL POWER ELECTRONIC BALLAST	16.5
R 1L2'-8LED2'-TYPE A-LP	9	RETROFIT WITH (1) 8 WATT 2' TLED TYPE A LAMP AND LOW POWER ELECTRONIC BALLAST	9.3
R 1L2'T5-9LED2'T5-TYPE B	2	RETROFIT WITH (1) 9 WATT 2' T5 TLED TYPE B LAMP WITH INTEGRATED DRIVER	9
R 1L3'-10LED3'-TYPE A-LP	50	RETROFIT WITH (1) 10 WATT 3' TLED TYPE A LAMP AND LOW POWER ELECTRONIC BALLAST	10.86
R 2L(1X4)-11.5LED4'-TYPE A-LP	3	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, NEW 1X4 PRISMATIC LENS	25
R 2L(L)-11.5LED4'-TYPE A-LP	8	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, NEW 2X4 PRISMATIC LENS	25
R 2L(L)-11.5LED4'-TYPE A-LP-HEIGHT	2	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, NEW 2X4 PRISMATIC LENS, HIGH INSTALL	25
R 2L(W)-11.5LED4'-TYPE A-LP-HARD	1	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, NEW WRAP LENS, HARD INSTALL	25
R 2L(WW)-11.5LED4'-TYPE A-LP	3	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, NEW WIDE WRAP LENS	25
R 2L(WWP)-11.5LED4'-TYPE A-LP	1	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, NEW VAPORTIGHT LENS	25
R 2L-11.5LED4'-TYPE A-LP	1888	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST	25

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Post Code	Post Fixture Qty	Proposed Description	Post Watts / Fixt
R 2L-11.5LED4'-TYPE A-LP-BB	57	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, BATTERY BACKUP	25
R 2L-11.5LED4'-TYPE A-LP-BB-HARD	1	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, BATTERY BACKUP, HARD INSTALL	25
R 2L-11.5LED4'-TYPE A-LP-DIM	4	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, DIMMABLE	25
R 2L-11.5LED4'-TYPE A-LP-HARD	200	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, HARD INSTALL	25
R 2L-11.5LED4'-TYPE A-LP-HARD-BB	1	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, HARD INSTALL, BATTERY BACKUP	25
R 2L-11.5LED4'-TYPE A-LP-HARD-HEIGHT	6	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, HARD AND HIGH INSTALL	25
R 2L-11.5LED4'-TYPE A-LP-HARD-VHEIGHT	30	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, HARD AND VERY HIGH INSTALL	25
R 2L-11.5LED4'-TYPE A-LP-HEIGHT	71	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, HIGH INSTALL	25
R 2L-11.5LED4'-TYPE A-LP-VHARD	99	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, VERY HARD INSTALL	25
R 2L-11.5LED4'-TYPE A-LP-VHEIGHT	4	RETROFIT WITH (2) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, VERY HIGH INSTALL	25
R 2L-25.5LEDT5HO4'-TYPE A-NP	1	RETROFIT WITH (2) 25.5 WATT 4' T5 HIGH OUTPUT TLED TYPE A LAMPS AND NORMAL POWER ELECTRONIC BALLAST	57
R 2L-25.5LEDT5HO4'-TYPE A-NP-HARD	12	RETROFIT WITH (2) 25.5 WATT 4' T5 HIGH OUTPUT TLED TYPE A LAMPS AND NORMAL POWER ELECTRONIC BALLAST	57
R 2L2'-8LED2'-TYPE A-LP	147	RETROFIT WITH (2) 8 WATT 2' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST	18.6

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Post Code	Post Fixture Qty	Proposed Description	Post Watts / Fixt
R 2L2'-8LED2'-TYPE A-LP-BB	10	RETROFIT WITH (2) 8 WATT 2' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, BATTERY BACKUP	18.6
R 2L2'-8LED2'-TYPE A-LP-HARD	2	RETROFIT WITH (2) 8 WATT 2' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, HARD INSTALL	18.6
R 2L2'-8LED2'-TYPE A-LP-HEIGHT	1	RETROFIT WITH (2) 8 WATT 2' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, HIGH INSTALL	18.6
R 2L3'-10LED3'-TYPE A-LP	10	RETROFIT WITH (2) 10 WATT 3' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST	21.72
R 2L3'-10LED3'-TYPE A-LP-BB	2	RETROFIT WITH (2) 10 WATT 3' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, BATTERY BACKUP	21.72
R 3L-11.5LED4'-TYPE A-LP	141	RETROFIT WITH (3) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST	37.5
R 3L-11.5LED4'-TYPE A-LP-BB	54	RETROFIT WITH (3) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, BATTERY BACKUP	37.5
R 3L-11.5LED4'-TYPE A-LP-CHKRBRD	64	RETROFIT WITH (3) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, CHECKERBOARD PATTERN	37.5
R 3L-11.5LED4'-TYPE A-LP-HEIGHT	4	RETROFIT WITH (3) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, HEIGHT	37.5
R 3L-11.5LED4'-TYPE A-LP-VHEIGHT	72	RETROFIT WITH (3) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, VERY HEIGHT	37.5
R 4L(L)-11.5LED4'-TYPE A-LP-HARD	1	RETROFIT WITH (4) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, HARD INSTALL, NEW 2X4 PRISMATIC LENS	50
R 4L-11.5LED4'-TYPE A-LP	125	RETROFIT WITH (4) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST	50
R 4L-11.5LED4'-TYPE A-LP-BB-CHKRBRD	6	RETROFIT WITH (4) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, BATTERY BACKUP, CHECKERBOARD PATTERN	50

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Post Code	Post Fixture Qty	Proposed Description	Post Watts / Fixt
R 4L-11.5LED4'-TYPE A-LP-CHKRBRD	54	RETROFIT WITH (4) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, CHECKERBOARD PATTERN	50
R 4L-11.5LED4'-TYPE A-LP-DIM-HARD-HEIGHT	4	RETROFIT WITH (4) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, DIMMABLE, HARD AND HIGH INSTALL	50
R 4L-11.5LED4'-TYPE A-LP-HARD	395	RETROFIT WITH (4) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, HARD INSTALL	50
R 4L-11.5LED4'-TYPE A-LP-HARD-BB	1	RETROFIT WITH (4) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, HARD INSTALL, BATTERY BACKUP	50
R 4L-11.5LED4'-TYPE A-LP-HARD-HEIGHT	195	RETROFIT WITH (4) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, HARD AND HIGH INSTALL	50
R 4L-11.5LED4'-TYPE A-LP-HEIGHT	16	RETROFIT WITH (4) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, HIGH INSTALL	50
R 4L-11.5LED4'-TYPE A-LP-VVHARD	19	RETROFIT WITH (4) 11.5 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, VERY HARD INSTALL	50
R 4L-13LEDBIAX-TYPE A-NP(2)	1	RETROFIT WITH (4) 13 WATT BIAX TLED TYPE A LAMPS AND (2) NORMAL POWER ELECTRONIC BALLASTS	66
R 4L-13LEDBIAX-TYPE A-NP(2)-HARD	4	RETROFIT WITH (4) 13 WATT BIAX TLED TYPE A LAMPS AND (2) NORMAL POWER ELECTRONIC BALLASTS, HARD INSTALL	66
R 4LT5HO-25.5LEDT5HO4'-TYPE A-CHKRBRD-VHARD	1	RETROFIT WITH (4) 25.5 WATT 4' T5 HIGH OUTPUT TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, VERY HARD INSTALL, CHECKERBOARD PATTERN	114
R 4LT5HO-25.5LEDT5HO4'-TYPE A-CHKRBRD-VHEIGHT	7	RETROFIT WITH (4) 25.5 WATT 4' T5 HIGH OUTPUT TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, VERY HIGH INSTALL, CHECKERBOARD PATTERN	114
R 5LT5HO-25.5LEDT5HO4'-TYPE A-HEIGHT	4	RETROFIT WITH (5) 25.5 WATT 4' T5 HIGH OUTPUT TLED TYPE A LAMPS AND (2) NORMAL POWER ELECTRONIC BALLASTS, HIGH INSTALL	142.5
R 6L-11.5LED4'-TYPE A-LP	3	RETROFIT WITH (6) 11.5 WATT 4' TLED TYPE A LAMPS AND (2) LOW POWER ELECTRONIC BALLASTS	75

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Post Code	Post Fixture Qty	Proposed Description	Post Watts / Fixt
R 6L-11.5LED4'-TYPE A-LP-HEIGHT	103	RETROFIT WITH (6) 11.5 WATT 4' TLED TYPE A LAMPS AND (2) LOW POWER ELECTRONIC BALLASTS, HIGH INSTALL	75
R 6L-11.5LED4'-TYPE A-LP-VHARD	25	RETROFIT WITH (6) 11.5 WATT 4' TLED TYPE A LAMPS AND (2) LOW POWER ELECTRONIC BALLASTS, VERY HARD INSTALL	75
R 8L-11.5LED4'-TYPE A-LP-HARD	30	RETROFIT WITH (8) 11.5 WATT 4' TLED TYPE A LAMPS AND (2) LOW POWER ELECTRONIC BALLASTS, HARD INSTALL	100
R 8L-13LEDBIAX-TYPE A-NP(4) + 12.5LEDKIT-RND	2	RETROFIT WITH (8) 13 WATT BIAX TLED TYPE A LAMPS AND (4) NORMAL POWER BALLASTS AND 12.5 WATT LED ROUND KIT	147.6
R 8L-13LEDBIAX-TYPE A-NP(4) + 12.5LEDKIT-RND+BB	2	RETROFIT WITH (8) 13 WATT BIAX TLED TYPE A LAMPS AND (4) NORMAL POWER BALLASTS AND 12.5 WATT LED ROUND KIT, BATTERY BACKUP	147.6
RF 2L(L)R2'KIT-8LED2'-TYPE A-LP	2	RETROFIT WITH (2) 8 WATT 2' TLED TYPE A LAMP AND LOW POWER ELECTRONIC BALLAST, 2X2 WHITE REFLECTOR KIT, NEW 2X2 PRISMATIC LENS	18.6
RK 15.5LED-4P-BB	11	RETROFIT WITH (1) 15.5 WATT LED PLUG-IN LAMPS, REMOVE BALLAST AND REWIRE SOCKET, BATTERY BACKUP	15.5
RK 15.5LEDPAR38-27K	7	RETROFIT WITH (1) 15.5 WATT LED PAR38 SCREW-IN LAMP, REMOVE BALLAST AND REWIRE SOCKET, VERTICAL MOUNT, 27K	15.5
RK 16.5LED-4P-VERT	53	RETROFIT WITH (1) 15.5 WATT LED VERTICAL PLUG-IN LAMPS, REMOVE BALLAST AND REWIRE SOCKET, BATTERY BACKUP	16.5
RK 16.5LED-4P-VERT-BB	5	RETROFIT WITH (1) 16.5 WATT LED PLUG-IN LAMPS, REMOVE BALLAST AND REWIRE SOCKET, VERTICAL MOUNT, BATTERY BACKUP	16.5
RK 18LEDCOB-AMBR	32	RETROFIT WITH (1) 18 WATT LED AMBER COB LAMP, REMOVE BALLAST AND REWIRE SOCKET	18
RK 1X84WC-11.5LED4'-TYPE A-LP	44	RETROFIT WITH (4) 8 WATT 4' TLED TYPE A LAMPS AND LOW POWER ELECTRONIC BALLAST, 1X8 WHITE CHANNEL STRIP KIT	50
RK 2-18LEDCOB-AMBR	10	RETROFIT WITH (2) 18 WATT LED COB LAMPS, REMOVE BALLAST AND REWIRE SOCKET, AMBER COLOR	36

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Post Code	Post Fixture Qty	Proposed Description	Post Watts / Fixt
RK 22LEDC8"	1	RETROKIT WITH 22 WATT LED RECESSED CAN KIT, 8" DIA, ADJUSTABLE LIGHT OUTPUT	22
RK 24LEDCOB-EXP	25	RETROFIT WITH (1) 24 WATT LED EXPLOSION PROOF COB LAMP, REMOVE BALLAST AND REWIRE SOCKET	24
RK 2-7LED-2P-HOR	50	RETROFIT WITH (2) 7 WATT LED HORIZONTAL PLUG-IN LAMPS, REMOVE BALLAST AND REWIRE SOCKET	14
RK 2-9LED-4P	209	RETROFIT WITH (2) 9 WATT LED PLUG-IN LAMPS, REMOVE BALLAST AND REWIRE SOCKET	18
RK 2-9LED-4P-BB	12	RETROFIT WITH (2) 9 WATT LED PLUG-IN LAMPS, REMOVE BALLAST AND REWIRE SOCKET, BATTERY BACKUP	18
RK 2-9LED-4P-BB-VHARD	2	RETROFIT WITH (2) 9 WATT LED PLUG-IN LAMPS, REMOVE BALLAST AND REWIRE SOCKET, BATTERY BACKUP, VERY HARD INSTALL	18
RK 35LEDCOBB22D	3	RETROFIT WITH (1) 35 WATT LED COB (LPS EQUIVALENT) LAMP, B22D BASE	35
RK 36LEDCOB-HARD-HEIGHT	20	RETROFIT WITH (1) 36 WATT LED COB LAMP, REMOVE BALLAST AND REWIRE SOCKET, HARD AND HIGH INSTALL	36
RK 45LEDCOB-EXP-HEIGHT	20	RETROFIT WITH (1) 45 WATT LED EXPLOSION PROOF COB LAMP, REMOVE BALLAST AND REWIRE SOCKET, HIGH INSTALL	45
RK 7LED-2P-VERT	24	RETROFIT WITH (2) 7 WATT LED VERTICAL PLUG-IN LAMPS, REMOVE BALLAST AND REWIRE SOCKET	7
RK 9LED-4P	28	RETROFIT WITH (1) 9 WATT LED PLUG-IN LAMPS, REMOVE BALLAST AND REWIRE SOCKET	9
RK 9LED-4P-27K	7	RETROFIT WITH (1) 9 WATT LED PLUG-IN LAMP, REMOVE BALLAST AND REWIRE SOCKET, 27K	9
RK 9LED-4P-BB	4	RETROFIT WITH (1) 9 WATT LED PLUG-IN LAMPS, REMOVE BALLAST AND REWIRE SOCKET, BATTERY BACKUP	9
RK 9LED-4P-HARD	1	RETROFIT WITH (1) 9 WATT LED PLUG-IN LAMPS, REMOVE BALLAST AND REWIRE SOCKET, HARD INSTALL	9

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Post Code	Post Fixture Qty	Proposed Description	Post Watts / Fixt
RK 9LED-4P-VERT	32	RETROFIT WITH (1) 9 WATT LED VERTICAL PLUG-IN LAMPS, REMOVE BALLAST AND REWIRE SOCKET	9
RK 9LED-4P-VERT-HEIGHT	15	RETROFIT WITH (1) 9 WATT LED VERTICAL PLUG-IN LAMPS, REMOVE BALLAST AND REWIRE SOCKET, HIGH INSTALL	9
ZZ DC	2	DISCONNECT AND REMOVE	0
ZZ DD	1422	DO NOT RETROFIT	4

TABLE K.4: EXISTING AND PROPOSED HVAC SCHEDULES AND SETPOINTS

Facility	Equipment	Serves	Proposed Occupied Setpoints (Heat/Cool)	Proposed Unoccupied Setpoints[1] (Heat/Cool)	Proposed Occupied Schedule	Proposed SAT Reset Schedule	Proposed HHW Reset Schedule
City Hall	AHU-1	2nd Floor West	72°/80°F	65°/85°F	M,W-F: 5a-7p; Tu: 5a-9p	55°F - 68°F at OAT of 80°F - 60°F	---
City Hall	AHU-2	2nd Floor East	72°/80°F	65°/85°F	M,W-F: 5a-7p; Tu: 5a-9p	55°F - 68°F at OAT of 80°F - 60°F	---
City Hall	AHU-3	1st Floor West	72°/80°F	65°/85°F	M,W-F: 5a-7p; Tu: 5a-9p	55°F - 68°F at OAT of 80°F - 60°F	---
City Hall	AHU-4	1st Floor East	72°/80°F	65°/85°F	M,W-F: 5a-7p; Tu: 5a-9p	55°F - 68°F at OAT of 80°F - 60°F	---
City Hall	AHU-5	Council Chambers	72°/80°F	65°/85°F	M,W-F: 5a-7p; Tu: 5a-9p	55°F - 68°F at OAT of 80°F - 60°F	---
Library Main	AHU-1	Building	72°/80°F	65°/85°F	M-Th: 6a-9p; F,Sa:	55°F - 68°F at	---

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Facility	Equipment	Serves	Proposed Occupied Setpoints (Heat/Cool)	Proposed Unoccupied Setpoints[1] (Heat/Cool)	Proposed Occupied Schedule	Proposed SAT Reset Schedule	Proposed HHW Reset Schedule
					6a-6p; Su: 6a-2p	OAT of 80°F - 60°F	
NACET Accelerator	HHW system	Building	---	---	24/7	---	100°F - 160°F at OAT of 50°F - 10°F
Public Works	AHU-1	Bldg. 6 Admin	72°/80°F	65°/85°F	M-F: 6a-6p	*no change	---
Public Works	HHW system	Bldg. 6 Admin	---	---	M-F: 6a-6p	---	100°F - 160°F at OAT of 50°F - 10°F
USGS #6	AHU-1	Perimeter VAVs	72°/80°F	65°/85°F	M-F: 6a-9p; Sa,Su: 6a-6p	*no change	---
USGS #6	AHU-2	Core VAVs	72°/80°F	65°/85°F	M-F: 6a-9p; Sa,Su: 6a-6p	*no change	---

Note 1: During unoccupied hours systems will cycle, with outside air dampers closed, to maintain unoccupied setpoints.

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EXHIBIT B

Energy Services Contract No. 2021-63 (Investment Grade Audit Report)

(Final executed IGA Report; Attached Separately)

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ENERGY SERVICES CONTRACT

Contract No. 2021-63

THIS ENERGY SERVICES CONTRACT (this **"Contract"**) is entered into as of November 29, 20 21, by and between the City of Flagstaff, a political subdivision of the State or Arizona located at 211 West Aspen Avenue, Flagstaff, AZ 86001 (**"City"**) and NORESCO, LLC, a Delaware limited liability company, having its principal place of business at One Research Drive Suite 400C Westborough, MA 01581 (**"Contractor"**). The City and Contractor may be collectively referred to as the **"Parties"** and individually as a **"Party."**

RECITALS

WHEREAS, the City desires to receive, and Contractor is able to provide professional services related to an energy audit and a savings analysis and further comply with the Energy Performance Contracting Act (A.R.S. § 34-105); and

NOW, THEREFORE, in consideration of the covenants, representations, warranties, and mutual promises and agreements contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

CONTRACT

1. Scope of Work: Conduct a comprehensive investment grade technical energy audit (the **"Investment Grade Audit"**) and savings analysis (the **"Report"**) at identified City facilities (**"Facilities"**) in order to determine the feasibility of entering into a guaranteed energy performance savings contract (**"Energy Efficiency Services Job Order Contract"**) to provide for the installation and implementation of energy conservation measures (**"ECMs"**) through a number of Projects at the Facilities which may be completed as Job Order Agreements.

   And as more specifically described in the scope of work (as amended and/or otherwise modified from time to time as provided herein, (**"Scope of Work"**) attached hereto as *Exhibit A.*

2. Compensation:

   a. There shall be no initial cost to the City. The design of the projects and installation of equipment to implement the measures will be structured so that the energy savings, maintenance and operational savings, and avoided costs resulting from the installed energy conservation measures are sufficient to cover 75 percent (75%) to 100 percent (100%) of all project costs for the duration of the Contract.

   b. In the event the City elects not to proceed, for any reason, with the future negotiation of a guaranteed energy, fuel, water, and wastewater Energy Efficiency Services Job Order Contract, after the completion of the Investment Grade Audit, the City will pay a one-hundred eighty-eight thousand ($188,000) backout fee for the Investment Grade Audit to the Contractor.

   c. City acknowledges that this fee represents only a portion of Contractor's cost to perform the Investment Grade Audit and Contractor will incorporate the full cost of the Investment Grade Audit into any eventual Energy Efficiency Services Job Order Contract.

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3. Standard Terms and Conditions: The City of Flagstaff Standard Terms and Conditions, attached hereto as ***Exhibit B,*** are hereby incorporated by reference and shall apply to performance of this Contract, except to the extent modified in ***Exhibit A***.

4. Insurance: Contractor shall meet insurance requirements of the City, attached here to as ***Exhibit C***.

5. Contract Term: The Contract term is for a period of two (2) years and continuing through _____, 2023 pursuant to the Standard Terms and Conditions. The Contract shall be effective as of the date signed by both parties. The Scope of Work shall be completed within two (2) years of Contract signature date. Performance shall commence within ten (10) days from the City's issuance of the Notice to Proceed and shall be completed on or before_____, 20___ consistent with the schedule of services.

6. Renewal: This Contract may be renewed for up to three (3) one (1) -year extensions by mutual written consent of the parties. The City Manager or his/her designee (the Purchasing Director) shall have authority to approve renewal on behalf of the City.

7. City Representative: The City Representative is Nicole Antonopoulos, Sustainability Manager, or her designee. All communications to the City shall be through the City Representative. The City Representative is responsible for bringing any request for a contract amendment or price adjustment to the attention of the Senior Procurement Specialist.

8. Key Personnel/Subcontractors: Contractor must identify the contact information for Key Personnel and Subcontractors (if any). Key Personnel are those employees whose license number and signature will be placed on key documents and those employees who have significant responsibilities for completion of the services. The City Representative for this Contract has the right to approve any proposed substitution of Key Personnel or Subcontractors.

9. City Ownership of Document and Data: Any original documents prepared or collected by Contractor in performance of this Contract such as models, samples, reports, test plans, survey results, graphics, tables, charts, plans, maps, specifications, surveys, computations and other data shall be the property of City ("City's work product"), unless otherwise agreed by the parties in writing. Contractor agrees that all materials prepared under this Contract are "works for hire" within the meaning of the copyright laws of the United States and hereby assigns to the City all rights and interests Contractor may have in the materials it prepares under this Contract, including any right to derivative use of the material.

10. Re-Use: City may use the City's work product without further compensation to Contractor; provided, however, the City's reuse without written verification or adaption by Contractor for purposes other than contemplated herein is at the City's sole risk and without liability to Contractor. Contractor shall not engage in any conflict of interest nor appropriate any portion of the City's work product for the benefit of Contractor or any third parties without the City's prior written consent.

11. Delivery of Document and Data: Upon termination of this Contract in whole or part, or upon expiration if not previously terminated, Contractor shall immediately deliver to the City copies all of the City's work product and any other documents and data accumulated by Contractor in performance of this Contract, whether complete or in process.

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12. Notice: Any notice concerning this Contract shall be in writing and sent by certified mail and email as follows:

To the City:
Emily Markel
Senior Procurement Specialist
City of Flagstaff
211 W. Aspen Avenue
Flagstaff, AZ 86001
emarkel@flagstaffaz.gov

To Contractor:
Pablo Hernandez
NORESCO, LLC
One Research Drive Suite 400C
Westborough, MA 01581
phernandez@noresco.com

With a copy to:
Nicole Antonopoulos
Sustainability Manager
City of Flagstaff
419 N. Mogollon Street
Flagstaff, AZ 86001
nantonopoulos@flagstaffaz.gov

With a copy to:
Kathleen Krasenics
NORESCO, LLC
One Research Drive Suite 400C
Westborough, MA 01581
Kathleen.Krasenics@noresco.com
Cc: licensing@noresco.com (Legal Department)

13. Authority: Each party warrants that it has authority to enter into this Contract and perform its obligations hereunder, and that it has taken all actions necessary to enter into this Contract.

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SIGNATURES ON FOLLOWING PAGE)

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CONTRACTOR

Pablo Hernandez

Print name: Pablo Hernandez

Title: CFO

CITY OF FLAGSTAFF

for

Print name: Greg Clifton

Title: City Manager

Attest:

City Clerk

Approved as to form:

City Attorney's Office

Notice to Proceed issued: _____, 2021

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EXHIBIT A

SCOPE OF WORK

1. Investment Grade Audit

Contractor will conduct an Investment Grade Audit at City Facilities, as listed in Table A.1, to determine the feasibility of entering into an Energy Efficiency Services Job Order Contract. The Investment Grade Audit will include the following technology categories:

i. Energy and water efficiency
ii. Water meter replacements with automated metering infrastructure (AMI)
iii. Fleet Conversion to Electric
iv. Strategic Sourcing
v. Water and wastewater process improvements (preliminary assessment only)

The Investment Grade Audit will present a multi-phase approach:

- Phase 1: Detailed preliminary assessment of the energy and water efficiency, water meter replacements with automated metering infrastructure (AMI), fleet conversion to electric, Strategic Sourcing opportunities, and of water and wastewater process improvements.
- Phase 2: The detailed development of a water and wastewater process improvement, under a separate potential Energy Efficiency Services Job Order Contract.

This process will include in Phase 1, the following priority assessments within the Investment Grade Audit identified by the City:

- City Hall Boiler Replacement
- Main Library Boiler Replacement
- Main Library Window Replacement
- Aquaplex Center Boiler Replacement

Investment Grade Audit Development Plan

Contractor will prepare a comprehensive plan for developing and completing the Investment Grade Audit deliverables. This plan will be presented as part of a kickoff meeting to establish tasks, roles and responsibilities to finalize a schedule to complete the work. As part of the kickoff meeting Contractor will complete the following:

a) Discuss City requests and project funding to determine areas and technologies that are anticipated to be a part of the project
b) Review available facility blue-prints and specifications provided by the City to become familiar with the facility systems for the areas determined to be a part of the proposed project
c) Review construction documents from recent projects including water/wastewater plant upgrade designs and reports, water meter upgrades, lighting retrofits and HVAC and controls work completed within the past five years to be provided by the City
d) Interview operating personnel and occupants to get a better understanding about the electrical, mechanical, plumbing, irrigation, and water/wastewater treatment systems
e) Document any issues or problems that need to be addressed related to the areas determined to be a part of the proposed project

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f) Obtain a list of preferred contractors, if available
g) Obtain detailed electrical, mechanical and plumbing operating schedules on areas determined to be a part of the proposed project
h) Gather most recent utility costs (electric, natural gas, water/sewer, trash) for the facilities determined to be a part of the project
i) Gather detailed current and future years' O&M and Capital budget plans related to facilities determined to be a part of the project
j) Gather information and copies of existing Maintenance and Service Contracts related to facilities determined to be a part of the project
k) Obtain letter of authorization releasing utility data to Contractor
l) Obtain facilities and operational calendar

Finance and Energy Efficiency Services Job Order Contract Workshop

Concurrent with the development kickoff meeting, a separate meeting will be scheduled to start the assessment of the wastewater and facilities in preparation for a potential design/build construction Energy Efficiency Services Job Order Contract. The development, review and approval of the Energy Efficiency Services Job Order Contract can take several weeks, and therefore must move forward simultaneously with the technical analysis. In addition, the method for procuring and approving project financing must also be developed. The scope of this meeting will include:

a) Define the review and approval process for the Energy Efficiency Services Job Order Contract, Job Order Agreements and Project Financing
b) Identify City staff involved in the review and approval process
c) Develop a schedule of tasks and milestones
d) Confirm the finance structure inclusive of City capital contribution and project finance term up to twenty (20) years.

On Site Field Audit

During a planned site visit, a team of Contractor energy professionals will survey each facility and gather necessary information in order to perform the engineering and energy evaluation. Tasks that Contractor will complete during the field visit include, but are not limited to:

a) Inventory lighting and plumbing fixtures that have not been retrofitted or replaced within the previous five years, HVAC equipment needing replacement, plug load equipment, and water and wastewater treatment equipment.
b) Document nameplate data of equipment listed above
c) Document locations and verifying print/layout maps for equipment listed above
d) Photograph existing equipment listed above
e) Conduct isolated monitoring (as needed)
f) Interview staff and maintenance personnel
g) Obtain operating schedules, procedures and system configurations for equipment listed above

Utility Tariff Analysis

Contractor will perform utility analysis of each facility determined to be a part of the project using past energy history, to determine the monthly electric, gas and demand profiles, and compare the energy use indices of the facility with similar facilities in the same geographic location. This step provides important

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preliminary information about the existing potential at each facility. Tasks that Contractor will complete during the analysis include:

a) Perform utility bill analysis
b) Establish base year consumption
c) Establish effective rates for electricity, natural gas and water/sewer and respective annual escalations
d) Interview City facility personnel on billing issues and anomalies

Preliminary ECM and Utility Baseline Workshop

Contractor will provide a preliminary Energy Conservation Measure (ECM) Matrix with specific ECMs for review and consideration for this project. City and Contractor will mutually agree on the ECMs that will move forward for detailed savings and cost analysis.

Concurrently, the team will review the utility baseline analysis and associated effective utility rates to be used in the energy and financial analysis.

Investment Grade Audit Report

Contractor will complete a comprehensive energy analysis of each facility using the information provided by the City, the data gathered during the on-site field audit, and the results of the utility tariff analysis. Results of the Investment Grade Audit will determine the annual energy savings by each ECM type for each Facility. Tasks that Contractor will complete during the energy analysis include:

a) Determine energy savings methodology by ECM
b) Perform savings evaluation
c) Document assumption and detailed calculations
d) Develop operating standards for the energy using equipment

Financial Cost Benefit Analysis

Contractor will complete a cost benefit analysis to demonstrate the financial impacts to City for implementing the proposed solutions. Total Project cost will include, but is not limited to, the following:

a) Equipment and installation costs
b) Engineering costs
c) Detailed design costs
d) Construction management costs
e) Commissioning costs
f) Project development costs
g) Measurement & Verification costs
h) Administrative costs
i) Project contingency costs
j) Overhead and fees
k) Profit
l) Taxes
m) Construction interest

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The City acknowledges and agrees that Contractor has not acted as a municipal financial advisor to the City and that the City has not relied on Contractor for any matters relating to the financing of the Project, including issuance of any bonds.

Project Management Plan

Contractor will prepare a project plan for implementation that will include the following:

a) Project installation
b) Construction scope of work
c) Equipment specification/cut sheets
d) Commissioning procedures
e) Project schedule

Final ECM Scope Workshop

Contractor will provide the City with the results of the detailed cost and savings analysis for the selected ECMs, and the associated financial summary. Final comments and revisions will be discussed and resolved, and the results incorporated into the Investment Grade Audit Report.

Submit Investment Grade Audit Report

Based on the input provided during the Final ECM Scope Workshop, Contractor will revise and finalize the Investment Grade Audit Report. Parties agree that any and all reports, deliverables, documentation, etc. shall only become the property of the City upon payment in full. The Investment Grade Audit Report will be organized as noted later in this section including an Executive Summary, Energy Efficiency Services Job Order Contract and associated attachments. These Energy Efficiency Services Job Order Contract Attachments, as well as the Energy Efficiency Job Order Contract terms and conditions concurrently negotiated during the project development process, will comprise the final Energy Efficiency Services Job Order Contract.

Parties agree that reuse of the design and/or corresponding contract documents or portions thereof by the City shall be limited to the City and for the benefit of the City. When reuse is contemplated, all title blocks and references to Contractor shall be removed from drawings unless written consent for reuse is given by Contractor. The City shall defend, indemnify and hold Contractor, its officers, employees and agents harmless from and against any and all liability, loss, expense, attorneys' fees, or claims or injury or damages arising out of the reuse of the design and / or corresponding contract documents or portion thereof without the written consent of Contractor.

Note that Contractor will also support the City with information required for describing the project to City Council and related departments, such as powerpoint presentations and summarized project descriptions and data.

Final Energy Efficiency Services Job Order Contract and Finance Workshop

If required, a final workshop will be held with City procurement and finance team members to discuss project elements and prepare for subsequent review and approval.

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2. Strategic Sourcing

Contractor shall provide strategic sourcing services for the following specified City budget categories:

- Telecommunications and IT
- Temporary Labor and Professional Services
- Insurance (Health and Non Health)
- Logistics
- Equipment, Vehicle Rental and Vehicle Management
- Office Supplies, Printing, Shop Supplies, Furniture
- Travel
- P Card, Ghost Card, Travel Card Programs
- Marketing and Promotional Services

Additional budget categories can be added by mutual agreement.

Contractor will develop a comprehensive strategy to identify, validate, and implement expense reductions, enhanced revenue, and refunds of vendor overpayments. The work will be performed as follows:

Opportunity Analysis ("Phase 1")

After receipt of the necessary financial information from the City, Contractor will complete a preliminary assessment of strategic sourcing opportunities. Results of the assessment will be communicated to the City in a strategic sourcing opportunity report which shall include the identification of budget categories for which potential savings or enhanced revenue opportunities have been identified and the range of projected savings or enhanced revenue.

The City shall review the strategic sourcing opportunity report and shall identify in writing which (if any) budget categories should be evaluated further. Additional analysis would be completed under separate agreement or amendment to this agreement structured under a shared savings approach.

Table A.1 City Facilities

Facility	***Address***	***Year Built***	***Square Footage***
Airport - Apron E (#2790)	2790 W. Lightning Drive	2005	2,700
Airport - Foxtrot Hangar 1 (#2771)	2771 W. Lightning Drive	2005	14,080
Airport - Foxtrot Hangar 2 (#2791)	2791 W. Lightning Drive	2005	14,080
Airport - Hangar A (#2660)	2660 W. Lightning Drive	1989	14,560
Airport - Hangar D (#2750)	2750 W. Lightning Drive	1992	14,560

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Facility	***Address***	***Year Built***	***Square Footage***
Airport - Hangar E (#2661)	2661 W. Lightning Drive	1999	14,560
Airport AARF	6000 S. Liberator Lane	2005	11,500
Airport DPS	6090 S. Liberator Lane	1980	3,750
Airport FAA maintenance	6628 S Cessna Circle	1980	2,000
Airport Hangar #2661	2661 W. Lighting Drive	2005	18,000
Airport terminal	6620 S. Pulliam Dr.	1995	27,815
Aquaplex Center	1702 N. 4th St.	2008	52,500
Cemetery House	1300 S. San Francisco	1975/2011	2,392
Cemetery Storage Warehouse	1300 S. San Francisco	1990	1,820
City Court	15 N. Beaver	1945	12,300
City Courthouse	101 W. Cherry	2020	39,500
City Hall	211 W. Aspen	1983	49,400
City Warehouse	5477 E. Commerce	1986	5,600
Coconino Warehouse	511 W. Coconino	1965	4,400
Cogdill Recreation Center	301 S. Paseo de Flag	1969	8,752
Fire Station #1	1972 S. Thompson Rd	2007	8,620
Fire Station #10 (Old Airport Ops Building)	6629 S. Cessna Circle	1954/1974	2,000

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Facility	***Address***	***Year Built***	***Square Footage***
Fire Station #2	1701 E. Ponderosa Pkwy	2011	14,631
Fire Station #3	4500 E. Nestle-Purina	2009	8,620
Fire Station #4	4040 E. Butler	1987	5,600
Fire Station #5	2525 N. Fort Valley Road	2008	8,620
Fire Station #6	3877 S. Lake Mary Rd.	1999	9,000
Hal Jensen Recreation Center	2403 N. Izabel	1970	16,808
J. Lively Ice Rink	1850 N. Turquoise	1975 / 2010	34,991
Joe C. Montoya Community and Senior Center	245 N. Thorpe	1978	9,246
Joel Montalvo Building	2230 E. Spruce	1950	3,300
Lake Mary - Filtration Building (11)	4500 S. Lake Mary Rd	2003	9,246
Lake Mary - Old Plant (2)	4500 S. Lake Mary Rd	1941	2,590
Lake Mary - Operations Control (1)	4500 S. Lake Mary Rd	1964	4,603
Lake Mary - Plant Maint. Shop (6)	4500 S. Lake Mary Rd	1960-66	2,100
Lake Mary Pump House	Lake Mary Well Field	1982	2,679
Landfill - Administration Bldg	Cinder Lake Landfill	2001	2,717
Landfill - Household Prod. Coll. Center	Cinder Lake Landfill	2002	4,000
Landfill - Maintenance Building	Cinder Lake Landfill	2008	4,700

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Facility	***Address***	***Year Built***	***Square Footage***
Landfill – Offices	Cinder Lake Landfill	1985	1,600
Library East	3000 N. 4th St. #5		11,000
Library Main	300 W. Aspen	1987	35,000
McCallister Ranch House	3366 W. Rt 66	1940's	2,000
McPherson Center	1850 N. Turquoise	1970	2,100
Milligan House	323 W. Aspen	1904	3,514
Murdoch Center	220 E. Brannen	1965	2,000
NACET – Incubator	2225 N. Gemini Drive	2008	10,285
NACET Accelerator - Innovation Mesa	2201 N. Gemini Drive	2015	28,053
North Reservoir Filtration Plant		1983	7,700
Phoenix Warehouse	216 W. Phoenix Ave.	1969	23,409
Ponderosa Head Start	1825 N. Main St		3,000
Prosecutors Building	107 W. Aspen	2001	3,255
PW Bldg 3 - Multi Use Garage (Old Solid Waste)	419 N. Mogollon	2005	6,300
PW Bldg 7 - Fleet/Vehicle Shop	419 N. Mogollon	1945	16,200
PW Core Admin Building 5	3200 W. Route 66	2018	13,155
PW Core Fleet Building 2	3200 W. Route 66	2018	21,701

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Facility	***Address***	***Year Built***	***Square Footage***
PW Core Solid Waste Building 3	3200 W. Route 66	2018	17,580
PW Core Streets Building 4	3200 W. Route 66	2018	20,809
PW Core Wash Facility Building 1	3200 W. Route 66	2018	3,000
Rio De Flag - Final Sludge & Scum Sta.	600 Babbitt Way	1993	1,518
Rio De Flag - Influent Pumping Sta.	600 Babbitt Way	1993	4,545
Rio De Flag - Operations Building	600 Babbitt Way	1993	21,525
Rio De Flag - Primary Sludge/Pumping Sta.	600 Babbitt Way	1993	1,510
Sunnyside Head Start	1825 N. 1 St		2,500
Sustainability Office (Old SW Office-B1)	419 N. Mogollon	1984	2,838
Theatrikos Building	11 W. Cherry	1940	8,500
Thorpe Shop	600 N. Thorpe Road	1975	4,000
USGS #3	2255 N. Gemini	1974	16,552
USGS #4	2255 N. Gemini	1976	23,847
USGS #5	2255 N. Gemini	1976	9,163
USGS #6	2255 N. Gemini	2002	27,525
Utilities Shop	5401 E. Commerce	1999	17,388
Visitor's Center	1 W. Rte. 66	1937	5,000

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Facility	***Address***	***Year Built***	***Square Footage***
Water Services / Housing East Side Annex	2323 N. Walgreens	1992	8,623
Wildcat Hill - Bio Towers & Oil Storage (7)	2800 N. El Paso Flag rd	1970	28,000
Wildcat Hill - Chlorine Storage (1)	2800 N. El Paso Flag rd	1982	1,783
Wildcat Hill - Influent Head works (11)	2800 N. El Paso Flag rd	1982	3,400
Wildcat Hill - Non-Haz. Liquid Waste (15)	2800 N. El Paso Flag rd	1980	10,000
Wildcat Hill - Operations & Maint. (6)	2800 N. El Paso Flag rd	1982	15,452
Wildcat Hill - Prim. Effluent Pump Station (12)	2800 N. El Paso Flag rd	1982	7,000
Wildcat Hill - Process Digesters (13)	2800 N. El Paso Flag rd	1982	9,800
Wildcat Hill - Reclaim Pump Station (4)	2800 N. El Paso Flag rd	1982	1,880
Wildcat Hill - Sand Filter Building (10)	2800 N. El Paso Flag rd	1991	8,632
Wildcat Hill - Sec. Eff. Pump Station (3)	2800 N. El Paso Flag rd	1991	849
Wildcat Hill - Secondary Clarifiers (14)	2800 N. El Paso Flag rd	1982	375
Wildcat Hill - Septage Truck Station (8)	2800 N. El Paso Flag rd	1992	36
Wildcat Hill - Sludge Inj. Equip. Storage (5)	2800 N. El Paso Flag rd	1982	760
Wildcat Hill - SO2 Storage (2)	2800 N. El Paso Flag rd	1991	969
Wildcat Hill - Storm Water Pump Station (9)	2800 N. El Paso Flag rd	1970	750
Woody Mountain Clarifier	Woody Mountain Well Field	1959	3,215

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Facility	*Address*	*Year Built*	*Square Footage*
		TOTAL	947,936

Note: The Investment Grade Audit Report shall include an evaluation of City water meters serving residential and commercial water customers.

Investment Grade Audit Deliverables

The deliverables will be structured in three parts as described below. These deliverables may be delivered together or separately, and in any order for consideration by the City.

Part 1 will be comprised of the Investment Grade Audit Report where the deliverables shall include:

A. Executive Summary
B. Assessments of:

    1. Energy and water efficiency
    2. Water meter replacements with automated metering infrastructure (AMI)
    3. Fleet Conversion to Electric
    4. Strategic Sourcing
    5. Water and wastewater process improvements (preliminary assessment only)

C. A Proposed Design/Build Energy Efficiency Services Job Order Contract with the following Attachments:

ATTACHMENT A	Property Description
ATTACHMENT B	Scope of Services
ATTACHMENT C	Reserved
ATTACHMENT D	Notice to Proceed
ATTACHMENT E	Delivery and Acceptance Certificates
ATTACHMENT F	Guaranty of Energy Cost Savings
ATTACHMENT G	Contract Cost and Annual Services
ATTACHMENT H	Change Order Form
ATTACHMENT I	Maintenance Services
ATTACHMENT J	Contractor Installed Equipment
ATTACHMENT K	Standards of Service
ATTACHMENT L	Modifications to Investment Grade Audit Documentation
ATTACHMENT M	Form of City's Approval of Sample or Specifications

Part 2 will address preliminary development of water and wastewater process improvements where the deliverables shall include:

A. A brief report summarizing the potential opportunities, preliminary estimate savings and order-of-magnitude budget that could be supported by the savings.
B. A project development plan will be provided outlining next steps to develop the mutually agreed opportunities.

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C. A proposed Phase 2 Energy Efficiency Services Job Order Contract.

Part 3 will address the results of Phase 1 budget optimization through strategic sourcing where the deliverables shall include:

A. A report with identification of budget categories for which potential savings or enhanced revenue opportunities have been identified and the range of projected savings or enhanced revenue.

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EXHIBIT B

STANDARD TERMS AND CONDITIONS

IN GENERAL

1. **NOTICE TO PROCEED:** Contractor shall not commence performance until after City has issued a Notice to Proceed.

2. **LICENSES AND PERMITS:** Contractor its expense shall maintain current federal, state, and local licenses, permits and approvals required for performance of the Contract, and provide copies to City upon request.

3. **COMPLIANCE WITH LAWS:** Contractor shall comply with all applicable federal, state and local laws, regulations, standards, codes and ordinances in performance of this Contract.

4. **NON-EXCLUSIVE:** Unless expressly provided otherwise in the Contract, this Contract is non-exclusive and the City reserves the right to contract with others for materials or services.

5. **SAMPLES:** Any sample submitted to the City by the Contractor and relied upon by City as representative of quality and conformity, shall constitute an express warranty that all materials and/or service to be provided to City shall be of the same quality and conformity.

MATERIALS

6. **PURCHASE ORDERS:** The City will issue a purchase order for the materials covered by the Contract, and such order will reference the Contract number.

7. **QUALITY:** Contractor warrants that all materials supplied under this Contract will be new and free from defects in material or workmanship. The materials will conform to any statements made on the containers or labels or advertisements for the materials and will be safe and appropriate for use as normally used. City's inspection, testing, acceptance or use of materials shall not serve to waive these quality requirements. This warranty shall survive termination or expiration of the Contract.

8. **ACCEPTANCE:** All materials and services provided by Contract are subject to final inspection and acceptance by the City. Materials and services failing to conform to the Contract specifications may be rejected in whole or part. If rejected, Contractor is responsible for all costs associated arising from rejection.

9. **MANUFACTURER'S WARRANTIES:** Contractor shall deliver all Manufacturer's Warranties to City upon City's acceptance of the materials.

10. **PACKING AND SHIPPING:** Contractor shall be responsible for industry standard packing which conforms to requirements of carrier's tariff and ICC regulations. Containers shall be clearly marked as to lot number, destination, address and purchase order number. All shipments shall be F.O.B. Destination, City of Flagstaff, 211 West Aspen Avenue, Flagstaff, Arizona 86001, unless otherwise specified by the City. C.O.D. shipments will not be accepted.

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11. **TITLE AND RISK OF LOSS:** The title and risk of loss of material shall not pass to the City until the City actually receives the material at the point of delivery, and the City has completed inspection and has accepted the material, unless the City has expressly provided otherwise in the Contract.

12. **NO REPLACEMENT OF DEFECTIVE TENDER:** Every tender of materials shall fully comply with all provisions of the Contract. If a tender is made which does not fully conform, this shall constitute a breach and Contractor shall not have the right to substitute a conforming tender without prior written approval from the City.

13. **DEFAULT IN ONE INSTALLMENT TO CONSTITUTE TOTAL BREACH:** Contractor and may not substitute nonconforming materials, or services. Delivery of nonconforming materials, and/or services, or a default of any nature, at the option of the City, shall constitute shall deliver conforming materials, or services, in each installment or lot of the contract a breach of the contract as a whole.

14. **SHIPMENT UNDER RESERVATION PROHIBITED:** Contractor is not authorized to ship materials under reservation and no tender of a bill of lading shall operate as a tender of the materials.

15. **LIENS:** All materials and other deliverables supplied to the City shall be free of all liens other than the security interest held by Contractor until payment in full is made by the City. Upon request of the City, Contractor shall provide a formal release of all liens.

16. **CHANGES IN ORDERS:** The City reserves the right at any time to make changes in any one or more of the following: (a) methods of shipment or packing; (b) place of delivery; and (c) quantities. If any change causes an increase or decrease in the cost of or the time required for performance, an equitable adjustment may be made in the price or delivery schedule, or both. Any claim for adjustment shall be evidenced in writing and approved by the City Purchasing Director prior to the institution of the change.

PAYMENT

17. **INVOICES:** A separate invoice shall be issued for each shipment and each job completed. Invoices shall include the Contract and/or Purchase Order number, and dates when goods were shipped or work performed. Invoices shall be sent within 30 days following performance. Payment will only be made for satisfactory materials and/or services received and accepted by City.

18. **LATE INVOICES:** The City may deduct up to 10% of the payment price for late invoices. The City operates on a fiscal year budget, from July 1 through the following June 30. Except in unusual circumstances, which are not due to the fault of Contractor, City will not honor any invoices or claims submitted after August 15 for materials or services supplied in the prior fiscal year.

19. **TAXES:** Contractor shall be responsible for payment of all taxes including federal, state, and local taxes related to or arising out of Contractor's performance of this Contract. Such taxes include but are not limited to federal and state income tax, social security tax, unemployment insurance taxes, transaction privilege taxes, use taxes, and any other taxes or business license fees as required.

    Exception: The City will pay any taxes which are specifically identified as a line item dollar amount in the Contractor's bid, proposal, or quote, and which were considered and approved by the City as part of the Contract award process. In this event, taxes shall be identified as a separate line item in Contractor's invoices.

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20. **FEDERAL EXCISE TAXES:** The City is exempt from paying certain Federal Excise Taxes and will furnish an exemption certificate upon request.

21. **FUEL CHARGES:** Contractor at its own expense is liable for all fuel costs related to performance. No fuel surcharges will be accepted or paid by City.

22. **DISCOUNTS:** If the Contract provides for payment discounts, payment discounts will be computed from the later date of the following: (a) when correct invoice is received by the City; or (b) when acceptable materials and/or materials were received by City.

23. **AMOUNTS DUE TO THE CITY:** Contractor must be current and remain current in all obligations due to the City during performance. Payments to Contractor may be offset by any delinquent amounts due to City or fees and charges owed to City under this Contract.

24. **OFAC:** No City payments may be made to any person in violation of Office of Foreign Assets Control regulations, 31 C.F.R. Part 501.

SERVICES

25. **INDEPENDENT CONTRACTOR:** Contractor shall be an independent contractor for purposes of all laws, including but not limited to the Fair Labor Standards Act, Federal Insurance Contribution Act, Social Security Act, Federal Unemployment Tax Act, Internal Revenue Code, Immigration and Naturalization Act; Arizona revenue and taxation, workers' compensation, and unemployment insurance laws.

26. **CONTROL:** Contractor shall be responsible for the control of the work.

27. **WORK SITE:** Contractor shall inspect the work site and notify the City in writing of any deficiencies or needs prior to commencing work.

28. **SAFEGUARDING PROPERTY:** Contractor shall responsible for any damage to real property of the City or adjacent property in performance of the work and safeguard the worksite.

29. **QUALITY:** All work shall be of good quality and free of defects, performed in a diligent and professional manner.

30. **ACCEPTANCE:** If work is rejected by the City due to noncompliance with the Contract, The City, after notifying Contractor in writing, may require Contractor to correct the deficiencies at Contractor's expense, or cancel the work order and pay Contractor only for work properly performed.

31. **WARRANTY:** Contractor warrants all work for a period of one (1) year following final acceptance by the City. Upon receipt of written notice from the City, Contractor at its own expense shall promptly correct work rejected as defective or as failing to conform to the Contract, whether observed before or after acceptance, and whether or not fabricated, installed or completed by Contractor, and shall bear all costs of correction. If Contractor does not correct deficiencies within a reasonable time specified in the written notice from the City, the City may perform the work and Contractor shall be liable for the costs. This one-year warranty is in addition to, and does not limit Contractor's other obligations herein. This warranty shall survive termination or expiration of the Contract.

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INSPECTION, RECORDS, ADMINISTRATION

32. RECORDS: The City shall have the right to inspect and audit all Contractor books and records related to the Contract for up to five (5) years after completion of the Contract.

33. RIGHT TO INSPECT BUSINESS: The City shall have the right to inspect the place of business of the Contractor or its subcontractor during regular business hours at reasonable times, to the extent necessary to confirm Contract performance.

34. PUBLIC RECORDS: This Contract and any related materials are a matter of public record and subject to disclosure pursuant to Arizona Public Records Law, A.R.S. § 39-121 et seq. If Contractor has clearly marked its proprietary information as "confidential", the City will endeavor to notify Contractor prior to release of such information.

35. CONTRACT ADMINISTRATION: Contractor will be required to participate in the City's Contract Administration Process. Contractor will be closely monitored for contract compliance and will be required to promptly correct any deficiencies.

INDEMNIFICATION, INSURANCE

36. GENERAL INDEMNIFICATION: Contractor shall indemnify, defend and hold harmless the City, its council, boards and commissions, officers, employees from all losses, claims, suits, payments and judgments, demands, expenses, attorney's fees or actions of any kind resulting from personal injury to any person, including employees, subcontractors or agents of Contractor or damages to any property arising or alleged to have arisen out of the negligent performance of the Contract, except any such injury or damages arising out of the sole negligence of the City, its officers, agents or employees. This indemnification provision shall survive termination or expiration of the Contract.

37. INSURANCE: Contractor shall maintain all insurance coverage required by the City, including public liability and worker's compensation.

38. INTELLECTUAL PROPERTY INDEMNIFICATION: Contractor shall indemnify and hold harmless the City against any liability, including costs and expenses, for infringement of any patent, trademark or copyright or other proprietary rights of any third parties arising out of contract performance or use by the City of materials furnished or work performed under this Contract. Contractor shall promptly assume full responsibility for the defense of any suit or proceeding which is, has been, or may be brought against the City and its agents for alleged infringement, or alleged unfair competition resulting from similarity in design, trademark or appearance of goods, and indemnify the City against any and all expenses, losses, royalties, profits and damages, attorneys fees and costs resulting from such proceedings or settlement thereof. This indemnification shall survive termination or expiration of the Contract.

CONTRACT CHANGES

39. PRICE INCREASES: Except as expressly provided for in the Contract, no price increases will be approved.

40. COMPLETE AGREEMENT: The Contract is intended to be the complete and final agreement of the parties.

41. AMENDMENTS: This Contract may be amended by written agreement of the parties.

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42. SEVERABILITY: If any term or provision of this Contract is found by a court of competent jurisdiction to be illegal or unenforceable, then such term or provision is deemed deleted, and the remainder of this Contract shall remain in full force and effect.

43. NO WAIVER: Each party has the right insist upon strict performance of the Contract, and the prior failure of a party to insist upon strict performance, or a delay in any exercise of any right or remedy, or acceptance of materials or services, shall not be deemed a waiver of any right to insist upon strict performance.

44. ASSIGNMENT: This Contract may be assigned by Contractor with prior written consent of the City, which will not be unreasonably withheld. Any assignment without such consent shall be null and void. Unless expressly provided for in a separately executed Consent to Assignment, no assignment shall relieve Contractor (Assignor) from any of its obligations and liabilities under the Contract with respect to City. The Purchasing Director shall have authority to consent to an assignment on behalf of City.

45. BINDING EFFECT: This Contract shall be binding upon and inure to the benefit of the parties and their successors and assigns.

EMPLOYEES AND SUBCONTRACTORS

46. SUBCONTRACTING: Contractor may subcontract work in whole or in part with the City's advance written consent. City reserves the right to withhold consent if subcontractor is deemed irresponsible and/or subcontracting may negatively affect performance. All subcontracts shall comply with the underlying Contract. Contractor is responsible for Contract performance whether or not subcontractors are used.

47. NONDISCRIMINATION: Contractor shall not discriminate against any employee or applicant for employment or person to whom it provides services because of race, color, religion, sex, national origin, disability, genetic information, veteran's status, pregnancy, familial status and represents and warrants that it complies with all applicable federal, state and local laws and executive orders regarding employment. In addition, any Contractor located within City of Flagstaff limits shall comply with the City Code, Chapter 14-02Civil Rights which also prohibits discrimination based on sexual orientation, or gender identity or expression.

48. DRUG FREE WORKPLACE: The City has adopted a Drug Free Workplace policy for itself and those doing business with the City to ensure the safety and health of all persons working on City contracts and projects. Contractor personnel shall abstain from use or possession of illegal drugs while engaged in performance of this Contract.

49. IMMIGRATION LAWS: Pursuant to A.R.S. § 41-4401, Contractor hereby warrants to the City that the Contractor and each of its subcontractors will comply with, and are contractually obligated to comply with, all State and Federal Immigration laws and regulations that relate to its employees and A.R.S. § 23-214(A) (hereinafter "Contractor Immigration Warranty"). A breach of the Contractor Immigration Warranty shall constitute a material breach of this Contract and shall subject the Contractor to penalties up to and including termination of this Contract at the sole discretion of the City. The City retains the legal right to inspect the papers of any Contractor or subcontractor employee who works on this Contract to ensure compliance with the Contractor Immigration Warranty. Contractor agrees to assist the City in regard to any such inspections. The City may, at its sole discretion, conduct random verification of the employment records of the Contractor and any subcontractors to ensure compliance with Contractor's Immigration Warranty. Contractor

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agrees to assist the City in regard to any random verification performed. Neither Contractor nor any subcontractor shall be deemed to have materially breached the Contractor Immigration Warranty if Contractor or subcontractor if Contractor or subcontractor establishes that it has complied with the employment verification provisions prescribed by sections 274A and 274B of the Federal Immigration and Nationality Act and the E-verify requirements prescribed by A.R.S. § 23-214(A).

DEFAULT AND TERMINATION

50. TERMINATION FOR DEFAULT: Prior to terminating this Contract for a material breach, the non-defaulting party shall give the defaulting party written notice and reasonable opportunity to cure the default, not to exceed thirty (30) days unless a longer period of time is granted by the non-defaulting party in writing. In the event the breach is not timely cured, or in the event of a series of repeated breaches the non-defaulting party may elect to terminate Contract by written notice to Contractor, which shall be effective upon receipt. In the event of default, the parties may execute all remedies available at law in addition Contract remedies provided for herein.

51. CITY REMEDIES: In the event of Contractor's default, City may obtain required materials and/or services from a substitute contractor, and Contractor shall be liable to the City to pay for the costs of such substitute service. City may deduct or offset the cost of substitute service from any balance due to Contractor, and/or seek recovery of the costs of substitute service against any performance security, and/or collect any liquidated damages provided for in the Contract. Remedies herein are not exclusive.

52. CONTRACTOR REMEDIES: In the event of City's default, Contractor may pursue all remedies available at law, except as provided for herein.

53. SPECIAL DAMAGES: In the event of default, neither party shall be liable for incidental, special, or consequential damages.

54. TERMINATION FOR NONAPPROPRIATION OF FUNDS: The City may terminate all or a portion of this Contract due to budget constraints and non-appropriation of funds for the following fiscal year, without penalty or liability to Contractor.

55. TERMINATION FOR CONVENIENCE: Unless expressly provided for otherwise in the Contract, this Contract may be terminated in whole or part by the City for convenience upon thirty (30) days written notice, without further penalty or liability to Contractor. If this Contract is terminated, City shall be liable only for payment for satisfactory materials and/or services received and accepted by City before the effective date of termination.

56. TERMINATION DUE TO INSOLVENCY: If Contractor becomes a debtor in a bankruptcy proceeding, or a reorganization, dissolution or liquidation proceeding, or if a trustee or receiver is appointed over all or a substantial portion of the property of Contractor under federal bankruptcy law or any state insolvency law, Contractor shall immediately provide the City with a written notice thereof. The City may terminate this Contract, and Contractor is deemed in default, at any time if the Contractor becomes insolvent, or is a party to any voluntary bankruptcy or receivership proceeding, makes an assignment for a creditor, or there is any similar action that affects Contractor's ability to perform under the Contract.

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57. PAYMENT UPON TERMINATION: Upon termination of this Contract, City will pay Contractor for satisfactory performance up until the effective date of termination. City shall make final payment within thirty (30) days from receipt of the Contractor's final invoice.

58. CANCELLATION FOR GRATUITIES: The City may cancel this Contract at any time, without penalty or further liability to Contractor, if City determines that Contractor has given or offered to give any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant ("Gratuities") in connection with award or performance of the Contract.

59. CANCELLATION FOR CONFLICT OF INTEREST (A.R.S. § 38-511): The City may cancel this Contract within three (3) years after its execution, without penalty or further liability to Contractor.

MISCELLANEOUS

60. ADVERTISING: Contractor shall not advertise or publish information concerning its Contract with City, without the prior written consent of the City.

61. NOTICES: All notices given pursuant to this Contract shall be delivered at the addresses as specified in the Contract or updated by Notice to the other party. Notices may be: (a) personally delivered, with receipt effective upon personal delivery; (b) sent via certified mail, postage prepaid, with receipt deemed effective four (4) days after being sent; (c) or sent by overnight courier, with receipt deemed effective two (2) days after being sent Notice may be sent by email as a secondary form of notice.

62. THIRD PARTY BENEFICIARIES: This Contract is intended for the exclusive benefit of the parties. Nothing herein is intended to create any rights or responsibilities to third parties.

63. GOVERNING LAW: This Contract shall be construed in accordance with the laws of Arizona.

64. FORUM: In the event of litigation relating to this Contract, any action at law or in equity shall be filed in Coconino County, Arizona.

65. ATTORNEYS' FEES: If any action at law or in equity is necessary to enforce the terms of this Contract, the prevailing party shall be entitled to recover its reasonable attorneys' fees, costs, professional fees and expenses.

66. FORCE MAJUERE: There may be events that occur during the term of this Contract that are beyond the control of both the City and the Contractor, including events of war, floods, labor, disputes, earthquakes, epidemics, pandemics, adverse weather conditions not reasonably anticipated, forest fires, and other acts of God. These events may result in a temporary delay of contractual deliverables, or the permanent inability to provide the contractual deliverables that are the subject of this Contract.

There will be no claims arising from a temporary delay of contractual deliverables, or the permanent inability to provide the contractual deliverables caused by the events described above, and the City will pay no additional costs incurred as a result of such events.

The parties agree to act in good faith to extend the Contract completion date without any penalty to the Contractor and that the extension will be in an amount of time equal to any temporary delay. This term supersedes all other terms regarding temporary delay, permanent shut down, or increased costs.

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67. NO BOYCOTT OF ISRAEL: Pursuant to A.R.S. §§ 35-393 and 35-393.01, if a Party has over 10 employees and the Contract is worth at least $100,000, the Party certifies that it is not currently engaged in, and agrees, for the duration of the Contract, will not engage in a boycott of Israel.

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EXHIBIT C

INSURANCE REQUIREMENTS

1. In General. Contractor shall maintain insurance against claims for injury to persons or damage to property, arising from performance of or in connection with this Contract by the Contractor, its agents, representatives, employees or contractors.

2. Requirement to Procure and Maintain. Each insurance policy required by this Contract shall be in effect at, or before, commencement of work under this Contract and shall remain in effect until all Contractor's obligations under this Contract have been met, including any warranty periods. The Contractor's failure to maintain the insurance policies as required by this Contract or to provide timely evidence of renewal will be considered a material breach of this Contract.

3. Minimum Scope and Limits of Insurance. The following insurance requirements are minimum requirements for this Contract and in no way limit the indemnity covenants contained in this Contract. The City does not represent or warrant that the minimum limits set forth in this Contract are sufficient to protect the Contractor from liabilities that might arise out of this Contract, and Contractor is free to purchase such additional insurance as Contractor may determine is necessary.

   Contractor shall provide coverage at least as broad and with limits not less than those stated below.

   a. Commercial General Liability - Occurrence Form

General Aggregate	$2,000,000
Products/Completed Operations	$1,000,000
Each Occurrence	$1,000,000

   b. Umbrella Coverage $2,000,000

   c. Automobile Liability – Any Automobile or Owned, Hired and Non-owned Vehicles Combined Single Limit Per Accident for Bodily Injury & Property Damage $1,000,000

   d. Workers' Compensation and Employer's Liability

Workers' Compensation	Statutory
Employer's Liability: Each Accident	$500,000
Disease - Each Employee	$500,000
Disease - Policy Limit	$500,000

   e. Professional Liability $2,000,000

4. Self-Insured Retention. Any self-insured retentions must be declared to and approved by the City. If not approved, the City may require that the insurer reduce or eliminate such self-insured retentions with respect to the City, its officers, agents, employees, and volunteers. Contractor shall be solely responsible for any self-insured retention amounts. City at its option may require Contractor to secure payment of such self-insured retention by a surety bond or irrevocable and unconditional letter of credit.

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5. Other Insurance Requirements. The policies shall contain, or be endorsed to contain, the following provisions:

   a. Additional Insured. In Commercial General Liability and Automobile Liability Coverages, the City of Flagstaff, its officers, officials, agents and employees shall be named and endorsed as additional insureds with respect to liability arising out of this Contract and activities performed by or on behalf of the Contractor, including products and completed operations of the Contractor, and automobiles owned, leased, hired or borrowed by the Contractor.

   b. Broad Form. The Contractor's insurance shall contain broad form contractual liability coverage.

   c. Primary Insurance. The Contractor's insurance coverage shall be primary insurance with respect to the City, its officers, officials, agents, employees and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, agents and employees, shall be in excess of the coverage of the Contractor's insurance and shall not contribute to it.

   d. Each Insured. The Contractor's insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.

   e. Not Limited. Coverage provided by the Contractor shall not be limited to the liability assumed under the indemnification provisions of this Contract.

   f. Waiver of Subrogation. The policies shall contain a waiver of subrogation against the City, its officers, officials, agents and employees for losses arising from work performed by Contractor for the City.

6. Notice of Cancellation. Each insurance policy required by the insurance provisions of this Contract shall provide the required coverage and shall not be suspended, voided, cancelled, reduced in coverage or in limits unless prior written notice has been given to the City. Notices required by this section shall be sent directly to the Buyer listed in the original Solicitation and shall reference the Contract Number:

   Attention: Emily Markel, Senior Procurement Specialist
   Contract No. 2021-63
   Purchasing Department
   City of Flagstaff
   211 W. Aspen Avenue
   Flagstaff, Arizona 86001

7. Acceptability of Insurers. Contractor shall place insurance hereunder with insurers duly licensed or approved unlicensed companies in the State of Arizona and with a "Best's" rating of not less than A-: VII. The City does not represent or warrant that the above required minimum insurer rating is sufficient to protect the Contractor from potential insurer insolvency.

8. Certificates of Insurance. The Contractor shall furnish the City with certificates of insurance (ACORD form) as required by this Contract. The certificates for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. Any policy endorsements that restrict or limit coverage shall be clearly noted on the certificate of insurance. The City project/contract number and project description shall be noted on the certificates of insurance. The City must receive and approve all certificates of insurance and endorsements before the Contractor commences work.

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9. Modifications. Any modification or variation from the insurance requirements in this Contract must have the prior approval of the City's Attorney's Office in consultation with the City's Risk Manager, whose decision shall be final. Such action will not require a formal Contract amendment but may be made by their handwritten revision and notation to the foregoing insurance requirements.

DocuSign

Certificate Of Completion

Envelope Id: 9F430DCF162D46CAAFB3F6C15E115A8E
Status: Completed
Subject: Please DocuSign: IGA City of Flagstaff 212049 - Noresco (2021-63).pdf
Source Envelope:
Document Pages: 27
Signatures: 1
Certificate Pages: 5
Initials: 0
AutoNav: Enabled
EnvelopeId Stamping: Enabled
Time Zone: (UTC-05:00) Eastern Time (US & Canada)

Envelope Originator:
Nicole Letkowski
Raheja MindSpace, Towe 12C
Hyderabad, Telangana 500081
nletkowski@noresco.com
IP Address: 136.226.49.20

Record Tracking

Status: Original
11/5/2021 11:21:47 AM
Holder: Nicole Letkowski
nletkowski@noresco.com
Location: DocuSign

Signer Events	Signature	Timestamp
Pablo Hernandez phernandez@noresco.com CFO Security Level: Email, Account Authentication (None)	 Signature Adoption: Pre-selected Style Using IP Address: 136.226.73.19	Sent: 11/5/2021 11:25:22 AM Viewed: 11/8/2021 8:08:20 AM Signed: 11/8/2021 8:08:25 AM

Electronic Record and Signature Disclosure:
Accepted: 5/18/2021 12:16:21 PM
ID: 3ce9d9c5-18f4-4edc-931c-37b5166507e4

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp
Kathleen Krasenics Kathleen.Krasenics@noresco.com Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	COPIED	Sent: 11/5/2021 11:25:22 AM
Will Travers wtravers@noresco.com Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	COPIED	Sent: 11/5/2021 11:25:22 AM

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	11/5/2021 11:25:22 AM
Certified Delivered	Security Checked	11/8/2021 8:08:20 AM
Signing Complete	Security Checked	11/8/2021 8:08:25 AM
Completed	Security Checked	11/8/2021 8:08:25 AM

Payment Events	Status	Timestamps

Electronic Record and Signature Disclosure

ELECTRONIC RECORD AND SIGNATURE DISCLOSURE

From time to time, HVAC Singapore, Malaysia & Brunei (we, us or Company) may be required by law to provide to you certain written notices or disclosures. Described below are the terms and conditions for providing to you such notices and disclosures electronically through the DocuSign system. Please read the information below carefully and thoroughly, and if you can access this information electronically to your satisfaction and agree to this Electronic Record and Signature Disclosure (ERSD), please confirm your agreement by selecting the check-box next to 'I agree to use electronic records and signatures' before clicking 'CONTINUE' within the DocuSign system.

Getting paper copies

At any time, you may request from us a paper copy of any record provided or made available electronically to you by us. You will have the ability to download and print documents we send to you through the DocuSign system during and immediately after the signing session and, if you elect to create a DocuSign account, you may access the documents for a limited period of time (usually 30 days) after such documents are first sent to you. After such time, if you wish for us to send you paper copies of any such documents from our office to you, you will be charged a $0.00 per-page fee. You may request delivery of such paper copies from us by following the procedure described below.

Withdrawing your consent

If you decide to receive notices and disclosures from us electronically, you may at any time change your mind and tell us that thereafter you want to receive required notices and disclosures only in paper format. How you must inform us of your decision to receive future notices and disclosure in paper format and withdraw your consent to receive notices and disclosures electronically is described below.

Consequences of changing your mind

If you elect to receive required notices and disclosures only in paper format, it will slow the speed at which we can complete certain steps in transactions with you and delivering services to you because we will need first to send the required notices or disclosures to you in paper format, and then wait until we receive back from you your acknowledgment of your receipt of such paper notices or disclosures. Further, you will no longer be able to use the DocuSign system to receive required notices and consents electronically from us or to sign electronically documents from us.

All notices and disclosures will be sent to you electronically

Unless you tell us otherwise in accordance with the procedures described herein, we will provide electronically to you through the DocuSign system all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you. To reduce the chance of you inadvertently not receiving any notice or disclosure, we prefer to provide all of the required notices and disclosures to you by the same method and to the same address that you have given us. Thus, you can receive all the disclosures and notices electronically or in paper format through the paper mail delivery system. If you do not agree with this process, please let us know as described below. Please also see the paragraph immediately above that describes the consequences of your electing not to receive delivery of the notices and disclosures electronically from us.

How to contact HVAC Singapore, Malaysia & Brunei:

You may contact us to let us know of your changes as to how we may contact you electronically, to request paper copies of certain information from us, and to withdraw your prior consent to receive notices and disclosures electronically as follows:
To contact us by email send messages to: ravikumar.medisetty@carrier.com

To advise HVAC Singapore, Malaysia & Brunei of your new email address

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City of Flagstaff, AZ

City of Flagstaff

Investment Grade Audit Report

ESCO Energy Service Contract No. 2021-063

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July 2022

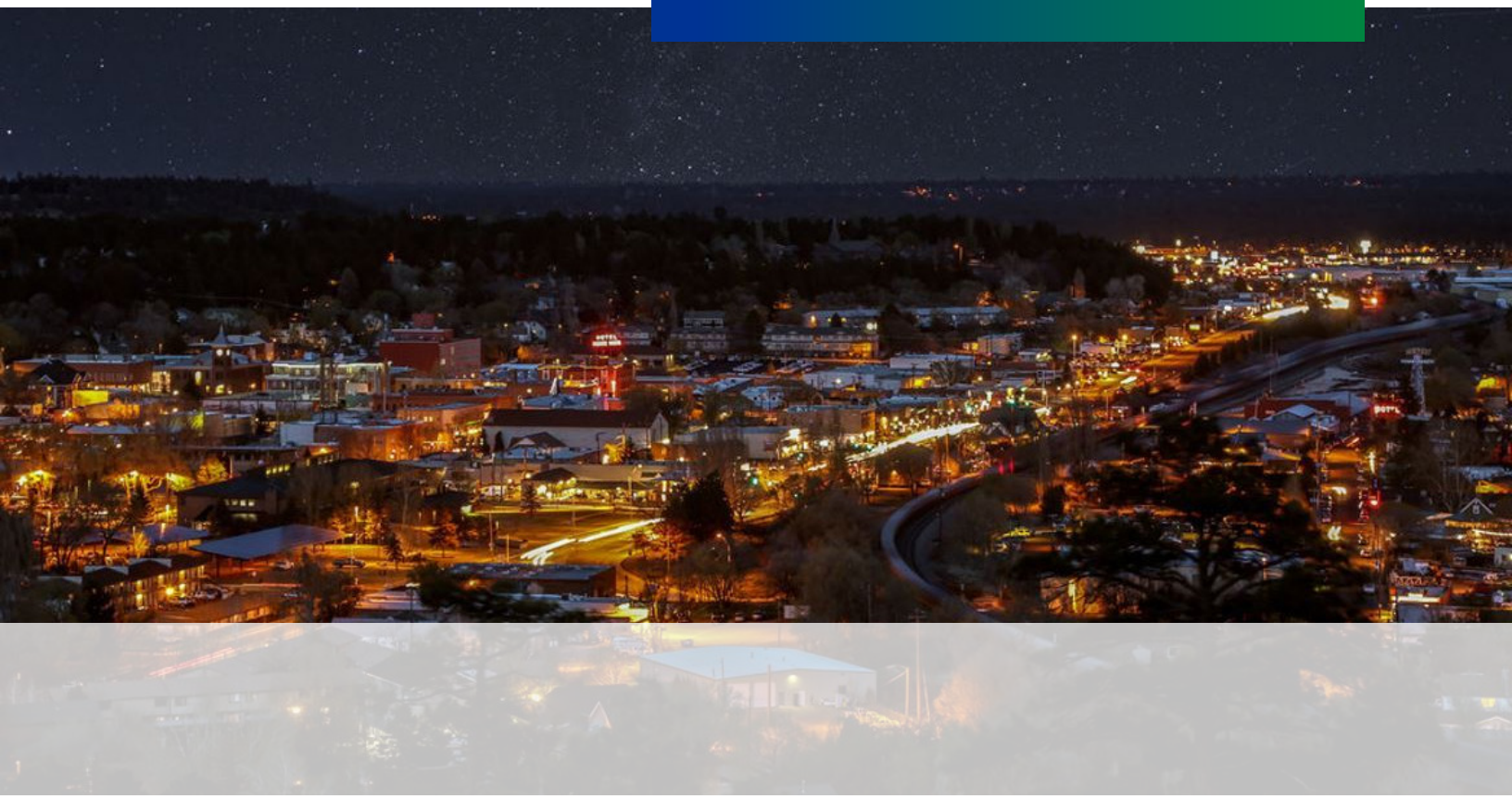


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1. Executive Summary



Overview

Since November of 2021 the City of Flagstaff (City) and NORESCO have collaborated to develop a program that addresses the City's climate initiatives and commitment to carbon neutrality. This Investment Grade Audit (IGA) Report provides an actionable plan to meet this challenge, starting with a Phase 1 project that addresses energy efficiency and greenhouse gas emissions (GHG) in City buildings. NORESCO is pleased to submit the recommended Energy Services project under the Solicitation No. 2021-63. We'd like to thank the City of Flagstaff staff for their assistance and recommendations.

NORESCO is providing a full range of energy and operational conservation measures (ECMs) to be implemented at City facilities through a multi-phase program for building electrification that will accelerate City's transition from fossil fuels. Services will align with the City's 2021 Carbon Neutrality Plan (CNP), the 2020 Climate Emergency Declaration, and the City's commitment to carbon neutrality by 2030. Historically, the limiting factor with municipalities in the Southwest has been the lack of funding available for extensive sustainability commitments. This program will allow the City to demonstrate the capability of energy cost savings to fund infrastructure improvements that reduce GHG emissions, electrify infrastructure, provide needed capital improvement projects (CIP), and reduce deferred maintenance.

Project Highlights

A comprehensive multi-phase program with recommendations to **reduce Flagstaff's municipal carbon emissions by 28%**

Over **$5 million in Phase 1 facility improvements** to accelerate implementation of the City's Climate Neutrality Plan

$6 million of guaranteed savings to support comprehensive facility improvements

Upgrades to lighting, HVAC, energy management systems, building envelope and irrigation systems

Electrification of existing natural-gas consumption equipment

New charging stations to support 18 electric vehicles

Local Arizona team providing engineering, project management and ongoing support

1. Executive Summary

The Program has been organized into project components that cumulatively reduce GHG emissions of City infrastructure by 28% and, when combined with the City's planned Utility Scale Solar project, will result in carbon neutrality.



Table 1-1: Summary of Program Emissions Reductions

Description	Annual GHG Reduction (Metric Tons)	% Reduction
Phase 1: Building Efficiency & Electrification	864	3%
Phase 2: Water Meters/AMI	509	2%
Phase 3: Wastewater Upgrades	1,861	6%
Future Climate Action Plan Initiatives		
Fleet Conversion	3,411	11%
Building HVAC Electrification	2,034	6%
Utility Scale Solar PV	22,823	72%
Total	**31,500**	**100%**

Each of these program components is described in this report and summarized as follows:

Phase 1: Building Efficiency & Electrification is comprised of $5.1 million of upgrades to building systems including lighting, energy management systems, building envelope and irrigation controls. In addition, electrification of heating/cooling systems at five (5) locations will start the process of minimizing natural gas consumption. Electric vehicle charging stations will complement the City's fleet conversion efforts. This project, described in detail in ***Section 3 – ECM Descriptions*** and ***Section 4 – Phase 1 Construction***, is fully developed and ready to start construction.

☐ **Next step:** Approve Energy Performance Contract and start construction in late 2022.

Phase 2: Water Meter with Advanced Metering Infrastructure (AMI) will complement existing City initiatives to install "smart" meters on existing water accounts and include AMI to streamline the meter reading and billing process. The preliminary analysis is summarized in ***Section 5.2 – Water Meters/AMI*** and estimates $15 million in additional revenue, enough to fund the turnkey project plus additional building HVAC electrification installations. This project requires testing of the existing meters to validate recovered revenue estimates and detailed development to validate the scope and cost.

☐ **Next step:** Approve existing meter testing, included as a line item in Phase 1.

Phase 3: Wastewater Upgrades have been evaluated at Wildcat Hill and Rio de Flag Water Reclamation Plant and are described in ***Section 5.3 – Wastewater Preliminary Analysis***. This evaluation, completed in collaboration with the City's Water Services team, recommends $9.3 million of improvements to the biosolids and liquid treatment equipment.

☐ **Next step:** Approve IGA for detailed development of Wastewater Upgrades.

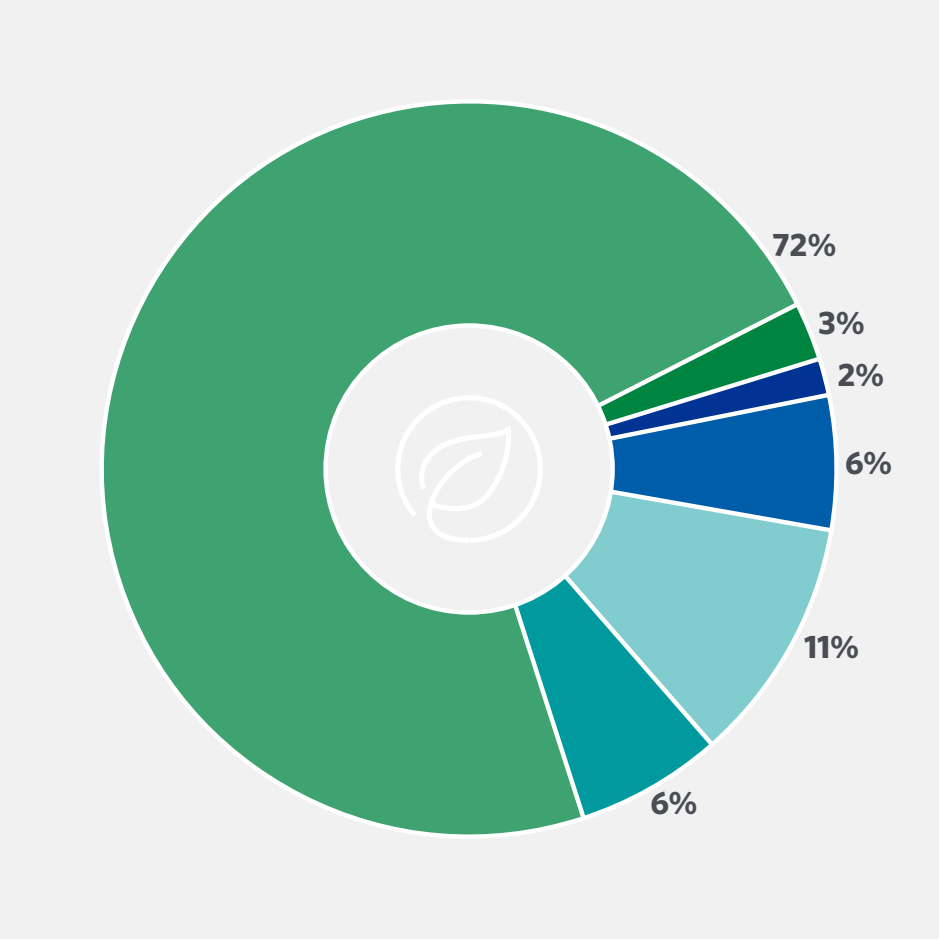
1. Executive Summary

Future CNP Initiatives: NORESCO has evaluated additional technologies and methods to assist the City in meeting sustainability goals. This analysis provides data, calculations and equipment recommendations for moving these initiatives to the next step of design, procurement and installation.

- ***Section 5.1 - Fleet Conversion*** describes the City's existing fleet and provides analysis of the makes/models, existing and proposed costs, and the benefits of electrification.
- ***Section 5.3 - Building Electrification*** provides a detailed inventory of natural-gas consuming equipment, locations, ratings and recommended replacements for equipment electrification.
- The Utility Scale Solar Photovoltaics (PV) is a City initiative to develop solar generation to provide electricity for City infrastructure following, or concurrent with, electrification efforts. This IGA report assumes that future City requirements will be met with this renewable, carbon neutral source.



Figure 1-1: Flagstaff Municipal Emissions Savings Sources



1. Executive Summary

Phase 1 Description

The recommended ECMs include the following highlighted upgrades to reduce utility consumption, costs and associated GHG emissions. Concurrently, the City will realize capital improvement cost avoidance and resolution of maintenance issues as it standardizes equipment and, most importantly, initiates the process of building and infrastructure electrification. A complete list of upgrades is found in ***Table 1-2***.



LED Lighting and Controls Upgrades: Includes over 5,900 interior retrofits of lighting to LED and 319 lighting control sensors. Tube-type LEDs will be standardized to Type A with new electronic ballasts. Exterior lighting will be standardized to "amber" LED at 236 locations and will comply with the City's Dark Sky ordinance.

Mechanical Upgrades: Heating, ventilating and air conditioning (HVAC) systems will be electrified with new boilers at the Library and heat pumps at Montoya Community and Senior Center, Lake Mary Water Treatment Plant, Public Works/Sustainability and Pulliam Airport. Concurrently, the Energy Management System software will be upgraded and sequences optimized at six locations.

Electric Rate Switch for Pumping Accounts: Following an extensive review of water supply electric accounts, it is recommended to switch the electric rate for Lake Mary Well #8 from its current Medium General Service Rate (E-32 M) to a Pumping Rate (E-221).

Building Envelope Improvements: This ECM will install weatherstripping, seal windows, and apply spray-foam insulation at 15 facilities totaling approximately 450,000 square feet. Also included at the Jay Lively Ice Rink is the installation of two air curtains at the entrance to the ice arena and an automated roll up door operator where the ice resurfacing machine exits the building to dump ice.

Electric Vehicle Charging Stations: NORESCO will install nine level two, dual-port electric vehicle (EV) charging stations at the Public Works office, Sustainability Building and Main Library in order to charge newly purchased and future City EVs. Preliminary design drawings in ***Appendix 2*** identify the proposed locations of the EV chargers.

Water Conservation: The existing WeatherTRAK irrigation control system will be re-commissioned at 17 locations to maintain coverage while optimizing water use. This ECM includes installation of new heads, nozzles, flow sensors and master valves at select locations.

Water Meter Testing: This task will assist the development of Phase 2 – Water Meters/AMI implementing the water meter testing plan, described in ***Section 3.1***, for small meters (2" and under) and survey of large meters (>3"). It includes removal of 179 small meters for accuracy testing and incorporation into recovered revenue models, and replacement with new ultrasonic meters with Itron 500W encoders.

1. Executive Summary

Table 1-2: Recommended Project Scope

Description	ECM Price	Average Annual Savings	Annual GHG Reduction *(metric tons)*
LED Lighting and Controls	$1,874,618	$104,084	393
Mechanical Upgrades			
Energy Management System Upgrades	$145,320	$33,830	206
Heat Pump Heating and Cooling	$697,816		61
Electric Boilers	$1,026,575		65
Electric Rate Switch for Pumping Accounts		$12,655	
Building Envelope Improvements			
Weatherization and Air-Sealing	$165,700	$14,932	87
Ice Rink Automated Door Closer and Air Curtains	$36,109	$757	5
Electric Vehicle Charging Stations	$330,886	$41,957	46
Water Conservation			
Irrigation Repairs & Re-Commissioning Allowance	$590,714	$96,820	
Water Meter Testing	$139,177		
Construction Allowance	$132,460		
Totals	**$5,139,375**		**864**

Construction Phase

A description of the proposed project management plan is described in ***Section 4.1 – Construction Process***. It describes NORESCO's plan for implementing the Phase 1 ECMs identified in this report. Highlights of this section include:

- A detailed project schedule describing the Phase 1 project to be built over an estimated 20-month duration.
- A Product and Design Document Submittals process to ensure we have accounted for sufficient review times.
- General clarifications regarding NORESCO roles and responsibilities, daily work schedule and treatment of hazardous materials.

Project Pricing is based on the Master Energy Service Agreement previously submitted to the City for review. NORESCO acknowledges final terms and conditions are still to be negotiated and may/may not impact scope and associated pricing. Please note that ECM Prices are based on cost of materials and labor in effect as of the date of this report submittal, and a Construction Allowance of $125,000 (plus tax) has been included to account for cost increases during the time between submittal of this report and final contract execution by the City. ***Section 4.1 – Construction Process*** also describes the proposed process for managing allowances associated with asbestos abatement related to the ECM - Electric Boilers, and end device deficiency repairs related to the ECM - Energy Management System Upgrades.



Measurement and Verification Plan

A description of the proposed Measurement and Verification (M&V) plan is described in ***Section 4.2 – M&V Plan***. It describes the process for verifying guaranteed savings via on site measurements and rigorous adherence to industry standards. The M&V Plan, and supporting baseline and savings calculations, is compliant with the Federal Energy Management Program's measurement and verification (M&V) Guidelines.

1. Executive Summary

The financial cash flow for the Phase 1 clearly demonstrates the energy savings, maintenance and operational savings, and avoided costs resulting from the installed ECMs are sufficient to cover 75% to 100% all of project costs over the duration of the contract.

Cashflow Parameters

- Implementation Fixed Price: **$5,139,375**
- Capital Contribution for GHG Reduction ECMs: **($2,055,276)**[2]
- Asbestos Abatement Allowance:**$10,000**
- Financed Amount: **$3,084,098**
- Estimated Utility Incentive: **$42,013**[3]
- Savings Escalation[4]
- Finance Interest Rate: **4%**[5]

The financial analysis and cash flow is presented to demonstrate compliance with the City's Request for Proposals and state of Arizona enabling legislation. Final project financing may consist of multiple funding sources and types, and finance term as directed by the City. Following review of the Phase 1 project and approval by the City, NORESCO shall finalize contract language for review by the City and inclusion in the Energy Performance Contract.

Phase 1 Financial Summary

Under Arizona Revised Statute 35-105, the City can use guaranteed utility and operational savings to reinvest into infrastructure. The legislation allows for project terms of up to 25 years. **This project pays for itself by generating $6 million in savings during the 20-year finance term and an additional $2 million in years 20 to 25 as summarized in *Table 1-3*.**

Table 1-3: Phase 1 - Cash Flow

Year	Utility Savings	O&M Savings	Guaranteed Total Savings	Finance Payments	M&V Services[1]	Total Annual Cost	Net Cashflow
1	$212,591	$10,129	$222,720	$181,860	$17,882	$199,742	$22,979
2	$219,271	$10,332	$229,603	$193,422	$11,741	$205,163	$24,440
3	$226,173	$10,538	$236,711	$199,420	$12,093	$211,514	$25,198
4	$233,308	$10,749	$244,057	$205,620	$12,456	$218,076	$25,981
5	$240,682	$10,964	$251,646	$212,025	$12,830	$224,855	$26,790
6	$248,303	$11,183	$259,486	$218,645	$13,215	$231,859	$27,627
7	$256,183	$11,407	$267,590	$225,487	$13,611	$239,098	$28,491
8	$264,328	$11,635	$275,963	$232,559	$14,020	$246,578	$29,385
9	$272,748	$11,868	$284,616	$239,868	$14,440	$254,308	$30,308
10	$281,455	$12,105	$293,560	$247,424	$14,873	$262,297	$31,263
11	$290,457	$12,347	$302,804	$255,235	$15,320	$270,554	$32,250
12	$299,764	$12,594	$312,358	$263,309	$15,779	$279,088	$33,270
13	$309,389	$12,846	$322,235	$271,658	$16,252	$287,910	$34,325
14	$319,342	$13,103	$332,445	$280,290	$16,740	$297,030	$35,416
15	$329,635	$13,365	$343,000	$289,215	$17,242	$306,457	$36,544
16	$340,280	$13,632	$353,912	$298,443	$17,759	$316,203	$37,710
17	$351,291	$13,905	$365,196	$307,988	$18,292	$326,280	$38,916
18	$362,679	$14,183	$376,862	$317,858	$18,841	$336,699	$40,163
19	$374,458	$14,467	$388,925	$328,066	$19,406	$347,473	$41,453
20	$386,644	$14,756	$401,400	$338,625	$19,988	$358,613	$42,787
21	$399,249	$15,051	$414,300				$414,300
22	$412,290	$15,352	$427,642				$427,642
23	$425,781	$15,659	$441,440				$441,440
24	$439,741	$15,972	$455,713				$455,713
25	$454,184	$16,292	$470,476				$470,476
	$7,950,227	**$324,434**	**$8,274,661**	**$5,107,017**	**$312,782**	**$5,419,797**	**$2,854,864**

1. Measurement and Verification (M&V) services are listed for 20 years to demonstrate compliance with Arizona enabling legislation. NORESCO is flexible on the length of services and the City will determine the term of M&V services.
2. Per the Request for Proposal, the City will consider measures that contribute to electrification of City buildings and have significant GHG emission reduction potential. The capital contribution equals the combined cost of the following ECM's: Heat Pump Heating and Cooling, Electric Boilers and Electric Vehicle Charging Stations.
3. Arizona Public Service incentives are estimated based on available current programs. Actual values will change based on the timing of installation and programs in effect at that time. NORESCO will complete all paperwork and submit documents required to maximize the incentive paid directly to the City. The estimated incentive is not guaranteed and therefore not included in the cash flow.
4. Savings are escalated annually as described in ***Section 2.2 – Baseline Energy and Water Use and Cost***.
5. This finance interest rate is an estimate and represents commonly available rates as the submittal date of this report. NORESCO has not, and will not, act as a Municipal Advisor on the project contemplated under this solicitation, as that term is defined in the Dodd-Frank Act and the regulations promulgated thereunder. In those instances where it is desired by the customer, NORESCO can assist in selecting a financing company or municipal advisor by transmitting a request for information (RFI), collecting the responses, and transmitting the responses back to the customer. NORESCO will not provide any advice with respect to the municipal financial products or the issuance of municipal securities including advice with respect to the structure, timing, terms, and other similar matters concerning such financial products or services.

1. Executive Summary

In Conclusion…



The details described in this IGA report provide an implementable plan for building electrification to transition the City from fossil fuels. The services provided align with the City's Climate Action and Adaptation Plan and supporting documents and initiatives. This report provides an engineering and economic basis for moving forward with an Energy Performance Contract to install the Phase 1 ECMs and continue development of the additional Phases and Initiatives described.

Ready for Success

The City is poised for immediate success with this project based on the following key points:

- **Phase 1 ECMs** will start the process of building electrification, lower energy and operational costs, reduce GHG emissions, address existing CIP needs, and streamline ongoing maintenance responsibilities.
- **Future Phases and CNP Initiatives,** described herein, have identified opportunities for deeper retrofits and GHG emissions reductions, and described next steps to move these efforts forward.
- **Savings realism** is embedded in the project via RFP compliant savings calculations and a detailed M&V plan described in ***Section 4.2***. NORESCO's guaranteed savings performance is the best in the industry with a guarantee miss rate of less than 0.08%. This is the result of a strong aftercare program resulting from commissioning, training, warranty, a robust M&V plan, and a 24-hour call center. This track record of delivering sustainable savings couple with strong financials provides the City the confidence they need to move forward with this Phase 1 project as well as future phases.
- **A detailed construction plan and schedule** has been assembled by our local project team. This project has been led by the NORESCO account executive and engineering project manager located within driving distance from Flagstaff.
- **Financial strength:** In addition to paying for itself over the finance term, the selected project returns **$2.8 million** in net cashflow to the City, or **35% of total guaranteed savings**. This is over and above the total annual project costs. These savings are the sole property of the City.

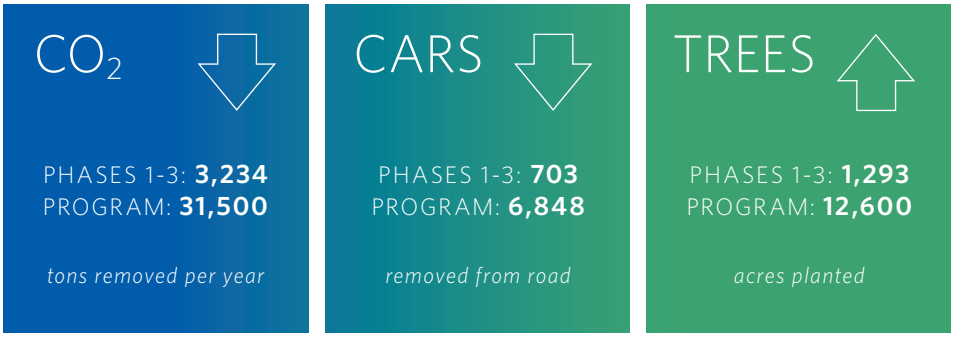
1. Executive Summary



Figure 1-2: The total combined reduction in greenhouse gases resulting from the comprehensive Program Phase 1-3 plus future CNP initiatives described in this report is the equivalent of planting 12,600 acres of trees.

The recommended Phase 1 project provides Flagstaff the best opportunity to demonstrate the value of energy and operational savings to fund projects that provide GHG emissions reductions and move the needle on building electrification. It was developed in collaboration with the City's Sustainability staff, facilities management, public works, water services, finance, and procurement staff – and the NORESCO team is very grateful for their time and the resources provided. This project will meet the criteria required by state law and reiterated in the RFP, address the climate emergency and continue the stewardship of climate change responsibilities, provide visible upgrades at City facilities, and reduce the time burden on the maintenance personnel. Our local team looks forward to continuing work with the City as we install these upgrades and future energy conservation and sustainability projects in the years to come.

Figure 1-3: Reduction in Greenhouse Gas Emissions



2. FACILITY PROFILE

2.1 Description of Buildings

NORESCO evaluated 36 City facilities, 50 parks, and 26 water utility assets (wells, springs, pumping stations) for energy and water savings opportunities and inclusion in this project. The following tables show which facilities have been evaluated in this project, and which energy conservation measures (ECMs) have been included in Phase 1 at each facility.

Table 2-1. City Facilities (Buildings) Evaluated

Site	Address	Sqft	Original Construction Date	Lighting System	HVAC System(s)	HVAC Controls	ECM-1: LED Lighting	ECM-2: Mechanical Upgrades	ECM-3 Electric Rate Switch	ECM-4 Building Envelope Improvements	ECM-5 Electric Vehicle Charging Stations	ECM-6: Water Conservation
Aquaplex Center	1702 N. 4th St.	52,500	2008	LED and fluorescent interior, HID and LED exterior	DX/HHW Rooftop Units, VAV boxes w/ reheat	EMS - Delta	▪			▪		
Cemetery	1300 S. San Francisco	4,212	1990	Fluorescent and incandescent interior, LED exterior	Furnaces, Unit Heaters	Prog & manual t-stats	▪					
Cinder Lake Landfill	6770 Landfill Road	13,017	1985	Fluorescent interior, HID exterior	Split AC / Furnaces (Propane), Radiant Floor Heat (Propane Boiler), Unit Heaters (Propane)	Prog & manual t-stats	▪			▪		
City Hall	211 W. Aspen	49,400	1983	LED and fluorescent interior, HID exterior	VAV AHUs (CHW/HHW), HW Radiant Ceiling Panels	EMS - Delta	▪	▪		▪		
City Hall Courthouse	101 W. Cherry	39,500	2020	LED interior, LED exterior	Daikin VRF System. ERV OA unit with Gas Heat	EMS - Riptide/Daikin						
City Warehouse	5477 E. Commerce	5,600	1986	LED and fluorescent interior, LED exterior	Gas IR Heaters	Prog & manual t-stats	▪					
Coconino Warehouse	511 W. Coconino	4,400	1965	LED and fluorescent interior, fluorescent exterior	Unit Heaters	Manual t-stats	▪					
Fire Station #1	1972 S. Thompson Rd	8,620	2007	Fluorescent interior, HID exterior	Split AC / Furnaces, Unit Heaters	EMS - Delta	▪					
Fire Station #10 (Old Airport Ops Building)	6629 S. Cessna Circle	2,000	1954/1974	Fluorescent interior, compact fluorescent exterior	Package Unit, Furnace, Unit Heaters	Prog & manual t-stats	▪					
Fire Station #2	1701 E. Ponderosa Pkwy	14,631	2011	Fluorescent and LED interior, HID exterior	Split AC / Furnaces, Unit Heaters	EMS - Delta	▪					
Fire Station #3	4500 E. Nestle-Purina	8,620	2009	Fluorescent interior, fluorescent and LED exterior	Split AC / Furnaces, Unit Heaters	EMS - Delta	▪					
Fire Station #4	4040 E. Butler	5,600	1987	Fluorescent interior, HID exterior	Split AC / Furnaces, Unit Heaters	Prog & manual t-stats	▪					
Fire Station #5	2525 N. Fort Valley Road	8,620	2008	Fluorescent interior and exterior	Split AC / Furnaces, Unit Heaters	EMS - Delta	▪					
Fire Station #6	3877 S. Lake Mary Rd.	9,000	1999	Fluorescent interior, LED, HID and fluorescent exterior	Split AC / Furnaces, Unit Heaters	Prog & manual t-stats	▪					
Hal Jensen Recreation Center	2403 N. Izabel	16,808	1970	Fluorescent interior, LED exterior	Furnaces, Unit Heaters, Split AC / Furnace for Rec Room	Programmable t-stats	▪			▪		

Site	Address	Sqft	Original Construction Date	Lighting System	HVAC System(s)	HVAC Controls	ECM-1: LED Lighting	ECM-2: Mechanical Upgrades	ECM-3 Electric Rate Switch	ECM-4 Building Envelope Improvements	ECM-5 Electric Vehicle Charging Stations	ECM-6: Water Conservation
J. Lively Ice Rink / McPherson	1850 N. Turquoise	37,091	1975	Fluorescent and LED interior and exterior	CHW/HHW AHUs, HW Baseboards in Locker Rooms, Electric Baseboards in Lobby	EMS - Delta	▪			▪		
Joe C. Montoya Community and Senior Center	245 N. Thorpe	9,246	1978	Fluorescent and LED interior, LED, HID and fluorescent exterior	Package Units	Programmable t-stats	▪	▪		▪		
Lake Mary Water Treatment Plant	4500 S. Lake Mary Rd	28,918	1964	Fluorescent and HID interior, HID and fluorescent exterior	Split Heat Pumps, Package Units, Split AC / Furnaces, Unit Heaters	Programmable t-stats	▪	▪		▪		
Library Main	300 W. Aspen	35,000	1987	Fluorescent, LED and HID interior, HID and LED exterior	VAV AHU (DX/HHW), Fan-powered terminal units with HHW reheat	EMS - Delta	▪	▪		▪		
Milligan House	323 W. Aspen	3,514	1904	Fluorescent and LED interior and fluorescent and incandescent exterior	Split AC / Furnaces	Programmable t-stats	▪			▪		
Murdoch Center	220 E Brannen	2,000	1965	Fluorescent interior and HID exterior	Furnaces	Programmable t-stats	▪					
NACET Accelerator	2201 N. Gemini Drive	28,053	2015	LED interior and exterior	CHW/HHW Fan Coils, ERV OA Unit	EMS - Delta		▪				
NACET Incubator	2225 N. Gemini Drive	10,285	2008	Fluorescent interior and exterior	VAV AHUs (DX/HHW), VAV boxes with HHW Reheat	EMS - Reliable	▪					
Public Works	3200 W. Route 66	76,245	2018	LED interior and exterior	VAV AHU (CHW/HHW) for Admin, Unit Heaters, IR Heaters, Gas MAUs, Split Heat Pumps	EMS - Delta		▪			▪	
Public Works / Sustainability	419 N. Mogollon	25,338	1945/1984/2005	LED and fluorescent interior, LED and HID exterior	Package Unit, Unit Heaters, IR Heaters	Prog & manual t-stats	▪	▪		▪		
Pulliam Airport	6200 S Pulliam Drive	137,605	1995	LED and fluorescent interior, LED and HID exterior	Split AC / Furnaces, Package Units, Split Heat Pumps for DPS Bldg.	EMS - Delta (Terminal)	▪	▪		▪		
Rio De Flag Wastewater Plant	600 Babbitt Way	29,098	1993	LED and fluorescent interior, HID exterior	VRF System, HW and Electric Unit Heaters, Gas MAUs	EMS - (Trane?) for VRF	▪					
Theatrikos Building	11 W Cherry	8,500	1940	LED and fluorescent interior, LED exterior	Split AC / Furnaces	Programmable t-stats	▪			▪		
Thorpe Shop	600 N. Thorpe Road	4,000	1975	LED, fluorescent and incandescent interior, LED exterior	Unit Heaters, Split AC / Furnace for Portable	Manual t-stats	▪					
USGS #5	2255 N Gemini	9,163	1976	Fluorescent and LED interior, LED exterior, HID site lighting	Unit Heaters (Propane)	Manual t-stats	▪			▪		

Site	Address	Sqft	Original Construction Date	Lighting System	HVAC System(s)	HVAC Controls	ECM-1: LED Lighting	ECM-2: Mechanical Upgrades	ECM-3 Electric Rate Switch	ECM-4 Building Envelope Improvements	ECM-5 Electric Vehicle Charging Stations	ECM-6: Water Conservation
USGS #6	2255 N Gemini	27,525	2002	Fluorescent and LED interior and exterior, HID site lighting	VAV AHUs (DX/HHW), VAV boxes with HHW Reheat, HHW Fin-tube Radiators	EMS - Delta	▪	▪		▪		
Utilities Shop	5401 E. Commerce	17,388	1999	Fluorescent and LED interior, HID and LED exterior	Split AC / Furnaces, Package Units, Unit Heaters	Prog & manual t-stats	▪					
Visitor's Center	1 W. Rte. 66	5,000	1937	Fluorescent and LED interior, HID and LED exterior	Split AC / Furnaces, Unit Heaters	Prog & manual t-stats	▪			▪		
Water Services / Housing East Side Annex	2323 N. Walgreens	8,623	1992	LED interior, fluorescent and HID exterior	Split AC / Furnaces	Programmable t-stats	▪					
Wildcat Hill Wastewater Plant	2800 N. Elpaso Flag rd	89,686	1982	Fluorescent, LED and HID interior, HID and fluorescent exterior	MZ AHU (DX/HHW), HHW AHUs and Unit Heaters, Furnaces	EMS - JCI Metasys (New MZ AHU)	▪					
Woody Mountain Clarifier	Woody Mountain Well Field	3,215	1959	Fluorescent industrial fixtures	Electric Unit Heaters	Manual t-stats	▪					
PARKS				HID site lighting, LED and CFL building exterior, LED and fluorescent restrooms			▪				▪	
WATER SYSTEMS								▪				

For a description of potential projects at the City's wastewater treatment plants please refer to the Water Reclamation Plant - Preliminary Analysis.

Table 2-2. City Parks Evaluated

Park	Address	Acres	ECM-1: LED Lighting	ECM-6: Water Conservation
Arroyo Park	850 E Ridgecrest Dr.	8.0	■	■
Bow and Arrow Park	3701 N Cochise Dr.	3.0		■
Buffalo Park	2400 N Gemini Road	215.0	■	
Bushmaster Park	3150 N Alta Vista	20.0	■	■
Cheshire Park	3000 N Fremont Boulevard	13.8	■	■
Coconino Park	2196 N Lantern Lane	0.3		
Colton Park	250 W Route 66			
Continental Park	5650 E Old Walnut Cyn.	105.9	■	■
Foxglenn Park	4200 E Butler Avenue	28.3	■	■
Guadalupe Park	805 W Clay Avenue	0.8	■	■
Jim Cullen Memorial Park	519 W Piute Road	1.3	■	
Joel Montalvo Park	2211 E First Avenue	2.1	■	■
McMillan Mesa Park	1140 Ponderosa Parkway	2.5		
McPherson Park	1650 N Turquoise Dr.	40.3		
Mobile Haven Park	4280 N Hamblin Street	1.8		
Old Town Springs Park	913 W Lower Coconino	0.3	■	
Plaza Vieja Park	526 W Clay Avenue	0.3	■	
Ponderosa Park	2512 N First Street	2.5	■	
Ponderosa Trails Park	3875 S Wild West Trail	8.0		■
Smokerise Park	6065 Native Way	0.8		■
The Basin / BMX Track	1700 E Sixth Street	2.2		
Thorpe Park	191 N Thorpe Road	219.0	■	■
University Highlands Park	3888 S Jewell	0.9		
Wheeler Park	212 W Aspen Avenue	2.5	■	■

Table 2-3. City Water Systems Evaluated in this Project

Water System Asset	Maximum Water Production (GPM)	ECM-3 Electric Rate Switch
Lake Mary Well #1	125	
Lake Mary Well #2	360	
Lake Mary Well #4	415	
Lake Mary Well #5	290	
Lake Mary Well #8	655	■
Lake Mary Well #9	240	
Woody Mountain Wells 1	125	
Woody Mountain Wells 2	245	
Woody Mountain Wells 3	570	
Woody Mountain Wells 4	320	
Woody Mountain Wells 5	280	
Woody Mountain Wells 6	405	
Woody Mountain Wells 7	550	
Woody Mountain Wells 9	400	
Woody Mountain Wells 10	280	
Woody Mountain Wells 11	355	
Continental 2 Well	310	
Foxglenn Well	300	
Sinagua Well	275	
Shop Well	920	
Ft. Tuthill Well	1135	
Interchange Well	190	
Rio Well	200	
McAllister Well	TBD[1]	
Inner Basin Wells and Springs	1041	

Note 1. Pump is newly installing and in commissioning

2.2 Baseline Energy/Water Use & Tariff Analysis

Baseline Energy Use

NORESCO evaluated Electric, Natural Gas, and Water utility data provided by the City of Flagstaff and Arizona Public Service (APS). NORESCO received three years of APS electric data (December 2018 – November 2021), four years of Natural Gas Data (May 2017 – May 2020) and over five years of Water Data (April 2016 – September 2021). The provided data included monthly bill summaries for each utility account, including usage and costs, as well as PDF copies of sample bills. *Table 2-4* summarizes the City's energy and water consumption, and the associated costs for 2018, 2019, and 2020, as well as for the most recent 12 months of provided data.

Table 2-4. Historical Electric, Natural Gas, and Water Use and Cost

Year	Electric Peak Demand - Annual Metered (kW)	Electric Energy Usage (kWh)	Total Electric Cost ($)	Natural Gas Use (therms)	Total Gas Cost ($)	Potable Water Use (kgal)	Reclaimed Water Use (kgal)	Total Water Cost ($)	Total Sewer Cost- Estimated ($)
2018		*Not Provided		464,050	**$342,428**	26,583	33,228	**$312,116**	**$93,734**
2019	82,767	36,580,383	**$4,017,639**	521,855	**$345,561**	26,992	42,086	**$391,643**	**$97,378**
2020	77,620	35,410,121	**$3,707,633**	*Not Provided		31,358	56,036	**$502,536**	**$99,021**
Last 12 Months of Provided Data [1, 2, 3]	81,741	37,292,227	**$3,941,297**	505,282	**$349,531**	28,414	55,451	**$500,145**	**$103,972**

Note 1: Last 12 months of provided electric data: November 2020 - October 2021
Note 2: Last 12 months of natural gas data: June 2019 - May 2020
Note 3: Last 12 months of water data: September 2020 - August 2021

Electric demand and energy decreased by 6 percent and 3 percent, respectively from 2019 to 2020. Natural gas use also decreased by 3 percent from 2019 to the most recent 12 months for which we have data (June 2019 – May 2020). These decreases are likely due to measures taken to help stop the spread of COVID-19, such as the temporary closing of City facilities and an increase in remote working. We anticipate that as facilities re-open and City personnel return to their offices, we will see electric demand and energy use return to levels similar to 2019. For this reason, we have selected the calendar year of 2019 as the baseline year, since it is likely the most representative of the utility consumption we can expect over the term of the project. Water use (both potable and reclaimed) increased significantly from 2019 to 2020. Our initial research and discussions with City personnel suggest that this increase may be due to some Hydropoint WeatherTRAK systems being placed into manual mode, as irrigation distribution components have failed. We will continue to research the accounts that contribute to these increases in water use through site surveys and review of

WeatherTRAK logs, to determine to what extent this represents an opportunity for water savings as a part of this project.

Electric Energy Use and Cost

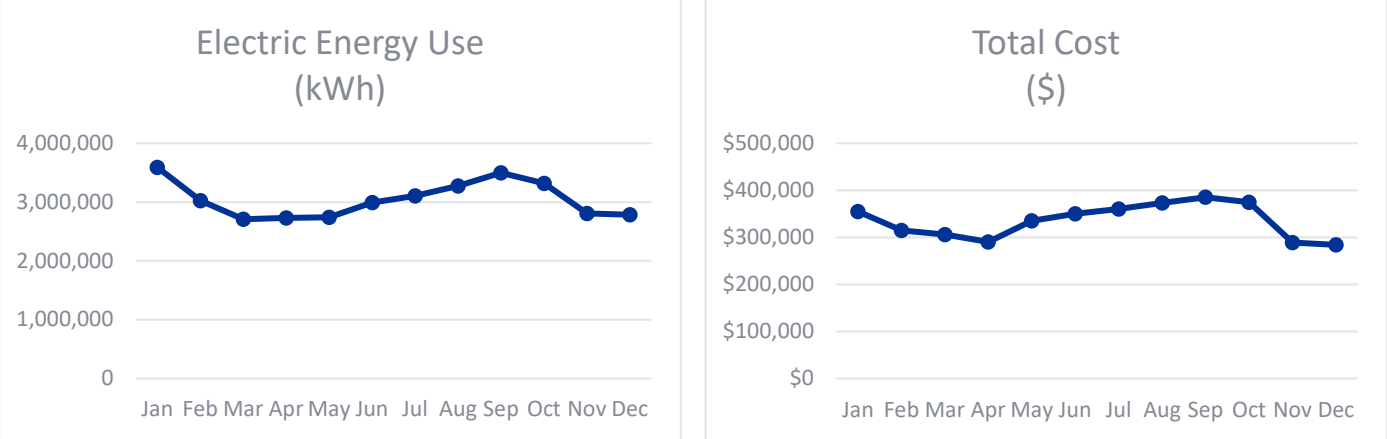
APS provides electrical service to the City of Flagstaff. City facilities are served by a total of 248 individual APS meters, each billed under a separate service account number.

NORESCO analyzed the total monthly energy usage for the baseline year of 2019. As shown below, the electric usage is generally highest during the warmest months of the year, due to the need for significant space cooling. Electric cost is especially high during these months, as electricity is more expensive during summer billing periods (May – October). Surprisingly, the highest electric use in 2019 was in January. While electric heating and long burn hours for exterior lighting contributed to this high use, it appears that water system pumping stations, and water/wastewater treatment plants also experienced higher use in January 2019. January electric use was 542,557 kWh higher than the average month in 2019. Water and wastewater electric use accounts for 368,399 kWh of this difference. We are working with City Water Systems personnel to investigate this anomaly and determine if it represents an opportunity for energy cost savings.

Table 2-5. 2019 Electric Use and Cost by Month

Month	Sum of Meter Peak Demands (kW)	Electric Energy Use (kWh)	Total Cost ($)
Jan	6,495	3,590,923	$355,101
Feb	6,471	3,022,709	$314,617
Mar	7,091	2,708,649	$305,923
Apr	6,254	2,729,871	$290,117
May	6,824	2,741,540	$335,234
Jun	6,742	2,993,551	$350,223
Jul	7,126	3,107,012	$360,541
Aug	7,639	3,277,303	$373,162
Sep	7,299	3,496,628	$385,264
Oct	7,607	3,318,326	$374,473
Nov	6,694	2,807,680	$288,922
Dec	6,525	2,786,197	$284,062
Total	**82,767**	**36,580,383**	**$4,017,639**

Figure 2-1. 2019 Electric Use and Cost by Month



NORESCO analyzed data for 116 APS electric meters that account for over 98 percent of the total electric energy consumed in the baseline year of 2019, and over 96 percent of the total electric cost. *Table 2-6* shows the City facilities included in the scope of this project, to which we have allocated the provided electric data.

Table 2-6. Electric Rate Tariffs, Energy Use, Billed Demand, and Total Electric Cost by Site

Site	Address	Sqft	Primary Electric Rate	2019 Demand - Read (kW)	2019 Electric Use (kWh)	2019 Total Electric Cost ($)
Aquaplex Center	1702 N. 4th St.	52,500	E-32 M [1]	2,311	779,520	$90,410
Cemetery	1300 S. San Francisco	4,212	E-32 XS	36	2,140	$784
Cinder Lake Landfill	6770 Landfill Road	13,017	E-32 XS	439	119,840	$19,207
City Hall	211 W. Aspen	49,400	E-32 M [1]	1,552	453,280	$58,915
City Hall Courthouse	101 W. Cherry	39,500	E-32 S	199	52,160	$9,385
City Warehouse	5477 E. Commerce	5,600	E-32 XS	57	17,763	$3,072
Coconino Warehouse	511 W. Coconino	4,400	E-32 XS	36	3,156	$932
Fire Station #1	1972 S. Thompson Rd	8,620	E-32 S	265	79,520	$11,825
Fire Station #10 (Old Airport Ops Building)	6629 S. Cessna Circle	2,000	E-32 XS	164	62,560	$9,777
Fire Station #2	1701 E. Ponderosa Pkwy	14,631	E-32 S	254	81,720	$12,147
Fire Station #3	4500 E. Nestle-Purina	8,620	E-32 S	289	87,760	$13,468
Fire Station #4	4040 E. Butler	5,600	E-32 XS	112	37,600	$6,375
Fire Station #5	2525 N. Fort Valley Road	8,620	E-32 XS	170	53,040	$8,009
Fire Station #6	3877 S. Lake Mary Rd.	9,000	E-32 XS	208	70,960	$10,567
Hal Jensen Recreation Center	2403 N. Izabel	16,808	E-32 XS	225	62,488	$9,456
J. Lively Ice Rink / McPherson	1850 N. Turquoise	37,091	E-32 M [1]	2,281	1,077,043	$118,263
Joe C. Montoya Community and Senior Center	245 N. Thorpe	9,246	E-32 S	391	111,796	$19,950
Lake Mary Water Treatment Plant	4500 S. Lake Mary Rd	28,918	E-221 [1]	5,672	2,118,371	$175,851
Library Main	300 W. Aspen	35,000	E-32 S [1,2]	1,288	433,680	$58,485
Milligan House	323 W. Aspen	3,514	E-32 XS	84	13,029	$2,392
Murdoch Center	220 E Brannen	2,000	E-32 XS [4]	-	-	$0
NACET Accelerator	2201 N. Gemini Drive	28,053	E-32 S [1]	563	223,200	$28,272
NACET Incubator	2225 N. Gemini Drive	10,285	E-32 S [5]	-	-	$0
Public Works	3200 W. Route 66	76,245	E-32 S [1]	1,592	612,400	$73,436

Site	Address	Sqft	Primary Electric Rate	2019 Demand - Read (kW)	2019 Electric Use (kWh)	2019 Total Electric Cost ($)
Public Works / Sustainability	419 N. Mogollon	25,338	E-32 XS	139	46,387	$10,400
Pulliam Airport	6200 S Pulliam Drive	137,605	E-32 S [1]	2,244	691,094	$106,461
Rio De Flag Wastewater Plant	600 Babbitt Way	29,098	E-32 M [1]	6,125	2,735,360	$295,685
Theatrikos Building	11 W Cherry	8,500	E-32 XS [4]	-	-	$0
Thorpe Shop	600 N. Thorpe Road	4,000	E-32 XS	134	27,704	$4,546
USGS #5	2255 N Gemini	9,163	E-32 XS	185	58,862	$8,852
USGS #6	2255 N Gemini	27,525	E-32 M [1]	1,611	825,600	$87,515
Utilities Shop	5401 E. Commerce	17,388	E-32 S	291	111,240	$14,884
Visitor's Center	1 W. Rte. 66	5,000	E-32 XS [4]	-	-	$0
Water Services / Housing East Side Annex	2323 N. Walgreens	8,623	E-32 XS	233	33,736	$6,932
Wildcat Hill Wastewater Plant	2800 N. El Paso Flagstaff Road	89,686	E-32 L [1]	11,352	5,534,740	$519,666
Woody Mountain Clarifier	Woody Mountain Well Field	3,215	E-32 L [1]	7,000	3,658,000	$389,019
PARKS		-	*see note 3	1,825	170,083	$54,249
STREETLIGHTING		-	E-59	273	2,218,263	$297,178
WATER SYSTEMS		-	*see note 3	28,402	12,614,943	$1,225,855
Total		**838,021**		**78,002**	**35,279,038**	**$3,762,221**

Note 1: Renewable Energy Adjustment Charge cap is typically met each month.
Note 2: Demand savings will be realized in Tier 2.
Note 3: Electric cost savings at parks and water system assets will be calculated based on specific rate serving each meter.
Note 4: Electric consumption or bills was not available for some smaller buildings and leased buildings. Based on their small size, savings for these buildings will be valued at the E-32 XS electric rate.
Note 5: The NACET Incubator electric data was not available. It is possible that this building shares a meter with the NACET Accelerator. NORESCO will confirm this in the field.

In addition to purchasing electricity from APS; City Hall, Lake Mary Water Treatment Plant, Rio De Flag Wastewater Plant, and Wildcat Hill Wastewater Plant have onsite solar photovoltaic (PV) systems, which provide electricity to the sites at which they are installed. Most of the time, these PV systems generate less electricity than the facility at which they are installed is consuming, therefore, some electricity must still be purchased from APS. At times, the PV systems generate more electricity than the facility is using, in which case the excess generated electricity is fed back into APS's grid, and the City is given a credit for this energy under APS's net metering program. The details of this program are discussed in the electric rates section.

Electric Rates

APS currently bills City facilities included in the scope of this project under nine different rate tariffs. These rate tariffs include general service rates, pumping rates, outdoor lighting rates, and street lighting rates. NORESCO has evaluated each APS rate, and each City account, to develop total incremental rates to use in savings calculations. These total incremental rates, when applied to our energy savings calculations, will provide accurate projections of the electric cost savings the City will realize from our proposed ECMs.

APS electric rates consist of a combination of fixed customer charges, service charges, demand charges and energy charges, as described in *Table 2-7*. Under many of APS's electric rates, demand and energy charges vary by the season (summer, winter). For simplicity and to be conservative, we have used an average of the summer and winter demand and energy rates as our total incremental rates for savings. In reality, the energy savings achieved from heating, ventilation, and air conditioning (HVAC) measures are likely to be higher in summer months, which will mean the energy cost savings realized by the City are actually higher than what we project.

Under some of APS's rates, demand and energy charges are also tiered, meaning that as the City uses more energy, the incremental cost of energy actually decreases. At this time, we are conservatively assuming that electric energy savings will be achieved in the second tier, at a lower incremental rate. If, during the Investment Grade Audit (IGA), we determine that significant electric energy savings will be achieved in the first tier, we will adjust the rates appropriately for those specific sites and measures, so that the energy cost savings are accurately reported.

Each rate tariff under which City facilities included in this scope of work is billed, and the total incremental demand and energy rates used for savings, is listed in *Table 2-7*.

While APS does offer time-of-use (TOU) rates, none of the City facilities included in the scope of this project are currently billed under TOU rates.

Table 2-7. APS Electric Rate Tariffs

Rate Code	Description	Available to:	Total Incremental Demand Rate for Savings ($/kW)	Total Incremental Energy Rate for Savings [1] ($/kWh)	Notes
E-32 XS	General Service - Extra Small	0 - 20 kW	**$0.00**	**$0.09451**	
E-32 XS D	General Service - Extra Small with Demand	0 - 20 kW	**$8.43**	**$0.12427**	
E-32 S	General Service - Small	21 - 100 kW	**$16.01**	**$0.07487**	
			$16.01	**$0.06775**	If REAC cap is met
			$10.91	**$0.07487**	If demand savings are in Tier 2
			$10.91	**$0.06775**	If REAC cap is met and demand savings are in Tier 2
E-32 M	General Service - Medium	101 - 400 kW	**$11.22**	**$0.07203**	
			$11.22	**$0.06491**	If REAC cap is met
E-32 L	General Service - Large	>401 kW	**$21.95**	**$0.06040**	
			$21.95	**$0.05329**	If REAC cap is met
E-221	Water Pumping Service	Pumping	**$7.97**	**$0.08926**	
			$7.97	**$0.08215**	If REAC cap is met
E-47	Dusk to Dawn Lighting	Lighting	**$0.00**	Unmetered. Charges based on lighting type and size (lumens, wattage)	
E-58	APS-Owned Street, Walkway, Park Lighting	Streetlighting	**$0.00**	Unmetered. Charges based on lighting type and size (lumens, wattage). Rate Schedule frozen as of Dec. 1, 2021.	
E-59	Government-Owned Streetlighting	Streetlighting	**$0.00**	**$0.08300**	

Note 1: Electric energy savings will generally be realized in Tier 2, however there may be some cases in which savings are achieved in Tier 1, at a higher rate.

APS's total incremental rates consist of the following components and adjustments, some of which are based on energy use (kWh) and some of which are based on demand (kW):

- Transmission Charge
- Delivery Demand Charge
- Systems Benefits Charge
- Delivery Energy Charge
- Generation Charge
- Renewable Energy Adjustment Charge (REAC)
- Power Supply Adjustment Charges (PSA)
- Transmission Cost Adjustment Charge (TCA)
- Environmental Improvement Surcharge (EIS)
- Demand Site Management Adjustment Charge (DSMAC)
- Lost Fixed Cost Recovery Adjustment Charge (LFCR)
- Taxes and Fees including Regulatory Assessment; Franchise Fee; and State, County, and City Tax

In addition to the components listed above, each APS account is charged a fixed basic service charge per day. Since ECMs will not affect the fixed basic service charges, they are not included in the total incremental rates.

Net Metering

Electric accounts at City Hall, Lake Mary Water Treatment Plant, Rio De Flag Wastewater Plant, and Wildcat Hill Wastewater Plant, where solar PV systems are installed, participate in APS's net metering program and are billed according to Rate Rider EPR-6. Under this program, each facility is credited for any excess solar PV production that is fed back into APS's grid. These credits then reduce the facilities' billed consumption on either the same billing month or subsequent billing months in the billing year. Any excess credits that have not been used by the December billing period are purchased by APS at a purchase rate of $0.02895 per kWh. Based on the information we received, none of the City's PV installations are producing enough excess electricity to sell to APS at this rate. That is, over the course of the year, each site consumes significantly more energy than its solar PV system produces. For this reason, the solar PV systems and net metering program will not affect the cost savings realized as a result of the measures proposed in this project, and the incremental electric rates listed above will still apply.

Natural Gas Usage and Cost

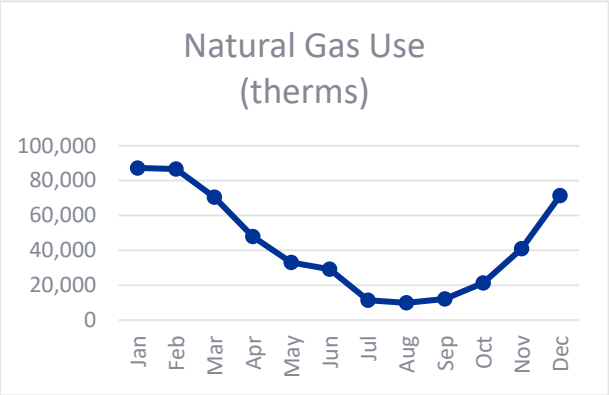
UES provides natural gas to City facilities through 56 different active account meters. This includes 44 meters which serve 31 of the City facilities included in this scope of work. Each meter is billed under a separate account number. City facilities use natural gas for space heating, domestic water heating, process heating, pool heating, and cooking.

NORESCO analyzed the natural gas usage and cost for the baseline year of 2019. As shown in *Table 2-8* and the following figures, City facilities use more natural gas in winter months when space heating is required.

Table 2-8. 2019 Natural Gas Usage and Cost by Month

Month	2019 Natural Gas Use (therms)	2019 Total Natural Gas Cost ($)
Jan	87,313	$55,109
Feb	86,589	$53,865
Mar	70,490	$43,421
Apr	47,914	$28,910
May	33,164	$23,743
Jun	29,154	$20,809
Jul	11,453	$8,689
Aug	9,918	$7,693
Sep	12,166	$9,251
Oct	21,265	$15,420
Nov	41,046	$29,365
Dec	71,383	$49,286
Total	**521,855**	**$345,561**

Figure 2-2. 2019 Natural Gas Usage and Cost by Month



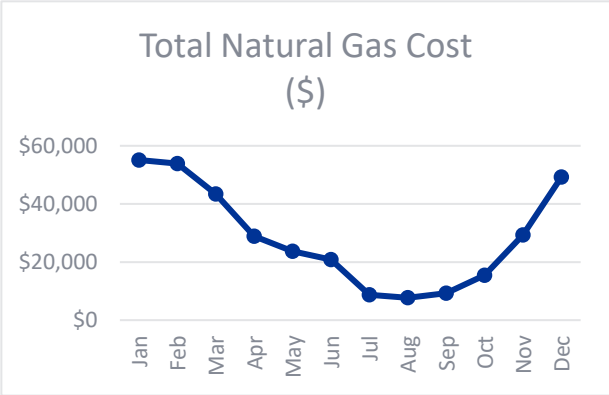


Table 2-9 shows the total gas usage and the total gas cost associated with each of the 31 City facilities with natural gas service, and the rate tariff under which each is billed. Based on the data we have; it appears that over 75 percent of the City's gas use is for space heating and approximately 10 percent is for process heating at the Wildcat Hill Wastewater Treatment Plant. The remaining 15 percent is used for domestic hot water heating, pool heating at the Aquaplex, and cooking. Some summer natural gas use can also be attributed to reheat.

Table 2-9. Natural Gas Rate Tariff, Usage, and Total Bill Cost for Baseline Year 2019

Site	Address	Number of Active Meters (w/ Use in Last 12 mo.)	Primary Gas Rate	2019 Gas Use (therms)	2019 Gas Cost ($)
Aquaplex Center	1702 N. 4th St.	1	UG-C20	71,808	$47,323
Cemetery	1300 S. San Francisco	1	UG-PA40	1,811	$1,418
City Hall	211 W. Aspen	1	UG-PA40	16,397	$10,891
City Warehouse	5477 E. Commerce	1	UG-PA40	3,432	$2,480
Coconino Warehouse	511 W. Coconino	1	UG-PA40	5,048	$3,520
Fire Station #1	1972 S. Thompson Rd	1	UG-PA40	4,580	$3,214
Fire Station #10 (Old Airport Ops Building)	6629 S. Cessna Circle	1	UG-C20	2,839	$2,091
Fire Station #2	1701 E. Ponderosa Pkwy	1	UG-C20	6,718	$4,619
Fire Station #3	4500 E. Nestle-Purina	1	UG-C20	7,523	$5,136
Fire Station #4	4040 E. Butler	1	UG-PA40	4,232	$2,968
Fire Station #5	2525 N. Fort Valley Road	1	UG-PA40	5,493	$3,725
Fire Station #6	3877 S. Lake Mary Rd.	1	UG-PA40	6,051	$4,132
Hal Jensen Recreation Center	2403 N. Izabel	1	UG-PA40	10,063	$6,725
J. Lively Ice Rink / McPherson	1850 N. Turquoise	1	UG-PA40	19,487	$13,360
Joe C. Montoya Community and Senior Center	245 N. Thorpe	1	UG-PA40	5,844	$4,066
Lake Mary Water Treatment Plant	4500 S. Lake Mary Rd	4	UG-PA40	9,894	$7,439
Library Main	300 W. Aspen	1	UG-PA40	10,225	$6,821
Milligan House	323 W. Aspen	1	UG-PA40	1,430	$1,184
NACET Accelerator	2201 N. Gemini Drive	1	UG-PA40	18,001	$12,180
NACET Incubator	2225 N. Gemini Drive	1	UG-PA40 [1]	0 [2]	$0 [2]
Public Works	3200 W. Route 66	5	UG-PA40 [1]	75,434	$50,585
Public Works / Sustainability	419 N. Mogollon	2	UG-PA40	5,441	$4,164

Site	Address	Number of Active Meters (w/ Use in Last 12 mo.)	Primary Gas Rate	2019 Gas Use (therms)	2019 Gas Cost ($)
Pulliam Airport	6200 S Pulliam Drive	3	UG-PA40	34,723	$23,224
Rio De Flag Wastewater Plant	600 Babbitt Way	3	UG-PA40	6,098	$5,182
Thorpe Shop	600 N. Thorpe Road	1	UG-PA40	4,453	$3,128
USGS #6	2255 N Gemini	1	UG-PA40	20,585	$13,779
Utilities Shop	5401 E. Commerce	1	UG-PA40	16,227	$10,761
Visitor's Center	1 W. Rte. 66	1	UG-PA40	7,789	$5,312
Water Services / Housing East Side Annex	2323 N. Walgreens	1	UG-PA40 [1]	3,820	$2,757
Wildcat Hill Wastewater Plant	2800 N. El Paso Flag Rd	2	UG-PA42	107,240	$62,752
WATER SYSTEMS		1	UG-PA40	2,071	$1,579
Total		**44**		**494,757**	**$326,516**

Note 1: Gas rate not provided with data for these facilities. Rate assumed based on facility type and size.
Note 2: No use shown in 2018 or 2019 for this meter. 2020 use and cost were 5,480 therms and $3,795 based on provided data.

Natural Gas Rates

Most City facilities are billed for natural gas under the Small Volume Public Authority Service rate (PA-40). The Wildcat Hill Wastewater Treatment Plant is billed under the Large Volume Public Authority Service (PA-42). The Aquaplex and Fire Stations #2, #3, and #10 are billed under the Small Volume Commercial Service rate. Each of these rates consist of a flat monthly Basic Service and Meter Charge, a Delivery Charge, a Tax Adjustment Credit, a Supply Charge, an Energy Efficiency Charge, and taxes and assessments, based on the bill subtotal.

The Tax Adjustment Credit, Supply Charge, and Taxes and Assessment vary month to month. For these rate components, we used the average charges from the last 12 months of bills provided, in establishing the total incremental rates used in savings calculations.

Table 2-10 shows the total incremental rates used in savings calculations for each rate tariff.

Table 2-10. UniSource Energy Services Natural Gas Total Incremental Rates

Rate Code	Description	Applicability	Total Incremental Rate ($/therm)
C-20	Small Volume Commercial Service	<120,000 therms per year	**$0.6850**
PA-40	Small Volume Public Authority Service	<120,000 therms per year	**$0.6855**
PA-42	Large Volume Public Authority Service	>120,000 therms per year	**$0.5414**

Propane Usage and Cost

Some City facilities do not have natural gas service, and instead use propane for heating. Propane is delivered and stored in tanks on-site. The City facilities included in the scope of this project that use propane are the Cemetery, and USGS Building #5. While consumption data was not available, the City provided historic propane costs from July 2019 through May 2022. Propane costs have increased over this time period.

Table 2-11 shows the incremental rate for propane used in savings calculations and is equal to the most recent price the City paid, per gallon.

Table2-11. Propane Incremental Rate

Rate	Total Incremental Rate ($/gal)
Propane	**$1.8803**

Gasoline Usage and Cost

The City purchases gasoline to fuel City fleet vehicles from Pro Petroleum. Per the City's contract with Pro Petroleum: The price for all gasoline and diesel fuels shall be the margin price for each line item, to be added (or subtracted) from the "Phoenix Oil Price Information Service (OPIS) Weekly Newsletter with 5-Day Average" price published each Thursday by the OPIS for the type of fuel required in order to determine the actual purchase price. The City provided gasoline consumption and cost information for fleet vehicles for FY2020-2021.

Table2-12. Gasoline Incremental Rate

Rate	Total Incremental Rate ($/gal)
Gasoline	$4.70

Table 2-12 shows the incremental rate for gasoline, used in savings calculations, and is equal to the price of the 60-day average gasoline price for Phoenix, AZ. For context, this is less than the current price of $5.59/gallon and the 30-day average of $5.20/gallon. While we do think gas and diesel prices will fall somewhat over time to the suggested value, we do expect elevated prices into the distant future. The main driver for this price increase is the reduction of domestic gasoline production capacity during the pandemic where several US refineries closed. These refineries may stay closed indefinitely due to the significant investment required to start production again and as demand for gasoline is expected to diminish over time with increased adoption of EVs. Base on the data provided, *Table 2-13* shows the annual fuel use of City vehicles and associated price and GHG emissions.

Table 2-13. Flagstaff FY2021-2022 Fuel Use

Fuel Use	Annual Gallons	Current Average Price ($/gallon)	Current Annual Cost of Fuel ($)	Associated CO2 Emissions (tons/yr)
Gasoline	136,674	$4.70	$642,369	1,339
Diesel	220,607	$5.28	$1,164,807	2,476
Total	**357,282**	**---**	**$1,807,176**	**3,814**

Water and Sewer Usage and Cost for Facilities

The City of Flagstaff Water Services provides water to City facilities, parks, and other irrigated landscaping in the City through a total of 195 meters and bills the City for this water consumption. In addition to metered water charges, City facilities are charged a flat monthly Stormwater Charge, based on the impervious surface area of each property. The City is also billed for sewer service, based on all metered water consumption, with the exception of irrigation and reclaimed water meters.

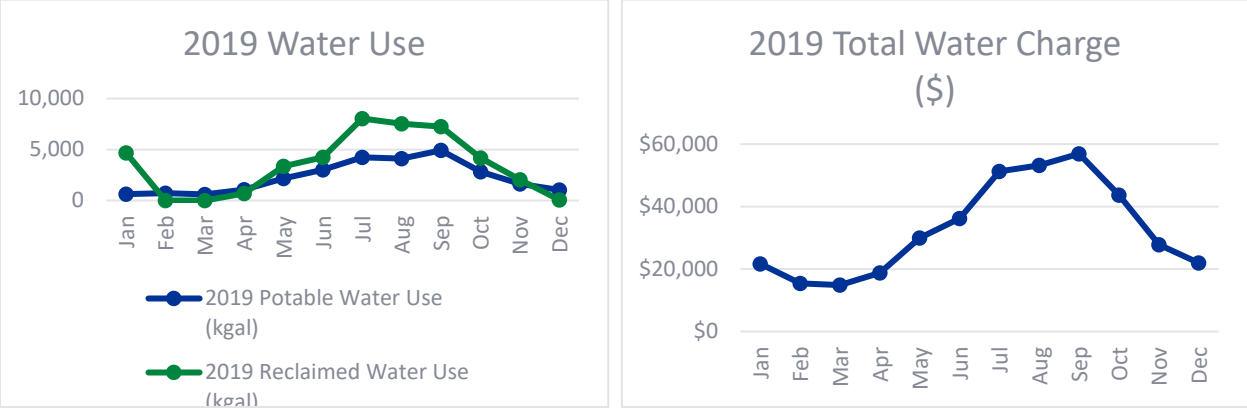
NORESCO analyzed the water usage and cost for the baseline year of 2019. As *Table 2-14* and the figures show, significantly more water is used in the summer months. This is an indication that the majority of water, including potable water, consumed by the City is for irrigation, and is not needed in winter months.

Table 2-14. 2019 Total Water Consumption and Cost by Month

Month	2019 Potable Water Use (kgal)	2019 Reclaimed Water Use (kgal)	2019 Total Water Charge [1] ($)
Jan	627	4,676 [2]	$21,666
Feb	720	13	$15,413
Mar	605	14	$14,882
Apr	1,061	680	$18,753
May	2,175	3,371	$29,941
Jun	3,030	4,224	$36,217
Jul	4,242	8,041	$51,224
Aug	4,114	7,522	$53,176
Sep	4,920	7,252	$56,910
Oct	2,835	4,181	$43,668
Nov	1,623	2,042	$27,838
Dec	1,041	69	$21,954
Total	**26,992**	**42,086**	**$391,643**

Note 1: Total water cost includes stormwater charge. Does not include sewer charge.
Note 2: Anomalous high reclaim water use in January 2019 is from Mobile Haven Park and is likely the result of a large leak which has been fixed.

Figure 2-3. 2019 Water Consumption and Cost by Month



NORESCO analyzed 154 water meters that account for almost 99 percent of the City's total water consumption. *Table 2-15* shows the 2019 baseline year water consumption and cost associated with the 26 City facilities, 19 City parks, and City streetscaping served by these 154 meters.

Table 2-15. Total Water Consumption and Cost by Site

Site	Address	2019 Potable Water Use (kgal)	2019 Potable Water Charge ($)	2019 Reclaimed Water Use (kgal)	2019 Reclaimed Water Charge ($)	2019 Stormwater Charge ($)	2019 Total Water Charges ($)
Aquaplex Center	1702 N. 4th St.	2,235	$12,860	0	$0	$3,211	**$16,072**
Cemetery	1300 S. San Francisco	85	$612	7	$960	$246	**$1,818**
City Hall	211 W. Aspen	457	$2,739	4,561	$9,348	$3,278	**$15,365**
City Hall Courthouse	101 W. Cherry	294	$1,905	0	$0	$247	**$2,152**
City Warehouse	5477 E. Commerce	2	$235	0	$0	$1,485	**$1,720**
Fire Station #1	1972 S. Thompson Rd	111	$1,197	0	$0	$0	**$1,197**
Fire Station #2	1701 E. Ponderosa Pkwy	119	$997	0	$0	$987	**$1,984**
Fire Station #3	4500 E. Nestle-Purina	126	$1,267	0	$0	$825	**$2,093**
Fire Station #4	4040 E. Butler	118	$1,193	31	$533	$353	**$2,079**
Fire Station #5	2525 N. Fort Valley Road	79	$979	0	$0	$630	**$1,609**
Fire Station #6	3877 S. Lake Mary Rd.	117	$1,031	0	$0	$413	**$1,444**
Hal Jensen Recreation Center	2403 N. Izabel	195	$1,651	0	$0	$1,392	**$3,043**
J. Lively Ice Rink / McPherson	1850 N. Turquoise	1,039	$6,409	0	$0	$2,932	**$9,340**
Joe C. Montoya Community and Senior Center	245 N. Thorpe	145	$1,228	0	$0	$2,925	**$4,153**
Lake Mary Water Treatment Plant	4500 S. Lake Mary Rd	33	$368	0	$0	$3,375	**$3,743**
Library Main	300 W. Aspen	433	$2,365	0	$0	$1,933	**$4,298**
Milligan House	323 W. Aspen	17	$276	0	$0	$70	**$347**
Public Works / Sustainability	419 N. Mogollon	33	$869	0	$0	$8,681	**$9,550**
Pulliam Airport	6200 S Pulliam Drive	1,307	$9,971	0	$0	$33,267	**$43,238**
Rio De Flag Wastewater Plant	600 Babbitt Way	326	$2,542	0	$0	$8,358	**$10,900**
Thorpe Shop	600 N. Thorpe Road	35	$400	0	$0	$0	**$400**

Site	Address	2019 Potable Water Use (kgal)	2019 Potable Water Charge ($)	2019 Reclaimed Water Use (kgal)	2019 Reclaimed Water Charge ($)	2019 Stormwater Charge ($)	2019 Total Water Charges ($)
USGS #6	2255 N Gemini	768	$4,888	0	$0	$914	**$5,802**
Utilities Shop	5401 E. Commerce	84	$1,083	0	$0	$1,658	**$2,741**
Visitor's Center	1 W. Rte. 66	123	$1,031	0	$0	$877	**$1,908**
Water Services / Housing East Side Annex	2323 N. Walgreens	31	$391	0	$0	$670	**$1,060**
Wildcat Hill Wastewater Plant	2800 N. Elpaso Flag Rd	908	$5,678	0	$0	$2,935	**$8,614**
Arroyo Park	850 E Ridgecrest Dr	1,057	$6,067	0	$0	$0	**$6,067**
Bow and Arrow Park	3701 N Cochise Dr	1,557	$8,742	0	$0	$0	**$8,742**
Cheshire Park	3000 N Fremont Blvd	496	$3,068	0	$0	$560	**$3,627**
Guadalupe Park	805 W Clay Avenue	557	$3,588	0	$0	$0	**$3,588**
Jim Cullen Memorial Park	519 W Piute Road	0	$0	1,123	$2,426	$0	**$2,426**
Joel Montalvo Park	2211 E First Avenue	6	$448	862	$2,346	$717	**$3,512**
McMillan Mesa Park	1140 Ponderosa Parkway	630	$3,782	0	$0	$0	**$3,782**
Mobile Haven Park	4280 N Hamblin Street	3	$205	4,806	$9,478	$0	**$9,683**
Old Town Springs Park	913 W Lower Coconino	312	$1,894	0	$0	$352	**$2,246**
Ponderosa Park	2512 N First Street	2	$389	0	$430	$211	**$1,031**
Ponderosa Trails Park	3875 S Wild West Trail	1,466	$8,158	0	$0	$0	**$8,158**
Plaza Vieja Park	526 W Clay Avenue	0	$189	0	$0	$0	**$189**
Smokerise Park	6065 Native Way	547	$3,151	0	$0	$137	**$3,289**
The Basin / BMX Track	1700 E Sixth Street	0	$409	0	$0	$2,003	**$2,412**
Bushmaster Park	3150 N Alta Vista	106	$1,029	4,530	$11,957	$3,430	**$16,416**
Foxglenn Park	4200 E Butler Avenue	58	$899	9,017	$20,655	$1,588	**$23,142**
Buffalo Park	2400 N Gemini Road	40	$436	0	$0	$0	**$436**
Continental Park	5650 E Old Walnut Cyn.	5,491	$31,376	0	$0	$3,300	**$34,676**

Site	Address	2019 Potable Water Use (kgal)	2019 Potable Water Charge ($)	2019 Reclaimed Water Use (kgal)	2019 Reclaimed Water Charge ($)	2019 Stormwater Charge ($)	2019 Total Water Charges ($)
Thorpe Park	191 N Thorpe Road	436	$3,223	14,523	$34,426	$5,705	**$43,354**
STREETSCAPE		3,378	$27,680	2,626	$9,105	$3,827	**$40,612**
Total		**25,360**	**$168,898**	**42,086**	**$101,665**	**$103,493**	**$374,056**

Water Rates

Most City facilities and parks are billed for potable water under the Commercial/Schools Water Rate, and/or the Landscaping/Lawn Meter Water Rate. The Rio de Flag Wastewater Treatment Plant is billed under the Manufacturing Water Rate. The Cemetery is billed for potable water under a Residential Water Rate. In addition to potable water, many of the City's irrigation uses reclaimed water, billed under the Commercial Reclaimed Water Rate. These rates consist of a monthly fixed meter charge, depending on the size of the meter, as well as a Water Rate, Water Energy Rate, a Water Resource and Infrastructure Protection (WRIP) Fee, and sales tax. These components are combined and published in the City's "Total Inside City Rate," as shown below. Commercial Potable, Manufacturing, and Residential Potable water accounts are also billed a Sewer Charge. *Tables 2-16 and 2-17* show the incremental water rates used for savings calculations, which include sewer charges, where applicable.

Table 2-16. Potable Water Service Incremental Rates

Rate Code	Description	Fixed Charge	Inside City Total Water Rate ($/kgal)	Inside City Sewer Rate ($/kgal)	Total Incremental Water/Sewer Rate ($/kgal)	Notes	
C	Commercial	Varies by Meter Size	$6.01	$5.68	$11.69		
MN	Manufacturing		$5.95	$6.09	$12.04		
LM	Landscaping		$6.01	$0.00	$6.01		
R1-R4	Residential (Single Fam)		$4.76	$5.35	$10.11	R1, R4: Tier 1	0-3.5 kgal
			$5.77	$5.35	$11.12	R1, R4: Tier 2	3.5-6.2 kgal
			$8.18	$5.35	$13.53	R1, R4: Tier 3	6.2-11.5 kgal
			$15.04	$5.35	$20.39	R1, R4: Tier 4	11.5+ kgal
			$5.74	$5.35	$11.09	R2, R3	

Table 2-17. Reclaimed Water Service Incremental Rates

Rate Code	Description	Fixed Charge	Inside City Total Water Rate ($/kgal)	Inside City Sewer Rate ($/kgal)	Total Incremental Reclaimed Water Rate ($/kgal)
C	Commercial (no main ext.)	Varies by Meter Size	$1.95	$0.00	$1.95
	Commercial (with main ext.)		$4.14	$0.00	$4.14
MU	City Departmental		$1.95	$0.00	$1.95

Citywide Metered Water Use

In addition to establishing baseline water consumption for City facilities, we are working to establish a baseline for total metered water use by customers of the City's Water Services Department. This baseline is important in order to calculate the additional revenue the City will realize from the increased accuracy of the proposed replacement of City water meters.

Based on the Non-Revenue Analysis completed in early 2022 that utilizes calendar year 2020 data the City currently produces and supplies an annual water volume of 2,748 MG. The City currently has a billed metered consumption volume of 2,449 MG that generates water and sewer revenue. This results in a non-revenue water volume of 300 MG. For CY2020, the total system revenues were as follows:

Water Consumptive Revenue: $19,649,182

Water Consumptive Revenue: $12,213,599

Total Consumptive Revenue: $31,862,780

The composite customer unit retail cost (CRUC) was calculated to be $13.01/kgal. A volumetrically weighted average was conducted based on the consumptive revenue divided by the billed metered volume. Sanitary sewer volumes are billed volumetrically, thus the calculation included the proportional share of the sewer rate.

Pool Chemicals

At the Aquaplex, the City purchases three chemicals used to treat the pool water: acid, chlorine, and carbon dioxide. As a part of this project, we are evaluating an onsite chlorine generation system that would greatly reduce the amount of chlorine and other chemicals the City must purchase. To evaluate the savings of the proposed system, we have established a baseline for the existing pool chemical usage. NORESCO reviewed the 2019 pool chemical uses, consistent with the timeline for the electric, natural gas and water/sewer baselines. The 2019 baseline for Aquaplex pool chemicals is shown in the table below.

Table 2-18. 2019 Pool Chemical Costs

Chemical	Cost ($)
Acid	$4,844
Chlorine	$22,814
CO_2	$7,012

Escalation and Future Utility Rates

The future escalation of utility rates plays an important role in this program and quantifies the financial benefit of the realized energy savings in subsequent years of the financing term. The rate forecast described on the following pages summarizes the methodologies used to forecast future utility rates for the City. The intent is to document projected rate changes for these utilities. As utility prices increase over time, the cost savings resulting from ECMs increases accordingly. By capturing all the savings to which the City is entitled, an increased scope of goods and services becomes available to the City under this financing package.

Accurate future utility rate projections are a critical input to the City's utility budget and any financial projection for energy and water savings. In order to provide a reliable rate projection to the City, NORESCO uses the publicly available Energy Escalation Rate Calculator (EERC) developed by the National Institute of Standards and Technology (NIST). The EERC is an industry-accepted tool, and its results can be used as an escalation rate for projected savings (and contract payments) for energy savings performance contracts. The results of the NIST EERC tool for this project are shown in *Figure 2-4*.

Water and sewer rates have also been evaluated to assist in the projection of future savings and recovered revenue resulting from proposed water infrastructure improvements (i.e. water meter conversions). To complete this analysis, water and sewer rates for the most recent 10 years were evaluated and are summarized in *Figure 2-5.*

Figure 2-4. NIST Energy Escalation Rate Calculator (EERC) Outputs for Electricity and Gas in Flagstaff



National Institute of Standards and Technology
U.S. Department of Commerce

NIST Energy Escalation Rate Calculation

https://pages.nist.gov/eerc/

Input Parameters:

Percent from Electricity:	100%
Location:	AZ (West)
Sector:	Commercial
Contract Start:	2023
Contract Duration:	15 years
Carbon Pricing Policy:	No carbon price
Annual Inflation Rate:	2.30%

Results:

Real Rate:	**0.00%**
Nominal Rate:	**2.30%**
Calculated on:	2/9/2022, 3:38:31 PM
Datafile version:	2021

National Institute of Standards and Technology
U.S. Department of Commerce

NIST Energy Escalation Rate Calculation

https://pages.nist.gov/eerc/

Input Parameters:

Percent from Natural Gas:	100%
Location:	AZ (West)
Sector:	Commercial
Contract Start:	2023
Contract Duration:	15 years
Carbon Pricing Policy:	No carbon price
Annual Inflation Rate:	2.30%

Results:

Real Rate:	**1.45%**
Nominal Rate:	**3.78%**
Calculated on:	2/9/2022, 3:39:50 PM
Datafile version:	2021

Figure 2-5. Historical Water and Sewer Rates for Flagstaff

Water

	Fiscal Year										
Single Family	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Tier 1 (0-3,700 gal)	$3.02	$2.07	$2.34	$2.51	$2.68	$2.77	$2.89	$3.02	$3.15	$3.29	$3.44
Tier 2 (3,700 - 6,400 gal)	$3.54	$2.69	$3.05	$3.26	$3.49	$3.59	$3.75	$3.91	$4.09	$4.26	$4.45
Tier 3 (6,400 - 11,700 gal)	$5.03	$4.13	$4.69	$5.02	$5.37	$5.53	$5.77	$6.03	$6.29	$6.57	$6.86
Tier 4 (11,701+ gal)	$8.77	$8.26	$9.38	$10.04	$10.74	$11.06	$11.55	$12.05	$12.59	$13.14	$13.72
Residential-Multi-family	$2.37	$2.66	$3.02	$3.23	$3.45	$3.56	$3.72	$3.88	$4.05	$4.23	$4.42
Commercial/Schools	$3.17	$2.83	$3.21	$3.43	$3.67	$3.78	$3.95	$4.12	$4.30	$4.49	$4.69

	Fiscal Year										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average
	-31.5%	13.0%	7.3%	6.8%	3.4%	4.3%	4.5%	4.3%	4.4%	4.6%	**2.1%**
	-24.0%	13.4%	6.9%	7.1%	2.9%	4.5%	4.3%	4.6%	4.2%	4.5%	**2.8%**
	-17.9%	13.6%	7.0%	7.0%	3.0%	4.3%	4.5%	4.3%	4.5%	4.4%	**3.5%**
	-5.8%	13.6%	7.0%	7.0%	3.0%	4.4%	4.3%	4.5%	4.4%	4.4%	**4.7%**
	12.2%	13.5%	7.0%	6.8%	3.2%	4.5%	4.3%	4.4%	4.4%	4.5%	**6.5%**
	-10.7%	13.4%	6.9%	7.0%	3.0%	4.5%	4.3%	4.4%	4.4%	4.5%	**4.2%**
Average	**-12.9%**	**13.4%**	**7.0%**	**6.9%**	**3.1%**	**4.4%**	**4.4%**	**4.4%**	**4.4%**	**4.5%**	**4.0%**

Sewer

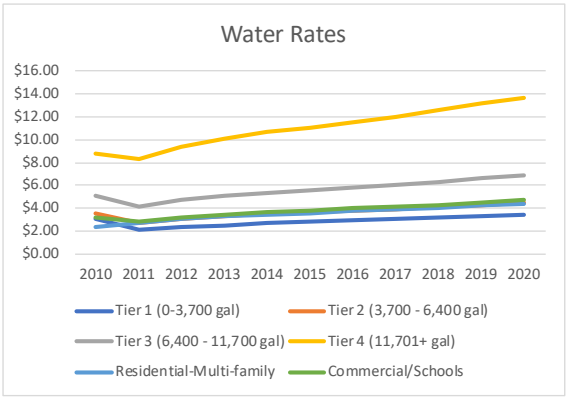
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Residential (Single & Multi-family)	$3.12	$3.08	$3.59	$3.69	$3.80	$3.80	$4.07	$4.36	$4.67	$5.00	$5.35
Commercial	$3.01	$3.22	$3.75	$3.90	$4.01	$4.02	$4.31	$4.62	$4.95	$5.30	$5.68

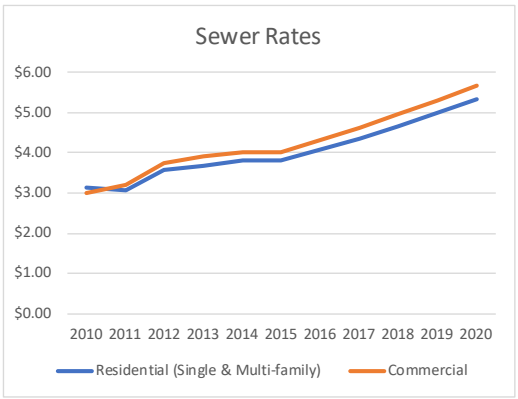
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average
	-1.3%	16.6%	2.8%	3.0%	0.0%	7.1%	7.1%	7.1%	7.1%	7.0%	**5.6%**
	7.0%	16.5%	4.0%	2.8%	0.2%	7.2%	7.2%	7.1%	7.1%	7.2%	**6.6%**
Average	**2.8%**	**16.5%**	**3.4%**	**2.9%**	**0.1%**	**7.2%**	**7.2%**	**7.1%**	**7.1%**	**7.1%**	**6.1%**

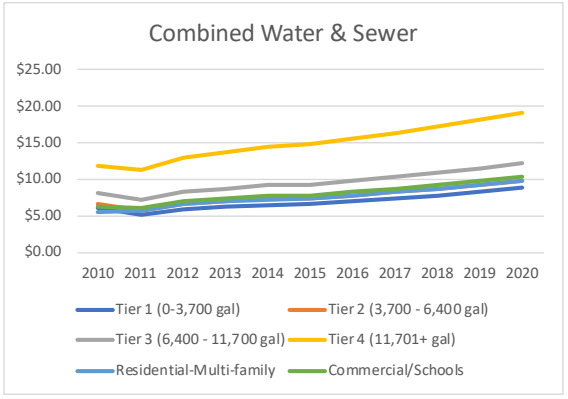
Combined

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Single Family											
Tier 1 (0-3,700 gal)	$6.14	$5.15	$5.93	$6.20	$6.48	$6.57	$6.96	$7.38	$7.82	$8.29	$8.79
Tier 2 (3,700 - 6,400 gal)	$6.66	$5.77	$6.64	$6.95	$7.29	$7.39	$7.82	$8.27	$8.76	$9.26	$9.80
Tier 3 (6,400 - 11,700 gal)	$8.15	$7.21	$8.28	$8.71	$9.17	$9.33	$9.84	$10.39	$10.96	$11.57	$12.21
Tier 4 (11,701+ gal)	$11.89	$11.34	$12.97	$13.73	$14.54	$14.86	$15.62	$16.41	$17.26	$18.14	$19.07
Residential-Multi-family	$5.49	$5.74	$6.61	$6.92	$7.25	$7.36	$7.79	$8.24	$8.72	$9.23	$9.77
Commercial/Schools	$6.18	$6.05	$6.96	$7.33	$7.68	$7.80	$8.26	$8.74	$9.25	$9.79	$10.37

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average
	-16.1%	15.1%	4.6%	4.5%	1.4%	5.9%	6.0%	6.0%	6.0%	6.0%	**3.9%**
	-13.4%	15.1%	4.7%	4.9%	1.4%	5.8%	5.8%	5.9%	5.7%	5.8%	**4.2%**
	-11.5%	14.8%	5.2%	5.3%	1.7%	5.5%	5.6%	5.5%	5.6%	5.5%	**4.3%**
	-4.6%	14.4%	5.9%	5.9%	2.2%	5.1%	5.1%	5.2%	5.1%	5.1%	**4.9%**
	4.6%	15.2%	4.7%	4.8%	1.5%	5.8%	5.8%	5.8%	5.8%	5.9%	**6.0%**
	-2.1%	15.0%	5.3%	4.8%	1.6%	5.9%	5.8%	5.8%	5.8%	5.9%	**5.4%**
Average	**-7.2%**	**14.9%**	**5.0%**	**5.0%**	**1.6%**	**5.7%**	**5.7%**	**5.7%**	**5.7%**	**5.7%**	**4.8%**







The results of the EERC analysis indicate projected annual escalation of **2.30 percent** for electricity and **3.78 percent** for natural gas. Propane and gasoline are not included in the EERC tool, but typically follow closely to natural gas, so escalation for propane and gasoline is also **3.78 percent** like gasoline. These values will be used for projecting future savings of these utilities.

For water and sewer rates, the historical averages over the past 10 years covering 2011 through 2020 are 4.0 percent and 6.1 percent respectively. The combined average for water plus sewer is 4.8 percent as displayed in *Figure 2-5.* For conservatism, a combined value of **4.00 percent** will be used for financial projections of water savings or recovered revenue resulting from water meters conversions.

The inflation rate of **2.30 percent**, as noted in the EERC analysis above, will be applied to avoided material costs. *Table 2-19* summarizes the escalation rates used to calculate cost savings over the term of the project.

Table 2-19. Utility Escalation Rates

Utility	Escalation Rate
Electricity	2.30%
Natural Gas	3.78%
Propane	3.78%
Gasoline	3.78%
Water & Sewer	4.00%
Maintenance (material) Savings	2.30%

Alternative Rate Opportunities

NORESCO is evaluating a number of the City's water production facilities for possible alternative APS rate structures. Based on our preliminary analysis, most City facilities and pumping stations are already being billed under the best option and would not benefit from switching rate options. However, a few water pumping stations are being billed under general service (GS) rates, as opposed to pumping rates. We are working with APS to determine if these accounts would be eligible to switch to the E-221 pumping rate, and what the impact would be on the electric cost associated with these accounts.

We have also evaluated the current rates for the City's streetlighting and exterior park and field lighting, which on an annual usage and cost basis, is mostly billed under APS lighting rate schedules E-47, E-58, and E-59. Some City park and streetlighting is currently billed under Small and Extra-Small General Service rate schedules. During the IGA, we will investigate the possibility of switching these accounts to lighting rate schedules, which may result in cost savings. In some cases, this may not be feasible if these APS meters also serve interior lighting such as in park restroom buildings.

2.3 Rebates and Incentives

Rebates are available from APS that will help offset installation costs of some of the included ECMs. We are working with representatives from APS to secure rebates that are available for the recommended measures. During the implementation phase we will assist the City with completing rebate paperwork, working with APS to facilitate required inspections and achieve the rebates. *Due to the periodic changes in rebate program rules and funding levels, the values represented below may change when the required paperwork is submitted.* Rebate applications will be filed at the onset of construction expected in late 2022. The rebate checks will come directly to the City.

APS offers rebates for new high-efficiency air conditioning and heat pump units. However, units that are installed as a fuel switch (i.e. switching from gas to electric heat) are not eligible at this time, therefore we do not anticipate any rebates for the installation of heat pumps included in this project.

UES offers rebates and incentives for the installation of new high-efficiency gas equipment. However, we have not included the installation of any gas equipment in the scope of this project. Projected and guaranteed rebate amounts are provided in *Table 2-20*.

Table 2-20. Projected Rebate Amounts

ECM	ECM Description	Rebate Provider	Rebate Type	Expected Rebate
1A	Interior LED Lighting	APS	General	$37,639
1B	Exterior LED Lighting	APS	General	$4,374
			TOTAL	**$42,013**

3. ECM DESCRIPTIONS

ECM 1: LED Lighting Introduction

NORESCO conducted a detailed lighting audit of each City facility included in *Section 2. Facility Profile*, including recording fixture and lamp types, quantities, wattages, and voltages; and took sample light level and power measurements. Additionally, we researched past work completed by the City on streetlighting upgrades, reviewed studies, and worked with City staff to assess potential light emitting diode (LED) streetlight upgrade projects. Activities completed during the IGA include the following.

- We toured each facility and recorded fixture count and type, control type, wattage, operational hours and took sample readings of wattage and power for all standard interior and exterior lighting.
- We held discussions with City maintenance personnel to better understand the operation of these systems, maintenance concerns, and any issues that need to be addressed.
- We reviewed the City's streetlight specification and prior studies and spoke with Steven Hill and Jeff Bauman to understand the goals of the in-process streetlight LED upgrades.
- We spoke with the City's prevalent sports lighting manufacturer and performed field audits of the City's sports lighting.

Based on the information we gathered and with the City's help, we have developed the following lighting and lighting controls upgrades as a part of this IGA. The measures included will provide the City with substantial energy and maintenance cost savings at a relatively low implementation cost. These projects will improve the City's infrastructure and address the Facility Department's most pressing deferred maintenance projects including moving forward with design on a series streetlight conversion project.

The lighting upgrades included in this project's scope of work are shown in *Table 3-1.1.*

Table 3-1.1. Measures included in IGA ECM-1: LED Lighting

ECM	Description	Locations
ECM-1a	Interior LED Upgrades	Throughout City buildings and parks
ECM-1b	Exterior LED Upgrades	Throughout City buildings and parks

As part of this process, we ruled out certain potential upgrades that do not align with the City's objectives and facility conditions. The following list of measures were evaluated but not fully developed as noted.

Table 3-1.2. Measures evaluated but not Included in Phase 1 ECM-1: LED Lighting

Description	Notes
LED Sports Field Lighting	• The City would benefit from reduced maintenance of difficult to access fixtures, while also reducing their carbon footprint and utility bill, by upgrading to LED sports field lighting. NORESCO evaluated sports field lighting both on-site as well as with the City's prevalent sports lighting manufacturer, Musco Lighting. Musco provided an inventory and list of potential upgrades. NORESCO performed field audits of the sports lighting at the parks recommended by Musco: Arroyo, Bushmaster, Continental, Joel Montalvo and Thorpe. We identified 70 groups of sports lights that could be upgraded to LED as summarized in *Table 3-1.3.*

Description	Notes
	• The high cost of LED high mast lighting combined with the low operating hours for these systems results in a long payback for this ECM. NORESCO recommends the City continue operation of the current high intensity discharge (HID) systems as they near the end of their life and reassess as LED technology continues to become less expensive.
LED Streetlights	• Replacing existing HID streetlights with LED would produce energy and energy cost savings for the City, while reducing maintenance costs and improving light quality and safety on City streets. • On January 26th, NORESCO met with Steven Hill and Jeff Bauman to discuss incorporating streetlights into Phase 1 of this project. Jeff and Steven have been evaluating streetlights for five years and have worked with local astronomers to define a specification to ensure minimal light pollution into the sky. At the time of the meeting, Steven and Jeff had a budget approved to retrofit the streetlights and were preparing a solicitation to multiple manufacturers for a test installation of several new LED streetlights, as well as lab testing to confirm which manufacturers met the City streetlight specification. Because Steven and Jeff have funding in place and were moving to the installation phase of streetlight retrofits, this ECM was not included in Phase 1 of this project.

Table 3-1.3. Potential LED Sports Field Lighting for Future Consideration

Existing Fixture Description (Quantity per Pole)	Potential LED Retrofit Description (Quantity per Pole)	Pole Quantity
(11) 1500-Watt Metal Halide Sports Lights with Shroud	New (8) 1500-Watt LED Sportlight Fixtures	4
(2) 1000-Watt Metal Halide Sports Lights with Shroud, Bullhorn Mount	New (2) 400-Watt LED Sportlight Fixtures	4
	New (2) 900-Watt LED Sportlight Fixtures	2
(2) 1500-Watt Metal Halide Sports Lights with Shroud	New (2) 1200-Watt LED Sportlight Fixtures	2
(3) 1000-Watt Metal Halide Sports Lights with Shroud	New (1) 600-Watt LED Sportlight Fixture	4
(3) 1000-Watt Metal Halide Sports Lights with Shroud, Bullhorn Mount	New (3) 400-Watt LED Sportlight Fixtures	2
(3) 1500-Watt Metal Halide Sports Lights with Shroud	New (3) 1200-Watt LED Sportlight Fixtures	16
(4) 1500-Watt Metal Halide Sports Lights with Shroud	New (4) 1200-Watt LED Sportlight Fixtures	14
(5) 1500-Watt Metal Halide Sport Lights with Shroud	New (5) 1200-Watt LED Sportlight Fixtures	10
(6) 1500-Watt Metal Halide Sport Lights with Shroud	New (5) 1500-Watt LED Sportlight Fixtures	2
(7) 1500-Watt Metal Halide Sport Lights with Shroud	New (4) 1200-Watt LED Sportlight Fixtures	4
	New (6) 1500-Watt LED Sportlight Fixtures	4
(8) 1500-Watt Metal Halide Sport Lights with Shroud	New (8) 1200-Watt LED Sportlight Fixtures	2
	TOTAL	**70**

ECM 1A: INTERIOR LED

Measure Overview

NORESCO will provide substantial energy savings, improve interior lighting quality, reduce maintenance costs, and alleviate exterior lighting concerns at the City of Flagstaff buildings by upgrading existing fluorescent and HID lighting systems to new, energy efficient LED technology. The interior lighting upgrades will consist of a combination of Type A tubular LED (TLED) lamps, electronic ballasts, direct wired LED plug-in lamps, and new LED fixtures. To further reduce lighting system energy consumption, we will install occupancy sensors in specific locations with variable occupancy, where we identified opportunities for additional energy savings.

Existing Conditions

NORESCO engineers performed a room-by-room survey of the existing lighting fixtures and technologies at the Flagstaff facilities, including lighting controls. We measured lighting levels throughout the buildings and identified hours of operation based on feedback from occupants. This information was presented to and reviewed by City staff. Maintenance staff informed us of recent, current, and likely future projects that may affect the scope of this ECM and was consulted on strategies for conversion of existing lighting systems to LED.

Typical Indoor Lighting

The predominant fixture types we found during the room-by-room survey include 4-foot 1-lamp lay-in recessed fixtures with a paracube lens, 1'x8' direct/indirect pendant mounted fixtures, 4-foot 2-lamp and 3-lamp industrial hooded fixtures, 2'x4' 2-lamp recessed lay-in fixtures, 4-foot 2-lamp wrap/vaportight fixtures and 4 foot 6-lamp high bay fixtures. Additionally, we found several fixture types that contain compact fluorescent, LED, and incandescent lamps of various wattages which are detailed in *Appendix 9: Lighting Line-by-Line.*



Figure 3-1a.1. Existing 2'x4' recessed lay-in fixtures at USGS Building #6 will be retrofitted with new TLED lamps and dimmable electronic ballast.

The existing interior lighting consists primarily of linear fluorescent lamps or tubes of various styles. While approximately 20 percent of the existing fixtures have been upgraded with TLED lamps or LED fixtures, the remining fixtures use primarily T8 or T5 lamps and electronic ballasts. We identified over 300 fixtures still using inefficient T12 lamps and magnetic ballasts. There are also many fixtures that contain compact fluorescent (720 fixtures) or incandescent lamps (170 fixtures) and HIDs (182 fixtures).The existing TLED lamps are a mix of Type A (fluorescent ballast), B (direct wire) and C (external LED driver). The existing TLED lamps also vary in color from 3000K to 5000K.

The majority of the fixtures throughout City facilities are manually controlled, with about seven percent operated by occupancy sensors. The lighting in some areas of the buildings like the Aquaplex Center and Pulliam Airport are controlled by timeclocks. The lack of local control in many rooms is resulting in lights operating longer than they should since private offices, conference rooms, storage areas, etc. are often unoccupied, but have lighting fixtures that are turned on when other adjacent areas are occupied.

Proposed Upgrades

LEDs have emerged as the most energy-efficient and rapidly growing lighting technology in today's marketplace. Solid-state LED luminaires, retrofit kits, linear LED lamps, screw-in and pin-based LED lamps offer many advantages over fluorescent, incandescent and HID technologies including higher efficacy, long life expectancy, better color rendering, reduced maintenance frequency, and low mercury and lead content.



Figure 3-1a.2: New TLED lamps will be installed with new electronic ballasts. This will standardize the color temperatures and TLED types throughout the City.

NORESCO will upgrade over 5,900 existing fixtures with high-efficiency, LED technology. The interior lighting upgrades, summarized below, will provide substantial energy savings over the existing fluorescent and HID lamps and ballasts. As part of this measure, NORESCO will:

- Retrofit existing linear fluorescent fixtures with new Type A TLED lamps and electronic ballasts. In existing fixtures of this type that have already been converted to LED we will replace lamps and ballasts with new technology for standardization (5000K color temperature) and to simplify warranty procedures. We will turn over any LED technology we remove to the City for use as spares.
- Replace existing HID high-bay fixtures with new LED fixtures.
- Replace existing incandescent and compact fluorescent lamps with new pin-based LED lamps, integrated drivers, and screw-in LED lamps.

To further reduce lighting system energy consumption, we will install occupancy sensors in locations where occupancy varies. The sensors will shut off lights when areas are unoccupied thereby reducing lighting run times resulting in energy savings. We will install wall switch detectors and ceiling-mounted occupancy sensors and power packs where appropriate. In some locations the ceiling mounted sensors will communicate wirelessly with new wall-mounted switches.

In some locations, the City has installed new LED fixtures to replace burnt out fixtures, resulting in a mixture of new LED fixtures and non-LED fixtures. NORESCO will install new LED fixtures amongst the existing LED fixtures, which could create confusion about which fixtures are under NORESCO warranty and which were already in place and are no longer under warranty. To help resolve this, NORESCO will place NORESCO labels on new and retrofitted LED fixtures we install so the City knows who to call if the fixture fails within NORESCO's workmanship warranty period.

New Equipment

NORESCO will install new LED lamps, retrofit kits, and fixtures. See the detailed scope of work section and *Appendix 9: Lighting Line-by-Line* for the individual upgrades at each facility. We will install primarily lighting products from the manufacturers listed in *Table 3-3-1a.1*. We selected these manufacturers because they are large and well-established and can ensure the availability of spare parts for future maintenance and warranty support. Please see *Appendix 1: Cutsheets* for additional information on the specific products we will install as a part of this ECM.

Table 3-1a.1. Specified Lighting Manufacturers

Major Lighting Manufacturers Specified
Green Creative – 519 Codisco Way Sanford Florida 32881, 844-455-8687
Keystone Technologies – 2750 Morris Road, Lansdale Pa 19446, 800-464-2680
Light Efficient Design – 188 S. Northwest Highway, Cary IL 60013, 847-380-3540
Monmouth Lighting Corp – 7A Marlen Dr, Hamilton NJ 08691, 609-586-7900
SensorSwitch (An Acuity Brand) – 900 Northrup Rd Ste A, Wallingford CT 06492, 203-265-2842

Scope of Work

Appendix 9: Lighting Line by Line presents a detailed breakdown of all lighting upgrades by facility and area. A summary of retrofits is provided in *Table 3-1a.2*. Equipment selections are preliminary and may be substituted with City-approved equal.

Table 3-1a.2. Interior Lighting New/Retrofitted Fixture and Controls Quantities

Facility	Interior Fixtures Upgraded to LED	New Lighting Controls
AQUAPLEX CENTER	371	1
CEMETERY	28	3
CINDER LAKE LANDFILL	125	4
CITY HALL	994	114
CITY WAREHOUSE	39	-
COCONINO WAREHOUSE	47	-
FIRE STATION #1	124	4
FIRE STATION #10 (OLD AIRPORT OPS BUILDING)	72	1
FIRE STATION #2	141	2
FIRE STATION #3	113	7
FIRE STATION #4	86	4
FIRE STATION #5	118	4
FIRE STATION #6	154	1
HAL JENSEN RECREATION CENTER	168	16
J. LIVELY ICE RINK / MCPHERSON	203	1
JOE C. MONTOYA COMMUNITY AND SENIOR CENTER	174	6
LAKE MARY WATER TREATMENT PLANT	258	5
LIBRARY MAIN	453	5
MILLIGAN HOUSE	19	6
MURDOCH CENTER	39	3
NACET INCUBATOR	163	33

Facility	Interior Fixtures Upgraded to LED	New Lighting Controls
PUBLIC WORKS / SUSTAINABILITY	131	9
PULLIAM AIRPORT	415	7
RIO DE FLAG WASTEWATER PLANT	113	-
THEATRIKOS BUILDING	83	1
THORPE SHOP	71	1
USGS #5	74	10
USGS #6	316	60
UTILITIES SHOP	143	7
VISITOR'S CENTER	61	-
WILDCAT HILL WASTEWATER PLANT	545	4
WOODY MOUNTAIN CLARIFIER	1	-
BUSHMASTER PARK	3	-
CONTINENTAL PARK	7	-
GUADALUPE PARK	4	-
JOEL MONTALVO PARK	5	-
THORPE PARK	45	-
TOTAL	**5,906**	**319**

Interface with Existing Equipment

The proposed lighting equipment will interface with existing facility electrical circuits in the same manner as the existing lighting equipment. There will be no changes to existing major electrical equipment, such as electrical and lighting panels and wiring/conduit runs to the new lighting fixtures.

The proposed high-efficiency light fixtures will produce less heat than the existing lighting systems. This will reduce the cooling load in the summer, but slightly increase the heating load in the winter.

Implementation Clarifications

The lighting installation is scheduled to take place during normal daytime weekday working hours. NORESCO will work with the City's facility personnel to reach a mutual agreement regarding scheduling and logistics and to coordinate access and minimize disruptions. The following items are excluded from the scope of work:

- Any hazardous waste abatement or remediation not explicitly defined in the scope of this agreement.
- Replacement of existing lenses for existing lighting fixtures.
- Replacement of existing wiring which is found to be defective during the installation process.
- Correction of ground faults that are identified during the installation and testing process.
- Replacement of existing conduit that is found to be defective during the installation process.
- Relocation of existing lighting fixtures to accommodate requests by the City.
- Correction to any existing code violation identified during implementation.
- Relocation of any furniture or other items is not included. This will be the responsibility of the City.
- Attic stock/spare parts.

- Lighting design submittals will consist of the lighting line-by-line and product submittals. Additional electrical design such as reflected ceiling plans and path of egress design are not required or included for this measure.

Savings Analysis

The improvements included in this ECM will reduce electric demand and consumption of the interior lighting systems by over 50 percent. NORESCO calculated these reductions using line-by-line spreadsheet models with a specific retrofit design selected for each major existing fixture type. Inputs to the calculations include:

- Baseline fixture wattages based on field measurements taken during the IGA, as described in *Section 7. Measurement and Verification Plan*.
- Post-retrofit fixture wattages based on manufacturer ratings.
- Baseline operating hours based on observed operation and discussions with City staff, as documented in *Appendix 4: Savings Calculations*.
- Post-retrofit operating hours based on reductions due to the occupancy controls.

We also calculated the interactive effects between the proposed interior lighting retrofits and buildings' heating, ventilation, and air conditioning (HVAC) systems. The lighting upgrades included in this ECM will reduce the amount of heat added to interior spaces, which will lead to a decrease in required cooling energy and an increase in heating energy, dependent on HVAC system type and operation. We calculated these interactions using established geographical cooling and heating interaction factors.

In addition to energy savings, we have included operations and maintenance (O&M) material savings in this ECM since the installation of new long-life LED lighting will reduce the frequency of lamp and ballast replacements. The City will also realize a reduction in labor hours required to maintain the lighting systems. However, we have not included any labor cost savings, as the labor resources will most likely be reallocated to other tasks.

We calculated GHG emissions based on the net emissions from the electricity saved and the additional natural gas consumed. Emissions factors were used for electricity and natural gas from the environmental protection agency's Emissions & Generation Resource Integrated Database (eGRID).

Operational Changes

Operations and maintenance costs and workload associated with the lighting systems at City facilities will be reduced due to the replacement of the lamps, ballasts, and fixtures with new equipment that is rated for up to 100,000 hours of operation.

ECM 1B: EXTERIOR LED

Measure Overview

NORESCO will upgrade exterior lighting systems with new energy efficient LED technology, generating energy savings, improving safety and security, and reducing maintenance costs. To minimize light pollution, we will install new amber-color exterior LED fixtures and retrofit existing fixtures with amber-colored lamps where possible. We will install new fixtures designed to minimize or eliminate the upward projection of light.

This measure will provide improvements to the exterior lighting performance and create excess energy savings to help pay for longer payback ECMs and provide cash flow back to the City.

Existing Conditions

NORESCO engineers performed an extensive survey of the existing exterior lighting fixtures at City facilities. We noted fixture condition and interviewed maintenance staff regarding recent, current, and likely future projects that may affect the scope of this ECM.

Typical Outdoor lighting

The predominant fixture types we found during our survey were low pressure sodium (LPS) pole mounted and shoe box fixtures, high pressure sodium (HPS) wall packs, shoe box and cobrahead fixtures, and compact fluorescent (CFL) wall packs, post tops, and recessed fixtures. Existing LED exterior fixtures were predominantly bollards, post tops, cylinders, downlights, and canopy fixtures. Additionally, we found several fixture types that contain metal halide, halogen, and incandescent lamps of various wattages. Approximately 33 percent of the exterior fixtures surveyed have already been upgraded to LED, including screw-in lamps, retrofit kits and new fixtures. The exterior fixtures are controlled by fixture mounted photocells, master photocells or time clocks. Details of our site surveys are included in *Appendix 9: Lighting Line-by-Line.*



Figure 3-1b.1. Existing wall pack fixtures with 2-26W compact fluorescent lamps will be replaced with new LED wall packs.

Proposed Upgrades

LEDs have emerged as the most energy-efficient and rapidly growing lighting technology in today's marketplace. Solid-state LED luminaires, retrofit kits, linear LED lamps, and screw-in and pin-based LED lamps offer many advantages over fluorescent, incandescent and HID technologies including higher efficiency, longer life expectancy, better color rendering, reduced maintenance, and significantly less hazardous material content.

NORESCO will retrofit or replace over 230 existing exterior building-mounted and pole-mounted fixtures with new LED technology. LED technology provides instant-on switching, low noise, and higher color rendering. These fixtures are much more energy efficient and in most cases are rated for 100,000 hours—four to five times the life rating of the existing lamps. This will reduce the frequency of lamp changes, thereby reducing annual maintenance costs. We will not retrofit or replace existing exterior LED fixtures as a part of this ECM.

To satisfy the City's dark sky requirements, we will install exterior LEDs with amber color where possible. For fixtures that are decorative and unavailable in amber LED color, we will provide retrofits with amber LED chip on board (COB) lamps. These COB retrofits will match retrofits already performed by the City. If new fixtures are needed to match existing building aesthetics, but they are not available in amber LED, we will install fixtures with 2700K or 3000K color temperature. We will install wall packs with full cutoff design, and other fixtures designed to minimize or eliminate the upward projection of light.

As part of this measure, NORESCO will:

- Replace existing HID fixtures with new amber LED fixtures.
- Retrofit existing HID fixtures with new amber LED COB lamps, if a new amber LED fixture is not available.
- Replace existing incandescent and compact fluorescent fixtures with new amber LED fixtures.
- Retrofit existing incandescent and compact fluorescent fixtures with new amber LED COB lamps or new screw-in LED lamps or pin-based LED lamps with integrated drivers, if new amber LED fixtures are not available.



Figure 3-1b.2. New wall packs will be amber in color and have full cutoff lighting distribution pattern.

- Retrofit existing linear fluorescent fixtures with new Type A TLED lamps and electronic ballasts with integrated drivers.

In some locations, the City has installed new LED fixtures to replace burnt out fixtures, resulting in a mixture of new LED fixtures and older non-LED fixtures. NORESCO will install new LED fixtures amongst the existing LED fixtures, possibly creating confusion about which fixtures are under NORESCO warranty and which were already in place and are no longer under warranty. To help avoid confusion, NORESCO will place NORESCO labels on new LED fixtures we install so City staff knows which fixtures are covered under NORESCO's workmanship warranty period.

New Equipment

See the detailed scope of work section and *Appendix 9: Lighting Line-by-Line* for the individual upgrades at each facility. We will install lighting products primarily from the lighting manufacturers listed in *Table 3-1b.1*. We selected these manufacturers because they are large and well-established and can ensure the availability of spare parts for future maintenance and warranty support. Please see *Appendix 1: Cutsheets* for additional information on the specific products we will install as a part of this ECM.

Table 3-1b.1. Lighting Manufacturers Specified

Major Lighting Manufacturers Specified
Lithonia – 1170 Peachtree Street, NE Suite 2300 Atlanta GA 30309-7676, 800-922-9641
Cooper – 1121 Highway, 74 South Peachtree City GA 30269, 800-553-3879
QSSI – 12802 Commodity Place Tampa FL 33626, 813-855-9416
Light Efficient Design - 188 S. Northwest Highway, Cary IL 60013, 847-380-3540

Major Lighting Manufacturers Specified
Green Creative - 519 Codisco Way Sanford Florida 32881, 844-455-8687

Scope of Work

Appendix 9: Lighting Line by Line presents a detailed breakdown of all lighting upgrades by facility and area. A summary of retrofits is provided in *Table 3-1b.2*. Equipment selections are preliminary and may be substituted with approved equal.

Table 3-1b.2. Exterior Lighting New/Retrofitted Fixture Quantities

Facility	Upgraded Exterior Fixtures
AQUAPLEX CENTER	27
FIRE STATION #1	18
FIRE STATION #3	12
HAL JENSEN RECREATION CENTER	1
J. LIVELY ICE RINK / MCPHERSON	27
LIBRARY MAIN	9
MILLIGAN HOUSE	2
THORPE SHOP	5
USGS #5	1
USGS #6	28
VISITOR'S CENTER	20
BUSHMASTER PARK	6
CHESHIRE PARK	2
CONTINENTAL PARK	26
FOX GLEN PARK	34
JOEL MONTALVO PARK	2
OLD TOWN SPRINGS PARK	2
PLAZA VIEJO PARK	1
PONDEROSA PARK	8
WHEELER PARK	5
Total	**236**

Interface with Existing Equipment

The proposed lighting equipment will interface with existing facility electrical circuits in the same manner as the existing lighting equipment. There will be no changes to the existing major electrical equipment, such as electrical and lighting panels and wiring/conduit runs to the new lighting fixtures.

Implementation Clarifications

The lighting installation is scheduled to take place during normal daytime weekday working hours. NORESCO will work with the City's facility personnel to reach a mutual agreement regarding scheduling and logistics and to coordinate access and minimize disruptions. The following items are **excluded** from the scope of work:

- Any hazardous waste abatement or remediation not explicitly defined in the scope of this agreement.
- Replacement of existing lenses for existing lighting fixtures.
- Replacement of existing wiring which is found to be defective during the installation process.
- Correction of ground faults on exterior pole lighting that are identified during the installation and testing process.
- Replacement of existing conduit that is found to be defective during the installation process.
- Relocation of existing lighting fixtures to accommodate requests by the City.
- Correction to any existing code violation identified during implementation.
- Attic stock/spare parts.
- Lighting design submittals will consist of the lighting line-by-line and product submittals. Additional electrical design such as reflected ceiling plans and path of egress design are not required or included for this measure.

Savings Analysis

The above improvements will reduce the electric demand and energy consumption of the exterior lighting systems by approximately 53 percent. NORESCO calculated these reductions using line-by-line spreadsheet models with specific designs selected for each major existing fixture type. Inputs to the calculations include:

- Baseline fixture wattages based on field measurements taken during the IGA as described in *Section 7. Measurement and Verification Plan*.
- Post-retrofit fixture wattages based on manufacturer ratings.
- Baseline operating hours based on observed operation and discussions with City staff, as documented in *Appendix 4: Savings Calculations*.
- Post-retrofit operating hours based on reductions due to the motion sensors installed.

In addition to energy savings, we have included O&M savings in this ECM since the installation of new long-life LED lighting will reduce the frequency of lamp replacements. The City will also realize a reduction in labor hours required to maintain the lighting systems. However, we have not included any labor cost savings, as the labor resources will most likely be reallocated to other tasks.

Operational Changes

O&M costs and workload associated with the lighting systems at the facilities will be reduced due to the replacement of the lamps and fixtures with new equipment that is rated for up to 100,000 hours of operation.

ECM 2: MECHANICAL UPGRADES INTRODUCTION

NORESCO conducted a detailed survey of each City facility included in *Section 2. Facility Profile*, including HVAC, HVAC controls, pool, and electrical systems in order to provide the City a list of potential energy efficiency and capital upgrades that align with the City's objectives and facility conditions.

We toured each facility's mechanical systems and documented existing equipment including size, efficiency, and condition information. A full inventory of natural gas equipment is included in *Section 5.3. Building Electrification.*

We held discussions with City Maintenance Personnel to better understand the operation of these systems, the maintenance concerns, and any issues that need to be addressed.

We deployed data loggers on HVAC and mechanical systems, and reviewed programming on the Delta Controls energy management system (EMS) front-end, to understand how the City operates these systems. The Delta Controls EMS is used to control much of the HVAC equipment at larger City facilities. It is a web-based system, accessible by City Maintenance Staff from computers at City Hall, Public Works, and remotely.

Based on the information we gathered with the City's help, we have developed the following HVAC, mechanical, and controls upgrades as a part of this IGA. These measures include those that will provide the City with substantial energy cost savings, at a relatively low implementation cost, and those that leverage the savings generated by other measures to help the City work towards their goal of electrification, while replacing aging gas boilers and gas-fired package units and furnaces. The infrastructure improvements we have included will take care of some of the Facility Department's most pressing deferred maintenance projects, replacing equipment at or near the end of its useful life, or that has become a maintenance issue for the City.

The HVAC upgrades included in this project's scope of work are shown in *Table 3-2.1.*

Table 3-2.1. Measures included in IGA ECM-2: Mechanical Upgrades

ECM	Description	Locations
ECM-2a	Energy Management System Upgrades	City Hall, Main Library, NACET Accelerator, Public Works, USGS #6
ECM-2b	Packaged Heat Pumps	Joe C. Montoya, Lake Mary WTP, Pulliam Airport, Sustainability Office
ECM-2c	Electric Boilers	Main Library

Certain mechanical upgrades we evaluated were not included in the Phase 1 project due to factors described in the following table. The Phase 2 water meter project is expected to generate additional revenue for the City, and this could be used to fund additional mechanical upgrades, as a part of Phase 2. The following list of measures were evaluated but not fully developed as noted.

Table 3-2.2. Measures evaluated but not Included in Phase 1, ECM-2: Mechanical Upgrades

Description	Notes
Electric Boilers at Aquaplex Center	• Replacement of the existing gas boilers at the Aquaplex with electric boilers would reduce the City's natural gas use while replacing aging boilers that have begun to create maintenance issues. • Due to the size of the boilers required to meet space, domestic water, and pool heating loads, significant additional electric infrastructure would be required, including a new 480/277V service from APS of at least 2,200A. The time required for the engineering of this electrical upgrade, and the lead time for APS to obtain the required utility transformer, means that this measure will not fit into the same timeline as the rest of the proposed project. We recommend further evaluation of this measure in future phases of this project, as lead times to obtain the required equipment become more manageable. • Another factor to consider in the evaluation of this measure is the increase in utility budget expected from switching from natural gas to electric boilers. Annual natural gas savings could be as high as $50,000, but annual electric costs could increase by as much as $200,000. Annual GHG reduction would be approximately 310 metric tons of CO_2 equivalent, assuming the electricity serving the new boilers comes from a net-zero renewable source.
Pool Pump Variable Frequency Drives (VFDs)	• Pool pump VFDs reduce the electric use of pool filtration pumps by matching pump speed to filter loading and reducing speed during unoccupied times. • The VFD installed on the main filtration pump at the Aquaplex is currently not being used due to aging filter controls. We evaluated the replacement of the existing filter controller and the installation of a new VFD, and pump controller specifically made for pool pumps. Due to the cost of installation and the potential for energy cost savings, we determined that this technology was not viable as a part of this project.
Pool Chlorine Generation	• On-site chlorine generation systems generate chlorine from salt using electricity. They can significantly reduce pool chemical costs and eliminate the need to store large amounts of chlorine. • Based on the prices that the City pays for chlorine, the cost of installation, and the associated additional O&M cost and burden, we determined that this technology was not viable as a part of this project.
Heat Pump for Pool Heating at Aquaplex Center	• An air-to-water electric heat pump for pool heating at the Aquaplex would significantly reduce the load on the existing boilers, and the associated natural gas use. • The air-to-water heat pumps available for this application are not designed to operate below 40°F. Due to the significant number of annual hours Flagstaff sees below this temperature, the existing gas boilers would still be required to heat the pool as much as 50 percent of the year. We recommend not pursuing this measure, and instead prioritizing boiler replacement in Phase 2 of this project.

The City's remaining natural gas consuming equipment has been inventoried and evaluated for future electrification. Please refer to *Section 5.3. Building Electrification*.

ECM 2A: ENERGY MANAGEMENT SYSTEM UPGRADES

Measure Overview

NORESCO will upgrade the City's existing Delta Controls energy management system (EMS) with a new enteliWEB graphics software package and will make targeted updates to HVAC controls programming at City Hall, Main Library, NACET Accelerator, Public Works, and USGS Building #6 generating significant electric and natural gas savings, at a low implementation cost. The software and graphics upgrade will include a new 10,000-point enteliWEB license. We will assist in configuring the new software on a new server provided by the City. (Note: the new software cannot be installed on the current server housing the ORCAview Software). We will provide new graphical floor plans and new graphics for the City facilities served by the existing Delta System. The programming updates will include correcting schedules to reduce equipment runtime; resetting hot water temperatures to increase the efficiency of condensing boilers during mild weather and adjusting supply air temperature setpoints and reset strategies to reduce simultaneous heating and cooling which will enable economizers to utilize cool outside air to cool spaces when possible. The programming changes will reduce the City's annual utility costs and help fund additional capital infrastructure improvements included in this project.

Existing Conditions

The City's current Delta Controls EMS provides monitoring and control of the HVAC systems at a number of the City's larger facilities. While the system is functional, aging over the years caused some of its programming to be overridden, leaving room for upgrades that will improve equipment operation, occupant comfort, and reduce energy consumption.

City Hall

Five variable air volume (VAV) air handling units (AHUs) provide heating, cooling, and ventilation to City Hall. The AHUs serve VAV boxes throughout the building, some cooling-only and some with hot water reheat. Additionally, hot water radiant ceiling panels provide heat to perimeter zones.

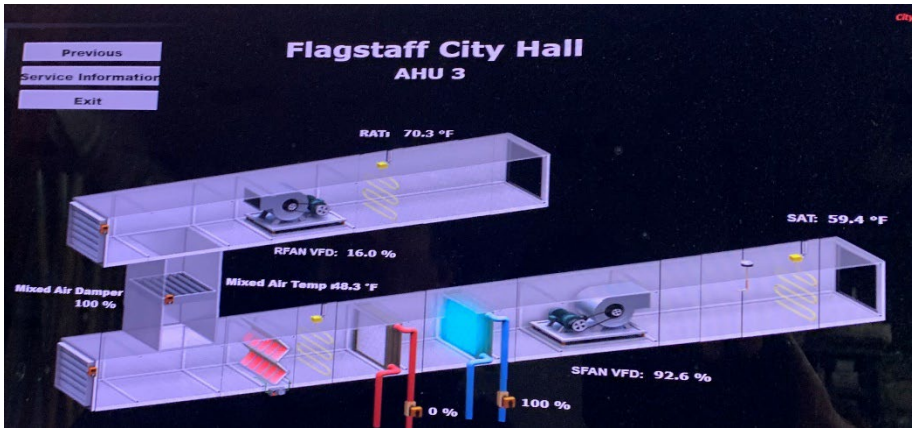


Figure 3-2a.1. Existing Delta Controls graphics will be updated with new enteliWEB software.

We observed an occupancy schedule in the EMS, which places AHUs at City Hall in occupied mode from 5am – 7pm on weekdays, with the exception of Tuesday, when HVAC equipment is scheduled from 5am – 9pm, because of City Council meetings. During unoccupied hours, AHUs turn off, but are allowed to cycle to maintain relaxed heating and cooling setpoint temperatures. We also performed data logging, which confirmed that AHUs 3 and 4, serving the first floor of the main building, are controlled by this schedule. We were not able to place data loggers on AHUs 1 and 2, which serve the second floor, but it is our understanding and assumption that they also operate based on the same schedule. Our data logging showed that AHU-5, which serves the Council Chambers, is not controlled by the building occupancy schedule, and runs 24/7.

Based on discussions with Facility Maintenance Staff and our observations of the EMS, during cold winter months AHUs 1 – 5 are placed "in hand" and run 24/7, because they are not able to recover and warm the building up if it is allowed to cool down to the setback heating temperature of 65°F. We observed supply air temperatures (SATs) set manually between 58 and 65°F. These SAT setpoints do not allow the building to recover from setback heating temperature setpoints, since core zones of City Hall do not have reheat coils or radiant ceiling panels to provide additional heating.

Main Library

The Main Library is primarily conditioned by a single VAV AHU with direct expansion (DX) cooling. Two newer 40-ton carrier air-cooled condensing units provide cooling to the DX coils. This VAV AHU serves parallel fan-powered terminal units (FTUs) with hot-water reheat coils. A single 1,700-MBH boiler, original to the building, provides hot water for the reheat coils, as well as to a few unit heaters and cabinet heaters in entry ways and stairwells. In cooling mode, the fan powered boxes' fans remain off, and their dampers modulate to control the amount of cool air from the AHU that is delivered to the space to maintain the cooling setpoint. The boxes' fans only operate in heating mode and pull air straight from the return air plenum, through the reheat coil. This air is mixed with air from the AHU to provide ventilation air and heat the space. The reheat coils' valves control the amount of hot water flowing through the reheat coils, to maintain the zones' heating setpoints.

During our site visits, we observed an HVAC schedule in the EMS that places the AHU in occupied mode based on the following schedule: Monday: 5am – 9pm, Tuesday – Thursday: 6am – 9pm, Friday: 6am – 7pm, Saturday: 7am – 7pm, Sunday: 7am – 6pm. Based on discussions with Facility Maintenance Staff, the AHU is placed "in hand" during cold winter months and runs 24/7 due to issues with the building recovering from setback heating temperature setpoints on cold mornings. Our data logging showed that as of April 5th, the AHU was still in hand, running 24/7. We assume that it was placed back in "auto" mode shortly after this, as spring brought warmer temperatures. During our site visits, the AHU SAT was being controlled manually via the EMS. The observed setpoint was 63°F during our December site visit and 65°F during our April site visit. Based on the calibration of our energy model to historical gas and electric utility data, we assumed that this setpoint varies from 55 to 70°F, based on weather conditions.

NACET Accelerator

The NACET Accelerator building is owned and operated by the City and leased to various tenants that use it as office and laboratory space. The building is primarily conditioned by four-pipe fan coil units (FCUs). Which receive chilled water (CHW) from two 30-ton Daikin chillers, heating hot water (HHW) from two 1050-MBH PK Mach condensing boilers, and outdoor ventilation air from a fixed plate energy recovery ventilator (ERV), located in the same mechanical room as the boilers. The FCUs are scheduled to operate in occupied mode based on tenant requirements, generally 8am – 5pm, Monday – Friday. The ERV runs 24/7, as it also provides makeup outdoor air for fume hoods in the laboratories, which must operate 24/7.

The existing PK Mach condensing boilers are very efficient but achieve their highest efficiencies at lower return water temperatures. Currently the HHW supply setpoint is 180°F at all times, despite the building being designed for a HHW supply temperature of 140°F. Based on current operation, and manufacturer's data, the boilers are likely achieving approximately 90 percent combustion efficiency. These boilers can achieve combustion efficiencies of over 98 percent when return water temperature is below 90°F.

Public Works Administration – Building #6

The administration building at the City's new Public Works facility consists primarily of office space and is conditioned by a single VAV AHU that serves VAV boxes with HHW reheat coils throughout the building. A

single 30-ton Carrier variable-speed scroll chiller provides CHW to the AHU, and two Lochinvar 400-MBH condensing boilers provide HHW to the VAV boxes as well as the AHU's central heating coil. An ERV recovers heat from the relief air and uses it to pre-condition incoming outside air. During our site visits we did not observe the ERV operating. The AHU is scheduled via the EMS to operate in occupied mode from 3am – 6pm, Monday – Friday. However, based on discussions with Facility Maintenance Staff and our observations of the EMS, the AHU operates "in hand" during the cold winter months, due to concerns that the building will not be able to recover from the setback heating temperature setpoints on cold mornings. Based on discussions and data logging of similar units, we assumed the AHU operates in hand from December 1 through March 31.

The return air damper, OA damper (from the ERV), and the OA (economizer) damper do not appear to be operating correctly. We observed the economizer damper open when the building was in heating mode and observed the economizer damper closed with the chiller running and chilled water coil operating, when outdoor air conditions were ideal for economizing. Significant opportunity exists for the recommissioning of the ERV and the AHU's return air, ERV, and economizer dampers.

We observed that the HHW setpoint temperature was set at 180°F via the EMS. While the existing condensing boilers are very efficient, they achieve their highest efficiencies (98 percent or higher) at lower return water temperatures. Based on current operation, and manufacturer's data, the boilers are likely achieving 89-90 percent combustion efficiency.

USGS #6

The City owns and operates the USGS campus, and leases the facilities to the United States Geological Survey. Building 6 serves primarily as office space and is conditioned by two VAV AHUs which serve VAV boxes with HHW reheat throughout the building. AHU-1 serves the perimeter zones, and AHU-2 serves the core zones. Both AHUs have DX cooling coils, each served by its own air-cooled condensing unit. Additionally hot water fin tube radiators provide heat along the building's exterior walls. Three DX computer room air conditioners (one serving as backup) cool the building's server rooms. HHW for fin-tube radiators and reheat coils is provided by two 900-MBH Raypack boilers.

AHUs 1 and 2 are scheduled via the EMS to operate in occupied mode from 4am – 9pm, Monday – Friday; and 6am – 9pm, Saturday and Sunday. However, based on discussions with Facility Maintenance Staff and our observations of the EMS, the AHU operates "in hand" during the cold winter months, due to concerns that the building will not be able to recover from the setback heating temperature setpoints on cold mornings. Based on our data logging, the AHUs operated in hand until March 24, at which point they were returned to "auto" and ran based on the EMS schedule.

AHUs 1 and 2 are equipped with airside economizers to provide "free cooling" when outdoor air temperatures are cool, but the building requires cooling due to internal and solar loads. Based on our observations of the units and the EMS, the economizers are not being used, and mechanical cooling from the air-cooled condensing units is required, even when cool outdoor air could be utilized.

Proposed Upgrades

NORESCO will install a new 10,000-point enteliWEB license (version 4.12 or newer) and assist in configuring the associated software on a new City-provided Windows-based server. We will configure the City's web server for the new enteliWEB software and update new graphics for the buildings served by the existing Delta system. As mentioned above the new software cannot be installed on the current server housing the ORCAview Software. Please refer to *Appendix 8: Deployment Plan Guide for enteliWEB* for details.

Using the updated Delta Controls enteliWEB EMS, we will update programming for HVAC systems serving City Hall, Main Library, NACET Accelerator, Public Works, and USGS Building #6. These updates will

significantly reduce electric energy and natural gas consumption of the associated equipment, while maintaining or improving occupant comfort. Updated programming will include:

- Optimum Start/Stop: We will program the EMS to look at space temperatures and outside air temperatures when considering when to initiate morning warm-up cycles. This strategy will ensure that occupied space temperatures are achieved by the time building occupants arrive at the building in the morning, while also minimizing unnecessary HVAC runtime.
- Nighttime Outdoor Air Control: We will program outdoor air dampers to remain fully closed during night cycling and during morning warm up, as opposed to remaining at minimum positions required for ventilation air. This strategy will eliminate the unnecessary conditioning of outdoor air when the building is not occupied and will also help HVAC systems recover during morning warm-up, since they will not have to heat cold outdoor air, until the building becomes occupied.
- Supply Air Temperature Reset: We will implement SAT reset strategies, based on either outdoor air temperature or zone cooling and heating calls, to minimize simultaneous heating and cooling, and to assist in morning warm-up. While central AHUs must provide cool air for space cooling, providing air that is too cold for the conditions leads to unnecessary reheating at VAV boxes, and over-cooling in core zones that do not have reheat coils.
- Economizer Control: We will restore and correct economizer programming to utilize cool outdoor air for cooling when appropriate. When the outdoor air temperature is less than the return air temperature, outdoor air will be used to meet the supply air temperature, instead of mechanical cooling from chilled water or DX coils. At times the economizer and mechanical cooling may be used simultaneously. Economizer dampers will modulate to meet SAT temperatures and will be locked up below 45°F (adjustable) outdoor air temperature.
- Hot Water Reset: we will program condensing boilers and building hot water loops to reduce (reset) hot water supply temperatures based on outdoor air temperature or heating coil hot water valve positions. Condensing boilers require relatively low return water temperature to achieve maximum condensing and efficiency. Some condensing boilers may achieve up to 99% efficiency under low load conditions, when return water temperature is as low as 80°F. Additionally, resetting hot water temperature minimizes distribution losses in the how water distribution system.

Table 3-2a.1 identifies the facilities, pieces of equipment, and updated control strategies included in this ECM. For more details, refer to *Appendix 7: Standards of Service*.

Table 3-2a.1. HVAC Equipment and Updated Sequences Included in this ECM

Facility	Equipment	Serves	Update/Restore HVAC Scheduling and Optimum Stop/Start	Nighttime Outdoor Air Control	Supply Air Temperature Reset	Economizer Control	Hot Water Reset
City Hall	AHU-1	2nd Floor West	▪	▪	▪		
City Hall	AHU-2	2nd Floor East	▪	▪	▪		
City Hall	AHU-3	1st Floor West	▪	▪	▪		
City Hall	AHU-4	1st Floor East	▪	▪	▪		

Facility	Equipment	Serves	Update/Restore HVAC Scheduling and Optimum Stop/Start	Nighttime Outdoor Air Control	Supply Air Temperature Reset	Economizer Control	Hot Water Reset
City Hall	AHU-5	Council Chambers	▪	▪	▪		
Library Main	AHU-1	Building	▪	▪	▪		
NACET Accelerator	Boilers 1, 2	Building HHW Loop					▪
Public Works	AHU-1	Building 6 (Admin)	▪	▪		▪	
Public Works	Boilers 1, 2	Building 6 HHW Loop					▪
USGS #6	AHU-1	Perimeter Zones	▪	▪		▪	
USGS #6	AHU-2	Core Zones	▪	▪		▪	

New Equipment

NORESCO has not included the replacement of any equipment as a part of this ECM. We have included an EMS end device deficiency allowance of $5,000, which will be used to replace failed end devices that are discovered during the implementation of the proposed programming updates. Please refer to *Section 4.1 Construction Process* for further description of this allowance.

Scope of Work

Our scope of work for this ECM will include the following:

- Install a new 10,000-point enteliWEB license and configure software on windows-based service provided by the City
- Assist the City with the new web server configuration
- Provide new graphical floorplans and updated unit graphics for the following buildings:
    - Aquaplex Center
    - City Hall
    - Main Library
    - J. Lively Ice Rink
    - NACET Accelerator
    - USGS #3
    - USGS #6
    - Public Works
    - Pulliam Airport

- Implement energy savings controls strategies as identified in *Table 3-2a.1* and *Appendix 7: Standards of Service.*

Interface with Existing Equipment

Affected HVAC equipment and associated controls components will remain as a part of this ECM. Programming adjustments will take place using the existing updated EMS.

Implementation Clarifications

NORESCO and the facility personnel will reach a mutual agreement regarding scheduling and logistics. NORESCO will work closely with the City's facility staff to coordinate access and minimize disruptions. The following items are **excluded** from the scope of work:

- New server provided by the City. The new software cannot be installed on the current server housing the ORCAview Software). Hardware and Software requirements for the new server are listed in the Delta Controls enteliWEB v4.12 Deployment and Planning Guide, Edition 1.0 and included as *Appendix 8: Deployment Plan Guide for enteliWEB.*
- Any hazardous waste abatement or remediation
- Replacement of existing wiring or conduit that is found to be defective
- Existing controls equipment, control boards or end devices found to be inoperable
- Existing end devices such as heating/cooling hydronic control values, mechanical actuators, and dampers, temperature sensors etc. are assumed to be functional; repair or replacement of these devices is excluded
- Correction of any existing code violation identified during the implementation

Savings Analysis

The programming updates included in this ECM will reduce fan energy consumption as well as electric energy consumption associated with cooling and natural gas consumption associated with heating. Cooling and heating savings will be generated by reduced runtimes and a reduced simultaneous heating and cooling associated with VAV reheat systems.

NORESCO calculated the energy savings for this measure using a combination of eQUEST building simulations and bin-temperature spreadsheet models. We surveyed City facilities, as well as engineering drawings and held discussions with facility staff that maintain and operate the HVAC equipment. Additionally, we reviewed programming on the EMS front-end, and deployed motor loggers to record fan runtimes. A summary of this data can be found in *Appendix 5: Baseline Measurements.* The data we collected was used to generate baseline eQUEST and bin-temperature spreadsheet models, which we reconciled against historical electric and natural gas utility data provided by the City. The model inputs were then changed to reflect the programming changes described above and calculate the savings. The reduction in heat load from the proposed lighting improvements were calculated in advance of modeling the controls programming updates, to account for the ECMs' interactive effects and to avoid overstating savings. The eQUEST model inputs and results can be found in *Appendix 4: Savings Calculations.*

Operational Changes

The proposed controls programming upgrades will result in reduced energy consumption associated with heating, cooling, and ventilating the affected facilities. O&M of the affected HVAC and controls systems will not change significantly. Decreased fan runtimes, and less cycling of air-conditioning compressors will increase equipment life and reduce maintenance burden.

ECM 2B: PACKAGED HEAT PUMPS

Measure Overview

NORESCO will help the City work towards its electrification goals with the turn-key replacement of aging gas-fired package units and furnaces with high-efficiency packaged electric heat pumps at Joe C. Montoya Community and Senior Center, Lake Mary Water Treatment Plant, Pulliam Airport, and the Sustainability Office. The gas-fired equipment included in this ECM are at or near the end of their useful lives and due for replacement. Replacing them with new high-efficiency heat pumps will significantly reduce, or in some cases eliminate, each facility's gas use, while in many cases improving occupant comfort and reducing electric demand and consumption associated with space cooling.

The new heat pumps will use non-ozone-depleting R-410a refrigerant, and will be equipped with electric resistance back-up heat, for use in extreme cold temperatures. We surveyed existing building electrical infrastructure and loads and have included in our scopes of work the necessary electrical upgrades required to convert from gas to electric heat pump heating, which in many cases includes new electrical service from APS.

Existing Conditions

NORESCO performed detailed surveys of the HVAC systems at City facilities. Heating in City facilities is primarily provided by natural gas equipment. While some larger buildings have centralized heating hot water loops, served by natural gas boilers, many facilities are heated by smaller unitary pieces of equipment such as gas-fired package units and furnaces. The age, condition, and efficiency of these pieces of equipment varies significantly, and some have become maintenance issues for facilities personnel. To support the City's electrification goals, and address maintenance headaches, we have focused the scope of this ECM on older pieces of equipment at or near the end of their useful life. *Table 3-2b.1* shows the pieces of equipment to be replaced as a part of this ECM

Joe C. Montoya Community and Senior Center

Joe C. Montoya Community and Senior Center is conditioned primarily by five gas-fired package units, located on the roof. Four of these units were installed between 2002 and 2008 and are at or nearing the end of their useful life. One of the units was installed in 2019. Building occupants expressed specific issues with the unit serving the fitness center, and that it is often unable to heat the space, possibly due to a malfunctioning economizer.

The kitchen area is not served by these five package units. There is a small ceiling-hung gas-fired unit heater in the kitchen, that is not functional. Kitchen staff currently uses an electric space heater during cold weather. The main kitchen exhaust hood fans typically operate when



Figure 3-2b.1. Many natural gas package units serving City facilities, such as this one at Joe C. Montoya Community and Senior Center have reached the end of their useful life and are excellent candidates for replacement.

the kitchen is in use, from 7:30 am – 2:30 pm, Monday – Friday. An evaporative cooler provides cooled makeup air for the kitchen hoods in the summer, but the unconditioned makeup air unit, intended to provide makeup air for the hoods when cooling is not needed and is not typically used. This means that during the heating season, the kitchen hood exhaust fans are creating significant negative pressure in the kitchen, pulling conditioned air from the rest of the building, and exhausting it through the kitchen hoods, increasing the overall heating load of the building.

Lake Mary Water Treatment Plant

The main Control Building at the Lake Mary Water Treatment Plant houses the main control room, offices, and lab space. The building is conditioned by a number of systems including newer split heat pumps, gas furnaces with split DX cooling, and gas-fired package units. Most of these systems are relatively new and in good condition. The exception to this is the gas-fired package unit serving the back lab. This 5-ton Tempstar package unit was manufactured in 1996 and has reached the end of its useful life. The unit is installed on-grade outside the exterior door serving the lab, and building occupants complain about a natural gas smell when the unit is in heating mode.

Pulliam Airport

The main terminal building of the Pulliam airport is conditioned by a combination of newer condensing furnaces with split DX cooling and gas-fired package units installed on the first-floor rooftop. The units are generally in good working order. The furnaces and their associated cooling components appear to have been replaced as needed, mostly in the last 10 years. While in decent condition, the two gas-fired package units serving the passenger holding area are original to the 2008 building expansion and are nearing the end of their useful life.

Sustainability Office

The Sustainability Office Building, located at the old Public Works yard is conditioned by a 4-ton gas-fired package unit installed on the roof, and by a furnace with no cooling, located in the attic above the break room. The package unit was manufactured in 1998 and has reached the end of its useful life. The furnace that serves the break room and some small adjacent rooms was not functional during our site visits, resulting in cold temperatures in that portion of the building.

Table 3-2b.1. Natural Gas Equipment to be Replaced as a Part of this ECM

Designation	Description	Manufacturer	Manufacture Date
Joe C. Montoya RTU-1	5-ton Gas-fired Package Unit Located on Rooftop, Serving Multipurpose Room	Trane	2003
Joe C. Montoya RTU-2	4-ton Gas-fired Package Unit Located on Rooftop, Serving Gathering/Billiards	Trane	2019
Joe C. Montoya RTU-3	3-ton Gas-fired Package Unit Located on Rooftop, Serving Crafts/Office	Trane	2003
Joe C. Montoya RTU-4	3-ton Gas-fired Package Unit Located on Rooftop, Serving Meeting Room	Trane	2002
Joe C. Montoya RTU-5	5-ton Gas-fired Package Unit Located on Rooftop, Serving Fitness Center	Lennox	2008
Joe C. Montoya UH-1	Natural Gas Unit Heater, Ceiling-hung in Kitchen (Inoperable)	Sterling	?

Designation	Description	Manufacturer	Manufacture Date
Lake Mary PACU-1	5-ton Gas-fired Package Unit Located On-Grade, Serving Back Lab Area	Tempstar	1996
Pulliam Airport RTU-1	6-ton Gas-fired Package Unit Located on 1st Floor Rooftop, Serving Passenger Holding Area	Trane	2008
Pulliam Airport RTU-2	6-ton Gas-fired Package Unit Located on 1st Floor Rooftop, Serving Passenger Holding Area	Trane	2008
Sustainability RTU-1	4-ton Gas-fired Package Unit Located On-Grade	Lennox	1996
Sustainability F-1	Natural Gas Furnace Located in Attic, Serving Break Room (Inoperable)	?	?

Proposed Upgrades

NORESCO will furnish and install new high-efficiency packaged heat pumps to replace select gas-fired equipment nearing the end of its useful life. In most cases we will install new units in the same location as the units they are replacing and will connect to existing ductwork. The new units will use non-ozone-depleting refrigerant and will be equipped with high-efficiency scroll compressors achieving a cooling efficiency of over 15 IEER/SEER, and a heating efficiency of over 8 HSPF, minimizing electric use during both heating and cooling. New units will also be equipped with economizers for free cooling, and electric resistance backup strip heat, for heating during extreme low temperatures, or in the case of a compressor failure. Units will be furnished and installed with 7-day programmable thermostats, with the exception of the two units at the Pulliam Airport, which will be furnished with Delta Controls per *Appendix 3: Preliminary Points List.*



Figure 3-2b.2. New packaged heat pumps will provide heating and cooling with high-efficiency scroll compressors and R-410a refrigerant. They will be furnished with supplemental electric resistance heat for extreme cold conditions.

Due to the extreme cold that Flagstaff can experience in the winter, electric resistance strip heat will be required to ensure occupant comfort during peak heating periods. Because of the need for electric strip heat, the new packaged heat pumps will require larger electric service than the gas-fired units they are replacing.

Our upgrades will include the required electrical work to serve the new heat pumps, including coordination with APS in cases where a new electrical service is required from the utility.

Joe C. Montoya Community and Senior Center

NORESCO will furnish and install five new package heat pumps, as identified in *Table 3-2b.2*, in place of the existing gas-fired package units on the roof. We will connect the new units to the existing ductwork and cut and cap gas lines at the main. Additionally, we will install a new electric unit heater in place of the existing gas unit heater in the kitchen, and we will interlock the existing makeup air unit with the kitchen hood exhaust fans, minimizing the amount of conditioned air that is exhausted through the hoods.

To serve the new heat pumps, a new additional electrical service is required. We will install a new 800A 120/240V panel located on the north side of the building. We will coordinate with APS for the installation of a new utility meter and a new pad mounted transformer next to the existing APS pole and we will trench and bury new conduit and conductors from the panel to the location of the new transformer.

Lake Mary Water Treatment Plant

NORESCO will furnish and install a new packaged heat pump, as identified in *Table 3-2b.2*, on-grade in place of the existing gas-fired package unit serving the back lab.

We will run new conduit and conductors from existing electric Panel CP, located in the basement of the main control building, to serve the new electric heat pump. This panel has multiple breakers that are no longer in use and has enough spare capacity to serve the new heat pump.

Pulliam Airport

NORESCO will furnish and install two new package heat pumps, as identified in *Table 3-2b.2*, in place of the existing gas-fired package units on the roof of the passenger holding area. We will connect the new units to the existing ductwork and cut and cap gas lines at the main.

We will install a new 225A 480/277V panel to serve the new heat pumps and have developed an innovative scope to do this while minimizing the need for significant conduit, conductors, and impact to the facility. We will repurpose the existing underground conduit and conductors that serve existing 208/120V Panel 'ATA', located directly below the existing RTUs, from Panel 'MLS' in the main electric room and use them to serve a new 225A 480/277V panel (panel 'H1') from main switch board. We will install a new 75 kVA transformer, conduit, and conductors to serve panel 'ATA' from new Panel 'H1'. New Panel 'H1' will also serve the new package heat pumps, which require 480V service.

Sustainability Office

NORESCO will furnish and install a new package heat pump, as identified in *Table 3-2b.2*, on-grade west of the Sustainability Office to replace the existing gas-fired package unit located on the roof as well as the existing non-operational furnace located in the attic. We will install new ductwork from the new heat pump up the outside of the building and into the attic, where it will connect with existing branch ductwork of the two existing units. We will cut and cap existing gas lines at the main.

To serve the new heat pump a new additional electrical service is required. We will install a new 200A 120/240V panel located on the west side of the building. We will coordinate with APS for the installation of a new utility meter and a new pole-mounted transformer west of Building 3. We will install conduit and conductors through, or attached to the exterior of Building 3, from the new meter to the new panel at the Sustainability Office.

New Equipment

NORESCO will install the following new equipment, or approved equal, at the following locations.

Table 3-2b.2. Proposed Heat Pumps and Unit Heater

Designation	Description	Manufacturer	Model#	Cooling Performance	Heating Performance
Joe C. Montoya RTU-1	5-ton Packaged Heat Pump Located on Rooftop, Serving Multipurpose Room	Carrier	50GCQM06B2A3-2A4F0	16.2 SEER	8.3 HSPF
Joe C. Montoya RTU-2	4-ton Packaged Heat Pump Located on Rooftop, Serving Gathering/Billiards	Carrier	50GCQM05B2A3-2A4F0	16.2 SEER	8.3 HSPF
Joe C. Montoya RTU-3	3-ton Packaged Heat Pump Located on Rooftop, Serving Crafts/Office	Carrier	50GCQM04B2A3-2A4F0	16.2 SEER	8.3 HSPF
Joe C. Montoya RTU-4	3-ton Packaged Heat Pump Located on Rooftop, Serving Meeting Room	Carrier	50GCQM04B2A3-2A4F0	16.2 SEER	8.3 HSPF
Joe C. Montoya RTU-5	5-ton Packaged Heat Pump Located on Rooftop, Serving Fitness Center	Carrier	50GCQM06B2A3-2A4F0	16.2 SEER	8.3 HSPF
Joe C. Montoya UH-1	7.5-kW Unit Heater, Ceiling-hung in Kitchen	Modine	HER75	---	1.0 COP
Lake Mary PACU-1	5-ton Packaged Heat Pump Located On-Grade, Serving Back Lab Area	Carrier	50GCQM06F3A5-2F5F0	16.2 SEER	8.3 HSPF
Pulliam Airport RTU-1	6-ton Packaged Heat Pump Located on 1st Floor Rooftop, Serving Passenger Holding Area	Carrier	50HCQD07F2A6-2F5M0	15.6 IEER	3.4 High-temp COP 2.4 Low-Temp COP
Pulliam Airport RTU-2	6-ton Packaged Heat Pump Located on 1st Floor Rooftop, Serving Passenger Holding Area	Carrier	50HCQD07F2A6-2F5M0	15.6 IEER	3.4 High-temp COP 2.4 Low-Temp COP
Sustainability RTU-1	5-ton Packaged Heat Pump Located On-Grade	Carrier	50GCQM06B2A3-2A4F0	16.2 SEER	8.3 HSPF

Scope of Work

The scope of work associated with this ECM will include the following:

Demolition

- The City will have the option of retaining equipment and material designated to be removed as a part of this work, and will be required to provide NORESCO a list of items it wishes to salvage and retain prior to construction. We will disconnect, remove, and protect from weather, dust, and damage the equipment and material listed for salvage. The City will be responsible for collecting and transporting any salvaged parts/equipment from the associated area. If the City does not wish to retain equipment and material designated to be removed as a part of this ECM, NORESCO shall dispose of equipment and material off-site in accordance with applicable codes, laws, ordinances, and regulations.
- NORESCO will demolish equipment and materials shown in *Appendix 2: Preliminary Design Drawings.*
- NORESCO will demolish and remove existing electrical installation for existing package units, unit heaters, and furnaces listed in *Table 3-2b.2*, including the disconnect, conductors, conduit, and ancillary equipment back to the source, unless otherwise indicated in *Appendix 2: Preliminary Design Drawings.*
- NORESCO will demolish and remove existing package units and furnaces to be replaced as a part of this ECM.
- NORESCO will remove natural gas piping back to the main and cap.

Installation of New Equipment

NORESCO will furnish and install the equipment included in this ECM as shown in *Appendix 2: Preliminary Design Drawings*, scope descriptions below, and manufacturer's recommendations.

Joe C. Montoya Community and Senior Center

NORESCO will:

- Furnish and install five (5) new roof-mounted package heat pumps as identified in *Table 3-2b.2*, on existing roof curbs. We will provide curb adapters as required for mounting of the new units and will coordinate final curb adapter configuration with the manufacturer.
- Furnish and install five (5) new 7-day programmable thermostats to control the new heat pumps. Thermostats shall be placed in same location as existing.
- Connect the existing supply and return air ducts to the new packaged heat pump plenum connections. Exterior ductwork will be internally lined.
- Perform pre-TAB measurements and post-TAB balancing to meet or exceed pre-TAB measurements. We will perform measurements at the discharge of the five (5) existing gas-fired package units and at the discharge of the five (5) new packaged heat pumps.
- Furnish and install a new electric unit heater as identified in *Table 3-2b.2*, per manufacturer's recommendation, in place of the existing non-functional gas unit heater in the kitchen.
- Provide a new 800A electrical service.
- Coordinate with APS the installation of a new pad mounted transformer. The transformer will be sized by APS
- Install underground conduit and conductors from the new pad mounted transformer to the energy meter at the exterior wall of the building. Underground feeders route will be through the parking lot and grass area. We will coordinate trench, conduit, and conductors with APS and their requirements.
- Install a new 800A energy meter and service rated NEMA 3R disconnect switch.
- Install a new service-rated 800A 120/240V 1-Phase 3W NEMA 3R surface-mounted panel board.

- Provide electrical installation for the five (5) new rooftop packaged heat pumps, including conductors, conduit, disconnects, circuit breakers, and other accessories required for the proper electrical connection.
- Provide electrical installation for the one (1) new electric unit heater, including conductors, conduit, disconnects, circuit breakers, and other accessories required for the proper electrical connection.
- Coordinate the installation of the new underground components of the equipment with the existing underground utilities. Landscaping, pavement, sidewalks, and curbs disturbed during the installation will be repaired to match the pre-construction conditions as closely as possible.

Lake Mary Water Treatment Plant

NORESCO will:

- Furnish and install one (1) new 5-ton packaged heat pump unit as identified in *Table 3-2b.2,* located on-grade, serving the back lab area, on a 24" curb adapter, on existing concrete pad. We will modify the existing pad as required.
- Furnish and install one (1) new 7-day programmable thermostat to control the new heat pump. Thermostat will be placed in same location as existing.
- Connect the existing supply and return air ducts to the new packaged heat pump plenum connections.
- Perform pre-TAB measurements and post-TAB balancing to meet or exceed pre-TAB measurements. We will perform measurements at the discharge of the one (1) existing gas-fired package unit and at the discharge of the one (1) new packaged heat pump.
- Identify circuit breakers in panel 'CP' that are out of service and replace them with a required circuit breaker for the new packaged heat pump.
- Furnish and install required electrical installation for the new packaged heat pump including conductors, conduit, disconnect, circuit breakers and other required accessories.
- Patch penetrations made for the electrical installation in interior and exterior of the building.
- Provide and install permanent labels for panels, switchboards, disconnects, etc. Label breakers used in existing electrical panels.

Pulliam Airport

NORESCO will:

- Furnish and install two (2) new 6-ton packaged heat pump units as identified in *Table 3-2b.2*, located on the rooftop, on existing roof curb. We will furnish and install new curb adapters for the new units and coordinate the final adapter configuration with the manufacturer.
- Integrate new heat pumps with the existing Delta Controls EMS. See *Appendix 3: Preliminary Points List* for details.
- Connect the existing supply and return air ducts to the new packaged heat pump plenum connections. Ductwork on roof will be internally lined.
- Perform pre-TAB measurements and post-TAB balancing to meet or exceed pre-TAB measurements. We will perform measurements at the discharge of the two (2) existing gas-fired package units and at the discharge of the two (2) new packaged heat pumps.
- Install a new 200A, 480/277V switch in the main switchboard and install feeders from switch to a new floor-mounted J-box next to the switchboard 'MLS'
- Remove existing connection between panel 'ATA' feeders and corresponding switch at the switchboard 'MLS' and re-connect those feeders into the new J-box next to the switchboard in order to connect to the new conductors to the main switchboard.
- Remove existing connection between switchboard feeders at the panelboard 'ATA' and re-connect those feeders into the new J-box under panel 'ATA'.

- Install a new 225A, 480V, 3-phase, 4-wire panel board 'H1'. Install feeders from penal 'H1' and the new J-box in order to connect to the existing conductors coming from the main switchboard.
- Install a new wall mounted 75kVA,480V-208/120V, 3-phase transformer above the new panel 'H1' and its feeders from the referenced panel through a 3P-125A CB.
- Install new feeders for the existing panel 'ATA' coming from the new 75kVA transformer (secondary side: 208/120V).
- Reconfigure existing electrical conduit and conductors to feed the two (2) new packaged heat pumps at the roof from the panelboard 'H1', including circuit breakers, conduits, conductors, and disconnect switch.
- All preparation work will be done during normal working hours and the actual cutover will be performed afterhours.
- Provide and install permanent labels for panels, switchboards, and disconnects. Provide printed labels and breaker identification sheet in new electrical panel. Clearly label breakers used in existing panels.

Sustainability Office

NORESCO will:

- Furnish and install one (1) new ground-mounted packaged heat pump as identified in *Table 3-2b.2* on a new concrete equipment pad. We will mount the unit on a 24" curb adapter secured to the concrete pad to raise the unit above snow levels. We will coordinate the final adapter configuration with the manufacturer.
- Furnish and install one (1) new 7-day programmable thermostat to control the new heat pump.
- Furnish and install new supply and return air ductwork from unit into attic, and within attic as required. Routing shown in *Appendix 2: Preliminary Design Drawings* is schematic, final routing will be field verified.
- Provide air balancing at supply and return diffusers. Provide balancing dampers at new takeoffs to the main trunks as needed.
- Connect supply and return air ducts with new air handling unit supply air plenum connection exterior ductwork will be internally lined.
- Perform pre-TAB measurements and post-TAB balancing to meet or exceed pre-TAB measurements. We will perform measurements at the discharge of the one (1) existing gas-fired package unit and at the discharge of the one (1) new packaged heat pump.
- Provide a new 200A electrical service.
- Furnish and install a new 2P-200A service rated disconnect switch.
- Utility to install feeders for new service from new utility transformer mounted on existing pole to new energy meter mounted on the side of truck bay (Building 3). Run electrical feed from exterior mounted disconnect into and through interior of the truck bay. Exiting the other side of the truck bay, run feed underground to Sustainability Office exterior to new electrical panel.
- Furnish and install a new service-rated 200A MCB, 120/240V, 1-phase, 3W, NEMA 3R, surface mounted panelboard.
- Provide required electrical installation for one (1) new packaged heat pump, including conductors, conduits, disconnects, circuit breakers, and other accessories required for the proper electrical connection.
- Patch any penetrations made in interior or exterior of the building for electrical installation.
- Provide and install permanent labels for panels, switchboards, and disconnects. Provide printed labels and breaker identification sheet in new electrical panel. Clearly label breakers used in existing panels.

Interface with Existing Equipment

New packaged heat pumps will be connected to existing air distribution systems in each building. At Pulliam Airport, the two new packaged heat pumps will be connected to the existing Delta Controls EMS. Heat pumps at the other buildings included in this scope of work will be furnished with, and controlled by, new 7-day programmable thermostats.

At Joe C. Montoya Community and Senior Center, the existing kitchen exhaust fans will be interlocked with the existing makeup air unit. The kitchen exhaust fans will continue to be controlled by a switch located in the kitchen.

Implementation Clarifications

NORESCO will work closely with City personnel to reach a mutual agreement regarding scheduling and logistics and to coordinate access and minimize disruptions. The following items are excluded from the scope of work:

- Any hazardous waste abatement or remediation
- Replacement of existing wiring that is found to be defective during the installation process beyond the identified scope listed above
- Replacement of electrical components such as conductors, fuses, breakers, and disconnects beyond the identified scope listed above
- Replacement of existing conduit that is found to be defective during the installation process
- Replacement of existing controls equipment end devices found to be inoperable
- Correction of any existing code violation identified during the implementation
- Temporary heating and cooling
- Temporary generators for cut-over at Pulliam Airport
- Modifications to existing electrical service beyond what is identified in the Scope of Work

Savings Analysis

The new packaged heat pumps included in this ECM will replace gas-fired equipment, eliminating the gas use associated with heating these spaces. The new high efficiency scroll compressors will use less energy than the existing equipment during cooling, reducing electric energy and demand during warm summer months. Since the new units use electric heat pumps to provide heat, electric energy and demand will increase in the winter. During extreme cold weather, the electric resistance strip heat may be required, further increasing electric energy use and especially demand. NORESCO calculated gas savings, as well as the impact on electric cost for this measure using bin-temperature spreadsheet models. Net utility costs are expected to increase as a result of this ECM, but this cost increase has not been included in the project cashflow. The projected utility cost increase and greenhouse gas emissions decrease is shown in *Table 3-2b.3*.

We surveyed the facilities, reviewed engineering drawings, and held discussions with facility staff that maintain and operate the HVAC equipment. We used this data to generate baseline bin-temperature models of the affected HVAC equipment, which we calibrated against historical natural gas utility data provided by the City. We then changed the model inputs to reflect the heating source and heating and cooling efficiencies of the proposed heat pumps and simulate the post-construction energy use of the equipment. We then calculated the savings as the difference between the baseline and post-installation modeled energy use. The bin-temperature model inputs and results can be found in *Appendix 4: Savings Calculations*.

Table 3-2b.3. Projected Impact on Utility Cost and Greenhouse Gas Emissions

Natural Gas Cost Savings	Electric Cost Increase	Net Utility Cost Increase	Carbon Dioxide Equivalent Greenhouse Gas Emissions Reduction (metric tons)[1]
$5,728	$8,980	$3,253	61.2

Note 1: We calculated GHG emissions based on natural gas therms multiplied by 0.007 factor (metric tons of CO2 equivalent/therms) per the environmental protection agency's Emissions & Generation Resource Integrated Database (eGRID). We assumed that all additional electricity will be generated by a net-zero renewable source.

Operational Changes

The HVAC unit replacements will result in the elimination of natural gas use associated with the existing units but increased electric demand and energy consumption associated with providing heating to the associated facilities. Daily operation and preventative maintenance requirements for the new units will be similar to that of the existing units, with the benefit that the new upgraded equipment should require fewer major repairs than the existing aging units.

ECM 2C: ELECTRIC BOILERS

Measure Overview

NORESCO will help the City work towards its electrification goals by replacing the Main Library's 35-year old natural gas boiler with two new electric boilers. The new electric boilers will provide hot water to the existing fan powered VAV boxes, cabinet and unit heaters, and driveway snowmelt system through the existing distribution system. We will provide the electrical work required to support the significant additional load the new boilers will create, but a new electrical service from APS will not be required. The existing natural gas meter and service will remain, serving the Library's gas fireplaces, if staff choose to continue using them.

Existing Conditions

The existing 1,700-MBH natural gas fired boiler at the Main Library generates HHW which is used to heat the Library, and the driveway snowmelt system at the entrance to the parking garage. Building heating is achieved primarily through 16 FTUs with HHW reheat coils. Additionally, there are a number of HHW cabinet and unit heaters at entrance ways, and in stairwells and mechanical spaces. Originally the parking garage had an HHW makeup air unit and electric snowmelt for the driveway. However, the makeup air unit has been removed, and the HHW lines that served it have been repurposed to heat the driveway through a small heat exchanger and glycol hot water system.

The boiler is original to the building and based on its size it appears that the mechanical room in which it resides was probably built around it. A tag indicates that there is asbestos containing material (ACM) in the flue. The boiler is the main consumer of natural gas at the Main Library, but there are three natural gas fireplaces, two of which are used regularly in the winter. Three small electric domestic hot water heaters provide hot water to sinks around the Library.



Figure 3-2c.1. The Library's existing natural gas boiler is original to the building and has reached the end of its useful life.

Table 3-2c.1. Existing Boiler

Designation	Description	Manufacturer	Model#	Serial #	Year of Manufacture
Main Library Boiler #1	1,700-MBH Forced-Draft Natural Gas Boiler	Weil-McClain	888-F	---	1986

Proposed Upgrades

NORESCO will furnish and install two new 252-kW (861-MBH) electric boilers in place of the existing natural gas boiler at the Main Library, almost eliminating natural gas use at the building. We will install the two new electric boilers on the existing boiler housekeeping pad, extending the pad as needed. We will connect the new boilers to the existing HHW loop, reusing the existing HHW pumps, and will connect new boiler controls and associated ancillary controls to the existing Delta EMS.

To serve this large additional electric load, we will install a new 800A breaker at the main electric panel and a new 600A 480/277V panel in the boiler room, to serve the boilers. We will run conduit and conductors externally along the building above the entrance to the parking garage and through the wall into the boiler room.

We will cut and cap the gas line serving the existing boiler at the main and will remove the existing boiler and through-the-roof breaching. We will patch the roof penetration to match the existing roof and will ensure that the roof warranty remains intact. An allowance of $10,000 has been included for the remediation of asbestos in the breaching of the boiler. Please refer to *Section 4.1 Construction Phase* for further description of this allowance.



Figure 3-2c.2. Two new electric boilers will be installed in place of the existing natural gas boiler.

New Equipment

NORESCO will install the following new equipment, or approved equal, at the Main Library.

Table 3-2c.2. Proposed Boilers

Designation	Description	Manufacturer	Model#	Full Load Performance
Main Library Boiler #1, #2	(2) 252-kW Electric Boilers, Located in Basement Boiler Room	Precision Boilers	PCW3-252C-480	1.0 COP

Scope of Work

The scope of work associated with the replacement of the existing Main Library boiler will include the following:

Demolition

- The City will have the option of retaining equipment and material designated to be removed as a part of this work, and will be required to provide NORESCO a list of items it wishes to salvage and retain prior to construction. We will disconnect, remove, and protect from weather, dust, and damage the equipment and

material listed for salvage. The City will be responsible for collecting and transporting any salvaged parts/equipment from the associated area. If the City does not wish to retain equipment and material designated to be removed as a part of this ECM, NORESCO shall dispose of equipment and material off-site in accordance with all codes, laws, ordinances, and regulations.

- NORESCO will demolish equipment and materials shown in *Appendix 2: Preliminary Design Drawings.*
- NORESCO will remove natural gas piping back to the main and cap.
- NORESCO will demolish and remove one existing natural gas fired hot water boiler, breeching and associated accessories. Cut back existing hot water supply and return piping to facilitate the installation of the new electric boilers.
- NORESCO will remove one existing 3" 3-way control valve.

Installation of New Equipment

NORESCO will:

- Furnish and install two 250 KW electric hot water boilers on existing concrete housekeeping pad. Modify existing pad as required to accommodate the new boilers. Refer to *Appendix 2: Preliminary Design Drawings* for accessories and details.
- Furnish and install one new 3" 3-way mixing valve and associated actuator. Connect, power, and integrate into the existing Delta Controls EMS.
- Furnish and install two new 3" 2-position automatic isolation valves at new boiler hot water return piping. Connect, power, and integrate into the existing Delta Controls EMS.
- Furnish and install new pipe temperature wells and temperature sensors in common boiler supply and return water piping. Connect and integrate into the existing Delta Controls EMS.
- Refer to *Appendix 3: Preliminary Points List* for additional EMS points to be installed and integrated into the existing Delta Controls EMS as a part of this ECM.
- Furnish and install new supply and return hot water isolation valves.
- Furnish and install a new make-up water back flow preventer.
- Mechanically lock closed the existing combustion air damper.
- Perform pre-TAB measurements and post-TAB balancing to meet or exceed pre-TAB measurements. We will perform measurements at the discharge of the two existing hot water pumps.
- Install a new 3P-800A breaker/switch in the existing main switchboard located at the exterior of the building.
- Install a new 800A, 480/277V, 3-Phase, 4W panelboard inside the boiler room.
- Install new feeders from the main switchboard attached to the building to feed the new 800A, 480V panel in the boiler room at the basement.
- Provide required electrical installation for two electric hot water boilers, including conductors, conduits, disconnects, circuit breakers, and other accessories required for the proper electrical connection.

Interface with Existing Equipment

We will integrate the new electric boilers with the existing Delta EMS and provide graphics on the web-based front-end.

The new boilers will provide HHW water to the existing FTUs, cabinet heaters, and unit heaters, which heat the Main Library, as well as to the driveway snowmelt system.

The existing HHW pumps, located in the boiler room will remain.

Implementation Clarifications

NORESCO will work closely with City personnel to reach a mutual agreement regarding scheduling and logistics and to coordinate access and minimize disruptions. We will perform the work described above during summer/warmer months when heating is either not needed or can be safely interrupted. The associated HVAC system at the Main Library will continue to provide ventilation and cooling during this time. The following items are excluded from the scope of work:

- Any hazardous waste abatement or remediation, beyond what can be abated with the allowance
- Replacement of existing wiring that is found to be defective during the installation process beyond the identified scope listed above
- Replacement of electrical components such as fuses, breakers, and disconnects beyond the identified scope listed above
- Replacement of existing conduit that is found to be defective during the installation process
- Replacement of existing controls equipment end devices found to be inoperable
- Replacement of existing end devices such as heating/cooling hydronic control values, mechanical actuators, and dampers in excess of what is outlined on the design documents
- Correction of any existing code violation identified during the implementation
- New chemical treatment systems. Existing chemicals and chemical pot feeder will be used. Chemicals used during the refilling process will be replenished
- Temporary heating while boiler is out of service
- Modifications to existing electrical service beyond what is identified in the Scope of Work

Savings Analysis

The new electric boilers installed as a part of this ECM will provide heating to the Main Library using electricity instead of natural gas. NORESCO calculated this ECM's impact on utility costs using an eQUEST building simulation. Net utility costs are expected to increase as a result of this ECM, but this cost increase has not been included in the project cashflow. The projected utility cost increase and greenhouse gas emissions decrease is shown in *Table 3-2c.3.*

We surveyed the facility, reviewed engineering drawings, and held discussions with facility staff that maintain and operate the HVAC equipment. Additionally, we deployed a data logger in AHU-1 at the Main Library to confirm its operation schedule. A summary of this data can be found in *Appendix 5: Baseline Measurements*. We used this data to generate a baseline eQUEST model of the Main Library, which we calibrated against historical electric and natural gas utility data provided by the City. We then changed the model inputs to reflect the new boilers and simulate the post-construction energy use and utility cost of the building. We then calculated the savings as the difference between the baseline and post-installation modeled energy use and utility cost. We calculated the reduction in heat load from the proposed lighting improvements and the proposed EMS programing changes at City Hall in advance of modeling the boiler replacement, to account for the interactive effects between ECMs and avoid overstating savings. The eQUEST model inputs and results can be found in *Appendix 4: Savings Calculations*.

Table 3-2c.3. Projected Impact on Utility Cost and Greenhouse Gas Emissions.

Natural Gas Cost Savings	Electric Cost Increase	Net Utility Cost Increase	Greenhouse Gas Emissions Reduction[1]
$6,042	$41,734	$35,692	64.6

Note 1: We calculated GHG emissions based on natural gas therms multiplied by 0.007 factor (metric tons of CO2 equivalent/therms) per the environmental protection agency's Emissions & Generation Resource Integrated Database (eGRID). We assumed that all additional electricity will be generated by a net-zero renewable source.

Operational Changes

The boiler replacement will result in the elimination of gas use at the Main Library, except for the gas fireplaces, and will result in an increase in electric demand and energy consumption. Daily operation and preventative maintenance requirements for the new boilers will be less than that of the existing boiler, since the new boilers will have electric resistance heating elements, which require very little maintenance compared to a natural gas burner.

ECM 3: ELECTRIC RATE SWITCH FOR PUMPING ACCOUNTS

Measure Overview

NORESCO will work with the City and APS to switch the electric rate for Lake Mary Well #8 from its current Medium General Service Rate (E-32 M) to a Pumping Rate (E-221), reducing the overall annual bill charges significantly. We evaluated the City's pumping accounts to determine if they would benefit from switching electric rates. While most appeared to be on the optimum rate, we found that Lake Mary was not, and switching could save the City significant amount of money each year.

Existing Conditions

The City operates pumping stations in and around Flagstaff, serving the City's water system. These pumping stations receive electric service from APS under either a General Service Rate Schedule or a Water Pumping Rate Schedule. APS's Water Pumping Rate Schedule (E-221) has a lower demand component than APS's Small, Medium, and Large General Service Rate Schedules (E-32 S, M, & L), but a higher energy component, especially in winter months, when the energy component of the General Service Rate Schedules is quite low. For details on APS's Rate Schedules, see *Section 2.2. Baseline Energy/Water Use and Tariff Analysis.* The result of these differences is that Pumping stations that run continuously with a relatively flat load benefit from being on a General Service Rate. Pumping stations that do not run continuously benefit from being on a Water Pumping Rate, since they have a higher peak demand relative to the amount of energy they use. The Water and Pumping Rate does, however, have a demand ratchet on the minimum bill charge, which means that pumping stations that only run occasionally, and have almost no use during many months of the year, will still have a significant charge each month, and may not benefit from being on a Water Pumping Rate.

Lake Mary Well #8 (service agreement ID 4001598609) is currently on a Medium General Service Rate Schedule (E-32 M). In the baseline year of 2019 the account used 714,480 kWh and was billed peak demand charges on a total of 1,584 kW (the sum of the monthly peak demands).

Proposed Upgrades

NORESCO will work with the City and our contacts at APS to switch Lake Mary Well #8 to a Water Pumping Rate Schedule (E-211). Based on the three years of data we evaluated, the total bill charges for this account will be reduced by approximately $10,000 annually under a Water Pumping Rate Schedule than would be if the account remained on a Medium General Service Rate Schedule.

Interface with Existing Equipment

The existing Lake Mary Well #8 electrical service will be billed under Water Pumping Rate Schedule E-211. Pumping and electrical equipment and infrastructure will continue to operate as it does now. No changes will be made to existing equipment, voltage or amperage of the service, or the APS meter.

Implementation Clarifications

This change to the Electric Rate Schedule will occur with no interruption to electric service. There is no physical implementation work included in this ECM.

Savings Analysis

The proposed rate switch for Lake Mary Well #8's electric service will result in a decrease in the total annual bill amount, relative to what it would be if the switch were not made. We evaluated City water systems electric accounts for potential rate switches but found that most would not benefit from switching electric rates.

NORESCO calculated the cost savings for this measure using a spreadsheet calculation. We calculated the baseline annual costs based on our rate analysis included in *Section 2.2. Baseline Energy/Water Use and Tariff Analysis* and based on historical utility data, and compared this to the actual billed amount, to confirm our understanding of the rate structure. We then calculated post-retrofit utility costs based on the same historical utility data and the new potential rate structures. We considered not only the incremental demand and energy rates that are used for energy savings calculations of conventional ECMs, but also considered monthly meter charges, tiered rate components, and any applicable ratchets. We also looked performed these calculations for multiple years of historical utility data, to ensure that we did not propose a rate switch that could wind up increasing energy costs. For example, based on 2019 and 2020 data, it appeared that Tuthill Well would benefit from switching from its current Large General Service Rate Schedule (E-32 L) to a Water Pumping Rate Schedule (E-221). However, when we looked at the most recent 12 months of data available, we discovered that based on that data, the account would actually see a significant increase in utility cost. For this reason, we are not proposing a rate switch for Tuthill Well electric service. The inputs and results of our cost savings calculations can be found in *Appendix 4: Savings Calculations*.

We also worked with our contacts at APS to confirm our calculations. APS calculated the projected impact from rate switches for four accounts, including Lake Mary Well #8 and Tuthill Well, and confirmed Lake Mary Well #8 would benefit from switching rates, but the other three accounts would not.

Operational Changes

The proposed rate switch will result in lower annual electric cost for the Lake Mary Well #8 pumping station. No operational changes are anticipated as a result of this ECM.

ECM 4: BUILDING ENVELOPE IMPROVEMENTS INTRODUCTION

NORESCO conducted a detailed survey of the building envelope of each City facility included in *Section 2. Facility Profile*, including the Windows, doors, and insulation to provide the City a list of potential energy efficiency and operational upgrades that align with the City's objectives and facility conditions.

Based on the information we gathered with the City's help, we have developed the following building envelope improvements which will decrease heating and cooling loads and will address humidity issues at the J. Lively Ice Rink.

The building envelope improvements included in this project's scope of work are shown in *Table 3-4.1.*

Table 3-4.1. Measures included in IGA ECM-4: Building Envelope Improvements

ECM	Description	Locations
ECM-4a	Building Weatherization	Fifteen City facilities (see *Table 3-4a.1*)
ECM-4b	Air Curtains and Automatic Roll-up Doors	J. Lively Ice Rink

Certain energy conservation measures were not included in the Phase 1 project due to their economics. Additional savings to the City can be produced by the water meter replacements as part of the Phase 2 water meter project. These additional savings could be leveraged to fund the additional building envelope improvements listed below. The following list of measures were evaluated but not fully developed as noted.

Table 3-4.2: Measures evaluated but not Included in ECM-4: Building Envelope Improvements

Description	Notes
Building Insulation	• Missing or deficient building insulation was noted in some locations at various City facilities. Due to the cold winters Flagstaff experiences, adding rigid board insulation to overhead doors, adding fiberglass batt insulation to walls and roofs, and adding blown-in cellulose insulation to attic floors would reduce building heating costs and improve occupant comfort. • Based on the relatively small scope of this potential measure, and the relatively inexpensive cost of natural gas, the economics of this measure were not favorable. We have prioritized building electrification measures over this measure.
Window Film	• Addition of low-E window film to windows at the Pulliam Airport that are not currently low-E would reduce the solar gain in the space, improving occupant comfort and reducing cooling costs. • Due to the fact that Flagstaff has a heating-dominant climate, and to the presence of overhangs on many of the windows evaluated, we determined that this measure did not make economic sense. While decreasing the solar gain will decrease cooling loads in the summer, it would also increase heating loads in the winter.

ECM 4A: WEATHERIZATION

Measure Overview

NORESCO will address select weatherization deficiencies at City facilities, improving occupant comfort and reducing heating and cooling costs. The scope of this ECM will consist primarily of weatherstripping and sealing exterior doors, including overhead doors, and interior doors that separate conditioned spaces from unconditioned spaces. Additionally, we will reseal specific windows at corners where gaskets have shrunk and will install spray foam insulation in specific locations where insulation is missing or where building penetrations need to be resealed.

Existing Conditions

City facilities included in this scope vary significantly in age and condition. We conducted a thorough audit of City facilities and identified locations in most facilities where weatherstripping and seals at doors and windows has deteriorated over time, increasing infiltration: the amount of outside air that enters buildings due to wind, stack effect, and mechanical systems. In addition to deteriorated weatherstripping and seals, we identified locations where building penetrations for gas and water piping and ductwork was not sealed, and locations where small portions of ceiling and roof insulation was missing. Infiltration represents a large source of heat loss or gain through the building envelopes in nearly all types of buildings. Due to the cold temperatures and wind that Flagstaff experiences during winter months, this infiltration leads to significant additional heating costs as well as potential discomfort for building occupants.



Figure 3-4a.1. The overhead doors at Cinder Lake landfill do not have weatherstripping on them; allowing heated garage air to escape to the outdoors.

Proposed Upgrades

We will install new weatherstripping and seals at doors and windows, seal building penetrations, and install spray foam insulation in place of missing insulation, reducing energy consumption associated with heating and cooling, and increasing occupant comfort. See *Table 3-4a.1* for details of scope at each building.



Figure 3-4a.2. Exterior doors at USGS #6 do not have a seal where they meet, allowing significant conditioned air to leave the building.

New Equipment

NORESCO will install the following materials in locations identified in *Table 3-4a.1*.

- Caulking or equivalent to seal cracks and gaps. Caulking will have a 50-year warranty from the manufacturer.
- Expanding foam to seal penetrations and the joint between the roof and the upper part of the wall. The foam has a manufacturer rated lifespan of 25 years.

- Sweeps and weatherstrips on doors that seal conditioned from unconditioned spaces or the outdoors. Door sealing materials consist of a heavy metal aluminum carrier, and strip of Q-lon which is a formed and angled sponge wrapped in vinyl. It is applied to the door frames, secured with screws, and caulked for added durability and air sealing through the carrier. The sweeps use a double fin film seal between a set of brushes, also embedded in a heavy aluminum carrier. The material is typically placed under the kick plate of the door and secured in the same method as the rest of the door seal.

Scope of Work

NORESCO will weatherstrip doors and seal windows, building penetrations, and the joint between the roof and top of the wall at the Lake Mary Water Treatment Plant, as detailed in *Table 3-4a.1*.

Table 3-4a.1. Building Weatherization Included in this Measure

Building	Doors to be Weather-stripped	Windows to be Sealed	Overhead Doors to be Weather-stripped	Penetrations to be Sealed	Roof-Wall Joint Sealing
Aquaplex Center	25	15 linear feet	-	-	-
Cinder Lake Landfill	10	-	3	-	-
City Hall	18	-	-	-	-
Hal Jensen Recreation Center	11	6 windows	-	3[1]	-
J. Lively Ice Rink / McPherson	33	-	1	-	-
Joe C. Montoya Community and Senior Center	8	-	-	-	-
Lake Mary Water Treatment Plant	24	-	1	-	60 feet
Library Main	14	-	3	-	-
Milligan House	2	-	-	-	-
Public Works / Sustainability	21	-	4	-	-
Pulliam Airport	21	-	4	-	-
Theatrikos Building	8	-	-	-	-
USGS #5	4	2 windows	3	-	-
USGS #6	13	-	-	-	-
Visitor's Center	13	-	-	20.5 feet[2]	-

[1] *Three pipe penetrations to be sealed*
[2] *20 feet for two exterior doors in garage to be sealed from the interior. 0.5 feet of penetrations in staircase area to be sealed.*

Interface with Existing Equipment

We will weather strip and seal existing doors and windows and apply spray-foam insulation at existing building penetrations and on existing roofs where insulation is missing. Existing doors and windows will continue to operate as they do currently but will have tight seals and be visibly in better overall condition.

Implementation Clarifications

NORESCO and the facility personnel will reach a mutual agreement regarding scheduling and logistics. NORESCO will work closely with the City's facility staff to coordinate access and minimize disruptions. The following items are **excluded** from the scope of work:

- Any hazardous waste abatement or remediation
- Correction of any existing code violation identified during the implementation
- Moving items that are in the way of performing the work
- Repairing or replacing Correcting misaligned or broken doors and windows

Savings Analysis

The weatherstripping, seals, and insulation included in this scope of work will result in reduced heating and cooling energy, and associated costs. We calculated the savings associated with this ECM using a spreadsheet model. In order to develop this model, we surveyed each facility's envelope to determine the amount of infiltration that could be eliminated and surveyed each facility's HVAC system to determine heating and cooling efficiencies and to determine which portions of each facility is heated and/or cooled. For details on this the spreadsheet model used to calculate savings associated with this ECM, see *Appendix 4: Savings Calculations*.

Operational Changes

The weatherstripping, sealing, and insulation included in this scope of work will result in lower heating and cooling costs and improved occupant comfort. We do not anticipate any operational changes to the affected facilities.

ECM 4B: ICE RINK AUTOMATED DOOR CLOSER AND AIR CURTAINS

Measure Overview

NORESCO will install air curtains on the double doors separating the lobby from the arena and will install an automatic opener on the existing roll-up door at the ice resurfacing machine exit at the south end of the arena, at the J. Lively Ice Rink. These upgrades will help reduce infiltration of warm air into the arena, reducing the condensation and humidity issues currently experienced during warm or humid weather.

Existing Conditions

Through building surveys and conversations with City staff and facilities personnel, NORESCO learned of humidity issues at the J. Lively Ice Rink during warm summer months. The air temperature in the arena is kept at 55° - 60°F. When warm air infiltrates the arena, moisture in the air condenses on surfaces such as the roof trusses causing corrosion and dripping onto the ice. In extreme cases, water dripping onto the ice forms a significant uneven surface that has to be repaired by hand. The City has made efforts to address this issue through the installation of dehumidifiers and a low-emissivity ceiling, however the problem persists.



Figure 3-4b.1. NORESCO will install a door operator for the overhead door where the ice resurfacing machine exits the building to dump ice.

Based on our conversation with facility personnel, two of the biggest sources of infiltration are the two double doors leading from the lobby to the arena, and the overhead door the ice resurfacing machine uses to exit the arena to dump ice shavings outside.

The lobby, which faces west, does not have cooling, and can get quite hot and humid. The two double doors used by patrons to enter the arena from the lobby see a lot of use, especially during events and are old and do not seal well, allowing warm, humid air from the lobby into the arena.

When the ice resurfacing machine enters or exits the building to dump the ice shavings, the roll up door must be manually raised and lowered. If a second staff member is not available to help, this door is left open since the resurfacing operator cannot drive the resurfacing machine and manually operate the door. With the roll up door left open, warm humid air enters the ice arena.

Proposed Upgrades

NORESCO will install air curtains over the two existing double doors used for patron access to the ice rink. When patrons open the doors to the ice rink, the air curtains will turn on, minimizing the amount of humid outside air that will enter the ice rink. Additionally, we will install an automated door opener for the ice resurfacing machine roll up door. The automated door opener will allow the ice resurfacing machine operator to open and close the door remotely, helping to prevent the loss of conditioned ice rink air and preventing

humid air from entering the ice rink. These upgrades will reduce the cooling and dehumidification load on the ice rink HVAC equipment saving energy and will reduce condensation improve the ice surface and reducing corrosion to the structure of the ice rink.



Figure 3-4b.2. Installing air curtains as part of this ECM will reduce the amount of humid air in the building, reducing the load on the existing dehumidifiers and cooling system.

New Equipment

NORESCO will furnish and install the following equipment as a part of this ECM:

- Two (2) unconditioned air curtains with surface-mounted switch activation, one for each of the double doors serving as the patron entrance to the arena from the lobby. ½ horsepower, 115-volt, single phase.
- One (1) standard-duty jackshaft operator for the ice resurfacing machine door, ½ horsepower, 115/208/230-volt, single phase.

For equipment details, see *Appendix 1: Cutsheets.*

Scope of Work

- NORESCO will furnish and install the two (2) air curtains and one (1) jack-shaft operator (motorized overhead door opener) listed above in accordance with manufacturer's recommendations
- NORESCO will furnish and install required electrical installations to feed two (2) air curtains and (1) jackshaft operator from existing panels including circuit breakers, conduit, and conductors.

Interface with Existing Equipment

We will install air curtains over the existing double doors from the lobby to the ice rink. The doors will continue to operate as they do now. The air curtains will turn on and off automatically, controlled by a switch on the doors.

We will install an automatic door opener on the existing roll-up door at the south end of the arena, used by the ice resurfacing machine to exit and dump ice shavings. This automatic opener will allow the ice resurfacing machine operator to open and close the door remotely, minimizing the amount of time it stays open.

Implementation Clarifications

NORESCO and the facility personnel will reach a mutual agreement regarding scheduling and logistics. NORESCO will work closely with the City's facility staff to coordinate access and minimize disruptions. The following items are **excluded** from the scope of work:

- Any hazardous waste abatement or remediation
- Correction of any existing code violation identified during the implementation
- Moving items that are in the way of performing the work
- Repairing or replacing misaligned or broken doors

Savings Analysis

The air curtains and automatic door opener included in this ECM will reduce infiltration of warm air into the ice rink, reducing cooling energy associated with the ice rink, and reducing heating energy associated with the lobby. We calculated the savings associated with this ECM using a bin-temperature spreadsheet model. In order to develop this model, we surveyed the facility's envelope and HVAC systems to determine heating and cooling efficiencies and to determine which portions of each facility is heated and/or cooled and how. For details on this the spreadsheet model used to calculate savings associated with this ECM, see *Appendix 4: Savings Calculations*.

Operational Changes

The door upgrades included in this scope of work will result in lower heating and cooling costs and will reduce humidity and condensation in the ice rink arena. Ice resurfacing machine operators will be able to open and close the roll-up door at the south end of the arena with a remote control, eliminating the need for an additional staff member to be present to open and close the door. Staff should periodically confirm that the air curtains are operating when lobby doors are open and turning off when the lobby doors are closed.

ECM 5: ELECTRIC VEHICLE CHARGING STATIONS

Measure Overview

NORESCO will install nine dual-port level 2 electric vehicle (EV) charging stations at City buildings to charge City-purchased EVs. These chargers will not be accessible to the public and are intended for use by City fleet.

Existing Conditions

The City of Flagstaff currently owns and operates six electric vehicles that are charged with existing level 2 charging infrastructure at City Hall and the Main Library along with level 1 chargers across other City facilities.

The City has adopted a policy where the purchase of EVs will be prioritized over internal combustion engine (ICE) vehicles, whenever they are commercially available. The City plans to continue converting its existing ICE fleet to EVs by purchasing an additional five EVs and two sport utility vehicle (SUV) hybrids this year. Five of these new vehicles will replace existing ICE fleet vehicles, and two are additions to the fleet. NORESCO analyzed the operational data provided by the City in order to determine the potential fuel and maintenance savings associated with switching vehicles from internal ICE to EVs and hybrids. The existing vehicles are shown in *Table 3-5.1* and their planned City-purchased replacements are shown in *Table 3-5.3.*



Figure 2b-1: Proposed ChargePoint Dual-Bollard Fleet Charging Station

Proposed Upgrades

As part of this project NORESCO will install nine dual-port EV charging stations at multiple City buildings to allow for fleet vehicle charging. The charger we are specifying is the ChargePoint CPF50 for fleet use. This charger has an overall capacity of up to 8kW which is shared between the two ports when both in use, or serves one port at full capacity when only one is in use. Overall, each dual-port installation will enable approximately 300 vehicle-miles per day of EV driving if charged overnight. This is significantly more than the average of approximately 50 miles/day for the five vehicles being replaced with EVs. City personnel will be required to charge fleet EVs that they utilize throughout the day, and it is assumed that all charging will happen overnight to avoid increased site electric demand and associated charges from APS. The proposed chargers have the capability of limiting equipment charging to specific times of day. We will assist the City with scheduling equipment capacities during the installation and startup of the equipment.



Figure 2b-1: Ford F150 Lightning Electric Truck the City is purchasing

Table 3-5.1 – Existing Fleet Vehicles to be replaced with EVs or Hybrids

Equipment #	License #	Year	Make	Model	Vehicle Category	Vehicle Sub-Category	Department	Fuel Use[1]	Fuel Type	Annual Miles[1]	Annual Maintenance Costs[2]	Current MPG[1]
967	G805EN	2006	FORD	4X4 EXT CAB ANIMAL	Passenger/Light Duty	Light Truck	POLICE - PATROL	1,127	Gasoline	17,460	$562	15.5
962	G697EL	2006	FORD	1/2 TON 4X4 X CAB PICKUP	Passenger/Light Duty	Light Truck	PUBLIC WORKS INSPECTION	859	Gasoline	11,363	$462	13.2
976	G813EN	2006	FORD	3/4 TON PICKUP	Heavy Duty	3/4 Ton Truck	PARKS BBB REC FIELDS	2,004	Gasoline	18,094	$980	9.0
New Vehicle added to the City Fleet							SOLID WASTE - GEN ADMIN	556	Gasoline	10,000	$955	18.0
New Vehicle added to the City Fleet							STREET MAINT & REPAIRS	556	Gasoline	10,000	$955	18.0
960	G700EL	2006	FORD	COMPACT 4X4 X CAB PICKUP	Passenger/Light Duty	Light Truck	BUILDING INSPECTION	333	Gasoline	5,366	$316	16.1
1006	G151EZ	2007	FORD	1/2 TON 4X4 EXT CAB	Passenger/Light Duty	Light Truck	BUILDING INSPECTION	794	Gasoline	10,506	$782	13.2

Note 1. Estimated where the vehicle is new to the City Fleet

Note. 2. Where actual maintenance costs were not provided, $0.0955/mi was utilized for ICE vehicles per AAA studies

New Equipment

NORESCO will install the following EV chargers, or approved equal, at the following locations.

Table 3-5.2: Equipment Proposed by NORESCO

Location	Description	Manufacturer	Model#	Quantity / Plugs	Charging Voltage	Maximum Charging Capacity
Public Works (Fleet Building)	Dual Bollard Type Level 2 EV Charging Station	ChargePoint	CPF50	1/2	208V-AC	6.6 kW ea
Public Works (Solid Waste)	Dual Bollard Type Level 2 EV Charging Station	ChargePoint	CPF50	3/6	208V-AC	6.6 kW ea
Public Works (Admin Office)	Dual Bollard Type Level 2 EV Charging Station	ChargePoint	CPF50	2/4	208V-AC	6.6 kW ea
Sustainability Office	Dual Bollard Type Level 2 EV Charging Station	ChargePoint	CPF50	1/2	208V-AC	6.6 kW ea
Main Library	Dual Wall Type Level 2 EV Charging Station	ChargePoint	CPF50	2/4	208V-AC	6.6 kW ea

Additional details such as the locations of charging stations/panelboards/wire runs relative to the buildings and single line diagrams are available in *Appendix 2: Preliminary Design Drawings.*

Scope of Work

NORESCO will furnish and install EV charging stations as outlined above. Electrical engineering plans will comply with City of Flagstaff building codes at date of this document submission.

Installation of New Equipment

Public Works (Fleet Building)

- Provide professional electrical engineering plans for City review.
- Furnish and install one EV dual-port mount charging stations.
- Provide and install a new 37.5 kVA low-voltage transformer (480V to 208/120V)
- Provide and install concrete equipment pad for new electrical equipment.
- Install a new 100A breaker in the existing panel FMH-1.
- Install a new 125A, 240/120V, 1-PHASE, 3W panelboard to serve the new EV chargers.
- Install new feeders from the existing FMH-1 panel to the new transformer and 125A panel.
- Provide and install new breakers and branch feeders to the new EV chargers.

Public Works (Solid Waste Building)

- Provide professional electrical engineering plans for City review.

- Furnish and install three (3) EV dual bollard mount charging stations.
- Provide and install a new 75 kVA low-voltage transformer (480V to 208/120V)
- Provide and install concrete equipment pad for new electrical equipment.
- Install a new 225A breaker in the existing panel SWH.
- Install a new 600A, 240/120V, 1-PHASE, 3W panelboard to serve the new EV chargers.
- Install new feeders from the existing SWH panel to the new transformer and 600A panel.
- Provide and install new breakers and branch feeders to the new EV chargers.

Public Works (Admin Office)

- Provide professional electrical engineering plans for City review.
- Furnish and install two (2) EV dual bollard mount charging stations.
- Provide and install a new 75 kVA low-voltage transformer (480V to 208/120V)
- Provide and install concrete equipment pad for new electrical equipment.
- Install a new 100A breaker in the existing panel ADH-1.
- Install a new 125A, 240/120V, 1-PHASE, 3W panelboard to serve the new EV chargers.
- Install new feeders from the existing ADH-1 panel to the new transformer and 125A panel.
- Provide and install new breakers and branch feeders to the new EV chargers.

Sustainability Building

- Provide professional electrical engineering plans for City review.
- Furnish and install one (1) EV dual bollard mount charging stations.
- Install a new 50A breaker in the existing panel main service panel and branch feeders to the new EV chargers.

Main Library

- Provide professional electrical engineering plans for City review.
- Furnish and install two (2) EV dual wall mount charging stations.
- Provide and install a new 75 kVA low-voltage transformer (480V to 208/120V)
- Provide and install concrete equipment pad for new electrical equipment.
- Install a new 125A breaker in the existing panel H-1.
- Install a new 125A, 240/120V, 1-PHASE, 3W panelboard L1 to serve the new EV chargers.
- Install new feeders from the existing H-1 panel to the new transformer and 125A panel L1.
- Provide and install new breakers and branch feeders to the new EV chargers.

Interface with Existing Equipment

EV chargers will be served from the existing electrical infrastructure, no new electrical service will be required from APS as a part of this ECM. The City will be able to charge existing fleet EVs at the new chargers installed as a part of this scope as well.

Implementation Clarifications

NORESCO will work the City to implement required electrical infrastructure upgrades at each site.

Additionally, NORESCO and facility personnel will reach a mutual agreement regarding scheduling and logistics. NORESCO will work closely with the City's facility staff to coordinate access and minimize disruptions. The following items are **excluded** from the scope of work:

- Any hazardous waste abatement or remediation not explicitly defined in the scope of this agreement.
- Correction to any existing code violation identified during implementation.

Savings Analysis

While NORESCO is not providing any new electric vehicles as part of this project, the installation of new EV charging infrastructure will facilitate the City's conversion of their fleet vehicles to EVs. The savings generated by the transition will result from the net cost of vehicle fueling (gasoline or diesel to electricity) and from maintenance savings. While gasoline prices are at record highs, for conservatism we did not use current prices in our long-term calculations. Instead, we utilized the 60-day average price of gasoline in our savings calculations which was applied to historical fuel usage by each vehicle. Maintenance savings of 50-70% compared to traditional ICE vehicles will result from the transition to EVs. The City performs as many maintenance tasks in-house as possible, but there are still documented costs that will be reduced due to the operation of EVs. These costs include oil changes, mileage-based manufacturer required tune-ups, brake components, and outsourced labor costs among others. Lastly, to determine the net savings associated with the transition, the amount of electricity use, and demand is calculated as a new expense. The EV chargers included in this ECM will be installed at locations that have adequate existing electrical capacity. There will be only a small demand penalty associated with the operation of the new chargers if they are operated overnight as intended. The electrical energy use associated the new EV chargers is calculated based on the existing vehicle annual milage and the proposed new EV City driving efficiency (kWh/mile). The calculation inputs and results for savings associated with the new EVs and associated chargers are summarized below and can be found in *Appendix 4: Savings Calculations.*

Table 3-5.3 – New Vehicles being added to City Fleet and Associated Savings

Equipment Being Replaced	New Vehicle		EV and Hybrid Savings					EVSE Location	GHG Emissions Reductions (Metric Tons/yr)[2]
	Make	Model	Maintenance Costs[1]	Fuel Type	Fuel (gal)	Electricity (kWh)	Demand (kW)		
967	Ford	F150EV	$281	Gasoline	1,127	-7,545	-20	Public Works	9.0
962	Ford	F150EV	$231	Gasoline	859	-4,911	-20	Public Works	6.9
976	Chevy	Bolt	$490	Gasoline	2,004	-4,762	-20	Public Works	16.0
New	Ford	F150EV	$478	Gasoline	556	-4,322	-20	Public Works	4.4
New	Ford	F150EV	$478	Gasoline	556	-4,322	-20	Public Works	4.4
960	Ford	Escape Hybrid	$0	Gasoline	198	0	0	N/A	1.6
1006	Ford	Escape Hybrid	$0	Gasoline	531	0	0	N/A	4.3
	Total	**---**	**$1,957**	**---**	**5,831**	**-25,861**	**-100**	**N/A**	**46.6**

Note 1: Annual Maintenance Expenses for EVs are assumed to be 50% those of ICE Vehicles, per industry studies.
Note 2: We calculated GHG emissions based on gasoline gallons multiplied by 0.008 factor (metric tons of CO2 equivalent/gallons) per the Energy Information Agency's carbon dioxide emissions coefficients. We assumed that all additional electricity will be generated by a net-zero renewable source.

Operational Changes

When making the switch from ICE vehicles to EVs, City employees will need to charge their vehicles daily to ensure there is enough battery charge for daily operations. EVs should be charged at night when other electric loads are low, to avoid significantly increasing electric peak demand. The proposed ChargePoint stations have the ability limit their charging capacity during the day to facilitate this. We recommend the City periodically audit the electrical consumption of the charging equipment through the ChargePoint portal.

ECM 6: WATER CONSERVATION INTRODUCTION

NORESCO evaluated both domestic water conservation measures at City buildings and parks, and irrigation upgrades for City parks and other landscaping. We performed site surveys and reviewed water billing data for both potable and reclaimed water. During our evaluation we found that the City has been proactive in water conservation and has upgraded domestic plumbing fixtures to low-flow and has invested in a HydroPoint WeatherTRAK irrigation control system. This irrigation system is an excellent system that provides weather-based irrigation control. However, over time, parts of the system have fallen out of calibration causing programs to be overridden, creating an opportunity to further reduce irrigation water use.

The water conservation upgrades included in this project's scope of work are shown in *Table 3-6.1.*

Table 3-6.1. Measures included in IGA ECM-6: Water Conservation

ECM	Description	Locations
ECM-6a	Irrigation Repairs and Recommissioning	City Parks

Certain water conservation upgrades we evaluated were not included in the Phase 1 project due to factors described below. Water conservation upgrades we evaluated but are not included in this IGA are shown in *Table 3-6.2.*

Table 3-6.2: Measures evaluated but not Included in Phase 1 ECM-6: Water Conservation

Description	Notes
Domestic Plumbing Fixture Retrofits	• Replacement or retrofit of domestic plumbing fixtures such as sinks, showers, toilets, and urinals with low-flow or ultra-low-flow equivalents can significantly reduce water use and associated water and sewer costs especially in high-use areas. • During NORESCO's interviews with City staff, we were told that City sinks, toilets and urinals were retrofitted with low flow fixtures in the past. We performed spot checks of City facilities and confirmed that domestic plumbing fixtures in City buildings and parks are already low-flow, and that there is not an opportunity for a domestic plumbing retrofit at this time.
Reclaimed Water for Irrigation at Continental Park	• Reclaimed water is available for irrigation in parts of the City, at a much lower cost than potable water. There is an existing reclaim water line adjacent to Continental Park, which has significant irrigation, and the City has made attempts to switch from potable to reclaimed water for irrigation of this park in the past. Currently, Continental Park is irrigated with potable water. • NORESCO interviewed Parks staff, visited Continental Park, and obtained drawings of the existing water utilities. At one time Continental Park was irrigated with reclaimed water that came out of a pond in a nearby housing development, but over time algae built up in the lines, since this water was coming from an open source. At this time, an attempt was made to tap into the existing reclaimed water line before the housing development's pond. Due to the large amount of reclaimed water flowing into the pond, there

Description	Notes
	was not adequate pressure in Continental Park's irrigation system when served from the reclaimed water line. We recommend revisiting this opportunity during a later phase of this project, when upgrades are made to the Wildcat Hill Wastewater Treatment Plant, which provides reclaimed water in this part of the City. If pressure and/or flow from the plant is increased, Continental Park may be able to switch back to reclaimed irrigation water for a relatively low capital cost, since much of the infrastructure is already in-place.

ECM 6A: IRRIGATION REPAIRS & RE-COMMISSIONING

Measure Overview

NORESCO will reduce irrigation water use and the associated utility costs at the City's parks and recreation properties by recommissioning the existing Hydropoint WeatherTRAK smart irrigation controls to irrigate more efficiently, without sacrificing turf quality. The scope of this ECM includes the following:

- Targeted replacement of inefficient heads and nozzles
- Addition of flow sensors and master valves to reduce system water loss
- Expanded programming to fully leverage the features of the existing controller functions

Our approach will reduce water consumption at the parks included in this ECM by over 25 percent and will provide staff with valuable real-time controller-driven data, making it easier to more efficiently manage irrigation needs and identify maintenance requirements.





Figure 3-6a.1

Existing Conditions

In the winter of 2019, the City of Flagstaff upgraded their irrigation controls infrastructure with Hydropoint's WeatherTRAK product. This is a highly capable and reliable product that makes managing irrigation systems easier and more water efficient. After discussing the City's needs with their grounds specialists, NORESCO engaged Hydropoint directly to ascertain how the WeatherTRAK system is currently operated and determine the best way to fully deploy existing controls capabilities. We determined that approximately 75 percent of the systems online were run in manual mode. When these "smart" controls are operated manually, the controller uses a pre-programmed timer schedule to water, resulting in waste and inefficiency as these systems may irrigate during or just after rain events, high winds, and extreme solar conditions. Due to City staffing constraints, we were not able to perform site visits to evaluate each irrigation system. In lieu of site visits, NORESCO leveraged staff interviews, existing controller history data, water billing, and GIS imaging to assess each site.

Proposed Upgrades

NORESCO will perform comprehensive irrigation controls recommissioning at 17 City locations. This will include multiple steps to identify the exact scope for each park. During construction, a detailed scope of work will be generated and proposed to the City along with the product submittals.

Early in the construction phase, NORESCO will conduct a detailed irrigation audit of each included site's irrigations system. We will evaluate existing equipment deficiencies and identify specific system upgrades required to accomplish the recommissioning. NORESCO will recommission and/or replace as much of the following as can be funded through the allowance included in this ECM:

- Recommission the controllers

- Install master control valves
- Install flow sensors
- Replace sprinkler nozzles and heads as needed

Each improvement has been selected based on its contribution to a properly working irrigation system and its ability to limit or eliminate water waste. HydroPoint's controls function most efficiently when operated in automatic mode, allowing the system to dynamically adjust according to weather conditions. The master control valve and flow sensors provide park managers feedback on the system's operation, allowing them to identify leaks and track consumptive use. The recommissioned systems will generate alarms for park staff if flow is detected outside of programmed zone-level tolerances during both scheduled irrigation and dormant periods. The master control valves will respond to aberrant flow conditions by closing impacted zones to reduce water loss due to line breaks/leaks. By standardizing and recommissioning the nozzles and heads, this ECM will allow irrigation controllers to better control rates of distribution and irrigate more predictably.

New Equipment

NORESCO's intent is to recommission each of the irrigation control systems included in this ECM so that they work efficiently and provide Flagstaff staff with more control. The exact equipment needed at each park will be determined during the detailed irrigation audit performed during the construction period of the project. Examples of equipment that will be replaced are flow sensors, master valves, and sprinkler nozzles/heads.

For more information on these pieces of equipment see *Appendix 1: Cutsheets.*

Scope of Work

NORESCO will perform a wet check of the 17 parks identified in Table 3-6.1 below. The results of the wet check will be presented to the City. Included in the ECM are 1,038 irrigation head replacements, 12 master control valves and 22 flow sensors. NORESCO has budgeted $225,000 as an allowance for additional improvements required to maintain the operation of the system. NORESCO will work with the City to prioritize what irrigation repairs or improvements should be funded by this allowance. The City will have final approval of how the allowance is spent.

NORESCO will work with Hydropoint to perform the work included in this ECM, to preserve any Hydropoint warranties for the existing equipment and to maximize equipment functionality. Of the almost 30 sites that were identified, 17 park locations (approximately 20 controllers) were found to offer savings opportunities that will help offset the cost of the system improvements needed to realize the savings. *Table 3-6.1* represents the largest irrigation water users and the largest amount of savings potential over existing baseline water use.

NORESCO Implementation Responsibilities

- Auditing, engineering, and design specification services
- Installation of new irrigation equipment and recommissioning of existing controllers
- Irrigation equipment verification, testing, and commissioning as needed during and after construction
- Training personnel/staff on proper O&M procedures
- Delivery of complete project closeout documentation, equipment listings, and O&M training manuals

City of Flagstaff Implementation Responsibilities

- Facilitate the full evaluation of each of the in-scope park irrigation systems with NORESCO and HydroPoint
- Continue maintenance on existing irrigation systems after the upgrade and recommissioning, including equipment installed as part of this ECM.

Table 3-6.1: Parks Included in the Scope of this Measure

Site	Total Controllers
Bow & Arrow Park	1
Bushmaster Park	2
Cheshire Park	1
City Hall (library/wheeler)	1
Cogdill Rec Center	1
Continental Sports Park	1
Flagstaff Little League	1
Foxglenn Park	2
Guadalupe Park	1
Hal Jensen Rec Center / Flagstaff Rec Center	1
Joel Montalvo Park	1
Mark Grace Field / Arroyo Park Ballfield	1
Ponderosa Trails Park	1
Smokerise Park	1
Thorpe Complex	2
Thorpe Multi-Purpose Field	1
Thorpe Park	1
Total	**20**

Interface with Existing Equipment

The existing WeatherTRAK controllers will remain but will be reprogrammed as needed. New irrigation equipment installed as a part of this ECM will be hard-wired or wirelessly connected to and operated by existing controllers.

Implementation Clarifications

The City of Flagstaff is responsible for irrigation system supply water pressures, typically between 25-50psi. The City is also responsible for any required underground utility marking required to accomplish underground distribution work.

This scope does not include the following:

- Any responsibility for existing backflow preventers, reduced pressure zones or code compliance issues related to backflow prevention devices

- Redesign and/or augmentation of existing zone head layouts to improve/resolve existing distribution uniformity issues

Savings Analysis

The City of Flagstaff provided water use data for their accounts that was used to evaluate each parks irrigation use and patterns. The data showed the seasonal use as expected for these systems and it was assumed that the data was relatively accurate. In the case of three parks (Ponderosa Park, Mobile Haven, Cullen), catch up billing was detected. This reduced the baseline consumption for these three parks, so the amount of savings available at these parks was limited. Therefore, they were not included in the savings analysis for this ECM.

The guaranteed savings for this ECM are based on optimized irrigation controls. NORESCO worked with HydroPoint to determine the savings potential for each included site by comparing the estimated irrigated square footage and baseline water use to evapotranspiration-based water requirements for the same area. Evapotransporation-based watering will consider temperature, wind, solar radiation, and relative humidity conditions to determine the amount of water available in the ground for the vegetation. It then uses this information, combined with rainfall data, to determine the amount of irrigation to provide to the vegetation. New matched precipitation rotating stream nozzles and pressure-compensating emitters/bubblers will reduce excess water application in impacted zones.

The City provided historical potable and reclaimed water consumption for the past fifteen years. Some irrigation water accounts are served by reclaim water, while others are served by potable domestic water at a significantly higher utility rate. We created water consumption baselines by examining accounts that reflect a typical irrigation water use pattern (consumption over the typical 6–8-month irrigation season).

The following assumptions were included in the cost and savings analysis.

- Irrigated area (sq. ft.) for each system. The area that is currently irrigated was estimated based on satellite imagery and staff interviews.
- Irrigated vegetation type (turf, shrub/tree, decorative, or native plantings). The type of growth being irrigated was also estimated based on aerial views and would include a mixture of turf, shrub/tree, or native.
- A site-specific 60-70% distribution uniformity to account for spray head and rotor water-delivery factors.
- Controllers remotely examined by Hydropoint and found in manual mode are assumed to operate in manual mode continuously. The controllers record the current settings, and it was assumed that if it was not on its automatic Evapotransporation (ET) mode then it was manually operated for the whole season.
- Assumed there was minimal significant water loss from distribution line breaks
- Each controller zone contains an average of 12 sprinkler heads per zone.
- The water billing provided by the City for scope sites is accurate for the year 2020 and represents a typical average irrigation season.
- Controller-related savings represents the delta between manually programmed timer schedules and real-time, weather-based schedules that dynamically adjust irrigation schedules.

Additionally, while new flow sensors and master valves will reduce water loss in distributions systems, we were not able to quantify specific leak loss and have not included savings related to leak repair.

Savings included in this ECM are an average based on available data and average weather. Actual usage and savings will vary based on actual season weather including effective rainfall, solar and wind conditions, and evapotranspiration rates.

Operational Changes

Proper system commissioning and diligent maintenance throughout the irrigation season will allow the WeatherTRAK controls to operate efficiently by responding to real-time weather conditions rather than a manually programmed schedule. During overseeding in the fall, experienced City staff can briefly override the ET-based automatic watering program to ensure the health of plant materials before systems are winterized. Prior to re-energizing the systems for the next irrigation season, City staff should continue regular maintenance normally and automatic mode should be re-established for each controller.

The controller upgrades and staff training will allow staff to retrieve a snapshot of the current controller condition from a remote location.

WATER METER TESTING

The water meter testing plan described herein is the next recommended step in the development of the Water Meter and Advanced Metering Infrastructure (AMI) Program. This Program will replace or retrofit the City's aging water meters with calibrated, certified new ultrasonic meters. NORESCO will also evaluate the implementation of an AMI system that will transition the City away from its existing radio-read, automated meter reading (AMR) system. A detailed description of the Water Meter and AMI Program is included in *Section 5.2 Water Meters/Advanced Metering Infrastructure* of this IGA report.

The first step in developing this comprehensive program is to test a sample of the existing meters to determine the accuracy of the meters and the additional revenue potential associated with retrofit or replacement. NORESCO proposes to complete this testing plan as part of this Phase 1 project. Once testing is complete, we will be prepared to provide a fixed-price, guaranteed savings proposal to implement the program as a Phase 2.

Meter Sampling and Testing Plan

The City provided NORESCO with a listing of all existing meters in their portfolio. We developed a metering sample plan by first sorting each group of meters by size. The number of meters to be tested of each size was calculated to achieve a 90 percent confidence level with a desired precision of 10 percent and the coefficient of variation of the expected measured values is based on typical results when testing each meter size/group. The calculated quantities of each meter size are as follows.

Table 5-2.1. Meter Quantities

Meter Size	Meters to be Tested	% of Total Population	Estimated Coefficient of Variation (Cv)[1]
3/4"	68	0.35%	50.0%
1"	64	5.94%	50.0%
1.5"	23	5.88%	30.0%
2"	24	3.26%	30.0%

Note 1: 50% is the maximum value for Cv

Once the quantity of meters required for testing was known, we then sorted the meter data by lifetime odometer reading and split the meters into thirds – smallest, middle, and greatest odometer readings. The meters to be tested were then randomly selected equally from each group to get a viable cross-section of the meter population. For reference, the meters randomly selected are provided in Appendix 10. Alternate meters have also been selected as backups in case one of the selected meters cannot be replaced in the testing phase.

Additionally, we will also survey large meters 3" and over to determine if they have available testing ports and existing conditions. Based on the survey, we will provide a list of large meters that are viable candidates for replacement to be tested in place to determine existing meter accuracy.

Water Meter Testing Installation Scope of Work

To determine the accuracy of the existing meters, we will remove and test a subset per American Water Works Association (AWWA) standards. The removed meters will be replaced with new ultrasonic water meters as listed below. The location of the water meters is based on data provided to NORESCO by the City and confirmed by NORESCO during the data review and billing analysis.

Table 5-2.2. Proposed Testing Meter Quantity and Type

Meter Size	Quantity	Existing Meter Description	Replacement Meter
3/4"	68	Positive Displacement Meter	Diehl Hydrus 3/4"x7.5" & Itron 500W ERT
1"	64	Positive Displacement Meter	Diehl Hydrus 1"x10.75" & Itron 500W ERT
1.5"	23	Positive Displacement Meter	Diehl Hydrus 1.5"x13" & Itron 500W ERT
2"	24	Positive Displacement Meter	Diehl Hydrus 2"x17" & Itron 500W ERT

Replacements will consist of Diehl Hydrus meters with Itron encoder receiver transmitters (ERT), per the above table.

Water Meter Evaluation

As part of the water meter testing plan, we have evaluated ultrasonic water meters from three reputable manufacturers: Neptune, Badger and Diehl. Based on performance, pricing and lead times, the Deihl meter was determined to be the best choice for timely execution of the testing scope and is recommended to be considered for Citywide water meter replacement.

Implementation

Unless otherwise defined below, the meters will be replaced like for like. Installation of strainers, test valves, bypasses or piping modifications is not included. NORESCO will supply all gaskets and flange fasteners.

The following are not included as part of installation:

- bad/broken curb stops
- piping modifications
- repair of pre-existing leaks or deteriorated piping
- replacement of meter boxes

Area of warranty coverage will be within 2' of the meter either upstream or downstream. Any leaks or repairs needed after installation in this 2' zone will be repaired by NORESCO at no additional charge. Any leaks or repairs needed outside of this 2' zone will be the responsibility of the City.

As part of the cost to test and replace existing meters, we have included a line item for contingency of incidentals. The contingency funds are controlled by the City and will allow for NORESCO to address any issues beyond standard meter installation such as replacing meter boxes or lids. A list of incidental work with associated pricing is provided. In addition:

- NORESCO and their contractors will work directly with the billing personnel to provide daily electronic change-out information for the City to input in their database and/or billing systems.
- The City agrees to receive and provide temporary storage of new meters from the Diehl/Itron distributor for installation by NORESCO and its subcontractors.
- As routes are completed, the City agrees to complete their inspections and sign offs according to the NORESCO route acceptance and sign off procedures.
- City agrees to provide support for hard-to-find meter locations and system isolation assistance when needed.
- City agrees to provide a designated representative to interface with NORESCO and its subcontractors on all issues relating to the water meter installations.

Table5-2.3. Incidental Contingency Work Pricing

#	Item	Line/Box Size	Unit Labor Price	Unit Material Price	Note
1	Replace Defective Curb Stops/Ball Valves/Gate Valves	3/4"	$45.00	$65.00	
		1"	$45.00	$90.00	
		1.5"	$160.00	$155.00	
		2"	$160.00	$204.00	
2	Replacing Defective/Broken Meter Boxes with plastic boxes and plastic lids (Dallas Specialty & MFG Boxes & Lids)	5/8" through 1"	$35.00	$47.00	Material includes DS1200BI (BLACK); If different box required, material and freight will be charged plus 25%
		1.5" & 2"	$55.00	$58.00	Material includes DS1500IB (BLACK); If different box required, material and freight will be charged plus 25%
3	Pipe Length Modifications to accommodate changes in meter type; Convert threaded to flanged or repipe improper screwed meter connections	1.5"	$240.00	$144.00	
		2"	$240.00	$152.00	
4	Pull and reinstall existing meter box due to misposition in relation to meter (meter boxes only, not including vaults); box resets	3/4"	$35.00	N/A	
		1"	$35.00	N/A	
		1.5"	$55.00	N/A	
		2"	$55.00	N/A	
5	Replace existing defective or leaking pipe/pipe modifications/repiping a direct connected meter on customer side	3/4"	$90.00	$78.00	
		1"	$90.00	$118.00	
		1.5"	$320.00	$204.00	
		2"	$320.00	$277.00	
6	Remove and Replace Concrete/Asphalt for Meter Access (includes use of Quikcrete or similar material mixed onsite; does not include 3rd party certified concrete work)	3/4"	$200.00	N/A	
		1"	$200.00	N/A	
		1.5"	$450.00	N/A	
		2"	$450.00	N/A	
7	Raise Meter Set Service (labor & material for piping only)	3/4"		N/A	
		1"		N/A	
8		3/4"	$200.00	N/A	

#	Item	Line/Box Size	Unit Labor Price	Unit Material Price	Note
	Lower Meter Set Service (labor & material for piping only)	1"	$250.00	N/A	
9	**Replace Meter Coupling; shorter couplings used for tight meter access**	3/4"	$25.00	$15.00	
		1"	$25.00	$20.00	
10	**Replace Meter Box Lid**	1" & Below	$5.00	See Note	Material and freight will be charged plus 25%
		1.5" & 2"	$10.00	See Note	Material and freight will be charged plus 25%

Water Meter Testing Results

The water meters that are removed and tested will be shipped to a certified test laboratory and tested per AWWA standards. The meter accuracy will be determined per the equation below:

Weighted Average Meter Accuracy

$$MWA = (LFWF * LFA) + (IFWF * IFA) + (MFWF * MFA)$$

Where:

MWA	=Weighted Average Meter Accuracy, in percent
LFWF	=Low flow rate weighting factor = 0.15 per AWWA standard M6.
LFA	= Low flow accuracy in percent, per third party meter testing data.
IFWF	= Intermediate flow rate weighting factor = 0.70 per AWWA standard M6.
IFA	= Intermediate flow accuracy, in percent, per third party meter testing data.
MFWF	= Maximum flow rate weighting factor = 0.15 per AWWA standard M6.
MFA	= Maximum flow accuracy, in percent, per third party meter testing data

The weighted average accuracy calculated from the test data will be used to determine the amount of under measurement of the baseline sample meters evaluated. Once the baseline accuracy for each meter has been calculated, the overall recovered revenue will be calculated based on the billed water usage provided.

Expected increased revenue will be calculated using a billing model during the next phase of the project. Potential billing gains will be determined by applying the appropriate utility costs (Water, Sewer, Energy, and Water Resources and Infrastructure Protection [WRIP]) to the potential increased billable gallons realized due to improved meter accuracies.

Next Steps

The next steps to start water meter testing are as follows:

- City personnel should thoroughly review the billing data, selected meters to be tested, and proposed scope of work.
- A budget to complete this work is included in the Phase 1 IGA. Upon approval from the City, we will order equipment to complete the proposed testing scope of work.

Further steps beyond meter testing are provided in the detailed description of the Water Meter and AMI Program included in *Section 5.2 Water Meters/Automated Metering Infrastructure* of this IGA report.

4. PHASE 1: CONSTRUCTION

4.1 Construction Process (Project Schedule / Project Implementation)

NORESCO Roles and Responsibilities

NORESCO oversees all construction activities during project implementation and will inspect all work performed to ensure compliance with the contract documents. Our onsite construction project manager (PM) manages and controls the activities of all our subcontractors. The PM is also responsible for maintaining continuity from the IGA, through construction, to commissioning, and into the first contract term. To meet such an aggressive schedule, NORESCO will have dedicated construction PM onsite when project work is occurring. The PM will coordinate project meetings with City facilities staff during construction and will maintain meeting minutes informing City stakeholders of all activity. Daily three-week look ahead schedules will be created every week specifically identifying:

- The time that the work will occur
- The location where work will occur
- The scope of work that will be completed
- Any potential impacts the work may have on the facility such as material logistics, access to offices, secured or locked areas, work zones, safety concerns, etc.

Each week's look ahead schedule will be performance tracked against the prior weeks' work and shared with City stakeholders. Our PM will ensure that all punch list issues are resolved prior to final acceptance and submit completed as-built documentation, O&M manuals, and other pertinent documents for the City's review and approval.

Project Schedule

Appendix 6: Project Schedule outlines a 20-month project duration inclusive of final design and installation of the ECMs described herein. Due to current supply chain delivery issues and chip shortages, major mechanical and electrical equipment has significantly prolonged delivery times. The overall schedule duration accounts for these extended material delays coupled by seasonal constraints. With and anticipated contract signing in November 2022, the work will be divided into two separate construction phases.

The first phase will combine the Interior/Exterior LED Lighting, Weatherization (including Jay Lively Ice Rink), Electric Vehicle Charging Stations, Irrigation Repairs & Re-commissioning, and Water Meter Test installations. This first phase of construction will be complete by approximately July/August of 2023 and will allow energy savings to start being accrued.

Once this work is complete, NORESCO will temporarily demobilize due to supply chain extended material deliveries and seasonality constraints associated with the mechanical upgrades and building electrification. NORESCO will re-mobilize in the spring of 2024 when the major mechanical and electrical equipment is being delivered and/or the weather is favorable for replacing the exterior mounted equipment and the Library, Joe C. Montoya Community Center, Lake Mary Water Treatment Plant and Sustainability Office. New electrical service upgrades are required at the Joe C. Montoya Community Center and Sustainability Office. The utility will not provide this upgrade until the new electrical panel housing the new electric meter socket is set in place.

General Clarifications

The work will be performed during normal business days and hours defined as Monday through Friday, 7:00 a.m. to 3:30 p.m., with an exception for federally observed holidays.

Permits will be obtained for scopes described in *Table 4.1-1*. Since City of Flagstaff is their own permitting authority, permitting costs have not been included.

Allowances

NORESCO has set several allowances as identified in the associated detailed scopes of work and defined below:

ECM 2a: Energy Management System Upgrades

This measure consists primarily of software and programming upgrades and does not include the replacement of any equipment. We have included an EMS end device deficiency allowance of $5,000, which will be used to replace failed end devices that are discovered during the implementation of the proposed programming updates. To expedite the work, NORESCO will correct deficiency items as they are found on a building-by-building basis up to the allowance amount. NORESCO will provide an itemized list of deficiency items found and associated unit cost, inclusive of any field time verifying the potential issue at each building. If this allowance has been depleted, a list of any additional deficiencies and associated costs will be provided to the City. Any allowance funds not used will be returned to the City or used for other energy savings measures as directed by the City.

ECM 2c: Electric Boilers

An allowance of $10,000 has been included for the remediation of asbestos in the breaching of the boiler. No other hazardous materials, testing, abatement, or removal is included in any other ECMs. The City will be responsible to perform any abatement and expend the Hazardous Materials Contingency towards abating any additional hazardous materials that may be encountered while performing the work. This work will be performed as necessary and expend the Hazardous Materials allowance. The City will remain the "Generator" of record and sign any and all disposal documents (i.e. manifests, bills of lading, etc.) in order to document the abatement or removal of any such hazardous materials from City's site or premises. Any hazardous material testing, abatement, or removal that exceeds the amount of the City Hazardous Material Contingency will be addressed by modification of the contract. NORESCO will provide a reconciliation of the City's Hazardous Material Contingency at Final Acceptance. Any allowance funds not used will be returned to the City or used for other energy savings measures as directed by the City.

Construction Allowance

NORESCO and the City mutually agree the Project Cost provided herein is based on prices of materials and labor in effect as of the date of this report submittal. NORESCO has included a $125,000 allowance to account for the following:

- Cost increases during the time between submittal of this report and final contract execution by the City (projected for November 2022). Upon scope approval by the City, NORESCO shall update the project costs for inclusion in the final contract.
- The cost of EV charging stations currently assumes no cost from APS to provide the supporting electrical services based on prior discussions with APS. The construction allowance will be used if, in the future, APS requires the City to pay a portion of new electrical services.

Any remaining Construction Allowance ($125,000 less cost revisions between IGA submittal and execution of the installation contract) will be set aside in a "City Controlled Contingency" to account for potential material cost increases from execution of the installation contract and product submittal approval by the City. If costs remain constant, any unused portion of this allowance can either be refunded back to the City or used for other ECMs.

Subcontractor List

The following subcontractors have been preliminarily selected to provide services for this project:

- ECM Holdings (lighting retrofit work)
- Building Envelope Solutions (Weatherization and sealing work)
- Irrigation Controls (Hydropoint)
- Pueblo Mechanical (HVAC replacement)
- Arizona Controls (HVAC controls)
- N.J. Shaum & Son (Electrical – HVAC, EV chargers)
- Water Meter Testing (Pedal Valve, Inc.)

City of Flagstaff Product/Design Review Responsibility

To ensure the project schedule is maintained it is essential a procedure is established for the review and approval of major products/equipment and design drawings. The preliminary schedule is based on product submittal and design drawing review durations as described below:

1. The City shall complete its review of the submittals within five working days of receipt of the submittals and provide electronic approval of the submittal or if the submittal has not been approved, written explanation as to the reason. NORESCO shall submit a revised submittal within five working days to the City for review and approval and the City shall have five working days from receipt thereof to complete its review of the revised submittal. NORESCO shall be responsible for any delays caused by rejection of incomplete or inadequate submittals. NORESCO may not commence any of the work that requires the submittals without written approval of the City.

    a. **Commodity Product Submittal** timeline shall follow durations noted above. Note that Commodity Product Submittals consist of commodity items for lighting and plumbing retrofits and repairs. The replacement schedule for the Commodity Product Submittals will be part of the submittal package for final review and approval by City. Note initial approval of the replacement schedule will be given by City as part of the approval of the IGA. The submittals will be grouped by type as standalone submittal packages.

    Due to current supply chain delivery issues, commodity product submittals are to include major mechanical equipment such as the Library boilers, RTUs at Joe Montoya Community Center, Sustainability Office, Pullman Airport and Lake Mary Water Treatment Facility and major electrical equipment for the Joe C. Montoya Community Center and Sustainability Office new service switchgear and Pullman Airport main electrical breaker.

    b. For **Design Drawings and Engineered Equipment Submittals**, the timeline shall follow durations noted above. This process is summarized in the descriptions below for the 90% and 100% Design Drawings and Engineered Equipment Submittal packages. These submittal

packages will be submitted by site for the specific energy conservation work to be implemented.

i. **90% Design Submittal**: 20 working days for City review, then five working days for NORESCO incorporation or response to City comments followed by NORESCO submitting a 100% Design Submittal that incorporates the City review comments.

ii. **100% Design Submittal**: 10 working days for City to review and validate the 100% Design Submittal satisfies their comments.

iii. City to issue final approval of 100% Design Submittal package and NORESCO to start the permitting process.

iv. Should there be further City comments, NORESCO will have five days to respond and resubmit to City. The City will have five days to approve the revised 100% Design Submittal.

2. Following approval of each **Commodity Equipment Submittal**, NORESCO shall proceed with procurement for lighting, HVAC, electric vehicle charging, irrigation controls, and water meter equipment as delineated in the specific Product Equipment Submittal.
3. Due to current supply chain delivery issues, commodity product submittals are to include major mechanical equipment such as the Library boilers, RTUs at Joe C. Montoya Community Center, Sustainability Office, Pullman Airport and Lake Mary Water Treatment Facility and major electrical equipment Joe C. Montoya Community Center new service switchgear and Pullman Airport main electrical breaker.
4. **Submittal Documents**: NORESCO shall provide one electronic copy of each Product Submittal and Design Drawing Package for review by City personnel. Product submittals will be transmitted and tracked through NORESCO's NEWFORMA online system. The format and content of Document Submittals is summarized in the *Table 4.1-1*.

Table 4.1-1. Product and Design Document Submittals

	Interior/ Exterior LED Lighting	Energy Management System Upgrades	Heat Pump Heating and Cooling	Electric Boilers	Electric Rate Switch for Pumping Accounts	Weatherization & Air Sealing	Ice Rink Automated Door Closer and Air Curtains	Electric Vehicle Charging Stations	Irrigation Repairs and Re-Commissioning	Water Meter Testing
City Permit?	No	No	Yes	Yes	No	No	No	Yes	No	No
Product Cutsheets	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes	Yes
Schedule of Replacement	yes (line by line table format)	yes (line by line table format)	per Design Submittal	per Design Submittal	N/A	yes (line by line table format)	N/A	per Design Submittal	yes (line by line table format)	yes (line by line table format)
Drawing/ Design Submittal	N/A	N/A	Design Submittal including site layout, mechanical, electrical, schedules	Design Submittal including site layout, mechanical, electrical, schedules	N/A	N/A	N/A	Design Submittal including site layout, electrical, schedules	N/A	N/A
Mech/Elec Plans by stamped by AZ Engineer	N/A	N/A	Yes	Yes	N/A	N/A	N/A	Yes	N/A	N/A
Submittals to City	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Note 1	Note 1	Notes 1, 2	Notes 1, 2	Note 1	Note 1	Note 1	Notes 1, 2	Note 1	Note 1

Note 1: Product Submittals apply to all projects considered maintenance, repair or replacement in kind.

Note 2: Drawing/Design Submittals for Permitting apply only to Heat Pump Heating and Cooling, Electric Boilers and Electric Vehicle Charging Stations.

4.2 MEASUREMENT AND VERIFICATION PLAN

NORESCO developed an ECM-specific Measurement and Verification (M&V) Plan for each of the ECMs proposed, which will provide cost-effective verification of savings throughout the Guarantee Period. The M&V Plan was developed for each ECM based on the following criteria:

- Compliance with IPMVP
- Accurate predictions of energy savings
- Cost-effective minimization of uncertainty in Verified Savings
- Verified Savings reflect actual post installation operating conditions
- M&V activities support ongoing energy management activities

NORESCO used the IPMVP as the basis for the proposed M&V Plan, while ensuring that the M&V Plan for the project as a whole is cost-effective. The proposed M&V Plan offers the City a savings verification strategy that emphasizes M&V rigor where it is best applied, yielding the best return to the City in terms of savings persistence, reliability, and support for ongoing energy management activities.

Table 4-4.2.1 lists the amount of Guaranteed Savings resulting from the ECMs to be installed by NORESCO.

Table 4-4.2.1. Guaranteed Savings

Year	$ Amount
1	$222,720
2	$229,603
3	$236,711
4	$244,057
5	$251,646
6	$259,486
7	$267,590
8	$275,963
9	$284,616
10	$293,560
11	$302,804
12	$312,358
13	$322,235
14	$332,445
15	$343,000
16	$353,912
17	$365,196
18	$376,862
19	$388,925
20	$401,400
Total	**$6,065,091**

A summary of units of energy saved is shown below in *Table 4-4.2.2.*

Table 4-4.2.2. Summary of Energy Units Saved

#	ECM	Annual Electric Demand (kW)	Electric Consumption (kWh)	Natural Gas (therms)	Propane (gallons)	Gasoline (gallons)	Utility Bill Savings Dollars	Reclaim Water (kgal)	Water (kgal)
1a & 1b	Interior & Exterior LED Lighting	2,415	738,882	(8,733)	(173)	0	0	0	0
2a	Energy Management System Upgrades	299	145,434	15,808	0	0	0	0	0
2b	Heat Pump Heating and Cooling	0	0	0	0	0	0	0	0
2c	Electric Boilers	0	0	0	0	0	0	0	0
3	Electric Rate Switch for Pumping Accounts	0	0	0	0	0	9,733	0	0
4A	Weatherization	0	3,273	10,415	1,151	0	0	0	0
4B	Ice Rink Automated Door Closer and Air Curtains	0	5,291	292	0	0	0	0	0
5	Electric Vehicle Charging Stations	(100)	(25,861)	0	0	5,666	0	0	0
6A	Irrigation Repairs & Re-Commissioning	0	0	0	0	0	0	10,432	6,751
8	Water Meter Testing	0	0	0	0	0	0	0	0
9	Construction Allowance	0	0	0	0	0	0	0	0
	Totals	**2,614**	**867,019**	**17,782**	**978**	**5,666**	**9,733**	**10,432**	**6,751**

Table 4-4.2.3. M&V Plan Summary by ECM

#	ECM Description	M&V Option Used	Summary of M&V Plan	
1a & 1b	**Interior and Exterior LED Lighting**	A	Key Variables	Lighting fixture power, hours of operation
			Baseline	Measure a sample of fixture wattages based on fixture type sufficient to yield a 90 percent confidence level and 10 percent precision for 58 percent of the connected baseline in-scope lighting load (kW) Hours will be agreed upon based on customer interviews and usage type based on past projects
			Post-Installation	Measure power on a sample of fixtures based on fixture type sufficient to yield a 90 percent confidence level and 10 percent precision for at least 50 percent of the connected in-scope lighting load (kW) Operating hours will remain the same as baseline or based on new lighting control schedule and will be agreed upon. Savings based on difference between baseline and post-installation wattage and operating hours.
			Post-Acceptance	Annual inspections of a sample of installed fixtures to verify they operational throughout the performance phase
2a	**Energy Management System Upgrades**	A	Key Variables	Weather data, building heating and cooling loads, runtime hours, temperature set points, and HVAC system efficiency
			Baseline	Confirm runtime and space temperature set points through EMS data, data loggers, and interviews with facility personnel Determine equipment information via site audit, facility staff interviews, and as-built drawings Existing space temperatures and schedules based on survey of existing EMS and discussions with facility personnel Develop energy model based on facility audit
			Post-Installation	Commissioning to verify proper installation of new control sequences and verification of mutually agreed schedules and set points. Post-retrofit consumption based on baseline model updated to reflect agreed upon EMS schedules and set points

#	ECM Description	M&V Option Used	Summary of M&V Plan	
			Post-Acceptance	Annual inspections of a sample of units to verify night setback temperatures and schedules meet the design intent.
2b	Heat Pump Heating & Cooling	There are no guaranteed savings associated with this ECM.		
2c	Electric Boilers	There are no guaranteed savings associated with this ECM.		
3	Electric Rate Switch for Pumping Accounts	A	Key Variables	Baseline electric use and demand, utility rates
			Baseline	Baseline electric use and demand and utility bills for Lake Mary Pump
			Post-Installation	Confirmation of change from rate E-32 to E-221
			Post-Acceptance	No ongoing M&V activities.
4a	Weatherization	A	Key Variables	Weather data, building heating and cooling loads, occupancy and operating schedules, space temperature set points
			Baseline	Determine baseline energy consumption using information obtained from site audits to determine current condition of existing weatherization and from interviews with facility staff
			Post-Installation	Verify proper installation of weatherization materials during commissioning period Expected energy savings will be determined using as-built conditions for gaps and cracks sealed.
			Post-Acceptance	Inspect a sample annually to verify that envelope improvements are in good condition
4b	Ice Rink Automated Door Closer and Air Curtains	A	Key Variables	Weather data, building heating and cooling loads, occupancy and operating schedules, space temperature set points
			Baseline	Determine baseline energy consumption using information obtained from building drawings, manufacturers' data, interviews with facility staff, and site audits to determine current operation of existing doors.
			Post-Installation	Verification of proper installation of equipment. Expected energy savings will be determined using an update to the savings calculation based on the installed conditions.

#	ECM Description	M&V Option Used	Summary of M&V Plan	
			Post-Acceptance	Inspect air curtain and door closer annually during the performance period to verify that equipment is in good condition.
5	**Electric Vehicle Charging Stations**	A	Key Variables	Existing fleet fuel economy, miles driven per year
			Baseline	NORESCO reviewed the fleet inventory provided by the City of Flagstaff to confirm the miles used for vehicles being contemplated for upgrade to electric vehicles.
			Post-Installation	Verification of proper installation of equipment. Expected energy savings will be the same as the proposed energy savings.
			Post-Acceptance	Inspect charging stations annually to verify that equipment is in good condition
6a	**Irrigation Repairs & Re-Commissioning**	A	Key Variables	Irrigated area, landscape watering needs, baseline water consumption for irrigated area, average rainfall data
			Baseline	Billed water data for the parks for 2020, current controller schedule
			Post-Installation	NORESCO will review the irrigation control system to verify that correct irrigation schedules and appropriate system response to weather events were programmed. Savings is calculated by subtracting the baseline water consumption with the calculated water use using historical weather data after recommissioning the irrigation system.
			Post-Acceptance	Annual inspections of a sample of the irrigation controls to ensure proper system operation. Verified savings will be based on the post-installation M&V activities as described above and documented in the Post-Installation Report.

ECM 1a & 1b: Interior & Exterior LED Lighting & Controls Upgrades

Overview of ECM, M&V Plan, & Savings Calculation for ECM

NORESCO will use IPMVP Option A for these ECMs.

NORESCO measured baseline fixture wattages for a representative sample of fixtures from pre-installation lamp and ballast combination (LBC) groups that represent 58 percent of the connected pre-installation lighting electrical load (kW) in the scope of this project. Upon completion of construction, NORESCO will measure the post-installation fixture wattages of a representative sample of fixtures from a number of post-installation LBC groups that represent at least 50 percent of the connected post-installation lighting electrical load (kW) in the scope. The post-installation LBC groups selected for measurement will be based on proposed fixture quantities. Hours of operation for each building's fixtures were determined via interviews with City personnel. Lighting loggers were not used since hours of operations during the IGA were not typical due to COVID-19. Post-installation hours of operation for areas where lighting controls are installed will be based on an agreed upon reduction in lighting use. Any variances in the number and/or equipment installed from the proposed scope of work will be noted in the Post-Installation Report generated by NORESCO. Verified savings will be calculated based on measured fixture wattages, agreed upon hours of operation, and the as-built quantities.

Proposed Energy Savings Calculations & Methodology

Direct Lighting Calculations

To calculate the proposed direct lighting savings, luminaires have been grouped with other luminaires sharing the same baseline LBC group, post installation LBC group, and hours of operation. For each group of LBCs, energy savings during each time of use period are calculated as follows:

$$ES_{lighting} = \left(P_{base} * N_{base} - P_{post} * N_{post}\right) * H_{base}$$

Where:

$ES_{lighting}$	= Energy savings, in kWh, for the lighting retrofits
P_{base}	= Electrical power, in kW, per luminaire for appropriate baseline LBC group
P_{post}	= Electrical power, in kW, per luminaire for appropriate post installation LBC group
N_{base}	= Number of luminaires in representative baseline LBC group
N_{post}	= Number of luminaires in representative post installation LBC group
H_{base}	= Existing annual operating hours defined by luminaire's pre hours group

NORESCO calculated the contribution to proposed peak demand savings by applying a diversity factor to the gross connected load (kW). The LBCs hours group determines the demand diversity factor. For each group of luminaires, NORESCO calculated the monthly proposed demand savings as follows:

$$DS_{lighting} = \left(P_{base} * N_{base} - P_{post} * N_{post}\right) * DF_{lighting}$$

Where:

$DS_{lighting}$	= Monthly demand savings, in kW, for the lighting retrofits
P_{base}	= Electrical power, in kW, per luminaire for appropriate baseline LBC group
P_{post}	= Electrical power, in kW, per luminaire for appropriate post installation LBC group
N_{base}	= Number of luminaires in representative baseline LBC group
N_{post}	= Number of luminaires in representative post installation LBC group

$DF_{lighting}$ = Hours group diversity factor; as a percentage from *Appendix 7: Standards of Service*

The results of these calculations are summed for total electric demand (kW) and energy (kWh) savings. Cost savings are determined by multiplying the proposed energy and demand savings for each applicable LBC by the approved incremental energy costs. This calculation can be found in *Appendix 4: Savings Calculations.*

Lighting Control Calculations

To calculate the proposed lighting control savings, luminaires have been grouped with other luminaires sharing the same baseline LBC group, post installation LBC group, and hours of operation. The baseline and post installation operating hours by building for all lighting equipment is detailed in *Appendix 7: Standards of Service.*

NORESCO based projected energy savings on proposed quantities. For each group of luminaires, we calculated the energy savings during each time of use period as follows:

$$ES_{controls} = \left(P_{post} * H_{base} - P_{post} * H_{post}\right) * N_{post}$$

Where:

$ES_{controls}$ = Energy savings, in kWh, for the on/off controls
P_{post} = Electrical power, in kW, per luminaire for appropriate post installation LBC group
H_{base} = Existing annual operating hours defined by luminaire's pre hours group
H_{post} = Post installation annual operating hours defined by luminaire's post hours group
N_{post} = Number of luminaires in representative post installation LBC group

The post installation operating hours are based on reductions to the baseline operating hours determined via direction and input from the City and on-site observations.

For each group of luminaires in this ECM, NORESCO calculated the monthly demand savings for the lighting controls as follows:

$$DS_{controls} = P_{post} * DF_{controls} * N_{post}$$

Where:

$DS_{controls}$ = Monthly demand savings, in kW, for the lighting controls
P_{post} = Electrical power, in kW, per luminaire for appropriate post LBC group
$DF_{controls}$ = Diversity factor; as a percentage in *Appendix 7: Standards of Service*
N_{post} = Number of luminaires in representative post installation LBC group

The results of these calculations are summed for total electric demand (kW) and energy (kWh) savings. Cost savings are determined by multiplying the proposed energy and demand savings for each applicable LBC by the approved incremental energy costs. This calculation can be found in *Appendix 4: Savings Calculations.*

Ancillary HVAC Interactive Calculations

The proposed lighting upgrades reduce the wattage needed for lighting, which in turn produces less heat in the lighted area. Since cooling systems have less heat to remove, less air conditioning energy is required.

The impacts of the lighting upgrade on HVAC systems were calculated with a spreadsheet model using cooling and heating utilization factors, based on the project location. In our analysis we considered the type and operation of HVAC systems. Luminaires in unconditioned spaces, such as outdoor areas, stairways, mechanical rooms, and high-bay areas, have no effect on the mechanical cooling systems. Therefore, cooling savings calculations do not include these luminaires. For each group of luminaires in conditioned spaces, we calculated the HVAC cooling energy savings during each time of use period as follows:

$$ES_{HVAC} = \frac{(ES_{Ligthing} + ES_{controls}) \times C_{Energy} \times (1 - \%_{BHO})}{CF} \times EFF \times UTIL_{Cooling}$$

Where:

ES_{HVAC} = Energy Savings, in kWh, for the HVAC interaction
$ES_{lighting}$ = Energy savings, in kWh, for the lighting retrofits (from conditioned spaces only)
$ES_{lontrols}$ = Energy savings, in kWh, for the lighting controls (from conditioned spaces only)
C_{energy} = Conversion factor = 3,413 Btu/kWh
%BHO = Percentage of the building area (sqft) that is heating only
CF = Conversion factor = 12,000 Btu/ton-hr, cooling capacity
EFF = Mechanical cooling efficiency, in kW/ton
UTILcooling = Cooling Utilization Factor. Percent of lighting energy that contributes to cooling load, based on location

The contribution to peak demand savings is determined by applying a diversity factor to the gross kW load. The LBC's hours group determines the demand diversity factor already applied to the demand savings for direct lighting and lighting controls. For each group of luminaires in conditioned spaces, the monthly HVAC demand savings were calculated as follows. The annual HVAC demand savings is calculated by multiplying the monthly HVAC demand savings by the number of cooling months per year:

$$DS_{Cooling} = \frac{DS_{Lighting} \times C_{Energy} \times M_{Cool}}{CF} \times EFF$$

Where:

$DS_{cooling}$ = Demand Savings, in kW, for the HVAC interaction.
$DS_{lighting}$ = Demand savings, in kW, for the lighting retrofits (from conditioned spaces only).
C_{energy} = Conversion factor = 3,413 Btu/kWh.
M_{cool} = Months per year with mechanical cooling = 5.
CF = Conversion factor = 12,000 Btu/ton-hr, cooling capacity.
EFF = Mechanical cooling efficiency, in kW/ton

Heating penalty was calculated as follows:

$$HP_{HVAC} = \frac{\left(ES_{Lighting} + ES_{Controls}\right) \times C_{Energy}}{C_{MMBTU} \times EFF} \times UTIL_{Heating}$$

Where:

HP_{HVAC} = Heating Penalty, in MMBtu, for the HVAC interaction.
$ES_{lighting}$ = Energy savings, in kWh, for the lighting retrofits (in conditioned spaces only).
$ES_{controls}$ = Energy savings, in kWh, for the on/off controls (in conditioned spaces only).
C_{energy} = Conversion factor = 3,413 Btu/kWh.
C_{MMBtu} = Conversion factor = 1,000,000 Btu/MMBtu.
EFF = Heating efficiency, as a percentage
UTILheating = Heating Utilization, a percent, is the regional heating season length in fractions of a year multiplied by an ASHRAE usable light heat factor

The results of these calculations were summed for total electric demand (kW) and energy (kWh) savings. Cost savings were determined by multiplying the expected energy and demand savings for each applicable LBC by the approved energy costs.

Baseline M&V Activities

NORESCO performed fixture power measurements for a sample of the baseline fixture types. For each LBC group measured, sample sizes were determined based on the statistical sampling techniques described in IPMVP, using a confidence level of 90 percent and a precision of 10 percent.

NORESCO completed fixture power measurements in June 2022 on ten LBCs that represented 58 percent of the total lighting load. Measurements were performed at the fixture or circuit level. NORESCO used these measurements to determine the average fixture power for the existing lighting system. The measured average was applied to the specific LBCs in the line-by-line lighting audit.

A true root mean square (RMS) electric power meter was used to measure the fixture wattage. Fixture wattage power measurements were performed on individual fixtures where feasible. If a dedicated circuit fed a group of identical fixtures (i.e., the same LBC) the circuit may be measured as a whole if measurement of individual fixtures was not feasible. NORESCO recorded the ballast type, manufacturer, and model number for all fixtures measured. Pre-installation samples and measurements were witnessed and signed off by a City representative and field notes can be found in *Appendix 5: Baseline Measurements.*

Hours of operation for each building's fixtures were determined via discussions with the City and on-site observations. These mutually agreed upon hours of operation were used for both baseline and post-installation energy savings calculations. Where lighting controls are installed, post-installation operating hours are based upon agreed upon reductions in lighting use.

Post-Installation M&V Activities

Upon completion of construction, NORESCO will measure the post-installation electrical demand of a representative sample of interior fixtures (or exterior fixtures that may be measured from an interior location) using the same sampling approach as the baseline and from a number of post-installation LBC groups that represent at least 50 percent of the connected post-installation lighting electrical load (kW) in scope . The measurements will be performed at the fixture or circuit level. The post-installation LBC groups selected for measurement will be based on proposed fixture quantities. Post-installation sampling and measurements will be witnessed and signed-off by a City representative.

NORESCO's on-site construction manager will monitor installation and retrofit of fixtures and verify that the correct products are installed. Any variances in the number and/or equipment installed from the proposed scope of work will be noted in the As-Built Report generated by NORESCO. The equations presented above will be used to calculate verified savings based on the as-built quantities and equipment.

Post-installation M&V activities for the lighting controls will focus on ensuring that the new controls conform to the design specifications. Successful completion of commissioning of the new controls, in accordance with the manufacturer's prescribed procedures and with the commissioning plan, shall constitute verification of the ability of the new controls to perform as designed. The engineering model will be used to calculate the expected annual energy savings. These expected annual energy savings calculations will be the basis for savings for the duration of the savings guarantee period.

Post-Acceptance Performance Period Verification Activities

NORESCO will conduct annual inspections during the performance period for a sample of fixtures to verify that proper replacement lamps are being used. NORESCO will survey the maintenance stock and maintenance records to confirm that the proper lamps and drivers are being inventoried. Any deficiencies and improper maintenance practices found will be reported in the Guaranteed Savings Reconciliation Report.

No additional measurements will be performed. Verified energy savings will be based on the baseline and one-time post-installation measurements and calculations described above and documented in the Post-Installation Report.

ECM 2a: Energy Management System Upgrades

Overview of ECM, M&V Plan, & Savings Calculation for ECM

NORESCO will use an approach based on IPMVP Option A for this ECM.

NORESCO will update EMS programming to correct schedules to reduce equipment runtime, adjust supply air temperature setpoints and reset strategies to reduce simultaneous heating and cooling, enable economizers to utilize cool outside air to cool spaces when possible, and reset heating hot water setpoints to take advantage of existing condensing boilers. Verified savings will be based on the eQUEST and bin-temperature models and on the successful completion of commissioning. Annual M&V activities will include inspections to verify that the control strategies continue to function as intended.

Proposed Energy Savings Calculations & Methodology

The energy baseline was determined using a combination of eQUEST energy simulation software and bin-temperature spreadsheet models. These methods require a range of input variables to establish the baselines, including weather data, building populations, operating schedules, heating and cooling system properties, and building envelope properties. TMY3 weather data is used to represent the long-term average weather. The baseline models represent the baseline energy consumption, and all ECM parametric runs are based on these models.

NORESCO calculated the post-installation energy consumption by modifying the baseline models with the equipment modifications and control strategies proposed in this ECM. NORESCO performed parametric simulations with post-installation inputs to the baseline models. For example, NORESCO adjusted operating schedules or temperature set points to simulate the proposed conditions. eQUEST models were used to calculate savings for multiple ECMs. We calculated the energy use for each measure using the previous measure as the baseline, in order to account for interactive effects and avoid duplicated savings. The results of the eQUEST simulations and bin-temperature models are shown in *Appendix 4: Savings Calculations.*

eQUEST is an industry-accepted building energy simulation software package. The software is based on the DOE-2 energy simulation engine and provides an improved user interface and features to facilitate the input and processing of data. eQUEST is a complex simulation program that performs numerous calculations when modeling building energy consumption. However, at its core, eQUEST uses standard heat transfer equations to determine the heating and cooling loads based on the heat loss or gain through the building envelope, the amount of outdoor air brought into the building, and any sources of internal heat gain such as lighting, equipment, and occupants.

The baseline energy use and demand were based on agreed upon existing equipment efficiencies, schedules and setpoints determined through on-site inspections, short term data logging, and interviews with City personnel. The post-installation energy use and demand were determined by updating the baseline model to incorporate the new equipment and control strategies. Annual savings are the difference between the baseline and post-installation energy use as calculated in the models. The verified savings will be based on the successful commissioning of the new equipment and control strategies.

Baseline M&V Activities

NORESCO installed motor loggers in HVAC equipment to record fan runtimes and HVAC operating parameters for a period of approximately three weeks beginning March 15, 2022 and ending April 7, 2022.

NORESCO analyzed the logger data to determine equipment schedules and fan runtime. Additionally, we reviewed programming on the existing Delta Controls EMS. eQUEST and bin-temperature models for the Joe C. Montoya Community and Senior Center, City Hall, the Main Library, NACET Accelerator, Public Works, and USGS Building #6 were used to calculate baseline energy usage under current operating conditions. The baseline data used in the models was obtained from on-site inspections, interviews with facility personnel, and agreed upon schedules and setpoints.

Post-Installation M&V Activities

Post-installation M&V activities will focus on ensuring that the control strategies have been implemented as proposed, including review of the startup and commissioning documents to confirm proper schedules, temperature setpoints, and control sequences. Successful completion of commissioning will constitute verification of proposed energy savings.

The Expected Savings will be based on the proposed eQUEST building simulation models and bin-temperature models for Joe C. Montoya Community and Senior Center, City Hall, the Main Library, NACET Accelerator, Public Works, and USGS Building #6. These expected annual energy savings calculations will be the basis for savings for the duration of the savings guarantee period.

Post-Acceptance Performance Period Verification Activities

NORESCO will conduct annual front-end reviews of programmed schedules and setpoints during the performance period. Any deficiencies and improper maintenance practices found will be reported in the Guaranteed Savings Reconciliation Report.

Verified energy savings will be based on the calculations described above and documented in the Post-Installation Report.

ECM 2b: Heat Pump Heating and Cooling

There are no guaranteed savings associated with this ECM.

Overview of ECM, M&V Plan, & Savings Calculation for ECM

NORESCO will replace existing gas-fired package units and furnaces with packaged heat pumps. There are no guaranteed savings included for this ECM because the additional cost to operate this equipment has not been included in the project cash flow. This was done because the City has carbon reduction goals they want to achieve and there are additional costs to operate equipment that reduce the City's carbon footprint. The additional cost to operate the equipment installed as part of this ECM have been included in the individual writeup for this ECM in the IGA.

Although there are no guaranteed savings for this ECM, we will still carry out a rigorous commissioning and acceptance procedures on the installed equipment combined with startup and commissioning documentation of the heat pumps to verify that the systems are operating properly at startup. There will be no ongoing M&V activities associated with this ECM.

ECM 2c: Electric Boilers

There are no guaranteed savings associated with this ECM.

Overview of ECM, M&V Plan, & Savings Calculation for ECM

NORESCO will replace the existing 1,700-MBH natural gas boiler at the Main Library with two new electric boilers, with the same total capacity. There are no guaranteed savings included for this ECM because the additional cost to operate this equipment has not been included in the project cash flow. This was done because the City has carbon reduction goals they want to achieve and there are additional costs to operate equipment that reduce the City's carbon footprint. The additional cost to operate the equipment installed as part of this ECM have been included in the individual writeup for this ECM in the IGA.

Although there are no guaranteed savings for this ECM, we will still carry out a rigorous commissioning and acceptance procedures on the installed equipment combined with startup and commissioning documentation of the heat pumps to verify that the systems are operating properly at startup. There will be no ongoing M&V activities associated with this ECM.

ECM 3: Electric Rate Switch for Pumping Accounts

Overview of ECM, M&V Plan, & Savings Calculation for ECM

NORESCO will use an approach based on IPMVP Option A for this ECM.

NORESCO will work with The City and APS to switch Lake Mary Well #8 from its current APS electric rate to APS's E-221 Water Pumping Service Rate, reducing overall annual electric costs for this account. The overall net savings to the City will be the current electric cost associated with this account, less the electric cost once the account has been switched to electric rate tariff E-221.

Proposed Energy Savings Calculations & Methodology

To calculate the proposed Electric Rate Switch savings, NORESCO calculated the current electric cost under E-32 M (Medium General Service), reconciled against historical data; and calculated the proposed electric cost under E-221 (Water Pumping Service), using the following equations.

$$\text{Rate Switch Savings} = B_{dem} \times (E32_{dem} - E221_{dem}) + B_{energy} \times (E32_{energy} - E221_{energy})$$

$$\text{Tax Savings} = \text{Rate Switch Savings} \times \text{Tax Rate}$$

$$\text{Total Rate Switch Savings} = \text{Demand Savings} + \text{Tax Savings}$$

Where:

B_{dem} = baseline demand for Lake Mary Well #8
B_{energy} = baseline energy use for Lake Mary Well #8
$E32_{dem}$ = demand rate for E32 tariff
$E221_{dem}$ = demand rate for E221 tariff
$E32_{energy}$ = energy rate for E32 tariff
$E221_{energy}$ = energy rate for E221 tariff

Baseline M&V Activities

NORESCO generated an electric cost model based on historical electric data and current APS rate tariffs. This electric cost model was run for the baseline year of 2019, as well as 2020, and the last 12 months of electric data provided (December 2020 – November 2021), to ensure that the electric use profile for Lake Mary Well #8 has not changed in a way that would significantly change the savings from this ECM moving forward.

Post-Installation M&V Activities

Post-installation M&V activities will focus on ensuring that Lake Mary Well #8 is billed by APS under the proposed Water Pumping Service electric rate (E-221).

The expected savings will be based on the proposed electric cost model run using baseline year 2019 electric data.

Post-Acceptance Performance Period Verification Activities

There are no ongoing M&V activities associated with this ECM.

Verified savings will be based on the results documented in the Post-Installation Report.

ECM 4A: Weatherization

NORESCO will use an approach based on IPMVP Option A for this ECM.

NORESCO will seal gaps around doors and windows to reduce the infiltration of unconditioned air will save energy and decrease operating costs. Sealing the building's shell with weatherstripping will enhance the building's physical integrity and reduce the uncontrolled flow of air that can lead to occupant comfort complaints.

Proposed Energy Savings Calculations & Methodology

The energy savings for this ECM was calculated using the energy model developed for each building. We performed facility inspections to determine the areas and size of infiltration cracks.

Baseline energy consumption for weather stripping components were calculated using a customized engineering model based on standard heat transfer formulas and ASHRAE crack method calculations. To calculate the savings, we estimated that the total baseline crack area for each facility will be sealed and no longer allow outside air infiltration in those specific locations.

Examples of the standard equations used include the following:

$$CFM = K \times A \times P_W$$

$$HEU = 1.08 \times CFM \times HDD \times 24$$

$$CEU = 1.08 \times CFM \times CDD \times 24$$

Where:

CFM	=	Airflow through cracks, ft^3/min
HEU	=	Heating energy use, Btu
CEU	=	Cooling energy use (sensible), Btu
K	=	Building factor, depending on the building type
A	=	Area of the crack, ft^2
P_W	=	Wind pressure factor, psf
HDD	=	Heating degree days
CDD	=	Cooling degree days

A summary of the major inputs used to create the baseline and post-installation models for each building are shown *Appendix 4: Savings Calculations.*

Baseline M&V Activities

During building audits, NORESCO identified areas that could benefit from improved weatherization. The existing insulating properties of these areas were estimated and resulting air infiltration rates were calculated. This information was incorporated into the model to determine baseline energy use. This data is detailed in *Appendix 4: Savings Calculations.*

Post-Installation M&V Activities

Post-installation M&V activities will focus on ensuring proper installation of weatherstripping and seals for the areas in the scope of work. Successful completion of this commissioning process in accordance with the manufacturer's prescribed procedures will constitute verification of the ability of the new equipment to perform as designed. Expected savings will use the confirmed installed quantities with the mutually agreed upon reduction from baseline infiltration rates in the locations.

Post-Acceptance Performance Period Verification Activities

NORESCO will conduct annual inspections on a sample of upgrades to ensure the envelope upgrades are in place and operating as intended. Any deficiencies and improper maintenance practices found will be reported in the Guaranteed Savings Reconciliation Report.

Verified energy savings will be based on the calculations described above and documented in the Post-Installation Report.

ECM 4b: Ice Rink Automated Door Closer and Air Curtains

NORESCO will use an approach based on IPMVP Option A for this ECM.

NORESCO will install an automatic door closer and air curtain at the Ice Rink to reduce the uncontrolled flow of conditioned air thereby decreasing operating costs and save energy.

Proposed Energy Savings Calculations & Methodology

The energy savings for this ECM was calculated using the energy model developed for the Ice Rink. The baseline used facility inspections and onsite observations to determine the areas and size of the doors and the infiltration and exfiltration associated with the door areas.

To quantify energy savings associated with this ECM, NORESCO developed a spreadsheet model using ASHRAE formulas to calculate infiltration through the open doors, and the associated heating and cooling energy use and cost. In the proposed case, we assumed that the air curtains will be 80 percent effective at reducing infiltration, and that the use of the automatic door opener will reduce the amount of time the door is left open by 90 percent.

The following equations were used to calculate the additional energy use due to existing infiltration:

$$CFM = A \times C_V \times WS_{avg} \times F$$

$$HEU = 1.08 \times CFM \times (T_h - T_l) \times COP_h$$

$$CEU = 1.08 \times CFM \times (T_h - T_l) \times COP_c$$

Where:

CFM	=	Airflow through open door, ft^3/min
HEU	=	Heating energy use, Btu

CEU	=	Cooling energy use (sensible), Btu
A	=	Area of opening, ft_2
C_v	=	Effectiveness of opening
WS_{avg}	=	Average wind speed, mph
F	=	Conversion factor = 88 ft/mi/min/hr
T_h	=	Temperature of warm space, °F
T_i	=	Temperature of cool space, °F
COP_h	=	Coefficienct of performance of the heating system
COP_c	=	Coefficienct of performance of the cooling system

Details of these calculations can be viewed in *Appendix 4: Savings Calculations.*

ECM Baseline M&V Activities

NORESCO inspected the Ice Rink doors and held discussions with facility personnel to identify target areas for envelope improvements that would help reduce humidity and condensation in the arena.

NORESCO developed an energy model based on existing conditions and equipment to calculate baseline infiltration and heat loss and gain based on those site observations.

Post-Installation M&V Activities

Post-installation M&V activities will focus on ensuring the equipment is in place and operating as intended. Expected savings will use the confirmed installed quantities with the mutually agreed upon reduction from baseline infiltration rates in the locations.

Post-Acceptance Performance Period Verification Activities

NORESCO will conduct annual inspections to ensure the envelope upgrades are in place and operating as intended. Any deficiencies and improper maintenance practices found will be reported in the Guaranteed Savings Reconciliation Report.

Verified energy savings will be based on the calculations described above and documented in the Post-Installation Report.

ECM 5: Electric Vehicle Charging Stations

NORESCO will use an approach based on IPMVP Option A for this ECM.

NORESCO will install EV chargers at Public Works, as described in ECM-5. The EV chargers will allow the City to charge new EVs, purchased to replace existing fleet vehicles with gasoline engines. The overall net savings to the City is the difference between the current fuel and maintenance costs of these vehicles, less the maintenance cost of the new EVs, and the cost of electricity used to charge them.

Throughout the performance period, NORESCO will inspect the EV chargers on an annual basis to ensure proper maintenance and continued operation. The savings will be based on the post installation calculations presented in the Proposed Energy Savings Calculation and Methodology section.

Proposed Energy Savings Calculations & Methodology

To calculate the proposed Fleet Vehicle Electrification savings, NORESCO used historical vehicle use and maintenance data, and current fuel and electric costs. The proposed Fleet Vehicle Electrification savings is calculated with the following equations:

$$EVS_{net} = FS + MS - EC$$

$$FS = FU \times FR$$

$$MS = AAM \times EV_m$$

$$EC = AM \times EV_{eff} \times ER + EVp \times DF \times DR$$

Where:

EVS_{net}	= Annual net electric vehicle savings , $/yr
FS	= Fuel Savings, $/yr
FU	= Fuel Usage, gallons/yr
AAM	= Average Annual Maintenance, $/yr
EV_m	= EV Maintenance Cost Factor, 50%
AM	= Annual Vehicles Miles, miles/yr
EV_{eff}	= EV Efficiency, mi/kWh, varies by vehicle
ER	= Electricity Rate at Location EV is being Charged, $/kWh
EVp	= EV Charger Power Rating, kW
DF	= EV Charger Contribution to Site Demand, %
DR	= Demand Rate at Location EV is being Charged, $/kW

Baseline M&V Activities

Spreadsheet models were developed to calculate the savings as the cost difference between the baseline gasoline use of the fleet and the post-installation energy use and demand of the fleet. The baseline fleet gasoline use and annual fleet driving distance were based on historical fleet records. The verified savings will be based on the successful commissioning of the new equipment.

Post-Installation M&V Activities

Upon completion of construction, NORESCO will commission and verify operation of new EV Chargers in accordance with the manufacturers' prescribed procedures. Expected savings will be calculated based on agreed upon revenue model, agreed upon electric rate, and the as-built quantities. Any variances in the number and/or equipment installed from the proposed scope of work will be noted by NORESCO. The equations presented above in the Proposed Energy Savings Calculation and Methodology section will be used to calculate expected annual revenue and energy cost based on the as-built quantities and equipment for the duration of the savings guarantee period.

Post-Acceptance Performance Period Verification Activities

NORESCO will conduct annual inspections during the performance period to ensure the equipment is in place and operating as intended. Any deficiencies and improper maintenance practices found will be reported in the Guaranteed Savings Reconciliation Report.

Verified energy savings will be based on the calculations described above and documented in the Post-Installation Report.

ECM 6a: Irrigation Repairs & Re-Commissioning

Overview of M&V Plan

NORESCO will use IPMVP Option A for this ECM.

A commissioning and acceptance procedure will verify the effectiveness of the installed improvements and that the irrigation controls and distribution profiles are functioning properly to achieve savings. This includes verification of the correct irrigation schedules and appropriate system response to weather events. The expected post-installation water use will be based on the schedules and weather response features used in the savings calculation for this measure.

NORESCO will perform annual evaluations of the irrigation controls to ensure proper system operation to achieve savings.

Proposed Energy Savings Calculations & Methodology

Baseline irrigation system and associated water consumption is based on the water billed to each park. Proposed savings are determined based on estimated irrigation and water use. The estimated irrigation and water use after the irrigation controls are installed were based on estimated areas being irrigated, as well as the type of landscape being irrigated. Water savings is calculated by subtracting the baseline water consumption with the calculated water use based on historical weather data after recommissioning the irrigation system. The scope of the irrigation system repairs are estimated because a detailed inventory of the irrigation system was not available from the City and park staff were not available to assist with field work to determine the quantity and functionality of the existing irrigation system components.

Baseline M&V Activities

The 2020 utility bill data was used to determine the baseline water consumption, which is dependent on reliability and availability of the sources. Fixture types, uses, areas and types of landscape were estimated by NORESCO.

Post-Installation M&V Activities

NORESCO will review the irrigation control system to verify that correct irrigation schedules and appropriate system response to weather events were programmed where they could be. The expected post-installation water use will be based on the baseline distribution system and commissioned irrigation schedules applied to the baseline water use profiles.

Performance Period M&V Activities

NORESCO will perform annual inspections on a sample of the irrigation controls to confirm that the equipment is operating properly. Any deficiencies and improper maintenance practices found will be reported in the Guaranteed Savings Reconciliation Report.

Verified savings will be based on the post-installation M&V activities as described above and documented in the Post-Installation Report.

5.1 FLEET CONVERSION

Overview

The City of Flagstaff is in the process of converting its fleet vehicles from internal combustion vehicles to electric vehicles (EVs). This transition will take several years as a significant portion of the vehicles operated currently have no viable EV alternative. However, this is quickly changing as original equipment manufacturers (OEMs) are expanding EV offerings as costs for the required batteries drop year-over-year.

Existing City Fleet

NORESCO analyzed the data provided by the City to determine the potential fuel and maintenance savings associated with switching the fleet to EVs. The total fleet consists of 490 assets, the breakdown of which is shown in *Figure 5.1-1. City Fleet by Asset Category*. The existing fleet includes 226 passenger and light duty vehicles, 16 utility vehicles and 248 heavy-duty vehicle assets including dump trucks, sweepers, garbage trucks and trailers. The heavy-duty vehicles consist primarily of medium (e.g. Ford F150, Chevy 1500, etc.) and heavy-duty trucks (e.g. Ford F250, F350, larger).

Figure 5.1-1. City Fleet by Asset Category

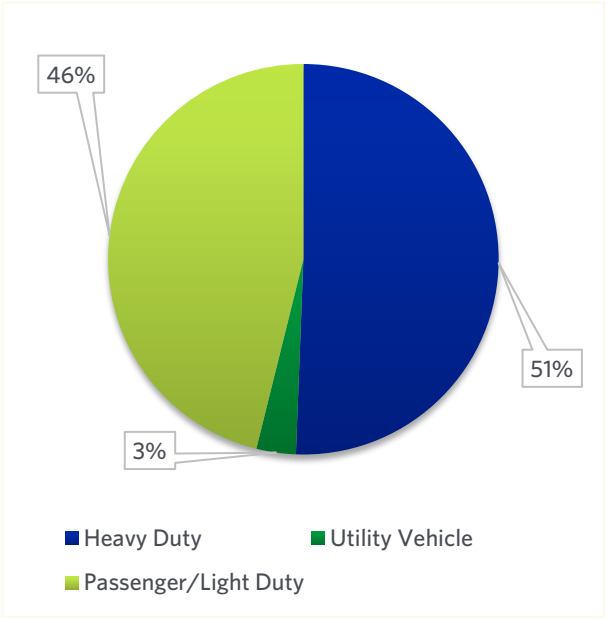
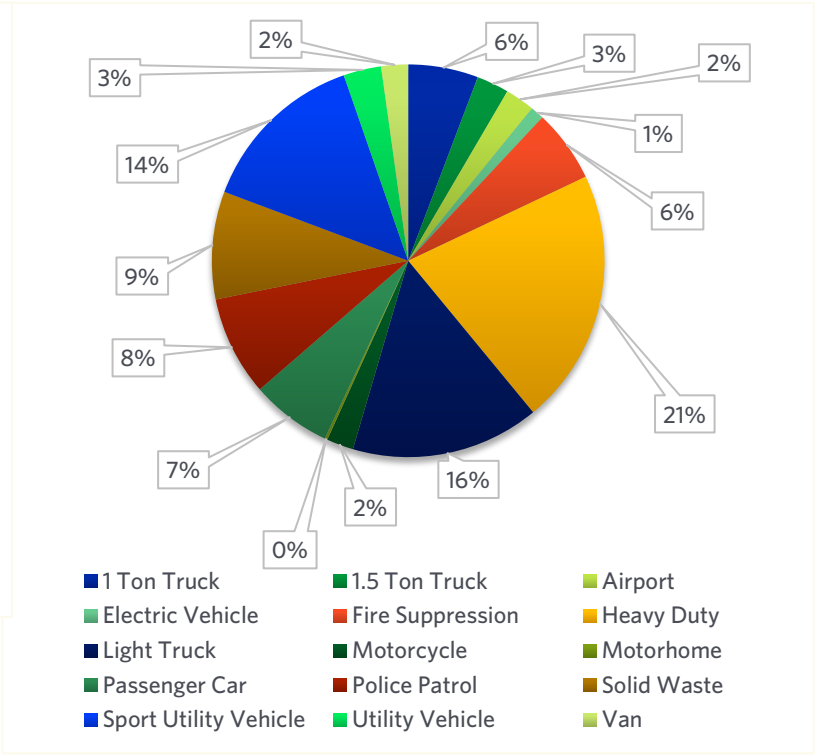


Figure 5.1.2. City Fleet by Asset Subcategory



Fleet Fuel Use

Annual fuel use was provided by the City as shown in *Figure 5.1-3*. Total fuel use was 357,282 gallons annually, broken out to 136,674 gallons and 220,607 gallons for gasoline and diesel, respectively. The vast majority of diesel fuel use comes from the operation of garbage trucks (solid waste), heavy duty vehicles (dump trucks, snow control, etc.), and work trucks (3/4 ton through 1.5 ton). The majority of gasoline use is spread fairly

equally between light work trucks, sport utility vehicles and police patrol cars with passenger cars and vans contributing to less than 5% of the total.

Figure 5.1-3. Annual Fleet Fuel Use by Asset Type

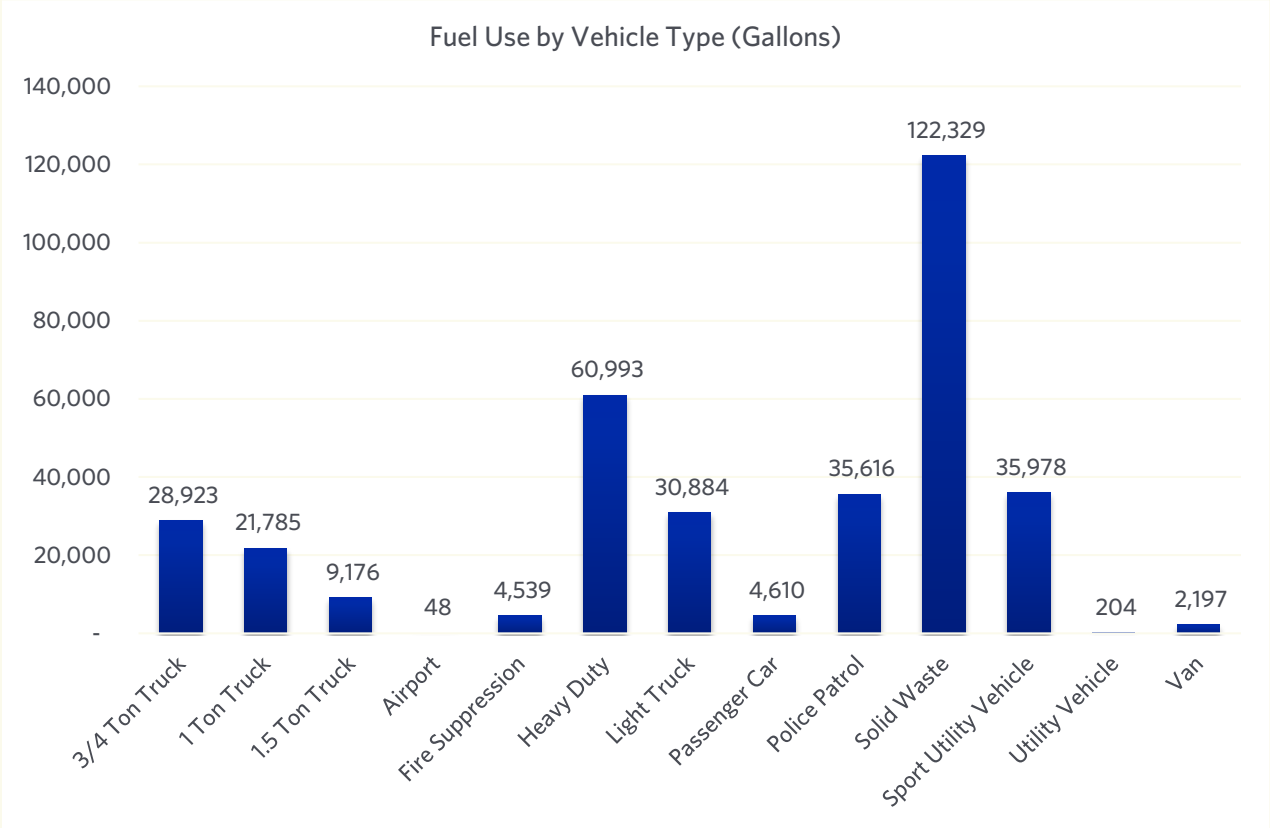


Table 5.1-1. Cost of Annual Fuel Use

Fuel Use	Annual Gallons	Current 60-day Average Price ($/gallon)	Annual Cost of Fuel ($)	Associated CO2 Emissions (metric tons/yr)
Gasoline	136,674	$4.70	$642,369	1,215
Diesel	220,607	$5.28	$1,164,807	2,246
Total	**357,282**	**---**	**$1,807,176**	**3,461**

Fleet Maintenance Costs

In addition to fuel, operating fleet vehicles is a significant cost to the City even though a significant portion of the maintenance performed is by City personnel whenever possible. Records of City fleet maintenance costs were provided for the lifetime of each vehicle. The categories of vehicle maintenance expense are as follows: Batteries, Commercial Labor, Commercial Parts, Environmental Fees, Lubricants, Engine Oil , and Labor. Using the vehicle's age, the average annual vehicle maintenance cost was calculated as shown below. As expected, the majority of expenses arise from the operation of the City's Heavy Duty Vehicle fleet. These vehicles are

typically more maintenance intensive because of the much heavier workloads placed on them per their function. For example, Solid Waste (garbage and recycling trucks and landfill activities) accounts for almost half of the maintenance costs followed by Fire Suppression at just under 15%. Maintenance cost for Passenger and light duty vehicles is significantly less with light trucks accounting for more than 40% of the total followed by SUVs and police patrol vehicles at 30% and 16%, respectively.

Table 5.1-2. Average Annual Maintenance Cost by Type

Maintenance	Averaged Annual Maintenance Costs ($/yr)
Heavy Duty	$1,095,431
Utility Vehicle	$11,481
Passenger/Light Duty	$103,443

Existing Fleet Electric Vehicles

While the City has begun to transition to EVs, they account for only 1% of the fleet as follows:

Table 5.1-3. City EV Fleet

Equipment No.	License No.	Year	Make	Model	Using Dept Desc	Fuel Type
1407	G201JH	2019	GENERAL MOTORS	CHEVROLET BOLT	PARKFLAG	Electric
1410	G530JM	2019	GENERAL MOTORS	CHEVROLET BOLT	BLUE STAKE	Electric
906	GA07620	2005	GEMSE	GEMSE 4	CITY HALL POOL VEHICLES	Electric
1098	GA07626	2008	GEMSE	GEMZ ELECTRIC	REGULATORY COMPLIANCE	Electric
1480	R5A2DD	2021	ZERO ONE	ELECTRIC MOTORCYCLE	POLICE - GEN ADMIN	Electric
1487	71A7EE	2018	GENERAL MOTORS	VOLT ELECTRIC W/GEN	CITY HALL POOL VEHICLES	Electric

These EVs are currently charged with level 1 and 2 chargers located at City Hall, Main Library, and the Police Station. Based on the information provided, neither the electricity consumption nor the mileage associated with these vehicles is tracked. It should also be noted that the Chevy Volt listed is a plug-in hybrid electric vehicle (PHEV) that has both an electric motor and battery that can be charged, and an IC engine such that for short trips (~25 miles) can run in all electric mode. While offering the greatest flexibility, PHEV vehicles are not recommended due the increased cost of vehicle systems (IC engine, electric motor, and battery) versus all electric vehicles.

Figure 5.1-4. Existing City-Owned EVs – Chevy Bolt and GEM e4





Current EV Options

Within the City of Flagstaff, a policy has been adopted to purchase EVs over internal combustion engine (ICE) vehicles when they are commercially available. The City is currently in the process of purchasing another Chevy Bolt and four Ford F150 Lightnings. Beyond these current purchases, there are now a significant number of EV options that the City can choose from to transition its fleet to EVs.

Sedans

There are many electric vehicles in this class in the market under $40,000 MSRP. Because the City's daily fleet mileage and fuel requirements are low, and the fuel savings associated with switching to hybrid vehicles are lower so only EVs are considered at this time. A list of the EVs available under $40,000 is provided below.

Table 5.1-4. EV Sedans Available Under $40,000

EV Sedans	Range (Mi)	MSRP	Battery (kWhrs)	Cost per kWhr	Miles per kWhr
Nissan Leaf	226	$28,425	62	$ 458	3.65
Chevy Bolt	259	$25,600	65	$ 394	3.98
Volkswagen ID.4	280	$41,995	82	$ 512	3.41
Tesla Model 3	267	$46,990	50	$ 940	5.34
Hyundai Kona	258	$35,245	64	$ 551	4.03
Kia Niro	239	$41,205	64	$ 644	3.73

Light Duty Trucks

Light-duty EV trucks have been announced for availability by a number of OEMs including Ford, GM and Tesla. Currently, Ford is the only manufacturer with the only product available for purchase being a ½ ton truck, but it is expected many more light duty trucks will be available over the next few years to choose from, which will also create competition and drive prices down. It is also expected that medium and heavy-duty trucks in the ¾ and 1-ton class will start to become available in the next few years. Images of the Ford and Chevrolet electric trucks are shown below.

Figure 5.1-5. Ford F150 and Chevy Electric Truck





Sport Utility Vehicles

Several manufacturers have available or will soon have available all-electric SUVs. Shown below are current SUV options the City should consider.

Table 5.1-5. SUVs for Consideration

EV SUV	Range (Mi)	MSRP	Battery (kWhrs)	Cost per kWhr	Miles per kWhr
Hyundai IONIQ 5	303	$45,000	77	584.42	3.94
Kia EV6	232	$40,900	58	705.17	4.00
Audi Q4 e-tron	241	$43,900	58	756.9	4.16
Volvo C40 Recharge	260	$59,845	78	767.24	3.33

Utility Trucks

There are several utility trucks that can be purchased either as an ICE vehicle or electric. Based on the low daily mileage expected, the program anticipates changing out the entire ICE utility truck fleet to electric over the course of the 20-year program period. Examples of the John Deere Gator TE Electric Utility Vehicle and Toro Workman GTX Electric Series electric utility trucks are shown in *Figure 5.1-6*.

Figure 5.1-6. John Deere Gator TE Electric Utility Vehicle and Toro Workman GTX





Future EV Options

By far, the heavy-duty vehicle asset category has the most potential for fuel and operational savings and GHG reductions. Unfortunately, the market for these vehicles is several years behind that of light duty and passenger vehicles. However, the availability of new and varied EV models is increasing every year and are expected to become more prolific in the near future. Although it is premature to select equipment at this stage of the program, the following describes some EV options available today that could be incorporated into the Flagstaff City fleet.

Heavy-Duty Trucks

There are several different heavy-duty battery electric trucks available today, mostly from start-up companies, but some are larger, non-traditional companies such as BYD. As the battery electric vehicle industry matures, more traditional OEMs will enter the market with their own electric trucks. Examples of some of the HD EV trucks available today are shown in the following figures. Based on a Ford F450 Superduty Chassis, Phoenix Motor Cars has a number of different configurations as shown below. BYD is a Chinese company that offers a number of electric vehicles, trucks, and buses. An example of BYD's Class 6 electric chassis is shown below and has several configurations.

Figure 5-1.7. Phoenix Motorcars Ford F450 Electric Flat-Bed Truck Configuration



Figure 5-1.8. BYD Class 6 Electric Chassis



There are also some companies doing conversions for Class 6-8 Trucks such as Unique Electric Solutions (UES). UES has develop EV kits and is converting existing diesel UPS Delivery Vans to battery electric once the diesel engines fail. This approach can save dollars and re-use existing assets in the fleet.

Vans

There are currently fewer options for traditional vans such as the Ford Econoline and GMC Savanna, but some of the same manufacturers that are converting HD trucks have shuttle vehicles based on the same electric chassis they are using for other applications. An electric shuttle van is shown to the right as an example of what can be acquired today.



Figure 5.1-9. Phoenix Motorcars Electric Shuttle Van

Garbage Trucks

While not fully commercially available, all-electric garbage trucks represent a significant opportunity to reduce emissions, lower operating noise and will eliminate the use of diesel fuel, motor oil, coolant fluids, DEF fluid, and potentially hydraulic fluid. The addition of regenerative braking will also significantly reduce maintenance associated with breaking in traditional tracks. The downside to these vehicles is that not many are currently available with Mack Truck and Sea Electric having only delivered a handful of electric trucks. Two other major downsides are cost charging infrastructure. Several Cities have been able to apply for state and federal grants to pay for these vehicles, with Ocala, FL and Wilmington, NC being two examples. These vehicles do require a significant amount of daily energy to charge their 325 kWh+ batteries, but this can be accomplished overnight with a 50-kW charge on virtually all routes.



Figure 5-1.10. Fully Electric Garbage Truck Operated by the City of New York

Optimizing Fleet Size

In addition to converting the City fleet to electric vehicles, it is recommended that the existing fleet be evaluated for redundant, seldom used, or vehicles that could be shared between departments. If identified, this would allow the City to reduce the overall fleet size and the associated expenses. If any vehicles can be eliminated from the City fleet, it would also make the transition to an all-electric fleet easier and less costly along the way.

After evaluating the data provided, a significant number of vehicles show no milage or fuel usage. These vehicles should be evaluated by the City to determine if the milage/gas use for these is simply not being reported or evaluated for need if the use for each vehicle is verified to be zero. The number of vehicles where the mileage and fuel use was reported as zero was 28 gasoline and 58 diesel vehicles.

The City should also evaluate fleet vehicles with little milage each year and determine if these vehicles are essential for City operations or if the duty of these vehicles can be shared across other City fleet vehicles. The following tables list gasoline and diesel vehicles are an excellent place to start as they comprise vehicles with annual milage of less than 1,000.

The City should also evaluate that each existing vehicle is correct for its current role as significant cost savings may be achieved by downsizing heavier vehicles to lighters models. The City has already started this process by replacing an existing ¾ ton truck (equip # 976) with a new Ford F150 lighting, significantly reducing operational costs and GHG emissions.

Table 5.1-6. Light Duty/Passenger Vehicles with Little Use that should be Considered for Consolidation

Equipment No.	Year	Make	Model	Vehicle Category	Vehicle Sub-Category	Age (Years)	Using Dept Desc	Fuel Type	Average Annual Costs	YTD Fuel	YTD MILES
1356	2018	GM CORP	12 PASSENGER VAN	Passenger/Light Duty	Van	4	RECREATION YOUTH CENTER	UNLEADED	$126	65	969
876	2004	FORD	3/4 TON 4X4 REG CAB	Heavy Duty	3/4 Ton Truck	17	PUB FAC MAINT-GEN ADMIN	UNLEADED	$538	69	942
1266	2016	FORD	EXPLORER AWL	Passenger/Light Duty	Sport Utility Vehicle	6	WARRANT DIVISION	UNLEADED	$127	67	935
614	1999	FORD	COMPACT 4X4 EXT CAB	Passenger/Light Duty	Light Truck	22	WSTWTR MONITOR-GEN ADMIN	UNLEADED	$506	58	928
983	2006	FORD	ESCAPE HYBRID	Passenger/Light Duty	Sport Utility Vehicle	16	BUILDING INSPECTION	UNLEADED	$222	22	838
1382	2019	GM CORP	EQUINOX	Passenger/Light Duty	Sport Utility Vehicle	3	CITY COUNCIL/MAYOR	UNLEADED	$375	29	782
969	2006	FORD	3/4 TON 4X4 CREW CAB	Heavy Duty	3/4 Ton Truck	16	WILDLAND FUEL MANAGEMENT	UNLEADED	$769	100	760
856	2004	FORD	TAURUS SEDAN	Passenger/Light Duty	Passenger Car	18	SOLID WASTE - GEN ADMIN	UNLEADED	$262	36	681
939	2006	FORD	TAURUS	Passenger/Light Duty	Passenger Car	16	POLICE - DETECTIVES	UNLEADED	$679	40	672
813	2003	FORD	COMPACT 4X4 EXT CAB	Passenger/Light Duty	Light Truck	19	PARKFLAG	UNLEADED	$1,061	55	595
1076	2008	FORD	RANGER 4X4 EXT CAB	Passenger/Light Duty	Light Truck	14	SHOP - POOL VEHICLES	UNLEADED	$1,132	40	585
996	2006	GM CORP	BOMB SQUAD RESPONSE	Utility Vehicle	Utility Vehicle	15	POLICE - PATROL	UNLEADED	$242	111	532
790	2002	FORD	1 1/2 TON 4X4	Heavy Duty	1.5 Ton Truck	19	WSTEWTR TREAT - GEN ADMIN	UNLEADED	$1,303	56	522
968	2006	FORD	3/4 TON 4X4 CREW CAB	Heavy Duty	3/4 Ton Truck	16	WILDLAND FUEL MANAGEMENT	UNLEADED	$1,436	63	492
791	2002	GM CORP	MINI BLAZER	Passenger/Light Duty	Sport Utility Vehicle	19	GENERAL ADMINISTRATION	UNLEADED	$623	48	440
1128	2006	FORD	FOCUS	Passenger/Light Duty	Passenger Car	13	CITY HALL POOL VEHICLES	UNLEADED	$295	15	437
474	1996	FORD	NEGOTIATORS VAN	Passenger/Light Duty	Van	25	POLICE - PATROL	UNLEADED	$289	33	400
390	1995	FORD	PAINT GRAFITI VAN	Passenger/Light Duty	Van	25	CODE ENFORCEMENT	UNLEADED	$288	33	327
393	1994	GM CORP	2WD S10 PICK UP	Passenger/Light Duty	Light Truck	25	PUB FAC MAINT-GEN ADMIN	UNLEADED	$553	17	312

Equipment No.	Year	Make	Model	Vehicle Category	Vehicle Sub-Category	Age (Years)	Using Dept Desc	Fuel Type	Average Annual Costs	YTD Fuel	YTD MILES
953	2006	FORD	1/2 TON 4X4 EXT CAB	Passenger/Light Duty	Light Truck	16	CAPITAL MNGT-ENGINEERING	UNLEADED	$588	36	304
1423	2019	JOHN DEERE	GATOR UTILITY TRACTO	Utility Vehicle	Utility Vehicle	2	WSTEWTR TREAT - GEN ADMIN	UNLEADED	$7	62	272
959	2006	FORD	4X4 X CAB PICKUP	Passenger/Light Duty	Light Truck	16	CAPITAL MNGT-ENGINEERING	UNLEADED	$388	25	270
937	2005	TOYOTA	PRIUS HYBRID	Passenger/Light Duty	Passenger Car	16	COMMUNITY INVESTMENT ADMIN	UNLEADED	$298	4	258
1324	2017	FORD	MAYOR/COUNCIL POOL VEHCLE	Passenger/Light Duty	Passenger Car	5	CITY COUNCIL/MAYOR	UNLEADED	$208	15	255
1075	2008	FORD	CITY HALL POOL VEHICLE	Passenger/Light Duty	Passenger Car	14	HOUSING ADMINISTRATION	UNLEADED	$487	15	203
570	1998	GM CORP	1 TON 4X4 W/UTILITY	Heavy Duty	1 Ton Truck	24	BIN MAINT - RESIDENTIAL	UNLEADED	$1,649	57	199
331	1991	CHRYSLER	DODGE MINI VAN	Passenger/Light Duty	Van	25	SUSTAINABILITY	UNLEADED	$416	15	191
852	2004	FORD	TAURUS SEDAN	Passenger/Light Duty	Passenger Car	18	POLICE - DETECTIVES	UNLEADED	$290	9	172
1062	2007	POLARIS	POLARIS RANGER ATV	Utility Vehicle	Utility Vehicle	14	POLICE - SPECIAL SERVCES	UNLEADED	$39	29	143
998	2006	FORD	PRISON TRANSPORT VA	Passenger/Light Duty	Van	15	POLICE - PATROL	UNLEADED	$301	27	134
1055	2007	TOYOTA	TOYOTA PRIUS	Passenger/Light Duty	Passenger Car	14	LIBRARY-COUNTY BOOKMOBILE	UNLEADED	$580	2	80
Total	**31**								**$16,076**	**1,250**	**14,630**

Table 5.1-7. Heavy Duty Vehicles with Little Use that Should be Considered for Consolidation

Equipment No.	Year	Make	Model	Vehicle Category	Vehicle Sub-Category	Age (Years)	Using Dept Desc	Fuel Type	Average Annual Costs	YTD Fuel	YTD MILES
204	1996	INTERNATIONAL	14 YD DUMP TRUCK	Heavy Duty	Heavy Duty	25	RECLAIMED WATER PLANT	ALL FUEL TYPES	$4,747	191	998
152	1988	FORD	1 TON 4X4 SERVICE W/UTIL	Heavy Duty	1 Ton Truck	25	OTHER SHOP WORK	ALL FUEL TYPES	$630	155	844
1469	2020	FREIGHTLINER	FREIGHT M2-106 NEW WAY RE	Heavy Duty	Solid Waste	0	RESIDENTIAL COLLECTION	ALL FUEL TYPES	$0	123	785
1114	1999	INTERNATIONAL	BOOM TRUCK	Heavy Duty	Heavy Duty	14	BUILDING & GROUNDS MAINT	ALL FUEL TYPES	$606	171	725
1030	2007	FREIGHTLINER	SWAT TRUCK	Heavy Duty	Heavy Duty	15	POLICE - PATROL	ALL FUEL TYPES	$605	122	632
1191	2006	FORD	3/4 TON SUPERDUTY RESCUE1	Heavy Duty	Fire Suppression	10	FIRE SUPPRESSION	ALL FUEL TYPES	$2,480	44	565
782	2002	FREIGHTLINER	6 YD DUMP TRUCK	Heavy Duty	Heavy Duty	20	SNOW CONTROL	ALL FUEL TYPES	$1,456	109	543
1147	2001	FREIGHTLINER	AERIAL LIFT 2 1/2 TON	Heavy Duty	Airport	13	AIRPORT-MAINT BLDG&GRNDS	DIESEL	$2,141	48	535
649	2000	CATERPILLAR	CAT AWD MOTOR GRADER	Heavy Duty	Heavy Duty	22	SNOW CONTROL	ALL FUEL TYPES	$9,048	583	534
1251	2014	CATERPILLAR	GRADER	Heavy Duty	Heavy Duty	7	STREET MAINT & REPAIRS	ALL FUEL TYPES	$1,540	686	531
1472	2017	CATERPILLAR	GRADER	Heavy Duty	Heavy Duty	0	SNOW CONTROL	ALL FUEL TYPES	$0	134	488
1107	2008	CATERPILLAR	5 YARD LOADER	Heavy Duty	Heavy Duty	14	STREET MAINTENANCE	ALL FUEL TYPES	$3,211	240	484
739	2001	FREIGHTLINER	6 YD DUMP TRUCK	Heavy Duty	Heavy Duty	21	SNOW CONTROL	ALL FUEL TYPES	$1,838	92	481
1140	2007	KOMATSU	LOADER 4 CU YARD	Heavy Duty	Heavy Duty	13	SNOW CONTROL	ALL FUEL TYPES	$3,795	180	453
1344	2001	PIERCE	QUANTUM PUMPER	Heavy Duty	Fire Suppression	4	FIRE SUPPRESSION	ALL FUEL TYPES	$8,454	68	442
1224	2013	CATERPILLAR	LOADER/BACKHOE	Heavy Duty	Heavy Duty	8	WATER SYSTEM MAINT	DIESEL	$282	575	413

Equipment No.	Year	Make	Model	Vehicle Category	Vehicle Sub-Category	Age (Years)	Using Dept Desc	Fuel Type	Average Annual Costs	YTD Fuel	YTD MILES
1473	2019	CATERPILLAR	GRADER	Heavy Duty	Heavy Duty	0	SNOW CONTROL	ALL FUEL TYPES	$0	64	381
404	1996	FORD	F350 UTILITY TRUCK	Heavy Duty	1 Ton Truck	25	PLANT MAINTENANCE	ALL FUEL TYPES	$2,352	46	366
720	2000	WEST-MARK	TYPE 3 WILDLANDS 60258	Heavy Duty	Fire Suppression	21	FIRE SUPPRESSION	ALL FUEL TYPES	$3,569	72	360
164	1995	GRADALL	GRADALL	Heavy Duty	Heavy Duty	25	DRAINAGEWAY MAINTENANCE	ALL FUEL TYPES	$2,641	113	339
777	2002	CASE	CASE SM 4X4 BACKHOE	Heavy Duty	Heavy Duty	20	WATER SYSTEM MAINT	ALL FUEL TYPES	$1,424	224	338
544	1997	JOHN DEERE	JOHN DEERE TRACTOR	Heavy Duty	Heavy Duty	24	PARKS BBB REC FIELDS	ALL FUEL TYPES	$1,045	105	312
1043	2007	PIERCE	PIERCE QUANTUM PUMPER	Heavy Duty	Fire Suppression	14	FIRE SUPPRESSION	ALL FUEL TYPES	$13,713	62	307
711	2000	JOHN DEERE	JDE 4X4 1 1/2 YD. BACKHOE	Heavy Duty	Heavy Duty	21	CORRECTIVE MAINT	ALL FUEL TYPES	$1,907	159	276
489	1997	PIERCE	PIERCE QUANTUM PUMPER	Heavy Duty	Fire Suppression	25	FIRE SUPPRESSION	ALL FUEL TYPES	$13,132	53	263
1214	2012	CHRYSLER	TYPE V1 WILDLAND	Heavy Duty	Fire Suppression	9	FIRE SUPPRESSION	ALL FUEL TYPES	$861	124	245
1366	2018	CATERPILLAR	MINI EXCAVATOR	Heavy Duty	Heavy Duty	4	STREET MAINTENANCE	ALL FUEL TYPES	$91	21	239
719	2000	WEST-MARK	TYPE 3 WILDLANDS 60257	Heavy Duty	Fire Suppression	21	FIRE SUPPRESSION	ALL FUEL TYPES	$4,445	47	205
1218	2012	CHRYSLER	TYPE V1 WILDLAND	Heavy Duty	Fire Suppression	9	FIRE SUPPRESSION	ALL FUEL TYPES	$416	72	204
795	2002	PIERCE	PIERCE BUILD 13339-1	Heavy Duty	Fire Suppression	19	FIRE SUPPRESSION	ALL FUEL TYPES	$13,949	39	195
1051	2008	FORD	3/4 TON EXT CAB PICKUP	Heavy Duty	3/4 Ton Truck	14	AIRPORT - GEN ADMIN	DIESEL	$439	19	190
1249	2014	CATERPILLAR	GRADER	Heavy Duty	Heavy Duty	7	STREET MAINT & REPAIRS	ALL FUEL TYPES	$1,710	721	173
619	1999	U.S. TANKER FIRE APPART	3,000 GAL. TENDER	Heavy Duty	Fire Suppression	22	FIRE SUPPRESSION	ALL FUEL TYPES	$2,135	37	168

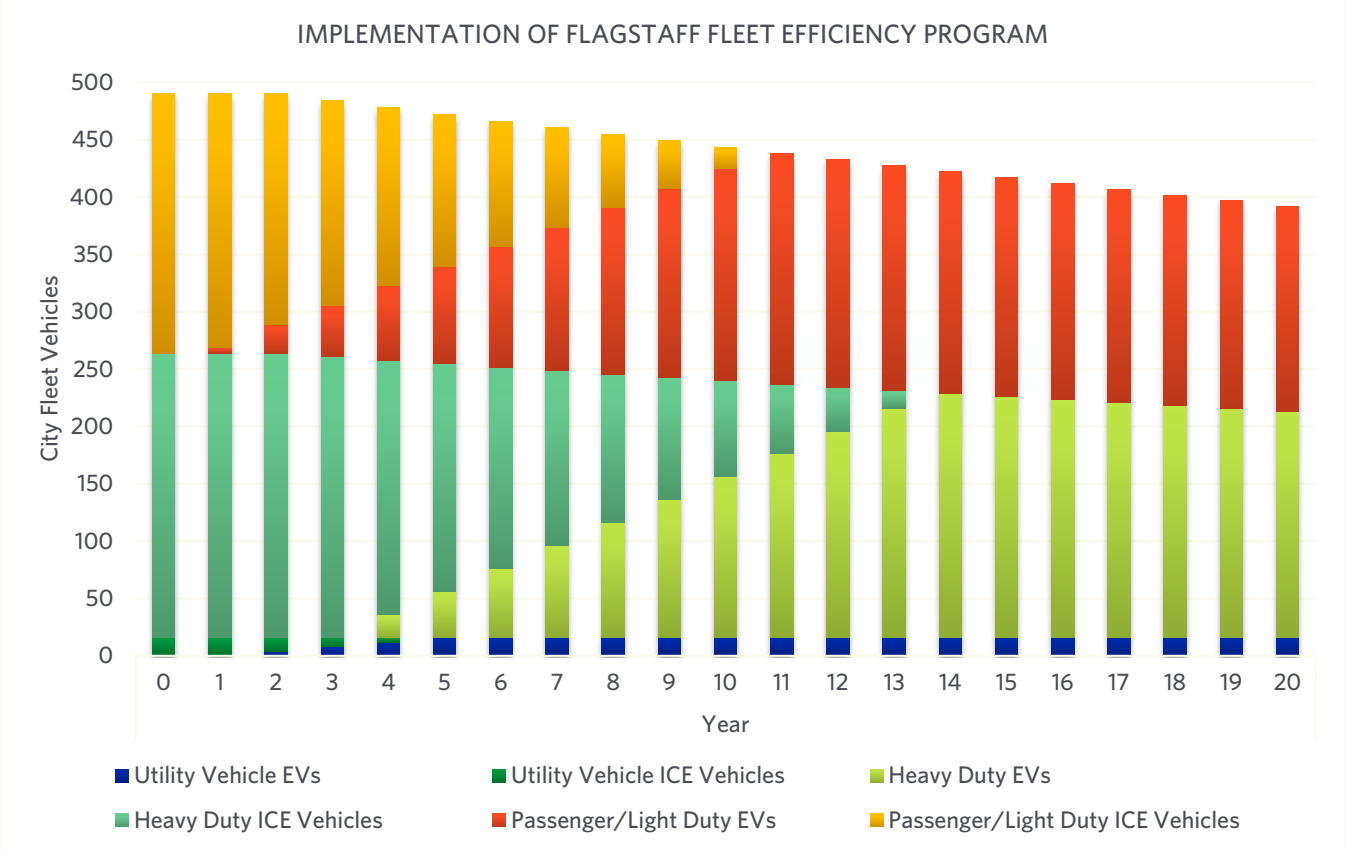
Equipment No.	Year	Make	Model	Vehicle Category	Vehicle Sub-Category	Age (Years)	Using Dept Desc	Fuel Type	Average Annual Costs	YTD Fuel	YTD MILES
580	1998	JOHN DEERE	JOHN DEER BACKHOE	Heavy Duty	Heavy Duty	23	STREET MAINTENANCE	ALL FUEL TYPES	$4,632	72	158
1457	2020	PIERCE	PIERCE VELOCITY PUMPER	Heavy Duty	Fire Suppression	1	FIRE SUPPRESSION	ALL FUEL TYPES	$4,281	19	155
1045	2007	PIERCE	85' AERIAL LADDER	Heavy Duty	Fire Suppression	14	FIRE SUPPRESSION	ALL FUEL TYPES	$19,010	30	151
161	1986	GENERAL MOTORS CORP	CHEVY DUMP TRUCK	Heavy Duty	Heavy Duty	25	RECLAIMED WATER PLANT	ALL FUEL TYPES	$1,011	12	118
796	2002	PIERCE	PIERCE QUANTUM PUMPER	Heavy Duty	Fire Suppression	19	FIRE SUPPRESSION	ALL FUEL TYPES	$12,826	21	105
1367	2018	CATERPILLAR	SKIDSTEER LOADER	Heavy Duty	Heavy Duty	4	STREET MAINTENANCE	ALL FUEL TYPES	$86	79	97
710	2000	JOHN DEERE	JDE 4X4 1 1/2 YD BACKHOE	Heavy Duty	Heavy Duty	21	PARKS GROUNDS MAINTENANCE	ALL FUEL TYPES	$3,839	18	87
1349	2018	INTERNATIONAL	AMBULANCE RESCUE	Heavy Duty	Fire Suppression	4	FIRE SUPPRESSION	ALL FUEL TYPES	$1,817	9	73
771	2001	KUBOTA	KUBOTA TRACTOR W/LOADER	Heavy Duty	Heavy Duty	20	RECREATION - ICE RINK	ALL FUEL TYPES	$142	19	59
355	1994	CASE	CASE CONSTR KING BACKHOE	Heavy Duty	Heavy Duty	25	FIRE FUEL MANAGEMENT	ALL FUEL TYPES	$1,537	19	57
1335	2013	INTERNATIONAL	RESCUE-AMBULANCE	Heavy Duty	Fire Suppression	14	FIRE SUPPRESSION	ALL FUEL TYPES	$586	11	55
834	2004	JOHN DEERE	2004 JD BACKHOE 1 1/2 YD	Heavy Duty	Heavy Duty	18	CEMETERY BILLING EQUIP	ALL FUEL TYPES	$2,425	10	49
1395	2019	CATERPILLAR	CAT 430F2 1.25 YD BACKHOE	Heavy Duty	Heavy Duty	3	INNER BASIN DEVELOPMENT	DIESEL	$10	30	38
1056	2007	JOHN DEERE	GATOR UTILITY TRACTOR	Utility Vehicle	Utility Vehicle	14	STREETSCAPE/MEDIAN MAINT	ALL FUEL TYPES	$1,003	3	20
540	1996	CATERPILLAR	CAT 3 YD LOADER	Heavy Duty	Heavy Duty	24	LAKE MARY WTR TREAT PLANT	ALL FUEL TYPES	$2,953	2	8
Total	**48**								**$160,820**	**5,847**	**15,244**

Fleet Transition

As outlined in the City of Flagstaff Carbon Neutrality Plan, the City has adopted the requirement of 100 percent of new light-duty City fleet vehicles to be electric vehicles starting in 2022, complemented by aggressive goals to test, evaluate, and where feasible, acquire EVs for medium and heavy-duty fleet vehicles and equipment categories (EM-3). We have preliminarily assembled a plan for the City to transition to a fully electric fleet that results in a light duty/passenger and utility vehicle fleet that is all electric in 10 years and a heavy-duty fleet that would be all electric in under 14 years. It is highly recommended that the City evaluate this plan and make adjustments annually in order to track and keep pace with fleet goals. Calculations have been provided in *Appendix 4: Savings Calculations* and key assumptions and variables in this plan are as follows:

- The existing fleet of light duty and heavy-duty vehicles will be optimized resulting in a 20% reduction over 20 years
    - Reductions do not begin until year 3 to facilitate planning and implementation
    - The existing fleet of 490 vehicles will be reduced to 392 vehicles
- 20 light-duty vehicles are converted annually starting in year 2
- 20 heavy-duty vehicles are converted annually starting in year 4 to allow for more options to become commercially available

Figure 5-1.11.



Electric Vehicle Charging

When procuring additional EVs, the City should plan for how each vehicle will be charged for daily use. This planning should account for typical vehicle daily miles and where the vehicles will be located overnight, when most of the charging should take place. Based on daily miles driven and availability of charging infrastructure, the level of charging equipment required for each vehicle should be assessed based on the table below.

Table 5.1-8. Electrical Vehicle Charging Types and Approximate Capacities

Charger Type	Electrical Capacity	Miles Charged/Hour	Total Miles (Overnight Charging)
Level 1	Up to 1.5 kW	4	41
Level 2	3.5 - 9 kW	10 - 25	10 - 250
Level 3	50 kW+ (DC)	138+	1375+

In general, most of the fleet use should be able to be charged through level 1 and 2 chargers based on their daily mileage. The energy required for each vehicle will vary depending on the weight of the vehicle, ambient temperature, the duty being performed, elevation traversed, etc. The City is evaluating the installation of two level 3 charging stations for emergency use on the east and west sides of town. While this is recommended for emergency situations, the number of level 3 chargers required by the City should continually be evaluated because the cost of implementation is significantly more than level 2 chargers.

Additionally, the City is also evaluating the policy of take-home vehicles where a city employee takes their work vehicle home and charges the vehicle there overnight. This policy would only apply to a subset of the fleet vehicles, which would likely exclude shared or pooled vehicles, all heavy duty and utility vehicles. If the City did adopt this policy, a method of compensation employees would need to be put in place for the electricity use. The simplest solution would be to compensate employees based on miles driven. Another consideration that would need to be taken into consideration with this policy is the range required by each take-home vehicle. If the daily range required by a take-home vehicle is more than 35-40 miles, a level 1 charger may not be sufficient.

Results

The lifecycle costs of electric vehicles have significant advantages over traditional internal combustion engines in addition to the potential to eliminate greenhouse gas emission depending on the source of the electricity utilized. The City should continually reassess the current state of its fleet to meet its operational needs while balancing requirements to minimize the operation costs and environmental impact.

Overall, the benefits to the City of Flagstaff by adopting a policy of purchasing electric vehicles over the next 20 years is:

- Avoid the creation of over 45,000 metric tons of CO2
- Avoid the purchase of over 2 million gallons of gasoline and over 2.7 million gallons of diesel
- Reduce fleet maintenance costs by over $10 million

5.2 WATER METERS/ADVANCED METERING INFRASTRUCTURE

Summary

As described in *Section 3. Water Meter Testing*, NORESCO recommends a multi-phase approach to upgrading the City's water meter infrastructure, beginning with the testing of the existing meters in Phase 1. Implementation of water meter replacements and advanced metering infrastructure (AMI) has the potential to increase revenue from existing water and sewer accounts and create savings in O&M expenditures. These savings and revenue enhancements, which we will verify as part of the Phase 1 testing plan, create the monies that will fund the future meter improvements, and are summarized as follows:

- **Increase Revenue:** The City currently collects over $22 million in water and sewer revenue from residential and commercial accounts annually. Replacement of older meters with new ultrasonic meters will improve accuracy of the meter readings and increase the revenue by a projected cumulative total $15 million over the 20-year life of the meters. Pending the results of the meter testing phase, this increased revenue can pay for the water meter replacements and AMI and contribute to a portion of proposed building electrification projects.
- **Improve Productivity and Customer Service:** NORESCO will install new ultrasonic meters with a rated lifetime of 20 years. With this new technology, the City will realize savings to the existing meter replacement budget. In addition, the new AMI system will automate meter readings resulting in labor, material, and transportation cost savings. The AMI system would also eliminate the need for City personnel to drive City vehicles for the purpose of collecting monthly meter data via the existing automated meter reading (AMR) system. The result is that these personnel can be redeployed to other priorities that improve water system functions.

In addition to the financial benefits noted above, this project will increase the City's American Water Works Association (AWWA) data validity score of 55 by providing the following advantages:

- Installation of smart meters and AMI is an AWWU-recommended action that increases the data validity of meter reading. The data collected from the AMI system will help the City make informed decisions on future actions that may reduce future water losses.
- Completion of a detailed billing analysis is recommended annually by AWWA. NORESCO has completed this billing analysis and a projection of potential increased revenue is summarized later in this section. This analysis was also used to develop the meter testing plan (see S*ection 3. Water Meter Testing*) which is recommended as the next step for the Water Meter and AMI Program.
- Upon request, we can include the survey and accuracy testing of selected source water meters (operated by the City) as part of the Water Meter and AMI Program.

Increase Revenue by Replacing Water Meters

The City's water meter infrastructure primarily uses mechanical meters (positive displacement type) whose accuracy degrades over time. These meters are read each month via a drive-by AMR system. The City has installed replacement ultrasonic meters in some places, representing less than 25 percent of all City meters. NORESCO's upgrade plan will focus on replacing positive displacement meters, where accuracy has degraded due to water quality and particulates, and general "wear and tear". NORESCO does not recommend new meters for recently replaced units.

The quantity of meters to be replaced represents approximately 16,500 meters currently in service within the City that are not already ultrasonic. NORESCO will evaluate replacing these meters with new ultrasonic meters

that contain no moving parts and do not degrade in accuracy. Solid state meters offer significant advantages, compared to mechanical meters, such as:

Solid State Meters

- ✓ Continuous accuracy at high and low flow levels
- ✓ Increased low flow registration
- ✓ No moving parts
- ✓ Minimal maintenance
- ✓ 20-year life

Mechanical (Positive Displacement) Meters

- ✓ Accuracy degrades due to wear of mechanical parts
- ✓ Susceptible to jamming by water particulates
- ✓ Maintenance required

Reduce Costs through Advanced Metering Infrastructure

NORESCO will evaluate improving City infrastructure by installing AMI equipment on the approximately 21,500 meters currently in use, including the newer meters recently replaced by City staff. The AMI system will be comprised of automated meter endpoints and a combination of cellular and radio collectors, and a front-end server that will transmit meter reads via cellular/radio frequency to the billing department. The hourly reads will provide additional information for customer service representatives enabling the City to proactively notify customers of leaks, retrieve hourly usage profiles for customers with questions and investigate suspected meter problems proactively.

Implementation of the AMI system will automate monthly meter reading, allowing the City to realize meter reading savings (e.g. labor, material, vehicles, fuel) in addition to increased revenue. Additional benefits of the new AMI system include:

Increase Productivity

- ✓ Streamline meter reading/billing
- ✓ Remote service capabilities (final reads, soft disconnects, bill investigations)
- ✓ Seamless integration between billing and accounting departments
- ✓ Improve safety and lower liability from reduced private property access
- ✓ Customize reports to simplify operations
- ✓ Lower repair and maintenance costs

Improve Customer Service

- ✓ Provide customer access to usage data
- ✓ Automate warnings for tamper and leak alerts
- ✓ Faster meter reading times with shorter and more flexible billing cycles
- ✓ Increased accuracy of bills based on actual readings (instead of estimates)

An AMI system also reduces misreads/rereads resulting from human error. Smart meters can provide alarms for potential leaks and system backflows. This will improve customer service by reducing misreads and allowing staff to proactively notify customers of potential leaks. The system can also provide "on demand" reads for customer move in/move outs. An AMI system can provide hourly reads to proactively high usage customers or enable time of user (TOU) billing. Overall, the system will increase billable revenue and reduce operation costs – all for a better service to end users and more flexibility to the City.

Data Download and Billing Analysis

The City provided NORESCO a full year of water billing records (4/1/2021-3/31/2022). NORESCO has analyzed and checked this data for accuracy and calibrated to the water rate components that were in effect throughout that period. The data analyzed is broken out by water meter size and is summarized below.

Table 5.2-1. Data Analysis of all Existing Meters

Size	Water Billed (kgal)	Water Revenue ($)	Sewer Billed (kgal)	Sewer Revenue ($)	Energy Fee (kgal)	Energy Fee ($)	WRIP (kgal)	WRIP ($)	Total Revenue ($)	Average $/kgal	Quantity of Meters
3/4"	1,037,770	$4,932,404	792,399	$4,333,171	1,037,773	$694,783	1,037,773	$539,648	$10,500,006	$10.12	19,268
1"	128,125	$640,740	94,658	$566,912	118,681	$85,639	98,114	$51,020	$1,344,311	$10.49	1,078
1.5"	154,148	$721,258	136,785	$815,402	141,997	$103,081	154,148	$80,157	$1,719,898	$11.16	391
2"	646,224	$2,630,608	495,418	$3,002,532	636,617	$461,432	690,179	$358,893	$6,453,466	$9.99	737
3"	76,952	$350,940	63,987	$390,850	69,881	$51,637	76,959	$40,019	$833,446	$10.83	37
4"	112,820	$478,211	36,962	$242,873	103,765	$75,590	112,820	$58,667	$855,340	$7.58	36
6"	18,103	$91,730	11,643	$66,133	16,023	$12,179	18,103	$9,413	$179,455	$9.91	11
8"	113,328	$145,755	0	$0	107,035	$75,506	113,328	$58,931	$280,192	$2.47	4
Total	**2,287,470**	**$9,991,646**	**1,631,852**	**$9,417,873**	**2,231,770**	**$1,559,847**	**2,301,425**	**$1,196,747**	**$22,166,113**	**$9.69**	**21,562**

For the period provided, the City had revenue for water supply operations of over $22 Million. This is inclusive of the Potable Water Rates, Reclaimed Water Rates, Sewer Rates, Water Energy Rates and Water Resources and Infrastructure Protection (WRIP) rates. The monthly fixed charges associated with each water account are not included in this analysis or shown above as they will not be affected with a water meter project. The potable, reclaimed water and sewer rates each have multiple categories of classes depending on the customer type as shown in the figures below, and which also shows the effective 2022 rates.

Figure 5.2-1. Effective 2022 Water Rate Classes and Rates

WATER RATES

POTABLE WATER: (per 1,000 gallons)		Customer Class	Water Rate	Water Energy Rate	*WRIP FEE	Total Inside City Rate
Single Family	Tier 1 (0 - 3,500 gallons)	R1 or R4	$ 3.44	$ 0.80	$ 0.52	$ 4.76
	Tier 2 (3,501 - 6,200 gallons)		4.45	$ 0.80	0.52	$ 5.77
	Tier 3 (6,201 - 11,500 gallons)		6.86	$ 0.80	0.52	$ 8.18
	Tier 4 (11,501+ gallons)		13.72	$ 0.80	0.52	$ 15.04
Multi-Family Units		R2 or R3	4.42	$ 0.80	0.52	$ 5.74
Commercial/Schools		C	4.69	$ 0.80	0.52	$ 6.01
Northern Arizona University		NA	4.30	$ 0.80	0.52	$ 5.62
Manufacturing		MN	4.63	$ 0.80	0.52	$ 5.95
Landscaping/Lawn Meters		LM	4.69	$ 0.80	0.52	$ 6.01
Hydrant Meter		HM	7.17	$ 0.80	0.52	$ 8.49
Standpipe*		SP	7.17	$ 0.80	0.52	$ 9.52

*Includes sales tax and environmental fee
*Effective 8/1/20

RECLAIMED WATER: (per 1,000 gallons)		Customer Class	Inside City Rate	Outside City Rate
Private Residential	Tier 1 (0 - 3,500 gallons)	R1	$ 1.43	$ 1.57
	Tier 2 (3,501 - 6,200 gallons)		1.77	1.95
	Tier 3 (6,201 - 11,500 gallons)		2.56	2.82
	Tier 4 (11,501+ gallons)		4.80	5.28
Commercial (no main Ext):		C	1.95	2.15
Commercial (w/ main Ext):		C	4.14	4.55
Manufacturing (no main Ext):		MN	1.93	2.12
Manufacturing (w/ main Ext):		MN	4.10	4.51
NAU (No main extension):		NA	1.82	N/A
NAU (with main extension):		NA	3.85	N/A
City Departmental		MU	1.95	N/A
Hydrant Meter		WR	4.00	N/A
Standpipe**		RS	4.53	N/A
Off Peak/Golf Course:	Tier 1 (0 - 150,000,000 gallons)	WR	1.65	1.82
	Tier 2 (150,000,001+ gallons)	WR	1.65	1.82

**Includes sales tax and environmental fee

Figure 5.2-2. Effective 2022 Sewer Rate Classes and Rates

SEWER RATES			
SEWER: (per 1,000 gallons)	Customer Class	Inside City Rate	Outside City Rate
Residential			
Single- and Multi-Family	R1 - R4	$ 5.35	$ 5.89
Non-Residential			
Car Washes	CW	5.38	5.92
Laundromats	L	5.53	6.08
Commercial	C	5.68	6.25
Hotels & Motels	H	7.58	8.34
Restaurants	RF	9.09	10.00
Industrial Laundries	IL	8.36	9.20
Manufacturing	MN	6.09	6.70
Pet Food Manufacturers	PF	13.34	14.67
Soft Drink Bottling	SD	10.57	11.63
Ice Cream Cone Manufacturing	IC	16.48	18.13
NAU	NA	4.91	5.40

Existing Ultrasonic Meters

The City has been replacing existing water meters with new long-life and highly accurate ultrasonic water meters over the past few years. Although a relatively small number of meters were replaced each year, to-date approximately 25 percent (by quantity) of the meters in the City have been replaced with ultrasonic meters. The data associated with these accounts was analyzed and is shown below.

Table 5.2-2. Data Analysis of Existing Ultrasonic Meters

Size	Water Billed (kgal)	Water Revenue ($)	Sewer Billed (kgal)	Sewer Revenue ($)	Energy Fee (kgal)	Energy Fee ($)	WRIP (kgal)	WRIP ($)	Total Revenue ($)	Quantity of Meters	Quantity of Meters
3/4"	214,918	$1,028,868	175,276	$968,431	214,918	$143,705	214,918	$111,758	$2,252,762	4,518	23.4%
1"	22,605	$120,116	21,044	$128,803	28,822	$19,273	21,173	$11,010	$279,202	268	24.9%
1.5"	21,352	$98,669	16,710	$116,201	21,352	$14,296	21,352	$11,103	$240,269	70	17.9%
2"	120,300	$524,637	112,895	$719,699	189,026	$124,757	200,389	$104,202	$1,473,296	157	21.3%
3"	0	$0	33	$178	0	$0	0	$0	$178	1	2.7%
4"	0	$0	0	$0	0	$0	0	$0	$0	0	0.0%
6"	0	$0	0	$0	0	$0	0	$0	$0	0	0.0%
8"	0	$0	0	$0	0	$0	0	$0	$0	0	0.0%
Total	**379,174**	**$1,772,290**	**325,958**	**$1,933,312**	**454,118**	**$302,031**	**457,831**	**$238,073**	**$4,245,707**	**5,014**	**23.3%**

These newer ultrasonic meters would not be considered for testing or replacement, as they are already very accurate. For the purposes of the proposed Water Meter and AMI Program, the adjusted project baseline (without the 25 percent meters previously replaced) is as follows:

Table 5.2-3. Data Analysis of Meters to be Replaced (Project Baseline)

Size	Water Billed (kgal)	Water Revenue ($)	Sewer Billed (kgal)	Sewer Revenue ($)	Energy Fee (kgal)	Energy Fee ($)	WRIP (kgal)	WRIP ($)	Total Revenue ($)	Average $/kgal	Quantity of Meters
3/4"	822,852	$3,903,536	617,123	$3,364,739	822,855	$551,079	822,855	$427,890	$8,247,244	$10.02	14,750
1"	105,519	$520,625	73,614	$438,109	89,858	$66,365	76,941	$40,010	$1,065,108	$10.09	810
1.5"	132,797	$622,588	120,075	$699,201	120,645	$88,785	132,797	$69,054	$1,479,628	$11.14	321
2"	525,925	$2,105,971	382,523	$2,282,834	447,590	$336,674	489,790	$254,691	$4,980,170	$9.47	580
3"	76,952	$350,940	63,953	$390,672	69,881	$51,637	76,959	$40,019	$833,268	$10.83	36
4"	112,820	$478,211	36,962	$242,873	103,765	$75,590	112,820	$58,667	$855,340	$7.58	36
6"	18,103	$91,730	11,643	$66,133	16,023	$12,179	18,103	$9,413	$179,455	$9.91	11
8"	113,328	$145,755	0	$0	107,035	$75,506	113,328	$58,931	$280,192	$2.47	4
Total	**1,908,296**	**$8,219,356**	**1,305,894**	**$7,484,561**	**1,777,652**	**$1,257,815**	**1,843,594**	**$958,674**	**$17,920,407**	$9.39	16,548

Based on this project baseline, NORESCO performed a preliminary analysis on estimated recovered revenue from each meter size category. The following scenario assumes a 4 percent increase in billed revenue on ¾" and 1" meters and a 2 percent increased revenue for 1.5" and 2" meters, with increased revenue from large meters not projected at this point. It should be noted that additional operations and maintenance savings will be realized if the City implements an AMI solution that will be detailed in the next phase of the project.

Table 5.2-4. Projected Revenue

Size	Total Project Baseline Revenue ($/year)	Increased Revenue Projection ($/year)	20 Year Projection of Increased Revenue($)	Quantity of Meters
3/4"	$8,247,244	$329,890	$9,823,484	14,750
1"	$1,065,108	$42,604	$1,268,675	810
1.5"	$1,479,628	$29,593	$881,210	321
2"	$4,980,170	$99,603	$2,965,998	580
3"	$833,268	TBD	TBD	TBD
4"	$855,340	TBD	TBD	TBD
6"	$179,455	TBD	TBD	TBD
8"	$280,192	TBD	TBD	TBD
Total	**$17,920,407**	**$501,690**	**$14,939,367**	**16,461**

Assuming a 4 percent annual escalation in the water, sewer, and WRIP rates, this project will result in cumulative revenue improvement of nearly $15 million over the 20-year life of the meters. The results of the meter testing will verify, and potentially modify the projected revenue increase and ultimately dictate the size and scope of the project. Additional revenue enhancement could fund additional projects as directed by the City, such as:

- Upgrading the current AMR system to AMI which will result in additional savings and automate billing and water system reporting
- Testing of source water meters at Lake Mary and City wells for accuracy and calibration and inclusion into the City's Water Resource Management Plan
- Retrofit of additional City operated natural gas equipment to electric resulting in further GHG reductions

Next Steps

The next steps recommended for the Water Meter and AMI Program are described as follows:

- City personnel should thoroughly review the billing data, selected meters to be tested, and proposed scope of work presented in *Section 3. Water Meter Testing*.
- Approve the procurement of test meters and proceed with meter testing to validate the increased revenue projections and further evaluation of the Water Meter and AMI Program.

- A price to complete the meter testing is included in the Phase 1 IGA. Upon approval from the City, we will order equipment to complete the proposed testing scope and coordinate installations with the City. This work will allow us to accurately project the increased revenue associated with the project and provide a firm fixed price to complete the Water Meter and AMI Program.

Table 5.2-5. Proposed Sequence of Steps

Date	Task
Mar 15, 2022	Team Workshop: water meter scope and process for development *(complete)*
Apr - May 2022	Data Download and Billing Analysis, Testing Plan *(complete – results provided herein)*
May - Sep 2022	City Review and Approval of Testing Plan
Oct 2022	Execute Phase 1 construction contract (including purchase of test meters)
Oct - Feb 2023	NORESCO Procure Meters
Mar - Apr 2023	NORESCO Remove/Replace & Test Meters
Apr - May 2023	NORESCO Cost Benefit Analysis
May 2023	NORESCO Finalize Phase 2 IGA
May - Jun 2023	City Review of Phase 2 IGA
Jun - Jul 2023	Finalize Phase 2 IGA and execute construction contract
Aug 2023	Approval by City Council
Sep 2023 – Q1 2025	Procurement and Installation of Phase 2

5.3 BUILDING ELECTRIFICATION

To support the City's goals of GHG reduction and electrification, NORESCO has evaluated the City's existing natural gas consuming equipment. We conducted site surveys and inventoried natural gas equipment and electrical infrastructure in order to develop Phase 1 electrification ECMs, and to help the City prioritize electrification efforts in future Phases and projects. This information is summarized in *Table 5-3.1* below, including projected GHG reduction associated with replacing this equipment as part of the City's electrification efforts.

Note that the Phase 1 electrification recommendations consist of replacement of existing natural gas consuming HVAC equipment in *ECM-2b: Heat Pump Heating and Cooling* and *ECM-2c: Electric Boilers*, and the installation of EV chargers for City fleet vehicles in *ECM-5: Electric Vehicle Charging Stations*. The natural gas equipment to be replaced in Phase 1 of this project was selected based on:

- The age and condition of the equipment – we will replace equipment that is at or nearing the end of its useful life, or that is failing and creating a maintenance headache for facilities personnel.
- The amount of natural gas the equipment consumes – we targeted facilities and equipment that consume a significant amount of natural gas, maximizing the project's GHG reduction.

A full inventory of natural gas equipment at City facilities, and recommended electric replacements, is included in *Table 5-3.1* below. The City can use this inventory as a road map as it works towards its electrification goal and continues to replace aging natural gas equipment with electric equipment when the existing equipment has reached the end of its useful life. The estimated cost to electrify the equipment listed in *Table 5-3.1* is $15 – $20 million. This is a rough order of magnitude budget based on 2022 material and labor costs for equipment replacement, plus industry standard engineering, design, project management, contractor general conditions and contingency. Locations shown in *Table 5-3.1* assume simple installations where adequate electrical service is available from a nearby panel. Many of the recommended electric replacements for existing gas equipment may need new electrical service from APS and/or involve other site conditions which may increase the cost.

Table 5-3.1. Existing Natural Gas Equipment

Facility	Equipment Type	Qty.	Designation	Location	Serves	Mfg.	Mfg. Date	Fuel	Heating Capacity - Hourly Input Rating (MBH)	Size (gal)	Nominal Cooling Capacity (MBH)	Recommended Electric Replacement	Notes	GHG Reduction (Metric Ton CO2 Equivalent)[2]
Aquaplex Center	HW Boiler - Condensing	2	B-1,2	Mech Room	HHW/DHW/Pool	Aerco	2007	NG	2751	---	---	Electric Resistance Boiler		300.98
Cemetery	Unit Heater	1	UH-1	Bldg 2 - Ceiling-hung	Bldg 2	ADP	1996	NG	138	---	---	Electric Resistance Unit Heater		7.55
Cemetery	Furnace - Std Eff.	1	F-1	Main Bldg	Main Bldg	Ruud	1996	NG	125	---	---	Split Heat Pump		6.84
Cemetery	DHW Heater - Std Eff.	1	DHW-1	Main Bldg Laundry	Main Bldg DHW	American	1996	NG	125	80	---	Heat Pump Water Heater	3	6.84
Cinder Lake Landfill	Split AC / Furnace - Condensing (Propane)	1	AC-1	Office Bldg	Office Bldg	ICP	2000	LPG	80	---	36	Split Heat Pump	3	4.38
Cinder Lake Landfill	Split AC / Furnace - Condensing (Propane)	1	AC-2	Office Bldg	Office Bldg	ICP	2000	LPG	100	---	48	Split Heat Pump	3	5.47
Cinder Lake Landfill	HW Boiler - Std Eff. (Propane)	1	B-1	Haz. Products Center	Haz. Products Center	Dunkirk	2002	LPG	280	---	---	Electric Resistance Boiler		15.32
Cinder Lake Landfill	Unit Heater (Propane)	3	UH-1-3	Truck Bays - Ceiling-hung	Truck Bays	Lennox	2000	LPG	100	---	---	Electric Resistance Unit Heater	3, 4	16.41
City Hall	HW Boiler - Std Eff.	2	B-1,2	Mech Room	HHW Loop	Kewanee	1981	NG	650	---	---	Electric Resistance Boiler		71.11
City Hall	DHW Heater - Std Eff.	1	DHW-1	Mech Room	Bldg DHW	AO Smith	1995	NG	75	100	---	Heat Pump Water Heater		4.10
City Hall Courthouse	Energy Recovery Ventilator	1	ERV-1	Rooftop	Fan Coil Outdoor Air	Daikin	2019	NG	360	---	287	Electric Resistance Heating Coil		19.69
City Warehouse	Gas IR Heater	5	IR-1-5	Warehouse - Ceiling-hung	Warehouse	Dayton	2000	NG	75	---	---	Electric Resistance IR Heater (2 each)	3, 4	20.51
Coconino Warehouse	Unit Heater	2	UH-1,2	Warehouse - Ceiling-hung	Warehouse	Reznor	1986	NG	100	---	---	Electric Resistance Unit Heater	3, 4	10.94
Coconino Warehouse	DHW Heater - Std Eff.	1	DHW-1	Closet	Building DHW	American Appliance	1986	NG	40	30	---	Heat Pump Water Heater	4	2.19
Fire Station #1	Split AC / Furnace - Condensing	3	AC-1-3	Mechanical Mezzanine	Weight Room, Dorms	Carrier	2007	NG	60	---	30	Split Heat Pump		9.85

Facility	Equipment Type	Qty.	Designation	Location	Serves	Mfg.	Mfg. Date	Fuel	Heating Capacity - Hourly Input Rating (MBH)	Size (gal)	Nominal Cooling Capacity (MBH)	Recommended Electric Replacement	Notes	GHG Reduction (Metric Ton CO2 Equivalent)[2]
Fire Station #1	Split AC / Furnace - Condensing	1	AC-4	Mechanical Mezzanine	Living, Kitchen	Carrier	2007	NG	80	---	48	Split Heat Pump		4.38
Fire Station #1	Unit Heater	4	UH-1-4	Apparatus Bay - Ceiling-hung	Apparatus Bay	Lennox	2007	NG	150	---	---	Electric Resistance Unit Heater		32.82
Fire Station #1	DHW Heater - Std Eff.	1	DHW-1	Mechanical Mezzanine	Building DHW	AO Smith	2011	NG	199	150	---	Heat Pump Water Heater		10.89
Fire Station #2	DHW Heater - Condensing	1	DHW-1	Mechanical Mezzanine		Rheem-Ruud	2010	NG	199	120	---	Heat Pump Water Heater		10.89
Fire Station #2	HW Boiler - Condensing	1	B-1	Mech/Elec Room	Snow Melt		2010	NG	70	---	---	Electric Resistance Boiler	3	3.83
Fire Station #2	Split AC / Furnace - Condensing	4	AC-1-3,6	Mechanical Mezzanine	Weight Room, Dorms, BC Office	Carrier	2010	NG	60	---	30	Split Heat Pump		13.13
Fire Station #2	Split AC / Furnace - Condensing	1	AC-4	Mechanical Mezzanine	Living, Kitchen	Carrier	2010	NG	80	---	48	Split Heat Pump		4.38
Fire Station #2	Split AC / Furnace - Condensing	1	AC-5	Mechanical Mezzanine	Training 1	Carrier	2010	NG	60	---	36	Split Heat Pump		3.28
Fire Station #2	Furnace - Condensing	1	F-7	Mech Room	BC Apparatus Bay	Carrier	2010	NG	60	---	---	Split Heat Pump		3.28
Fire Station #2	Unit Heater	4	UH-1-4	Apparatus Bay - Ceiling-hung	Apparatus Bay	Lennox	2010	NG	150	---	---	Electric Resistance Unit Heater		32.82
Fire Station #3	Split AC / Furnace - Condensing	3	AC-1-3	Mechanical Mezzanine	Weight Room, Dorms	Trane	2008	NG	60	---	30	Split Heat Pump		9.85
Fire Station #3	Split AC / Furnace - Condensing	1	AC-4	Mechanical Mezzanine	Living, Kitchen	Trane	2008	NG	80	---	48	Split Heat Pump		4.38
Fire Station #3	Split AC / Furnace - Condensing	1	AC-5	Mech Room	Training 1	Trane	2008	NG	60	---	36	Split Heat Pump		3.28
Fire Station #3	Unit Heater	4	UH-1-4	Apparatus Bay - Ceiling-hung	Apparatus Bay	Reznor	2008	NG	150	---	---	Electric Resistance Unit Heater		32.82
Fire Station #3	DHW Heater - Std Eff.	1	DHW-1	Mechanical Mezzanine	Building DHW	AO Smith	2008	NG	199	150	---	Heat Pump Water Heater	3, 4	10.89
Fire Station #4	DHW Heater - Std Eff.	1	DHW-1	Mech Room	Building DHW	Bradford White	2008	NG	85	100	---	Heat Pump Water Heater		4.65
Fire Station #4	Split AC / Furnace - Condensing	1	AC-1	Mech Room	Living, Dorms	Rheem	2018	NG	112	---	60	Split Heat Pump		6.13
Fire Station #4	Unit Heater	2	UH-1,2	Apparatus Bay - Ceiling-hung	Apparatus Bay	Reznor	1987	NG	125	---	---	Electric Resistance Unit Heater	4	13.68
Fire Station #5	Split AC / Furnace - Condensing	3	AC-1-3	Mechanical Mezzanine	Weight Room, Dorms	Trane	2008	NG	60	---	30	Split Heat Pump		9.85

Facility	Equipment Type	Qty.	Designation	Location	Serves	Mfg.	Mfg. Date	Fuel	Heating Capacity - Hourly Input Rating (MBH)	Size (gal)	Nominal Cooling Capacity (MBH)	Recommended Electric Replacement	Notes	GHG Reduction (Metric Ton CO2 Equivalent)[2]
Fire Station #5	Split AC / Furnace - Condensing	1	AC-4	Mechanical Mezzanine	Living, Kitchen	Trane	2008	NG	80	---	48	Split Heat Pump		4.38
Fire Station #5	Split AC / Furnace - Condensing	1	AC-5	Mech Room	Training 1	Trane	2008	NG	60	---	36	Split Heat Pump		3.28
Fire Station #5	Unit Heater	4	UH-1-4	Apparatus Bay - Ceiling-hung	Apparatus Bay	Reznor	2008	NG	150	---	---	Electric Resistance Unit Heater		32.82
Fire Station #5	DHW Heater - Std Eff.	1	DHW-1	Mechanical Mezzanine	Building DHW	AO Smith	2008	NG	199	150	---	Heat Pump Water Heater	3, 4	10.89
Fire Station #6	Split AC / Furnace - Condensing	1	AH-1	Above Ceiling	Weight Room	Ruud	1998	NG	60	---	36	Split Heat Pump		3.28
Fire Station #6	Split AC / Furnace - Condensing	1	AH-2	Exterior MER	Living	Ruud/Armstrong	2016	NG	105	---	60	Split Heat Pump		5.74
Fire Station #6	Split AC / Furnace - Condensing	3	AH-3-5	Ext MER, Upstairs Closet	Living, Dorms	Ruud/Armstrong	2016	NG	75	---	36	Split Heat Pump		12.31
Fire Station #6	Unit Heater	4	UH-1-4	Apparatus Bay - Ceiling-hung	Apparatus Bay	Reznor	1998	NG	75	---	---	Electric Resistance Unit Heater	4	16.41
Fire Station #6	DHW Heater - Condensing	1	DHW-1	Ext MER	Building DHW	AO Smith	1998	NG	150	100	---	Heat Pump Water Heater	4	8.21
Fire Station #6	DHW Heater - Condensing	1	DHW-2	Mech/Elec Room	Building DHW	Rheem	2013	NG	40	40	---	Heat Pump Water Heater		2.19
Fire Station #10 (Old Airport Ops Building)	Package Unit	1	AHU-1	Rooftop	Offices	ICP	1995	NG	80	---	36	Packaged Heat Pump		4.38
Fire Station #10 (Old Airport Ops Building)	Furnace - Std Eff.	1	F-1	Locker Room	Lockers, Gym	Ruud	1988	NG	175	---	---	Split Heat Pump		9.57
Fire Station #10 (Old Airport Ops Building)	Unit Heater	2	UH-1-2	Garage - Ceiling-hung	Garage (High Bay)	Reznor	1995	NG	150	---	---	Electric Resistance Unit Heater	3, 4	16.41
Fire Station #10 (Old Airport Ops Building)	Unit Heater	2	UH-3-4	Garage - Ceiling-hung	Garage (Low Bay)	Reznor	1995	NG	75	---	---	Electric Resistance Unit Heater	3, 4	8.21
Hal Jensen Recreation Center	DHW Heater - Std Eff.	1	DHW-1	Gym Closet	Building DHW	Bradford White	2008	NG	40	40	---	Heat Pump Water Heater		2.19
Hal Jensen Recreation Center	Split AC / Furnace - Condensing	1	AC-1	Lobby - Above Ceiling	Lobby, Rec Room		2015	NG	80	---	36	Split Heat Pump	3, 4	4.38
Hal Jensen Recreation Center	Furnace - Std Eff.	2	F-1-2	Attic North and South	Weight Rooms	Ruud	2000	NG	60	---	---	Split Heat Pump	3, 4	6.56
Hal Jensen Recreation Center	Furnace - Std Eff.	1	F-3	Upstairs Closet	Upstairs, Changing Rooms	Ruud	2000	NG	100	---	---	Split Heat Pump	3, 4	5.47
Hal Jensen Recreation Center	Unit Heater	4	UH-1-4	Gym - Ceiling-hung	Gym		2000	NG	75	---	---	Electric Resistance Unit Heater	3, 4	16.41

Facility	Equipment Type	Qty.	Designation	Location	Serves	Mfg.	Mfg. Date	Fuel	Heating Capacity - Hourly Input Rating (MBH)	Size (gal)	Nominal Cooling Capacity (MBH)	Recommended Electric Replacement	Notes	GHG Reduction (Metric Ton CO2 Equivalent)[2]
J. Lively Ice Rink / McPherson	DHW Boiler - Std Eff.	2	DHW-1,2	Blr Rm North, MER West	DHW Systems 1, 2	Raypak	2018	NG	399	---	---	Electric Resistance Boiler	External Storage Tanks	43.65
J. Lively Ice Rink / McPherson	HW Boiler - Condensing	2	B-1,2	Boiler Room North	Heating Hot Water	Velocity	2010	NG	270	---	---	Electric Resistance Boiler	3, 4	29.54
J. Lively Ice Rink / McPherson	Package Unit	1	AC-1	Rooftop	Lockers	Carrier	2010	NG	100	---	48	Packaged Heat Pump	3, 4	5.47
Joe C. Montoya Community and Senior Center	Package Unit	1	RTU-1	Rooftop	Multipurpose Room	Trane	2003	NG	125	---	60	Packaged Heat Pump	5	see note 5
Joe C. Montoya Community and Senior Center	Package Unit	1	RTU-2	Rooftop	Gathering / Billiards	Trane	2019	NG	70	---	36	Packaged Heat Pump	5	see note 5
Joe C. Montoya Community and Senior Center	Package Unit	1	RTU-3	Rooftop	Craft Room / Office	Trane	2003	NG	100	---	36	Packaged Heat Pump	5	see note 5
Joe C. Montoya Community and Senior Center	Package Unit	1	RTU-4	Rooftop	Meeting Room	Trane	2002	NG	100	---	36	Packaged Heat Pump	5	see note 5
Joe C. Montoya Community and Senior Center	Package Unit	1	RTU-5	Rooftop	Fitness Center	Lennox	2008	NG	150	---	72	Packaged Heat Pump	5	see note 5
Joe C. Montoya Community and Senior Center	DHW Heater - Std Eff.	1	DHW-1	Mechanical Closet	Building DHW	American Standard	2014	NG	125	80	---	Heat Pump Water Heater		6.84
Joe C. Montoya Community and Senior Center	Unit Heater	1	UH-1	Kitchen - Ceiling-hung	Kitchen	Sterling	2005	NG	30	---	---	Electric Resistance Unit Heater	3, 4, 5	see note 5
Joe C. Montoya Community and Senior Center	Kitchen Equipment			Kitchen			2005	NG		---	---		Range, Griddle, Ovens	
Lake Mary Water Treatment Plant	Split AC / Furnace - Condensing	1	AC-1	Upstairs Closet	Upstairs	Trane	2012	NG	60	---	---	Split Heat Pump	3	3.28
Lake Mary Water Treatment Plant	Furnace - Condensing	1	F-1	Upstairs Closet	Upstairs	Trane	2012	NG	97	---	36	Split Heat Pump		5.31
Lake Mary Water Treatment Plant	Package Unit	1	AHU-1	On-grade	Back Lab	Tempstar	1996	NG	150	---	60	Packaged Heat Pump	3, 5	see note 5
Lake Mary Water Treatment Plant	Package Unit	1	AHU-2	Rooftop	Front Lab	Lennox	2018	NG	70	---	36	Packaged Heat Pump	3, 4	3.83
Lake Mary Water Treatment Plant	Unit Heater	2	UH-1,2	Maint. Shop - Ceiling-hung	Maint. Shop	Reznor	2000	NG	100	---	---	Electric Resistance Unit Heater	3, 4	10.94

Facility	Equipment Type	Qty.	Designation	Location	Serves	Mfg.	Mfg. Date	Fuel	Heating Capacity - Hourly Input Rating (MBH)	Size (gal)	Nominal Cooling Capacity (MBH)	Recommended Electric Replacement	Notes	GHG Reduction (Metric Ton CO2 Equivalent)[2]
Lake Mary Water Treatment Plant	Unit Heater	1	UH-3	Coagulant Bldg - Ceiling-hung	Coagulant Bldg.	Lennox	2000	NG	50	---	---	Electric Resistance Unit Heater	3, 4	2.74
Lake Mary Water Treatment Plant	Unit Heater	2	UH-4,5	Filtration - Ceiling-hung	Filtration	Reznor	2000	NG	50	---	---	Electric Resistance Unit Heater	3, 4	5.47
Lake Mary Water Treatment Plant	Unit Heater	1	UH-6	NaHO Storage - Ceiling-hung	NaHO Storage		2000	NG	50	---	---	Electric Resistance Unit Heater	3, 4	2.74
Lake Mary Water Treatment Plant	DHW Heater - Std Eff.	1	DWH-1	Upstairs Closet	Main Bldg DHW	Rheem	2015	NG	36	40	---	Heat Pump Water Heater		1.97
Library Main	HW Boiler - Std Eff.	1	B-1	Boiler Room	Terminal Units	Weil-McLean	1986	NG	1700	---	---	Electric Resistance Boiler	5	see note 5
Library Main	Fireplace Gas Logs	3	FP-1-3	Main Floor	Main Floor		1986	NG	60	---	---	Abandon	3	9.85
Milligan House	Split AC / Furnace - Std Eff.	2	AC-1,2	Basement, Attic	Downstairs, Upstairs	Armstrong Air	2014	NG	60	---	36	Split Heat Pump	3	6.56
Murdoch Center	Furnace - Std Eff.	2	F-1,2	Above Ceiling	Building		2000	NG	80	---	---	Split Heat Pump	3, 4	8.75
Murdoch Center	DHW Heater - Std Eff.	1	DHW-1	Kitchen Closet	Building DHW	SABH	1993	NG	33	30	---	Heat Pump Water Heater		1.81
NACET Accelerator	HW Boiler - Condensing	2	B-1,2	Mech Room	Fan Coils	Patterson-Kelley	2014	NG	1050	---	---	Electric Resistance Boiler		114.88
NACET Incubator	HW Boiler - Condensing	2	B-1,2	Mech Room	AHUs, Reheat Coils	Raypak	2008	NG	400	---	---	Electric Resistance Boiler	3	43.76
NACET Incubator	DHW Heater - Condensing	1	DHW-1	Mech Room	Building DHW	AO Smith	2008	NG	300	130	---	Heat Pump Water Heater		16.41
Public Works (Bldg-1)	DHW Boiler - Std Eff.	1	B-1	Bldg 1 MER	Wash Rack Hot Water	Hotsy	2018	NG	290	---	---	Electric Resistance Boiler		15.86
Public Works (Bldg-1)	Unit Heater	1	UH-1	Bldg 1 MER	Bldg 1 MER	Reznor	2018	NG	30	---	---	Electric Resistance Unit Heater		1.64
Public Works (Bldg-2)	DHW Heater - Condensing	1	DHW-1	Bldg 2 Closet	Bldg 2 DHW	AO Smith	2018	NG	76	50	---	Heat Pump Water Heater		4.16
Public Works (Bldg-2)	Makeup Air Unit	1	MAU-1	Mechanical Mezzanine	Main Shop Space		2018	NG	500	---	---	Electric Resistance Heating Coil	3	27.35
Public Works (Bldg-2)	Makeup Air Unit	1	MAU-2	Welding Shop - Ceiling-hung	Welding Shop		2018	NG	300	---	---	Electric Resistance Heating Coil	3	16.41

Facility	Equipment Type	Qty.	Designation	Location	Serves	Mfg.	Mfg. Date	Fuel	Heating Capacity - Hourly Input Rating (MBH)	Size (gal)	Nominal Cooling Capacity (MBH)	Recommended Electric Replacement	Notes	GHG Reduction (Metric Ton CO2 Equivalent)[2]
Public Works (Bldg-2)	Split AC / Furnace - Condensing	1	AC-1	Offices - Above Ceiling	Offices	Reznor	2018	NG	100	---	48	Split Heat Pump	3	5.47
Public Works (Bldg-2)	IR Heater	12	IR-1-12	Shop Space - Ceiling-hung	Shop Space		2018	NG	100	---	---	Electric Resistance IR Heater	3	65.64
Public Works (Bldg-3)	Makeup Air Unit	1	MAU-1	Mechanical Mezzanine	Paint Booth	Reznor	2018	NG	500	---	---	Electric Resistance Heating Coil	3	27.35
Public Works (Bldg-3)	IR Heater	2		Ceiling-hung			2018	NG	100	---	---	Electric Resistance IR Heater	3	10.94
Public Works (Bldg-3)	Unit Heater	4		Ceiling-hung			2018	NG	100	---	---	Electric Resistance Unit Heater	3	21.88
Public Works (Bldg-5)	Split AC / Furnace	1	AHU-1	Sign Shot - Ceiling-hung	Sign Shop, Office	Reznor	2018	NG	100	---	48	Split Heat Pump	3	5.47
Public Works (Bldg-5)	IR Heater	4	IR-1-4	Ceiling-hung	Paint Striper, Street Sweeper Bays		2018	NG	100	---	---	Electric Resistance IR Heater	3	21.88
Public Works (Bldg-5)	Unit Heater	5	UH-1-5	Ceiling-hung	Garage Space	Reznor	2018	NG	100	---	---	Electric Resistance Unit Heater	3	27.35
Public Works (Bldg-6)	HW Boiler - Condensing	2	B-1,2	Mech Room	AHU-1, reheat coils	Lochinvar	2018	NG	400	---	---	Electric Resistance Boiler		43.76
Public Works (Bldg-6)	DHW Heater	1		Mech Room			2018	NG	125	80	---	Heat Pump Water Heater	3	6.84
Public Works / Sustainability (Bldg 1)	Package Unit	1	AHU-1	Rooftop	Office Space	Lennox	1998	NG	120	---	48	Packaged Heat Pump	5	see note 5
Public Works / Sustainability (Bldg 1)	Furnace - Std Eff.	1	F-1	Above Ceiling	Break Room	Trane?	1998	NG	75	---	---	Packaged Heat Pump	5	see note 5
Public Works / Sustainability (Bldg 3)	IR Heater	6	IR-1-6	Ceiling-hung	Garage Space	Sterling	2005	NG	75	---	---	Electric Resistance IR Heater		24.62
Public Works / Sustainability (Bldg 7)	DHW Heater - Std Eff.	1	DHW-1	Above Office Build-out	DHW System (Main)	American	1988	NG	40	50	---	Heat Pump Water Heater	4	2.19
Public Works / Sustainability (Bldg 7)	DHW Heater - Std Eff.	1	DHW-2	Above Office Build-out (East)	DHW System (East)	American Appliance	1988	NG	40	40	---	Heat Pump Water Heater		2.19
Public Works / Sustainability (Bldg 7)	Unit Heater	6	UH-1-6	Ceiling-hung	West Shop and East Garage	Sterling	2003	NG	144	---	---	Electric Resistance Unit Heater	4	47.26
Public Works / Sustainability (Bldg 7)	Unit Heater	1	UH-7	Ceiling-hung	Wood Shop	Reznor	1980	NG	200	---	---	Electric Resistance Unit Heater		10.94

Facility	Equipment Type	Qty.	Designation	Location	Serves	Mfg.	Mfg. Date	Fuel	Heating Capacity - Hourly Input Rating (MBH)	Size (gal)	Nominal Cooling Capacity (MBH)	Recommended Electric Replacement	Notes	GHG Reduction (Metric Ton CO2 Equivalent)[2]
Public Works / Sustainability (Bldg 7)	Unit Heater	1	UH-8	Ceiling-hung	Mower Storage	Reznor	1980	NG	120	---	---	Electric Resistance Unit Heater	3, 4	6.56
Pulliam Airport	Package Unit	2	RTU-1,2	Rooftop	Passenger Holding Expansion	Trane	2008	NG	150	---	72	Packaged Heat Pump	5	see note 5
Pulliam Airport	Split AC / Furnace	9	F-1-9	Mech Rooms M1-M4	Terminal Main Floor	Ruud	2011	NG	125	---	60	Split Heat Pump	Some may have lower capacities	61.54
Pulliam Airport	Split AC / Furnace	2	F-10,11	Above Ceiling	Terminal Mezzanine Floor	Ruud	2011	NG	105	---	60	Split Heat Pump	3, 4	11.49
Pulliam Airport (Ops)	Unit Heater	1	UH-1	Ceiling-hung	Equipment Storage	Reznor	2004	NG	45	---	---	Electric Resistance Unit Heater		2.46
Pulliam Airport (Ops)	IR Heater	2	RH-1,2	Ceiling-hung	Apparatus Bay - East	Reznor	2004	NG	125	---	---	Electric Resistance IR Heater		13.68
Pulliam Airport (Ops)	IR Heater	2	RH-3,4	Ceiling-hung	Apparatus Bay - West	Reznor	2004	NG	100	---	---	Electric Resistance IR Heater		10.94
Pulliam Airport (Ops)	Split AC / Furnace - Std Eff.	2	GF-1,2	Mech Room	1st Floor	Trane	2004	NG	100	---	60	Split Heat Pump		10.94
Pulliam Airport (Ops)	Split AC / Furnace - Condensing	2	GF-3,4	Below Floor	2nd Floor	Trane	2004	NG	60	---	36	Split Heat Pump		6.56
Pulliam Airport (Ops)	Furnace - Condensing	1	GF-5	Ceiling-hung	ARFF Storage, Laundry	Trane	2004	NG	40	---	---	Split Heat Pump		2.19
Pulliam Airport (Ops)	DHW Heater - Std Eff.	1	WH-1	Mech Room 116	Building DHW	Bradford White	2004	NG	180	80	---	Heat Pump Water Heater		9.85
Pulliam Airport (Ops)	DHW Heater - Std Eff.	1	WH-2	Mech Room 123	Laundry DHW	Bradford White	2004	NG	55	65	---	Heat Pump Water Heater		3.01
Pulliam Airport (X-hangars)	Unit Heater	5	UH-1-5	Ceiling-hung	Hangars	Sterling	2010	NG	400	---	---	Electric Resistance Unit Heater	4	109.41
Rio de Flag Wastewater Plant	HW Boiler - Condensing	3	B-1-3	Mech Room	Heating Hot Water Loop	Lochinvar	2017	NG	400	---	---	Electric Resistance Boiler	3, 4	65.64
Rio de Flag Wastewater Plant	DHW Heater - Inst. Condensing	1	DHW-1	Mech Room	Building DHW	Navien	2017	NG	150	Inst.	---	Instantaneous Electric Water Heater	3, 4	8.21
Rio de Flag Wastewater Plant	Makeup Air Unit	1	MAU-601	Ceiling-hung	Odor Control	Reznor	1992	NG	150	---	---	Electric Resistance Duct Furnace	3, 4	8.21

Facility	Equipment Type	Qty.	Designation	Location	Serves	Mfg.	Mfg. Date	Fuel	Heating Capacity - Hourly Input Rating (MBH)	Size (gal)	Nominal Cooling Capacity (MBH)	Recommended Electric Replacement	Notes	GHG Reduction (Metric Ton CO2 Equivalent)[2]
Rio de Flag Wastewater Plant	Makeup Air Unit	1	MAU-201	IP Bldg - Exterior On-grade	IP Bldg	Reznor	1992	NG	600	---	---	Electric Resistance Duct Furnace		32.82
Rio de Flag Wastewater Plant	Makeup Air Unit	1	MAU-202	IP Bldg - Floor Mount	IP Bldg	Reznor	1992	NG	350	---	---	Electric Resistance Duct Furnace (2 required)		19.15
Theatrikos Building	Split AC / Furnace - Std Eff.	1	AC-1	Attic	Main Bldg	Lennox	2000	NG	80	---	60	Split Heat Pump	3, 4	4.38
Theatrikos Building	Split AC / Furnace - Std Eff.	1	AC-2	Attic	Stage/Theater Suplimental	Lennox	2000	NG	60	---	36	Split Heat Pump	3, 4, 6	3.28
Theatrikos Building	Split AC / Furnace - Condensing	1	AC-3	Basement	Basement	Lennox	2010	NG	80	---	48	Split Heat Pump	3, 4	4.38
Thorpe Shop	Unit Heater	1	UH-1	Ceiling-hung	Office Space	Dayton	1990	NG	30	---	---	Electric Resistance Unit Heater	4	1.64
Thorpe Shop	Unit Heater	2	UH-2,3	Ceiling-hung	Shop Space	Reznor	1990	NG	75	---	---	Electric Resistance Unit Heater	4	8.21
Thorpe Shop	DHW Heater - Std Eff.	1	DHW-1	Above Office Build-out	Shop/Office DHW		1990	NG	40	40	---	Heat Pump Water Heater	4	2.19
Thorpe Shop	Split AC / Furnace - Std Eff.	1	AC-1	Under Portable	Portable	Ruud	1990	NG	60	---	30	Split Heat Pump	3	3.28
USGS #5	Unit Heater (Propane)	4	UH-1-4	Ceiling-hung	Warehouse	Reznor	2000	LPG	100	---	---	Electric Resistance Unit Heater	3, 4	21.88
USGS #5	Unit Heater (Propane)	2	UN-5,6	Ceiling-hung	Warehouse and Offices	Reznor	2000	LPG	50	---	---	Electric Resistance Unit Heater	3, 4	5.47
USGS #6	HW Boiler - Std Eff.	2	B-1,2	Mech Room	Reheat and Fin-tube Radiation	Raypak	2001	NG	900	---	---	Electric Resistance Boiler		98.47
USGS #6	DHW Heater - Std Eff.	1	DHW-1	Mech Room	Building DHW	Bradford White	2002	NG	50	40	---	Heat Pump Water Heater		2.74
Utilities Shop	Unit Heater	14	UH-1-14	Ceiling-hung	Garage and Shop Space	ADP	1999	NG	115	---	---	Electric Resistance Unit Heater		88.07
Utilities Shop	Package Unit	2	AHU-1,2	On-grade	Office and Shop Space	Ruud	1999	NG	135	---	60	Packaged Heat Pump		14.77
Visitor's Center	Unit Heater	1	UH-1	Ceiling-hung	Amtrak Garage	Dayton	2007	NG	100	---	---	Electric Resistance Unit Heater		5.47

Facility	Equipment Type	Qty.	Designation	Location	Serves	Mfg.	Mfg. Date	Fuel	Heating Capacity - Hourly Input Rating (MBH)	Size (gal)	Nominal Cooling Capacity (MBH)	Recommended Electric Replacement	Notes	GHG Reduction (Metric Ton CO2 Equivalent)[2]
Visitor's Center	Unit Heater	1	UH-2	Ceiling-hung	Amtrak Garage		2007	NG	70	---	---	Electric Resistance Unit Heater	3, 4	3.83
Visitor's Center	DHW Heater - Std Eff.	1	DHW-1	Amtrak Attic	Building DHW	Bradford White	2016	NG	32	30	---	Heat Pump Water Heater		1.75
Visitor's Center	Split AC / Furnace - Std Eff.	1	AC-1	Amtrak Attic	Amtrak	Rheem	2011	NG	150	---	60	Split Heat Pump		8.21
Visitor's Center	Split AC / Furnace - Std Eff.	1	AC-2	Visitor Center Attic	Visitor Center	Rheem	2016	NG	125	---	48	Split Heat Pump		6.84
Visitor's Center	Split AC / Furnace - Std Eff.	1	AC-3	Visitor Center Attic	Visitor Center	Rheem	2013	NG	75	---	36	Split Heat Pump		4.10
Visitor's Center	Split AC / Furnace - Std Eff.	1	AC-4	Visitor Center Attic	Visitor Center	Rheem	2008	NG	150	---	60	Split Heat Pump		8.21
Visitor's Center	Split AC / Furnace - Std Eff.	1	AC-5	Gift Shop Attic	Gift Shop	Rheem	2010	NG	100	---	36	Split Heat Pump	3, 4	5.47
Water Services / Housing East Side Annex	Split AC / Furnace - Std Eff.	4	F-1-4	Mech Rooms	Building	Carrier	2018	NG	80	---	60	Split Heat Pump		17.51
Wildcat Hill Wastewater Plant	HW Boiler - Std Eff.	1	B-1	Main Ops Boiler Room	Site HW Loop	Ajax	1982	NG	3250	---	---	Electric Resistance Boiler	4	177.79
Wildcat Hill Wastewater Plant	DHW Heater - Inst. Condensing	1	DHW-1	Main Ops Mech Room	Main Ops DHW	Navien	2017	NG	150	Inst.	---	Instantaneous Electric Water Heater	3, 4	8.21
Wildcat Hill Wastewater Plant	Makeup Air Unit	1	MAU-1	Digester Bldg Exterior	Digester Bldg	Greenheck	2008	NG	587	---	---	Electric Resistance MAU		32.11
Wildcat Hill Wastewater Plant	Makeup Air Unit	1	MAU-2	Digester Bldg Exterior	Digester Bldg	Greenheck	2008	NG	191	---	---	Electric Resistance MAU		10.45
Wildcat Hill Wastewater Plant	Furnace - Std Eff.	2	F-1,2	Old Plant Bldg	Old Plant Bldg	Ruud	2005	NG	75	---	---	Split Heat Pump	3, 4	8.21
Wildcat Hill Wastewater Plant	Combined Heat and Power Unit	1	CHP-1	Main Ops Boiler Room				NG		---	---	None	6	
Total														**2,543**

Note 1: Footnote for future use.
Note 2: We calculated GHG emissions based on natural gas therms multiplied by 0.007 factor (metric tons of CO2 equivalent/therms) per the environmental protection agency's Emissions & Generation Resource Integrated Database (eGRID). We assumed that all additional electricity will be generated by a net-zero renewable source.
Note 3: Existing equipment size/capacity estimated due to lack of access, missing nameplates, and/or insufficient drawings.
Note 4: Existing equipment age estimated based on condition and/or age of building.
Note 5: Equipment replacement included in Phase 1. Cost and GHG reduction accounted for in Phase 1.
Note 6: Existing equipment not currently operational.

5.4 WATER RECLAMATION PLANT - PRELIMINARY ANALYSIS

The Preliminary Analysis for City of Flagstaff Water Reclamation Plants is included in the following section. Additional hard copies have been included under separate cover.

City of Flagstaff, AZ

City of Flagstaff

Water Reclamation Plant Preliminary Analysis

ESCO Energy Service Contract No. 2021-063

POINT OF CONTACT

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July 2022

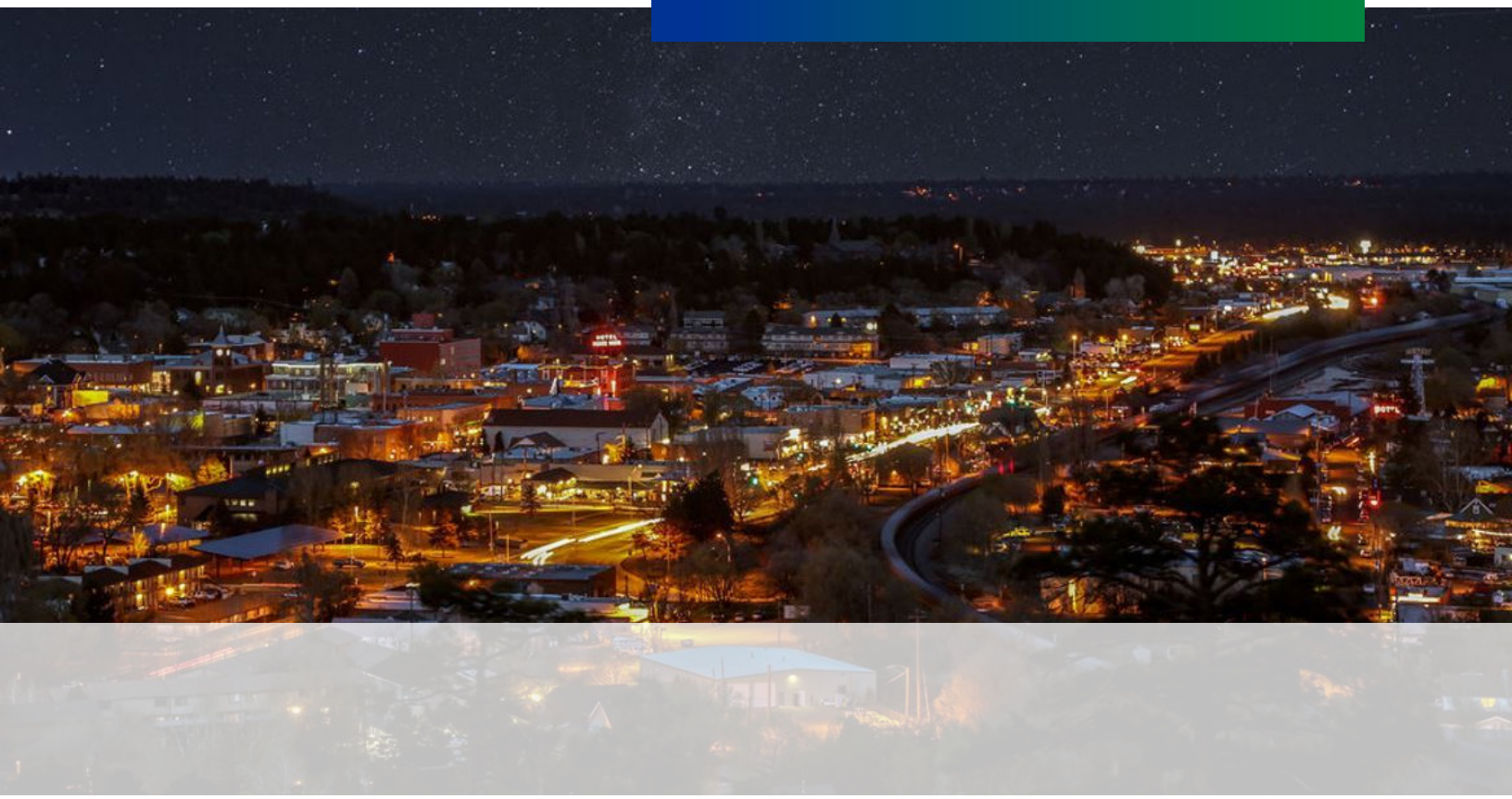


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WATER RECLAMATION PLANT - PRELIMINARY ANALYSIS

1. Executive Summary

On May 19, 2021, the City of Flagstaff (City) issued a solicitation for an ESCO Energy Service Contract (ESC) to develop and implement a full range of energy conservation (and operational improvement) measures (ECMs) at City-owned facilities in support of the 2021 Carbon Neutrality Plan. The City selected NORESCO to assist with the evaluation of ECMs, to be implemented under an ESC, that can provide benefits such as:

- generate energy and operational savings
- address capital improvement and maintenance needs
- reduce greenhouse gas (GHG) emissions

Highlights of Proposed Project

- **A comprehensive project with $9.3 million in Water Reclamation Plant infrastructure improvements**
- **$780k in first year savings and $19.5 million in guaranteed savings over a 20-year contract term**
- **Efficient and sustainable infrastructure improvements including process improvements and biosolids handling optimization**
- **Complements the ongoing capital improvements currently in design phase or planned for the future at Flagstaff's Water Reclamation Plants.**

A key component of this process is a Preliminary Analysis Report (PAR) of the Rio de Flag and Wildcat Hill Water Reclamation Plants (WRPs). This PA Report is the first stage in the ESC development process. NORESCO focused on ECMs that addressed operational improvements requested by WRP staff, the requirements of the ESC procurement, and the community priorities and objectives that inform Flagstaff's Priority Based Budgeting (PBB) criteria. The audit resulted in the selection of ECMs recommended for advancement to further design and analysis in the Investment Grade Audit (IGA) stage.

1.1 Wildcat Hill and Rio de Flag WRPs

There are two WRPs serving Flagstaff. Both facilities are managed by the City's Department of Water Services (Wastewater Division) and are key assets for the City's ongoing operations and service to the citizens of Flagstaff. Cumulatively, these plants are responsible for 21 percent of the City's greenhouse gas (GHG) emissions and 25 percent of electricity consumption. Plant statistics are summarized as follows:

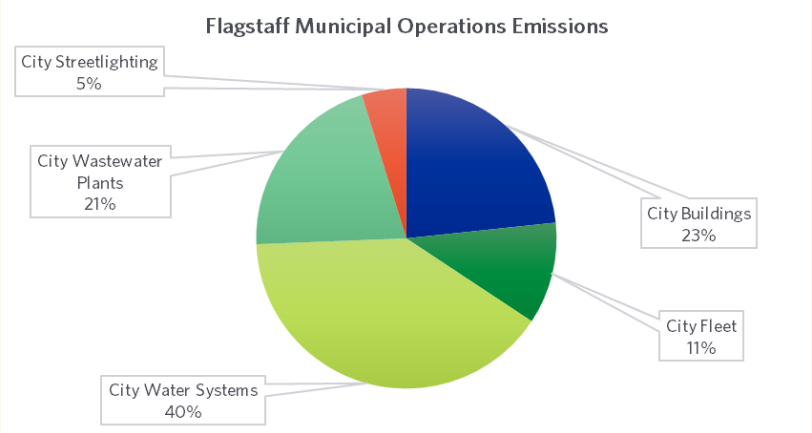


Figure 1.

Table 1. Flagstaff WRP Summary

Water Reclamation Facility	Annual Electricity Consumption (kWh)	Annual GHG Emissions (metric tons)	Average Daily Flow (MGD)	Process Description
Wildcat Hill	9,103,413	6,828	3.6	Activated sludge facility with anaerobic digestion
Rio de Flag	3,050,572	2,288	1.8	Activated sludge

Based on site surveys, discussion with City staff and resulting assessments, both facilities are operating below design capacity based on the following findings:

- A portion of the existing treatment processes are operating beyond expected life cycles contributing to inefficiencies.
- The reclaim water pumping systems are in need of optimization.
- Biosolids management is centralized at Wildcat Hill resulting in a cumbersome, problematic process that is labor intensive and not sustainable for the future.
- Placement of fats, oils, and grease (FOG) directly in the anaerobic digesters results in operational challenges and requires ongoing cleaning and maintenance.
- Wildcat Hill generates 66,000 cubic feet per day of methane gas which is half of the theoretical estimate.
- Existing operations are based on feedback loop controls, limiting the ability of the facilities to pace plant processes based on flows and organic loadings.

These conditions result in inefficiencies, equipment mismatches, and underutilization of treatment processes - increasing energy use and the resulting carbon footprint. In general, the facilities are aged and in need of capital investment to upgrade infrastructure, performance and operational efficiency.

1.2 ECM Summary

Based on each ECM's unique operational, financial, and sustainability characteristics, the proposed ECMs focus on the improvement of liquid and solids treatment equipment and systems that reduce energy consumption, operational costs, and/or replace equipment that is past if useful life. Based on analysis of these factors and feedback from the City, the proposed ECMs are:

- **Biosolids Dewatering** at Wildcat Hill will immediately provide a long-term solution to the digested biosolids management problems and enable expansion to include a dryer in a future phase of project implementation. This combination will reduce the quantity (weight) of biosolids and generate a Class A material suitable for land spreading.
- **Blower Replacement** at Wildcat Hill will address the aeration blowers which are oversized and inefficient. Replacement with three high speed turbo blowers with integrated variable frequency drives (VFDs) will enhance oxygen transfer while achieving reduction in electricity consumption and GHG emissions.
- **FOG** removal from digesters at Wildcat Hill will result in enhanced operations efficiency and performance, as well as produce brown grease. This, combined with additional tipping fees, will be a new revenue source. In addition, if the City releases the 20-mile restriction for the septage haulers to dispose at Wildcat Hill, additional revenue can be generated. Likewise, a similar arrangement at Rio de Flag may be considered, requiring capital contribution from the City.
- **Automation & Controls** will replace the current feedback to feed forward protocols at both WRPs. This will provide proactive optimized aeration and biological treatment strategy facilities - enhancing operational flexibility and flow pacing while reducing electricity consumption.
- **Reclaim Water Distribution Pumps** at both WRP's will be reprogrammed to incorporating smart pumping protocols that optimize pump operations. This improvement will provide increased plant capacity while conserving and managing water.

The approach to the development of each ECM is comprised of the following elements: (1) energy and operational baseline; (2) recommended equipment/technology upgrade; (3) GHG emissions reduction

potential; and (4) preliminary savings, revenue, and capital and maintenance costs. These recommended ECMs are described in detail further in this report. The results of the energy and operations savings analysis is summarized below.

Table 2. ECM Summary

#	Energy Conservation Measaure	Estimated Installed Cost	Annual Energy Savings	Annual O&M Savings	Annual O&M Costs	Annual GHG Reduction (metric tons CO2)
1	Biosolids Dewatering (Wildcat Hill)	$3,440,576		$546,616	$176,833	-
2	Blower Replacement (Wildcat Hill)	$2,268,575	$100,265	$11,448	$13,467	592
3	FOG Receiving (Wildcat Hill)	$2,120,818		$32,648	$21,013	-
4	Automation & Controls (Wildcat Hill & Rio de Flag)	$1,019,623	$41,971		$6,303	248
5	Reclaim Water Distribution Pumping (Wildcat Hill & Rio de Flag)	$497,575	$2,738	$45,399	$3,934	16
	Totals	**$9,347,167**	**$144,974**	**$636,111**	**$221,551**	**856**

1.3 Financial Evaluation

The financial evaluation consisted of a 20-year cash flow analysis of the combined ECMs as a single project. Annual savings are based on estimated reduction in electricity and operational costs as described later in this report. Annual costs include debt service, new maintenance, and measurement and verification (M&V) services. The debt service is based on a preliminary (+/- 20%) estimate of $9.3 million for total installed cost for the ECMs listed in *Table 2* above, less a $2 million capital contribution by the City to enhance the potential for GHG reduction resulting from this program.

While the project will generate energy and operational savings quantified herein, additional benefits to the City include capital cost avoidance as well as digester maintenance improvements related to the FOG Receiving project. The following table summarizes the financial evaluation as well as the net carbon reduction associated with the ECMs.

Table 3. Estimated Pro Forma

Year	Annual Electricity Savings	Annual O&M Savings	Guaranteed Total Savings	Estimated Finance Payments	Annual O&M Costs	Total Annual Costs	Net Annual Savings
1	$144,974	$636,111	**$781,085**	$479,849	$221,551	$701,400	$79,687
2	$148,308	$650,744	**$799,052**	$489,556	$228,197	$717,753	$81,299
3	$151,720	$665,711	**$817,431**	$499,446	$235,043	$734,489	$82,942
4	$155,209	$681,022	**$836,231**	$509,521	$242,095	$751,616	$84,615
5	$158,779	$696,686	**$855,465**	$519,788	$249,357	$769,145	$86,320
6	$162,431	$712,709	**$875,140**	$530,246	$256,838	$787,083	$88,057

Year	Annual Electricity Savings	Annual O&M Savings	Guaranteed Total Savings	Estimated Finance Payments	Annual O&M Costs	Total Annual Costs	Net Annual Savings
7	$166,167	$729,102	**$895,269**	$540,900	$264,543	$805,443	$89,826
8	$169,989	$745,871	**$915,860**	$551,752	$272,479	$824,232	$91,628
9	$173,898	$763,026	**$936,924**	$562,806	$280,654	$843,460	$93,464
10	$177,898	$780,576	**$958,474**	$574,067	$289,073	$863,140	$95,334
11	$181,990	$798,529	**$980,519**	$585,535	$297,745	$883,280	$97,239
12	$186,175	$816,895	**$1,003,070**	$597,215	$306,677	$903,892	$99,178
13	$190,457	$835,684	**$1,026,141**	$609,109	$315,878	$924,988	$101,153
14	$194,838	$854,904	**$1,049,742**	$621,223	$325,354	$946,577	$103,165
15	$199,319	$874,567	**$1,073,886**	$633,557	$335,115	$968,673	$105,213
16	$203,903	$894,682	**$1,098,585**	$646,118	$345,168	$991,286	$107,299
17	$208,593	$915,260	**$1,123,853**	$658,907	$355,523	$1,014,430	$109,423
18	$213,391	$936,311	**$1,149,702**	$671,927	$366,189	$1,038,117	$111,585
19	$218,299	$957,846	**$1,176,145**	$685,184	$377,174	$1,062,358	$113,787
20	$223,320	$979,876	**$1,203,196**	$698,678	$388,490	$1,087,168	$116,028
Totals	$3,629,658	$15,926,114	**$19,555,772**	$11,665,384	$5,953,143	$17,618,527	$1,937,245

Note 1: Savings and costs are escalated at 2.3 percent annually, an estimated projection of inflation as summarized in Section 2.2 of the IGA.

Note 2: For this PAR , it is assumed the project will be financed over a 20-year period at 4% interest. This rate represents commonly available financing rates as of July 30, 2022. Final project financing may consist of multiple funding sources and types, and term as directed by the City.

Note 3: The net annual savings is approximately 10% of the total savings. For future development of the project, this value will be determined by the City based on factors such as ECM selection, method and term of finance, and other factors to be determined during the next phase of the project.

1.4 Conclusions

The results of this PAR demonstrate the recommended ECMs summarized in *Table 2* are technically viable, will generate savings and GHG emissions reductions, will satisfy near-term capital improvements for the City, and will significantly improve the efficiency and performance of the WRPs. The specific benefits of these improvements are summarized as follows:

1-Wildcat Hill Biosolids Dewatering

- Resolves biosolids management issues
- O&M savings
- Minimal GHG increase
- Compatible with biosolids drying option using biogas for heating

2 -Wildcat Hill Blower Replacement

- Energy footprint reduction
- Plant flow pacing
- O&M savings
- Performance enhancement
- GHG reduction

3-Wildcat Hill FOG Receiving

- Removal from digesters
- New revenue generataion
- Enhanced digester operations
- O&M savings

4-Rio de Flag Automation & Controls

- Energy footprint reduction
- Plant flow pacing
- O&M savings
- Performance enhancement
- GHG reduction

5-Wildcat Hill Automation & Controls

- Energy footprint reduction
- Plant flow pacing
- O&M savings
- Performance enhancement
- GHG reduction

6-Wildcat Hill Reclaim Water

- Smart Pumping
- O&M savings
- GHG reduction

7-Rio de Flag Reclaim Water

- Smart Pumping
- O&M savings
- GHG reduction

Additionally, the proposed project will positively contribute to Flagstaff's Climate/Sustainability and Priority Based Budgeting policies. The projected cash flows are sufficient to meet the performance guarantee requirements of the Arizona Revised Statute (ARS) 34-105 and support a decision to proceed to the IGA phase of the project which will define the project scope, cost, savings, and guarantee parameters that form the basis of the ESC.

1.5 Additional ECMs Evaluated

WRP staff expressed interest in additional ECMs related to biosolids handling, beneficial use of biogas, and overall WRP capital improvements. Biosolids handling is of specific interest as the current practice is expensive and not sustainable in the long term. Since there are several sludge processing and biogas conversion projects under development, including the dewatering ECM proposed herein, NORESCO has identified a ECM, solar drying, as a long-term solution for disposition of end product biosolids that can be implemented independent of the on-going solids handling improvements. Based on discussion with WRP staff, this ECM will undergo further consideration and is therefore not included in the IGA portfolio identified herein. Brief descriptions of additional ECM's that address aging infrastructure but do not meet the self-funding criteria are provided in the PAR. If the City determines that one or more of these ECMs should be evaluated

further, NORESCO will incorporate into future efforts to integrate with, and compliment the recommended IGA ECMs noted in *Table 2.*

2. Introduction

2.1 Background

On May 19, 2021, the City of Flagstaff issued Solicitation 2021-63 for an ESCO Energy Service Contract. The scope of services identified included a full range of conservation measure improvements to be implemented for City of Flagstaff facilities and other non-building opportunities; and an implementable plan for building electrification to transition the City from fossil fuels. Services mandated must align with the City's 2018 Climate Action and Adaptation Plan, the 2020 Climate Emergency Declaration, and the City's commitment to carbon neutrality by 2030. The specific facilities and project scopes are to be implemented through a guaranteed comprehensive energy, fuel, water, and wastewater performance-based savings contract. At no cost to the city, identification and design of projects and installation of equipment to implement the ECMs must be structured so that the energy savings, maintenance, and operational savings, and avoided costs resulting from the installed energy conservation measures (ECMs) are sufficient to cover 75 percent to 100 percent of all project costs for the duration of the contract. The City reserved the right to consider additional ECMs that have significant GHG emission reduction potential.

2.2 Preliminary Analysis Report Focus

This PAR provides the results of the preliminary audit of two Water Reclamation Plants (WRP's) operated by the City of Flagstaff's (City's) Water Services Division. The Wildcat Hill and Rio de Flag WRP's are advanced wastewater treatment plants operating in compliance with Arizona Department of Environmental Quality (ADEQ) regulations and permit requirements. Both WRP's include tertiary treatment of effluent as reclaim water, which is distributed throughout the City via a dedicated pipeline network.

The PAR includes a technical and financial evaluation of potential ECM's performed under a Professional Services Contract between the City and NORESCO to conduct a Phase I: Preliminary Water and Wastewater Improvement for the Wildcat Hill WRP located at 2800 North El Paso Road, Flagstaff, AZ 86004 and Rio de Flag WRP located at 600 Babbitt Dr. Flagstaff, AZ 86001. This PAR will identify ECM's to be included in a subsequent Investment Grade Audit (IGA). The IGA will include ECMs that meet the savings and GHG reduction criteria and objectives outlined in Solicitation 2021-63.

The proposed ECMs included herein are based on NORESCO site investigations, input from the City of Flagstaff (Jim Huchel), and evaluation of documents, data and current projects underway at the WRPs. Biosolids disposal at the Wildcat Hill WRP was identified as a focus area which was separately evaluated in some detail by the NORESCO team and presented herein.

2.3 Preliminary Energy Audit Process

The water and wastewater audit kick-off meeting between the City and NORESCO was held on November 16, 2021. Subsequent interviews and meetings with City operations, maintenance and administrative personnel, on-site field surveys, data collection and technical and financial analysis was performed over a five-month period. Collaborative working sessions were held between the City of Flagstaff and NORESCO to confirm operating assumptions and review of ECMs that may result in energy and operating savings.

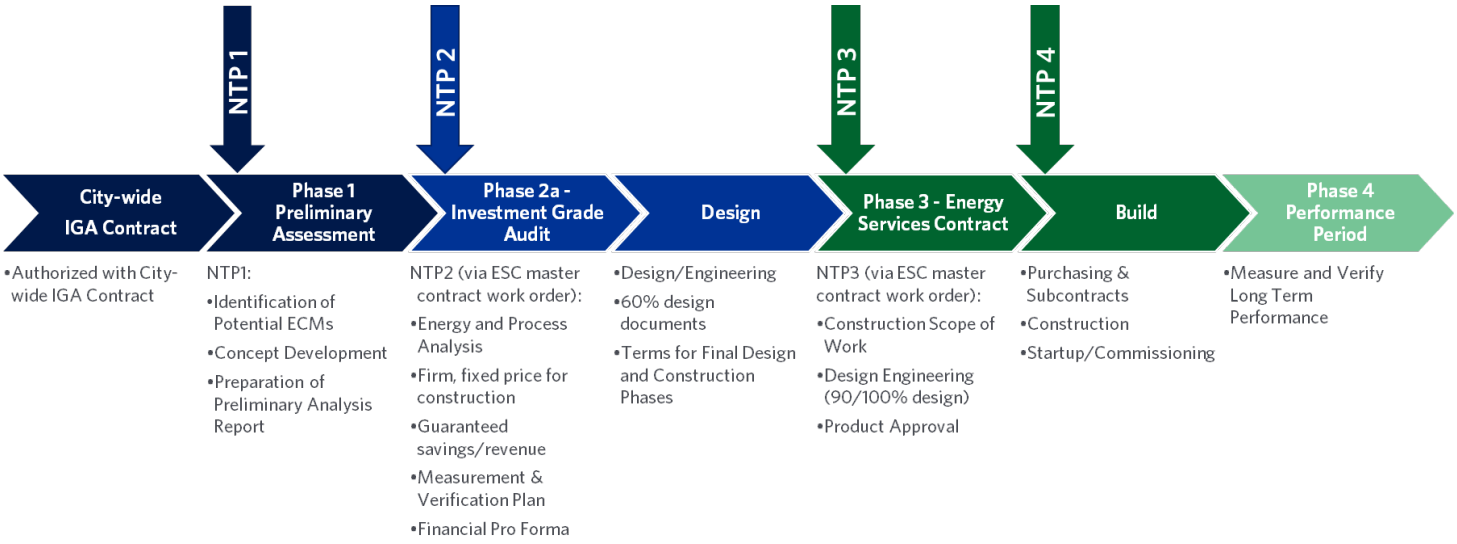
The City personnel were presented a high-level assessment of ECMs that may be considered. Following the City's acceptance of the ECMs additional investigations were undertaken inclusive of budgetary level (+/- 20%) cost and savings estimates presented in this report.

Based on the City's final selection, NORESCO will develop an IGA which will present a Firm Fixed Price for turnkey project implementation and commissioning along with a guarantee of performance for the duration of the term of contract, typically up to 20 years.

The specific steps or phases associated with this process are summarized below and in the following chart.

- **Phase 1** – Preliminary Analysis for information and data evaluation, site visits, development of ECMs that meet the goals and objectives of the City – **Completed and presented herein**
- **Phase 2** – IGA development, inclusive of 60% design and equipment selection leading to the generation of a Firm Fixed Price with guaranteed performance offering
- **Phase 3** – ECM design completion, construction, implementation, and commissioning
- **Phase 4** –M&V to validate equipment performance and associated savings

Figure 2. Project Development Process



3. Existing Conditions

3.1 Wildcat Hill WRP

This advanced wastewater treatment facility can treat six million gallons per day. The WRP accepts and treats sludge received from the Rio de Flag WRP, in addition to digesting its own sludge. Methane gas generated from the anaerobic digestion process was utilized by a cogeneration system (presently non-operational) which aided in reducing the overall power consumption of the facility. The plant could generate sufficient power to run critical treatment processes in case of power failure.

Wastewater goes through preliminary treatment at the headworks complex, which includes a bar screen where large debris is removed, followed by a grit removal process where inorganic solids are removed. Primary treatment occurs in the primary clarifier for settlement of the heavier solids to the bottom to become sludge and be removed separately. Lighter material is skimmed and placed in the anaerobic digester.

The secondary treatment process includes an integrated fixed film activated sludge (IFAS) process, where remaining ammonia nitrogen are oxidized resulting in sludge which settles to the bottom and nitrogen gas which goes into the atmosphere. The settleable solids are either recycled back to the IFAS or pumped to the anaerobic digester. The benefits of IFAS are improved and faster restoration of nitrification; process stability, Sludge Volume Index (SVI) improvements; and significantly reduced sludge production. The negative aspects are high power usage, high capital construction costs, need for specialized operating knowledge, and frequent addition or replacement of media.

Figure 3. IFAS Process

IFAS, a variation of the MBBR process, gets its name from the integration of biofilm carrier technology within conventional activated sludge. IFAS technology is the first process specifically designed for ideal operation in municipal wastewater treatment/activated sludge processes. Typically, IFAS is a retrofit solution for conventional activated sludge systems that are at or beyond capacity, providing minimal plant downtime, zero facility construction and optimization of existing equipment.

The hybrid process enables activated sludge systems to achieve dramatic gains in volume productivity without increasing mixed liquor suspended solids (MLSS). IFAS processes are designed for complete compatibility with fine-bubble aeration systems, providing demonstrated long-term operation cost savings.

Tertiary treatment occurs through a membrane or sand filtration system which removes the remaining solids. Following this step, the treated wastewater is disinfected by chlorine gas. At this point the effluent is fully treated and is distributed into the City's reclaimed water system or discharged to Rio de Flag.



Figure 4. Wildcat Hill Water Reclamation Plant

Biosolids from the primary and secondary clarifiers are thickened prior to placement in the two anaerobic digesters. The biogas generated is collected and conditioned to be used in the cogeneration system currently non-operational. The digested biosolids are dewatered passively and placed in the dedicated onsite biosolids disposal area.

Figure 5. Wildcat Hill WRP and Process Flow

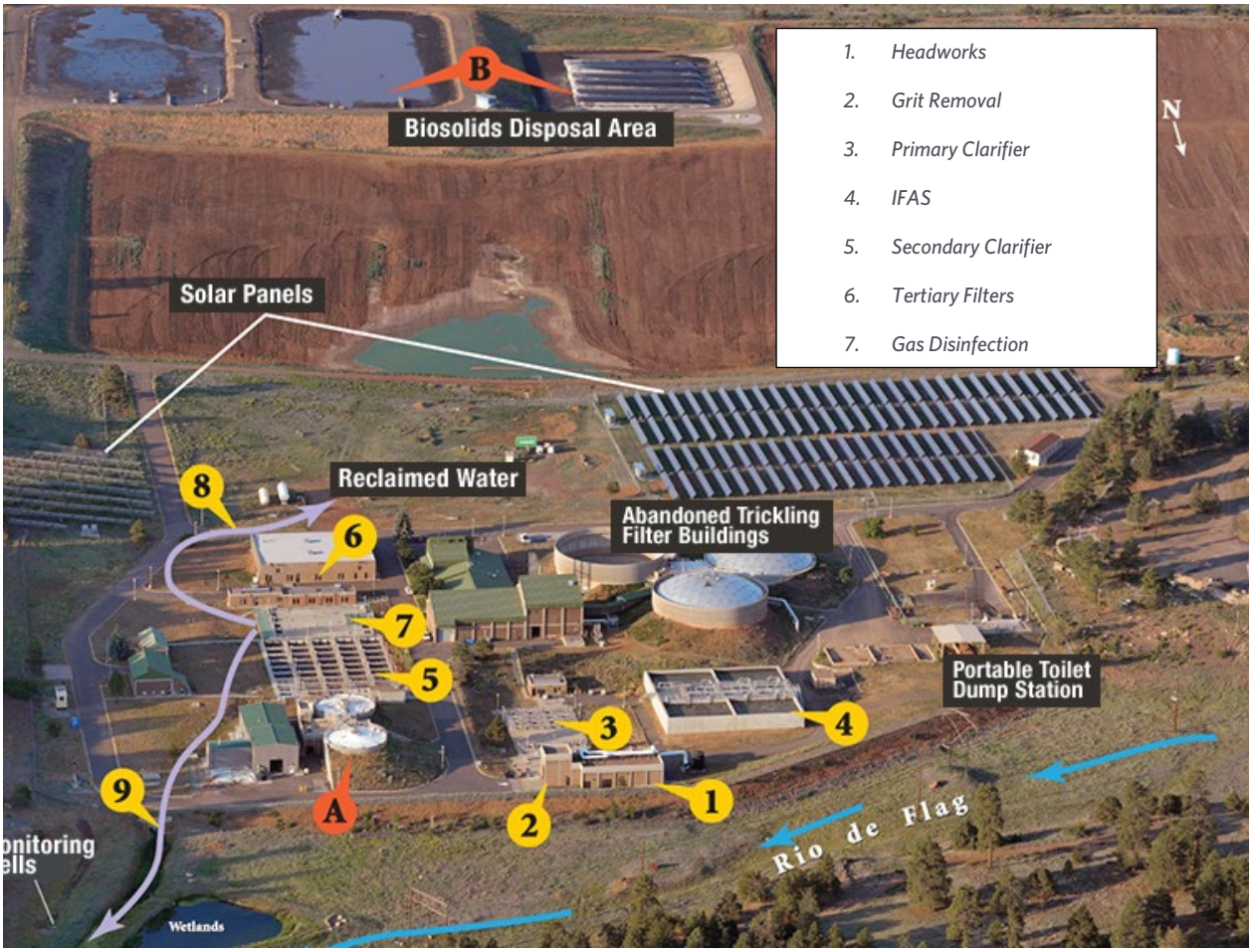


Table 4. Wildcat Hill WRP Plant Operating Information

Date	11/16/2021
Address	2800 N. El Paso
Permit Number	AZ0020427
Permit Expiration Date	05/31/2025
Treatment Process Type	IFAS
CMMS	Valves only
Energy Spend	$483,877
Demand Based Charges	$118,387
Automation & Controls Type	Limited
Permit Limits mg/L	BOD 15; TSS 4; NH3 5; P 5.4
Nutrient Removal	Yes
Average Daily Flow - mgd	3.6
Design Flow - mgd	6.0
Peak Flow - mgd	15
BOD – mg/L Influent	757 avg; 1320 max
TSS – mg/L Influent	651 avg; 2462 max

Ammonia - mg/L	43 avg; 75 max
Alkalinity	332 avg; 482 max
I&I	Mostly inflow less infiltration
Liquids	
Influent Pump Station	No gravity feed
Headworks & Screen	Yes
Grit Removal	Aerated system
Primary Clarifier	Yes – square units
BOD Removal %	69
Secondary/Final Clarifier	Yes – square units
Aeration – Type	Diffused aeration
Blower – MS – PD - HST	MS Centrifugal
DO – ORP - ABAC	Do and ORP
Aeration Basin MLSS- mg/L	2503 avg; 3572 max
Basin Sidewall Depth - ft	18
Diffusers – FB - CB	CB
Air Control System	Manual control valves
Disinfection	Chlorine gas
Effluent Pumps	Yes
Mixers	Yes
Solids	
Sludge Production dt/yr.	1768
Mixed Liquor VSS%	71
Polymer Type/Usage /yr.	NA
Solids Conditioning Tank	Huber
Solids Thickening	Huber Disc
Solids % Feed to Digester	4 to 5%
RAS Pumps	Yes
WAS Pumps	Yes
Dewatering - Type	Informal – Geotubes and lined ponds
Filtrate/Centrate	Headworks
Disposal – LF/Land Spreading	Dedicated land disposal
Digestion	
Digester Type	Anaerobic mesophilic digesters
Sludge Retention Time	15 days
VSS Destruction %	60
Gas Generation SCFM	67,667 cft/day avg
Biosolids	
Classification – A/B?	B
Disposal	Onsite
Automation & Controls	
Type – PLC/DCS	PLC
SCADA	Citect
Probes	Yes

Table 5. Wildcat Hill WRP Electricity Use Based on Motor Size and Run Times

Pump Designation	Motor	# Operating	Motor - HP	VFD - HP	Daily Run Hours/Day	Annual Hours	UpTime %	Operating Hours	Efficiency %	KW-HP Factor	KWH Annual	Energy Cost Estimate $0.11/kWh
Bar Screen	2	2	3	Yes	24	8,760	100%	8,760	90%	0.746	43,566	$ 4,357
Old Bar Screen	1	1	5		0		100%	-	90%	0.746	-	-
Primary Scum Pump P-2211 & P-2212	2	2	2		4	1,460	100%	1,460	90%	0.746	4,841	$ 484
Primary Scum Grinders (JWC)	2	2	3		4	1,460	100%	1,460	90%	0.746	7,261	$ 726
Grit Pump P-2201 & P-2202	2	2	20		24	8,760	100%	8,760	90%	0.746	290,443	$ 29,044
Grit Blower	2	1	50		24	8,760	100%	8,760	90%	0.746	363,053	$ 36,305
Primary Eff Pumping	4	1.5	50	Yes	24	8,760	100%	8,760	90%	0.746	544,580	$ 54,458
IFAS Aeration Blowers	3	1	450		24	8,760	100%	8,760	90%	0.746	3,267,480	$ 326,748
Secondary Effluent pumps	4	1.5	50	Yes	24	8,760	100%	8,760	90%	0.746	544,580	$ 54,458
Sand Filter Drive Motor	3	3	1/4		24	8,760	100%	8,760	90%	0.746	5,446	$ 545
Sand Filter Backwash Pumps	3	3	3.6		24	8,760	100%	8,760	90%	0.746	78,420	$ 7,842
Disk Filter Drive Motor	2	1.5	1.5	Yes	24	8,760	100%	8,760	90%	0.746	16,337	$ 1,634
Disk Filter Backwash pumps	2	1.5	15		24	8,760	100%	8,760	90%	0.746	163,374	$ 16,337
RAS pumps, P-5101 thru P-5110	10	10	8	Yes	24	8,760	100%	8,760	90%	0.746	580,885	$ 58,089
WAS Pumps P-5310 & P-5320	2	1	5	Yes	24	8,760	100%	8,760	90%	0.746	36,305	$ 3,631

Pump Designation	Motor	# Operating	Motor - HP	VFD - HP	Daily Run Hours/Day	Annual Hours	UpTime %	Operating Hours	Efficiency %	KW-HP Factor	KWH Annual	Energy Cost Estimate $0.11/kWh
TWAS Pumps P-5550, P-5560 & P-5580	3	1.5	10	Yes	24	8,760	100%	8,760	90%	0.746	108,916	$ 10,892
Primary Sludge Pumps	4	1.5	25	Yes	24	8,760	100%	8,760	90%	0.746	272,290	$ 27,229
Grease Transfer Pump P-2010 & P-2020	2	1	10	Yes		-	100%	-	90%	0.746	-	$ -
ML Recycle, P-4750 & P-4760	2	1	30	Yes	24	8,760	100%	8,760	90%	0.746	217,832	$ 21,783
Anoxic Mixers	3	3	5		24	8,760	100%	8,760	90%	0.746	108,916	$ 10,892
Grease Tank Blower BL-2001 & BL-2005	2	1	20		24	8,760	100%	8,760	90%	0.746	145,221	$ 14,522
Emergency Drain	1	0.2	40			8,760	100%	8,760	90%	0.746	58,089	$ 5,809
Digested Gas Blower P-8801 & P-8802	2	1	20		24	8,760	100%	8,760	90%	0.746	145,221	$ 14,522
Digester Sludge Recirculation pump P-8401 & P8402	2	2	10		24	8,760	100%	8,760	90%	0.746	145,221	$ 14,522
Digested Sludge Pump P-8481 & P-8482	2	2	30	Yes	24	8,760	100%	8,760	90%	0.746	435,664	$ 43,566
# 3 water HP pumps	2	1	20		24	8,760	100%	8,760	90%	0.746	145,221	$ 14,522
# 3 Water LP pump	1	0.5	20		24	8,760	100%	8,760	90%	0.746	72,611	$ 7,261
# 3 Water LP pump	1	0.025	15		24	8,760	100%	8,760	90%	0.746	2,723	$ 272
Reclaim P-6214 P-6215	2	0.5	75	Yes	24	8,760	100%	8,760	90%	0.746	272,290	$ 27,229
Reclaim P-6213	1	0.5	75		24	8,760	100%	8,760	90%	0.746	272,290	$ 27,229

Pump Designation	Motor	# Operating	Motor - HP	VFD - HP	Daily Run Hours/Day	Annual Hours	UpTime %	Operating Hours	Efficiency %	KW-HP Factor	KWH Annual	Energy Cost Estimate $0.11/kWh
Reclaim Tank Fill Pump P-6216	1	0.25	10	Yes	24	8,760	100%	8,760	90%	0.746	18,153	$ 1,815
Reclaim, Booster	3	0.3	125		24	8,760	100%	8,760	90%	0.746	272,290	$ 27,229
OCF-1	1	1	25		24	8,760	100%	8,760	90%	0.746	181,527	$ 18,153
OCF-2	1	1	7.5		24	8,760	100%	8,760	90%	0.746	54,458	$ 5,446
Disk Thickener Drive Motor, DT-1 & DT-2	2	1	1	Yes	24	8,760	100%	8,760	90%	0.746	7,261	$ 726
Disk Thickener Floc Mixer DT-1 & DT-2	2	1	1/4	Yes	24	8,760	100%	8,760	90%	0.746	1,815	$ 182
Plant Air Compressor, CP-4301 & CP-4302	2	1.25	20		24	8,760	100%	8,760	90%	0.746	181,527	$ 18,153
Compressed air Dryers	2	1	5		24	8,760	100%	8,760	90%	0.746	36,305	$ 3,631
Total											9,102,413	$ 910,241

Electricity Baseline

NORESCO's compilation of annual electricity use is based on connected horsepower and run times and the blended electric rate. The electricity use breakdown by prime WRP process operations is summarized in Figure 6. Electricity savings projections are derived from the baseline consumption and costs in the table above.

Wildcat Hill WRP electricity usage is predominantly in seven key process areas: 1) IFAS aeration; 2) Primary effluent pumping; 3) RAS pumping; 4) Secondary effluent pumping; 5) Digested sludge pumping; 6) Grit aeration blower; and 7) Reclaim water pumping.

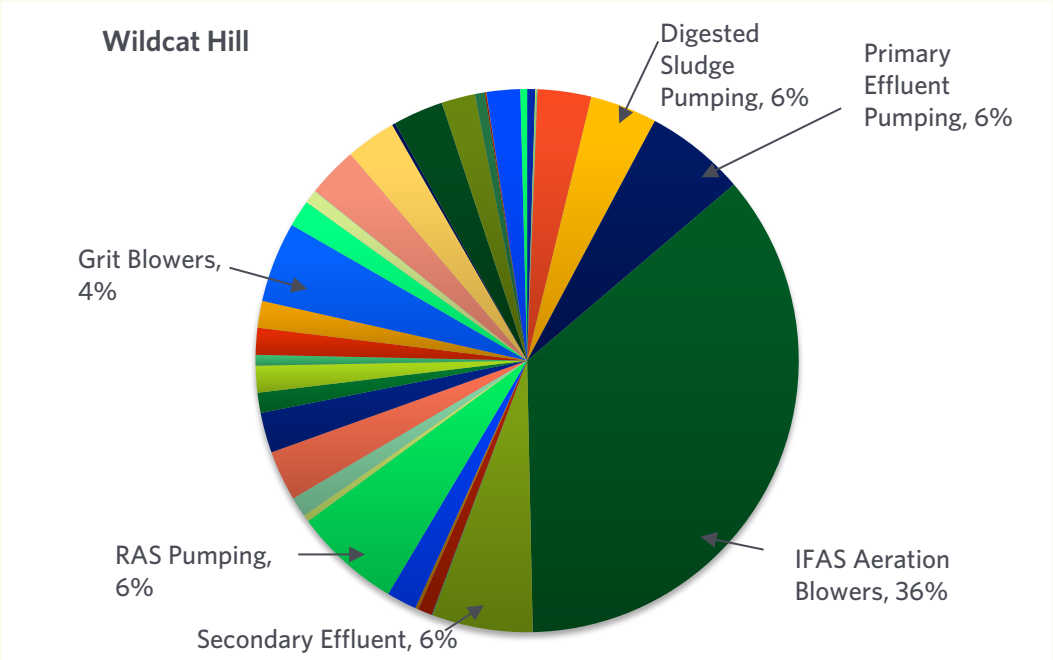


Figure 6. Electricity Disaggregation

Operational Budget Baseline

The City baseline wastewater operations budget was $4,338,100 for FY21-22 per the Wastewater Fund Five Year Plan dated 2021-2025. Our assumption on allocation of these funds is based on the proportion of plant operating capacity of 1.8 MGD and 3.6 MGD for Rio de Flag and Wildcat respectively. The FY21-22 for Wildcat Hill is assumed to be 67% of the total budget, or $2,892,067.

Dewatering Baseline

The current baseline of operational costs associated with summer and winter biosolids management were provided by facility personnel and are as follows:

Table 6. Wildcat Hill WRP Biosolids Management Costs

Labor - Flagstaff	$84,880
Labor - Contract	$123,648

Power	$48,000
Operations	$22,050
Maintenance	$5,000
Repairs & Replacements	$5,000
GeoTubes	$153,600
Totes	$78,000
Fuel	$2,135
Total	**$522,313**

Fats, Oils, and Grease Baseline

The annual baseline of FOG that is processed at the Wildcat WRP is 734,040 gallons and was provided by facility personnel.

3.2 Rio de Flag WRP

Raw sewage enters the preliminary treatment process through the influent channel from the Rio de Flag Interceptor sewer and passes through the bar screens where a ½" grate removes the larger solids. These solids are dewatered and transported to the landfill. An enclosed odor control system utilizing activated charcoal removes odors at this point prior to venting the clean air outside.

Primary treatment occurs in clarifiers, where particles settle out as primary sludge and are sent to the Wildcat Hill Wastewater Treatment Plant via the collection system for digestion (waste primary sludge). Scum and odors are also removed at the primary clarification point.

The Rio de Flag WRP is an advanced wastewater treatment facility, capable of treating 4 million gallons per day. Operating a two train - four-phase Bardenpho process provides secondary treatment inclusive of aeration/denitrification where the biological treatment takes place. The secondary clarifiers remove the byproducts created by this biological process, recycles microorganisms back into the process (return activated sludge) and wastes the unneeded portion into the sewer system (waste activated sludge).

Tertiary treatment is achieved by effluent passing through the final sand and anthracite filters and/or disc filters prior to the final ultraviolet disinfection. This treated water is pumped to the reclaimed water reservoir on Cedar Hill (Buffalo Park Tank) to be gravity fed into the reclaimed water distribution system and/or into the Rio de Flag reclaim system.

The advantages of the process are excellent nitrogen removal; good solids settleability; alkalinity recovery; reduced oxygen requirement, and simple operation controls (SCADA centric). Whereas the drawbacks are large reactor volume requirements, and inflexible for phosphorus removal.

Figure 7. Bardenpho Process

Bardenpho processes are used in municipal wastewater treatment and are either four stage or five stage. The four-stage Bardenpho process is used by the City and is all about nitrogen removal. In the four-stage process, the stages (or selectors) are: first anoxic basin, aerobic basin, second anoxic then a small reaeration (aerobic) phase.

The first anoxic is the main denitrification zone where recycled MLSS from the aeration tank and RAS from the clarifiers is returned and mixed with the incoming influent waste stream. Denitrification takes place first, then nitrification occurs in the aerobic zone. This is very similar to the MLE process at this point.

The second anoxic zone is used mainly as a polishing denitrification stage where any nitrate left from the first two zones is allowed to denitrify. Carbon sources such as methanol, acetic acid or glycerin can be added to enhance denitrification. The last, or fourth zone, is the reaeration tank where aeration is done to help release any nitrogen gas bound in the MLSS, which aids in settling in the clarifiers, and adds DO to the MLSS.



Figure 8. Rio de Flag Wastewater Reclamation Plant

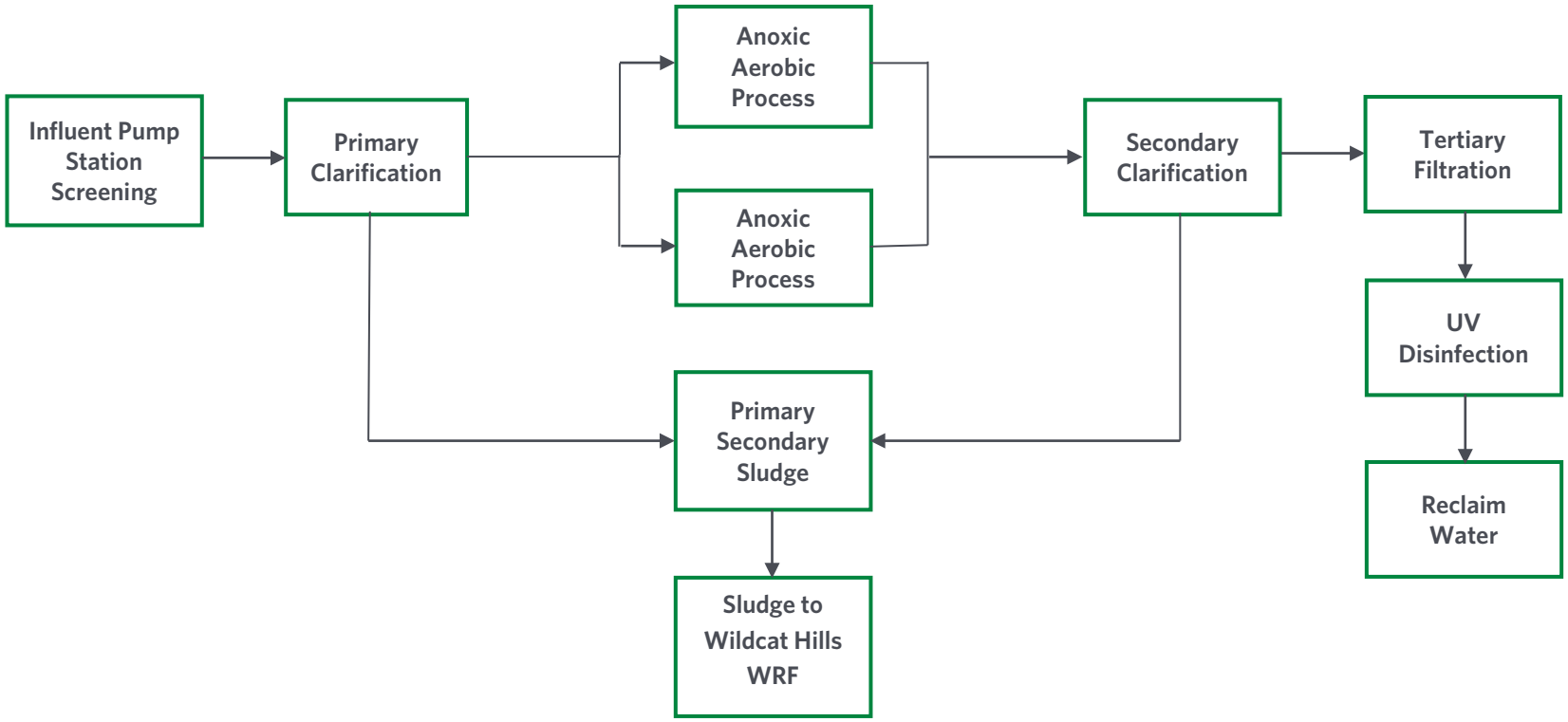


Figure 9. Rio de Flag WRP Two Stage Bardenpho Treatment Process

Table 7. Rio de Flag WRP Operating Information

Date	11/16/21
Address	600 S. Babbitt Road
Permit Number	P-102421
Permit Expiration Date	01/24/2022 – Aquifer Protection Permit
Discharge Violations - EPA	None
Treatment Process Type	2 Phase Barden Pho – anoxic/aerobic
CMMS	Being implemented
Energy Spend	$283,623 (2020)
Demand Based Charges	$42,825
Automation & Controls Type	PLC
Permit Limits	Nitrogen 10 mg/L
Nutrient Removal	Required
Average Daily Flow - mgd	1.8
Design Flow - mgd	4.0
Peak Flow - mgd	2.0
BOD – mg/L Influent	396 avg; 750 max
TSS – mg/L Influent	301 avg; 522 max
Ammonia - mg/L	37 avg; 64 max
Alkalinity	327 ang; 128 min; 950 max
I&I	Some
Liquids	
Influent Pump Station	Yes
Headworks & Screen	2 screens
Grit Removal	No
Primary Clarifier	2 circular – recently rehabilitated
PC - BOD Removal %	32
Secondary/Final Clarifier	2 circulars
Tertiary Filtration	New
RAS Recirculation Rate	1.0
Aeration – Type	Diffused aeration
Blower – MS – PD - HST	PD
DO – ORP - ABAC	Do and ORP
Aeration Basin MLSS- mg/L	2200
Diffusers – FB - CB	Fine bubble
Air Control System	Manual – DO/ORP driven
Disinfection	UV
Effluent Pumps	Reclaim Water
Mixers	
Biosolids – No Treatment	
Sludge	Gravity flow to Wildcat Hill WRP for processing
Automation & Controls	
Type – PLC/DCS	Modecon and AB
SCADA	Citect
Probes	Yes

A summary of electricity use based on motor size and run times is summarized below.

Table 8. Rio de Flag WRP Electricity Use Based on Motor Size and Run Times

Pump Designation	Motor	# Operating	Motor - HP	VFD - HP	Daily Run Hours/Day	Annual Hours	Up Time %	Operating Hours	Efficiency %	KW-HP Factor	KWH Annual	Energy Cost Estimate $ 0.1100
Bar Screen - Mechanical	1	1	3	X	24	8,760	100%	8,760	90%	0.746	21,783	$ 2,396
Influent Pump Station	5	1	100	x	24	8,760	100%	8,760	90%	0.746	726,107	$ 79,872
Primary Clarifiers	2	2	1	X	24	8,760	100%	8,760	90%	0.746	14,522	$ 1,597
Aeration Basin Blowers	3	1	200	23	24	8,760	100%	8,760	90%	0.746	163,972	$ 18,037
RAS/WAS Pumping	5	1	25	x	24	8,760	100%	8,760	90%	0.746	181,527	$ 19,968
Sludge Pumps	2	1	10	x	6	2,190	100%	2,190	90%	0.746	18,153	$ 1,997
Final Clarifier Skimmer	2	2	1	x	24	8,760	100%	8,760	90%	0.746	14,522	$ 1,597
Sand Filtration	1	1	1		5	1,825	100%	1,825	90%	0.746	1,513	$ 166
UV System	1	1	76 lamps	140 Watts	24	8,760	100%	8,760	90%	0.746	93,206	$ 10,253
Reclaim Pumps	1	1	250	X	24	8,760	100%	8,760	90%	0.746	1,815,267	$199,679
Total											3,050,572	$333,167

Electricity Baseline

NORESCO's compilation of annual electricity use is based on connected horsepower and run times and the blended electric rate. The electricity use breakdown by prime WRP process operations is summarized in Figure 10. Electricity savings projections are derived from the baseline consumption and costs in the table above.

Rio de Flag WRP electricity usage is predominantly in five key process areas: 1) Reclaim water pumping; 2) Influent pumping; 3) Aeration blowers; 4) waste activated sludge (RAS/WAS) pumping; and 5) UV disinfection.

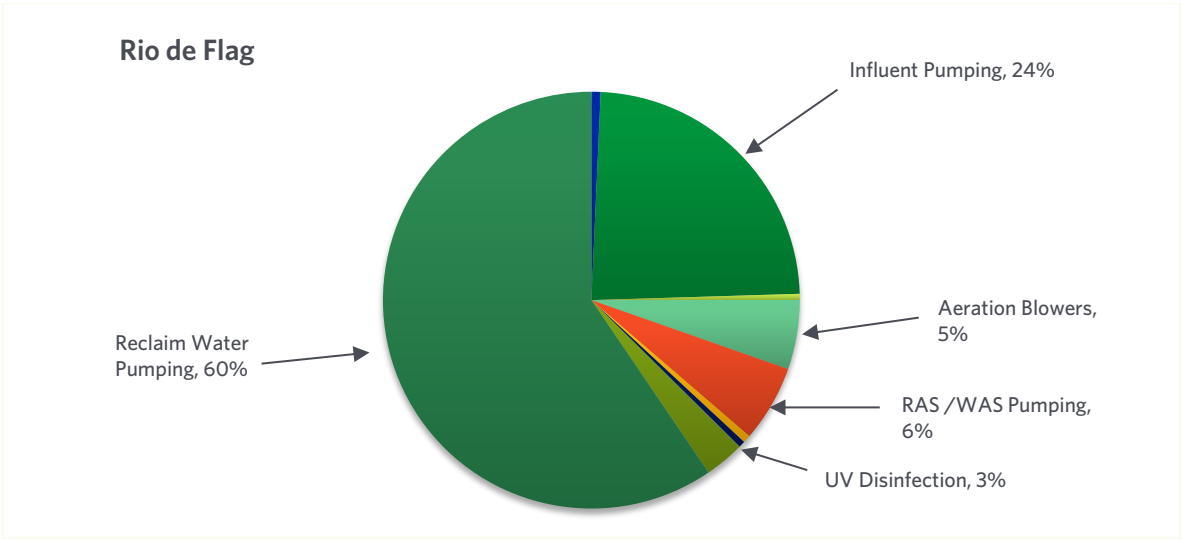


Figure 10. Electricity Breakdown by WRP Process

Operational Budget Baseline

The City baseline wastewater operations budget was $4,338,100 for FY21-22 per the Wastewater Fund Five Year Plan dated 2021-2025. Our assumption on allocation of these funds is based on the proportion of plant operating capacity of 1.8 MGD and 3.6 MGD for Rio de Flag and Wildcat respectively. The FY21-22 for Rio de Flag WRP is assumed to be 33% of the total budget, or $1,446,033.

4. Present State

The two WRPs are permitted by the ADEQ. The Rio de Flag operates under Aquifer Protection permit, and the Wildcat Hill WRP operates under a ADEQ – Arizona Pollutant Discharge Elimination System (AZPDES) permit. These permits are issued for a five-year term and renewed and amended to include additional treatment standards to comply with new regulations. Both WRPs are designed for peak flow management and treatment, which includes adequate clarifier capacities, aeration basin performance, diffused aeration systems, disinfection systems, electrical switchgear, pumps, motors, and blowers.

4.1 Wildcat Hill WRP Observations

The Wildcat Hill WRP was placed in service in 1973, operating under AZPDES Permit Number AZ0020427. The WRP processes were expanded or upgraded in 1983 and 2009. The WRP is designed for 6 mgd, average daily flow is 3.6 mgd, with peak flow of 15 mgd. Currently the plant is operating at approximately 60 percent of design capacity. Operations below the rated hydraulic or organic loading capacity present operational challenges, necessitating constant attention and management to achieve the desired treated effluent parameters. Based on the information provided by the City, the influent BOD is 757 mg/L average, and TSS is 651 mg/L average. The IFAS process is operating and performing as designed. Disinfection of effluent is accomplished by chlorine gas which has the potential for health impact to the operations personnel and environmental impact in the event of a system leak or failure.

The plant utilizes a feedback control loop system monitoring DO with ORP for biological treatment optimization, while maintaining an average MLSS of 2,500 mg/L average, which is at the low end of the wastewater industry operating standard. The biosolids from Rio de Flag are placed in the headworks. The sludge generated in the primary and secondary clarifiers is routed to a disc thickener, prior to being placed in one of two anaerobic digesters.

Additional observations:

- The existing (3 – 450 hp) multistage centrifugal blowers are oversized for the air required to support 3.6 mgd flow which is 60 percent of design capacity. These types of blowers cannot be turned down. The air is throttled by control valves, which cause excessive back pressure and wear and tear on the blower motors, always operating at full horsepower with high energy consumption.
- The aeration systems inclusive of piping network, air management valves and diffusers are aged and compromised requiring strategic replacement in some locations that are compromised.
- The WRP receives septage and FOG wastes which is placed directly in the digesters causing operational problems and diminished performance.
- Two anaerobic digesters utilizing mesophilic process are operational, producing 66,000 cubic feet of methane gas per day, which was conditioned and routed to support the cogeneration system. The existing cogeneration system is inoperative, inclusive of the gas conditioning system. The City is engaged in upgrading the gas conditioning system, adding two new engines to expand the cogeneration capabilities. Presently, methane gas is being flared. The current gas production is at approximately 50 percent of the theoretical gas production based on the biosolids loading in the plant influent.
- Plantwide the electrical switchgear, motors and pumps are aged, which will require replacement with high efficiency units and upgraded operational characteristics.
- The reclaim water system is operating as designed.
- Three tanks associated with the decommissioned trickling filter process are abandoned in place.

- Auxiliary backup power resiliency was noted at the facility, indicating critical processes can remain operational in the event of an extended power disruption.

A forward-looking Asset Management Plan identifying capital investment based on equipment life cycle thresholds does not exist. The City provides annual funds to support maintenance or emergency funds for immediate corrective action in case of equipment failure, which can result in disruption of treatment processes. The maintenance program appears to be underfunded, resulting in reactionary point of failure replacement of equipment operating past expected life cycle thresholds.

Wildcat Biosolids Generation

The information presented below summarizes the biosolids process. Information was provided by the City operations team, and the numbers are average annual values.

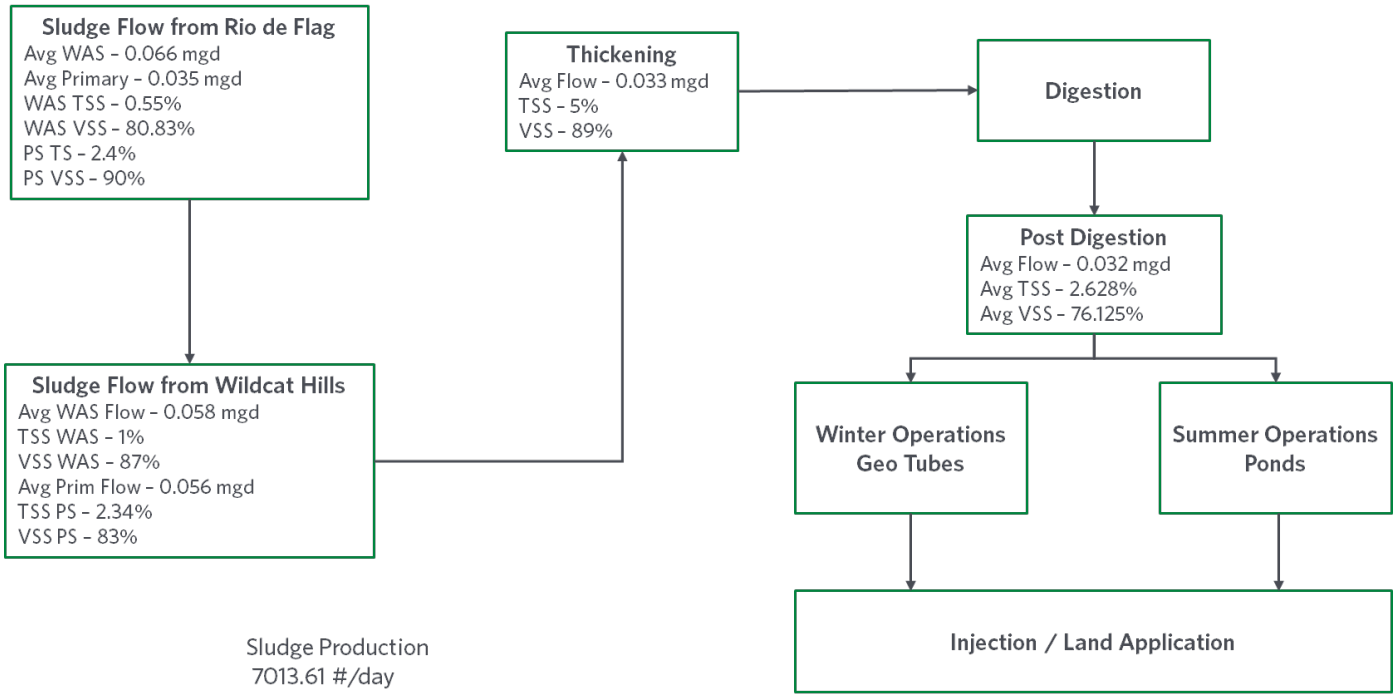


Figure 11. Wildcat Hill Biosolids Process Diagram

Wildcat Hill Biosolids Management

NORESCO focused on developing a thorough understanding of the biosolids operations protocols for the summer and winter seasons. The biosolids are handled in two different ways. During the summer, biosolids are pumped to holding ponds and subsequently disposed through a series of pipes in the onsite biosolids disposal area where it is injected into the ground. In the winter, the biosolids are pumped to large porous bags referred to as geotubes and allowed to sit until the water leaches out of the bags leaving concentrated solids for disposal in onsite dedicated area. The return liquor is pumped back to the headworks.

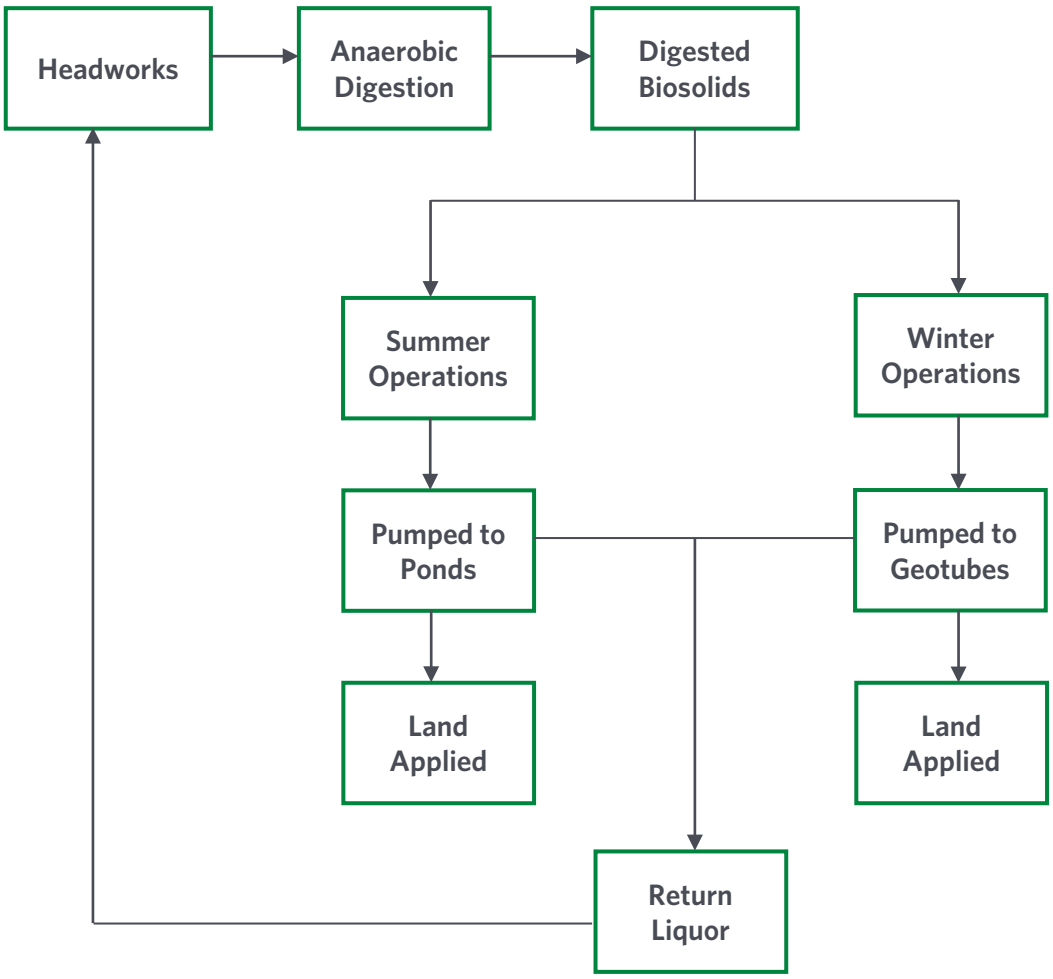


Figure 12. Wildcat Hill Process Flow Diagram

The existing biosolids management process is labor intensive and not sustainable for the long term. Land application is permissible today; however, it may not be available in the future with more stringent environmental regulations.

4.2 Rio de Flag WRP Observations

The Rio de Flag WRP was placed in service in 1993, operating under Aquifer Protection Permit Number P-102421. The WRP is designed for 4 million gallons per day (mgd), average daily flow is 1.8 mgd, with peak flow of 2 mgd. Rio de Flag is currently operating at approximately 45 percent of design capacity. Operations below the rated hydraulic or organic loading capacity present operational challenges, necessitating constant attention and management to achieve the desired treated effluent parameters. Based on the information provided by the City, the influent biological oxygen demand (BOD) is 396 milligrams per liter (mg/L) average, and total suspended solids (TSS) is 301 mg/L average. The two train - four phase Bardenpho treatment

process is operating as designed. Effluent disinfection is accomplished by ultraviolet (UV) radiation which is not currently operating in the automatic mode and must be manually adjusted.

The plant utilizes a feedback control loop system monitoring dissolved oxygen (DO) with oxygen reduction potential probes (ORP) for biological treatment optimization, while maintaining an average mixed liquor suspended solids (MLSS) of 2,200 mg/L, which is at the low end of the wastewater industry operating standard. The sludge generated in the primary and secondary clarifiers is conveyed through a pipe via gravity to the Wildcat Hill WRP for digestion and ultimate disposal.

Additional observations:

- The influent pumps are aged operating beyond their expected life cycle. The current plan is to replace all pumps with new submersible pumps in a dry pit installation.
- The absence of grit removal causes significant downstream issues impacting performance efficiency, reduction of treatment capacity, and excessive maintenance needs due to sand and grit which are abrasive to pumps, piping, valves, and diffusers.
- The existing (3 – 200 hp) positive displacement blowers are oversized for the air required to support 1.8 mgd flow which is 45 percent of design capacity. The VFD settings have been turned down to between 52 percent and 29 Hertz, effectively reducing the horsepower to 23. Despite this low setting, excess air needs bleeding.
- Due to the age of the WRP, aeration systems inclusive of piping network, air management valves and disc diffusers in some locations are compromised resulting in low oxygen transfer efficiency.
- Plantwide the electrical switchgear, motors and pumps are aged, which will require replacement with high efficiency units and upgraded operational characteristics.
- The reclaim water system is operating as designed. Backup power resiliency was not noted at the facility, indicating vulnerability in case of an extended power disruption.

A forward-looking Asset Management Plan identifying capital investment based on equipment life cycle thresholds does not exist. The City provides annual funds to support maintenance or emergency funds for immediate corrective action in case of equipment failure, which can result in disruption of treatment processes. The maintenance program appears to be underfunded, resulting in reactionary point of failure replacement of equipment operating past expected life cycle thresholds.

5. Proposed ECMs Overview

Based on the information presented to this point, a comprehensive set of ECMs was developed and reviewed with City WRP staff. As a result of extensive review and multiple meetings, a set of Proposed ECMs are recommended for further evaluation and design.

The remainder of this section provides descriptions of these ECMs and associated benefits.

Table 9. Summary of Proposed ECMs

Plant Process	Plant	Observation	Solution	Outcome	Benefit
Biosolids Dewatering	**Wildcat Hill**	Complicated winter summer disposal operations	Screw press and solar drying	Class A biosolids generation	Long term sustainable solution
Blower Replacement	**Wildcat Hill**	Mismatched blower to air demand	Right sized HST lead blower	Enhanced oxygen transfer, energy savings	Energy savings - 5% annually
FOG Receiving	**Wildcat Hill**	Directly introduce to the digesters causing operational problems	Greasezilla Solution	Divert oils and grease from digesters	Revenue generation and additional tipping receipts
Automation & Controls	**Rio de Flag**	Feedback controls resulting in inefficiency	Feedforward controls - ABAC	Proactive optimized aeration and biological treatment strategy	Energy savings - 15% annually
	Wildcat Hill	Feedback controls resulting in inefficiency	Feedforward controls - ABAC	Proactive optimized aeration and biological treatment strategy	Energy savings - 15% annually
Reclaim Water Distribution Pumps	**Rio de Flag Wildcat Hill**	City's focus and investment on reclaim water	Expand capacity at both plants	Increased capacity and conservation	Resource conservation and water management

5.1 Biosolids Dewatering

The current operation of biosolids management at Wildcat Hill has specific summer and winter operations procedures and requirements. The operations are labor intensive and cumbersome, and the level of inefficiency adds costs with continued environmental impact at the onsite biosolids disposal area.



Figure 13. Huber Screw Press

NORESCO is proposing a mechanical dewatering process using a screw press. The screw press can process the digested sludge which has an average dry solids percentage of 2.6 and enhance it to between 18 to 22 percent. At this point the sludge "cake" has the consistency of wet dirt and is easily handled via conveyors or by a front-end loader. The City can opt to dewater the digested sludge and land apply onsite or dispose it at the City landfill. The significant benefit of mechanical dewatering is less volume to manage and reduced labor costs to land apply versus the currently process described earlier.

5.2 Blower Replacement (Wildcat Hill)

Aeration processes include blowers, air delivery, and oxygen transfer efficiency of the diffuser network. All three must work together to deliver an optimized biological treatment at the lowest possible operating cost.



Figure 14. High Speed Turbo Blower

Wildcat Hill includes three (3) 450 hp multistage centrifugal blowers that have limited turndown ability. One blower is operational 24/7 which appears to be a mismatch of supply and demand. This causes IFAS media to blow out of the aeration basin and foam, which is a typical result of too much air delivery. Although the air is throttled through valves, the blower motor continues to operate a full load which is extremely inefficient. Properly sizing the blowers and retaining the existing blowers as a backup will significantly improve the operating characteristics and reduce energy use.

NORESCO explored two (2) options for the proposed High-Speed Turbo (HST) Blowers: two (2) blowers sized at 100% load, or three (3) blowers sized at 50% load. The selection of multiple blowers for each option was intended to maintain redundant equipment for plant operations with the existing blowers acting as backup. The option of three (3) blowers sized at 50% load results in lower energy requirements compared to the 100% size blower, and the three-blower option also offers more operational flexibility. Therefore the three-blower option was selected.

The primary benefit of a new, properly sized blower(s) is to modulate the air produced based on flows and loadings of the process, resulting in in lowering the energy use and associated GHG emissions.

5.3 FOG Receiving



Figure 15. FOG Receiving Station

Septage waste generated within the Flagstaff City limits is permitted for disposal at the Wildcat Hill. The septage waste received is comingled with FOG, stored in a tank, and subsequently pumped to the anaerobic digesters. The direct placement of FOG in the digesters may enhance biogas generation but causes significant operational challenges in the digesters compromising their overall performance.

NORESCO recommends the City relax the restriction of limiting septage waste generated locally and allow receipts from the neighboring areas and counties including Sedona. NORESCO's solution includes segregation of the septage waste for FOG processing using a proprietary technology. The brown grease recovered from the process may be retailed for new revenue generation, as well as the expanded receipts generated by additional tipping fees as a new revenue generation source.

5.4 Automation & Controls

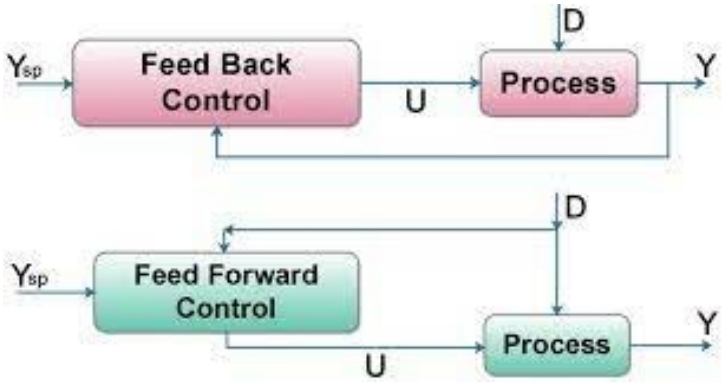


Figure 16. Process Control Schematics

The current operations at both Wildcat Hill and Rio de Flag are dependent on a feedback loop control versus feed forward controls strategy. The feed forward controls strategy is more desirable and is an important consideration which helps to optimize the activated sludge treatment process. Feedback is reactive whereas feed forward is proactive. Ammonia loading knowledge upfront complements and stabilizes aeration and nutrient removal, DO is still the dominant monitoring parameter.

Feedback instigates DO instability requiring constant adjustments to achieve desired levels and requires constant human interface driven by operator intuition and experience. DO fine tuning is a huge challenge because proportional integral derivative (PID) algorithms are poorly suited because of no connectivity to the underlying process being monitored. This results in wasted energy because of varying DO bandwidth.

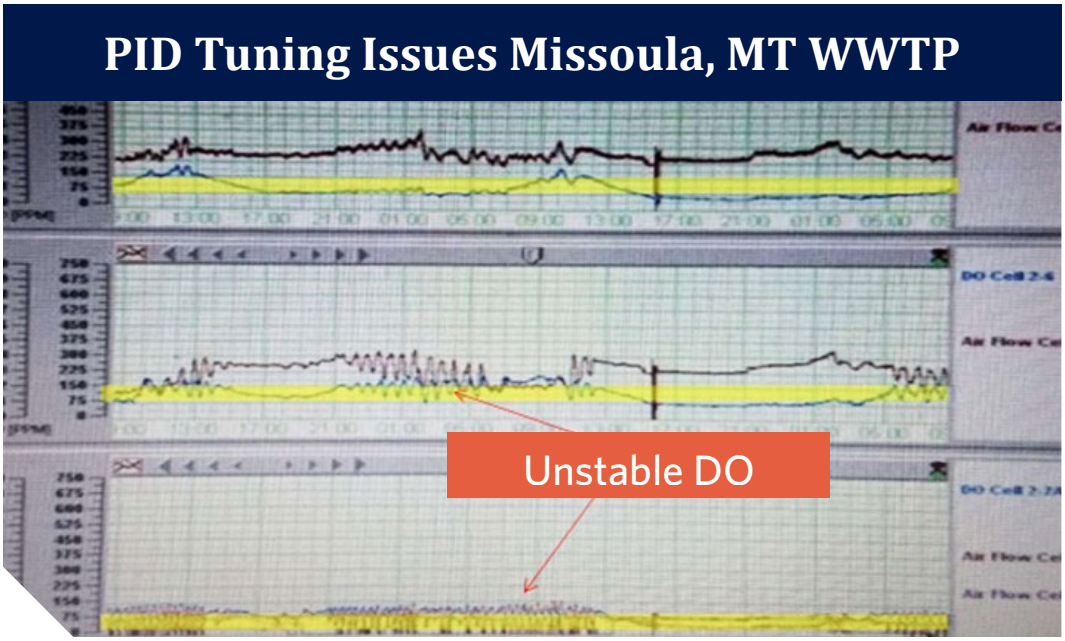


Figure 17. Example Facility Process Tuning

Feed forward controls are driven by influent nutrient loadings, minimizing operator interface, intuition, and bias. The strategy optimizes aeration resulting in energy savings through fine-tuned DO precision and process stability and it is ideally suited for the nutrient removal process. Another benefit of the feed forward control strategy allows flow pacing based on influent flows and loadings, and results in lowering energy use and consequently GHG emissions.

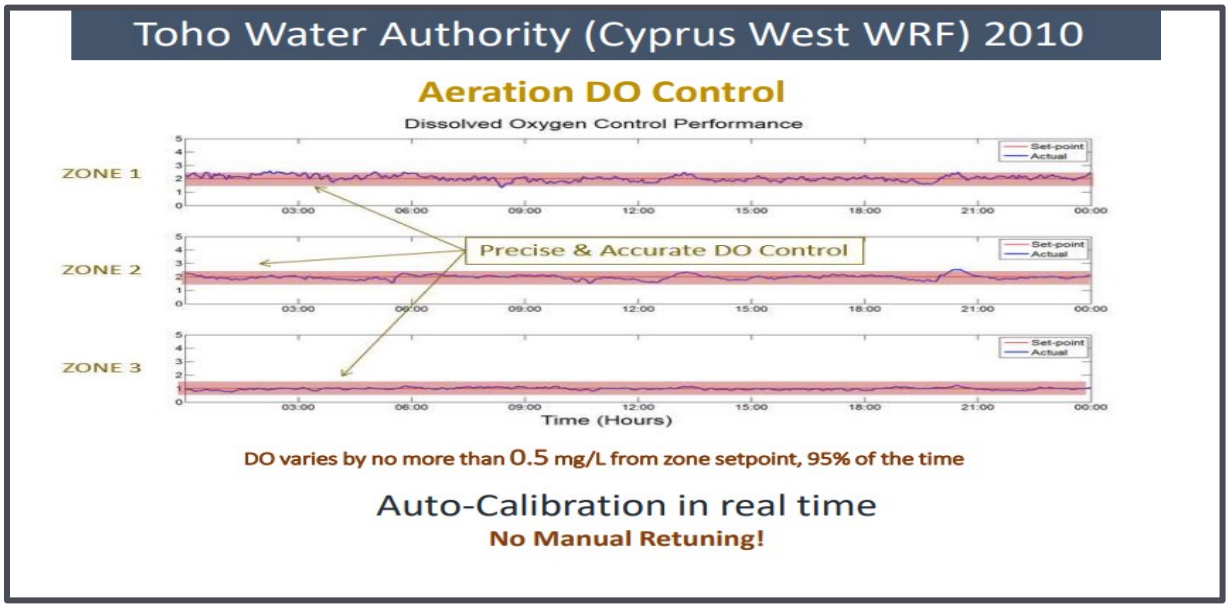


Figure 18. Stabilized Aeration Dissolved Oxygen

5.5 Reclaim Water Distribution Pumping

Both plants produce reclaim water for sale to customers throughout the City. The reclaim water is distributed through a separate piping distribution system to these customers and the system is pressurized via reclaimed water distribution pumps. The City is currently in the process of upgrading the controls on these pumps with some of the equipment already owned by the City but in need of installation and integration. We propose to complete the installation of VFDs on the distribution pumps and associated programming to allow for a smart pumping mode that will reducing energy and operating costs over time. We will work with the Reclaim water team to fully integrate the existing pumps and new controls into the Reclaim water network.



Figure 19. Rio de Flag Distribution Pumps

6. Summary of Proposed ECMs

Each of the ECMs have been evaluated for potential savings (electricity, O&M), emissions impact and estimated capital cost. The results are summarized in the following table.

Table 10. Summary of Recommended ECMs

Energy Conservation Measure	Estimated Capital Budget	Annual Electricity Savings	Annual O&M Savings	Annual O&M Costs	Annual Reduction of CO2 (metric tons) (note 1)	Implementation Method
Biosolids Dewatering (Wildcat Hill)	$3,440,576		$546,616	-$176,833	-	NORESCO Master ESA Work Order
Blower Replacement (3 x 50%) (Wildcat Hill)	$2,268,575	$100,265	$11,448	-$13,467	592	NORESCO Master ESA Work Order
FOG Receiving (Wildcat Hill)	$2,120,818		$32,648	-$21,013	-	NORESCO Master ESA Work Order
Automation & Controls - (Wildcat Hill & Rio de Flag)	$1,019,623	$41,971		-$6,303	248	NORESCO Master ESA Work Order
Reclaim Water Distribution Pumping (Wildcat Hill & Rio de Flag)	$497,575	$2,738	$45,399	-$3,934	16	NORESCO Master ESA Work Order
Totals	**$9,347,167**	**$144,974**	**$636,111**	**-$221,551**	**856**	

Note 1: We calculated GHG emissions based on natural gas therms multiplied by 0.007 factor (metric tons of CO2 equivalent/therms) per the environmental protection agency's Emissions & Generation Resource Integrated Database (eGRID).

7. Additional ECMs Evaluated

The following ECMs are presented for the City's consideration and planning. In some cases, the City has already initiated further development and design under its existing capital planning process.

Table 11. Summary of Additional ECMs Evaluated

Plant Process	Plant	Observation	Solution	Outcome	Benefit
Biosolids Solar Dryer	**Wildcat Hill**	Complicated winter summer disposal operations	Solar drying	Class A biosolids generation	Long term sustainable solution
Grit Removal	**Rio de Flag**	Does not exist, causing significant reduction in life cycle thresholds of piping, pumps, valves	New installation	Enhanced and efficient operations due to grit and sand removal	O&M savings – approximately - 15% Energy savings plantwide - 1%
Blower Replacement	**Rio de Flag**	Oversized blowers operating at 50% VFD frequency reduction.	Right sized HST lead	Enhanced oxygen transfer, energy savings	Energy savings - 5% annually
Cogeneration	**Wildcat Hill**	Existing engine not operational requiring rebuild or replacement	Rebuild/rehab engine	Combined heat and power	Energy cost offset
Anaerobic Digestion	**Wildcat Hill**	Low gas generation, 66,000 cft/day	Possible rehabilitation and upgrading mixing and covers	Enhanced gas generation	Potential revenue generation
Diffuser Replacement	**Rio de Flag**	Diffusers approaching end of life cycle. Capacity expansion backup for Wildcat Hill WRP	Upgrade diffusers to high oxygen transfer efficiency ultrafine pore panel units.	Enhanced oxygen transfer, less air demand, energy savings, capacity expansion	Energy savings - 10% annually
	Wildcat Hill	Diffusers approaching end of life cycle. Capacity expansion	Upgrade diffusers to high oxygen transfer efficiency ultrafine pore panel units if compatible with IFAS	Enhanced oxygen transfer, less air demand, energy savings, capacity expansion	Energy savings - 10% annually
Influent Pumping	**Rio de Flag**	4-pumps with VFD 300 horsepower each, two operating 24/7	Replacement of existing pumps with submersibles installed in a dry pit	New pumps will enhance sustainability and resiliency	Energy savings - 2% annually

Plant Process	Plant	Observation	Solution	Outcome	Benefit
Plantwide Equipment Upgrade	**Rio de Flag Wildcat Hill**	Aged motors and electrical switchgear	Replace aged motors and switchgear	Operational efficiency and energy footprint reduction	Energy savings - 2% annually
Trickling Filter Tanks	**Wildcat Hill**	Idle not used	Repurpose - decant tanks	Assist in biosolids management from Rio de Flag to generate more gas	Enhance gas production through management of Rio de Flag biosolids
Disinfection	**Wildcat Hill**	Chlorine gas system	Hypochlorite, Parasitic acid, UV	Health and safety	Safety
Plant Expansion	**Wildcat Hill**	Long term enhanced reuse water objective	New plant - MBR	Capacity expansion	Reclaim water capacity expansion
Auxiliary Power	**Rio de Flag**	Backup Power supply deficiency	Microgrid	Resiliency	Sustainability

7.1 Biosolids Solar Dryer

The biosolids management ECM identified as a proposed solution (Dewatering) can be coupled with solar drying and heated floor utilizing either biogas generated at the Wildcat Hill WRP, purchased natural gas, waste heat from the proposed cogeneration systems or a combination thereof. NORESCO concurs that alternative biosolids management is needed for long term operations and regulatory compliance.



Figure 20. Typical Solar Dryer Layout

The City has a desire to generate a Class A biosolids material which can be land applied on agricultural land or used as landscaping fertilizer. Alternatively, the Class A solids could be used at the landfill for daily cover conserving long term airspace. This ECM could be facilitated with a solar dryer, with drying assisted by heat from either biogas generated at the WRP, purchased natural gas, waste heat from the proposed cogeneration systems or a combination thereof.

There are several manufacturers of solar drying systems and many operating facilities across the country that have successfully executed solar drying projects. Solar drying is especially attractive in Arizona because of the abundant sunshine and low humidity. Solar drying has the added benefit of a smaller carbon footprint (GHG) compared to other drying methods such as belt or drum dryers which require significant supplemental heat. As part of the solar drying solution, NORESCO intends to utilize excess biogas not committed for the proposed cogeneration units for heating the floor of the solar drying building, thereby optimizing the number of units and the size of the building. Utilizing biogas in the proposed drying process will significantly reduce the carbon footprint (GHG).

7.2 Grit Removal

Grit removal as part of a wastewater treatment process mitigates problems caused by sand and grit in down-stream plant operations. The issues that the presence of grit and sand cause are reduced conveyance capacities and impeding flow in pipes and channels, as well as reducing the capacity of aeration tanks and anaerobic digesters. The Rio de Flag WRP does not include a grit removal system, the absence of which is presenting O&M challenges by reducing conveyance capacity and shortening life cycles of operating equipment.

Rio de Flag WRP will benefit by the inclusion of the grit removal system. It will positively impact the annual operations and maintenance aspects, extend the life of the operating equipment, and provide plant performance enhancements. However, being a new process, it will increase carbon footprint (GHG).

7.3 Blower Replacement (Rio de Flag)

Aeration processes include blowers, air delivery, and oxygen transfer efficiency of the diffuser network. All three must work together to deliver an optimized biological treatment at the lowest possible operating cost. Rio de Flag WRP operates three (3) 200 hp positive displacement blowers with integrated VFDs. One blower is operational 24/7 which is turned down to a 29 Hertz setting essentially reducing the operating horsepower to 23. Typically, blower performance and optimum operating characteristics are diminished at the 50 percent turndown threshold. This implies the blower is not properly sized and there is a mismatch based on air demand and oxygen transfer efficiencies of the fine bubble disc diffusers. Despite the turndown, the blower is generating too much air which is diverted away from the aeration system and bled out to the atmosphere. Portions of the air delivery piping and diffusers appear to be breached or compromised, resulting in wasted energy, reduced efficiency, and performance. Properly sizing a blower and retaining the existing blowers as a backup will significantly improve the operating characteristics and reduce energy use.

7.4 Wildcat Hill - Anaerobic Digestion

Biogas Generation

The Wildcat Hill WRP includes two mesophilic anaerobic digesters that receive the thickened biosolids (primary and secondary sludge), sludge from other operating plants in the area, and septage waste (FOG). Through the anaerobic digestion process the sludge is digested for approximately 15 to 18 days, resulting in the destruction of volatile organics. A significant byproduct of the process is biogas, which is approximately 55 percent methane and the balance being carbon dioxide. The biogas generated is considered dirty which includes trace amounts of hydrogen sulfide and siloxanes. The presence of these contaminants in biogas renders it unusable for cogeneration or any other alternative use without treatment and conditioning.

If the gas is to be utilized for cogeneration, renewable natural gas (RNG), compressed natural gas (CNG) or used for heating a boiler, it will require varying levels of conditioning and treatment. The existing gas condition system is inoperable and is scheduled for an upgrade.



Figure 21. High Speed Turbo Blower

Existing Cogeneration System

A cogeneration system comprised of a single JenBacher engine and gas conditioning system was placed in service in 2009 and operated for six years. The gas conditioning system did not adequately treat the gas for effective removal of Siloxanes and Hydrogen Sulfides causing the JenBacher engine's failure.

The current plan is to upgrade the gas conditioning system and install two new engines, which is currently under contract for implementation. When operational, the cogeneration system will substantially offset the power usage and thereby reduce the carbon footprint (GHG).



Figure 22. Biogas Genset

Anaerobic Digester Operations

Based on data received from the City, the Wildcat Hill WRP digesters produce 66,000 cubic feet per day of biogas. The influent TSS combined with the average daily flow for both Rio de Flag and Wildcat Hill WRPs theoretically can generate 124,000 cubic feet per day, which indicates that there are unknown issues with the existing digesters. Evaluation of digester performance to enhance biogas generation requires significant engineering evaluation of the biosolids management, digester operations, biosolids feed, mixing, heating and condition assessment, which is outside the scope of the assessment.

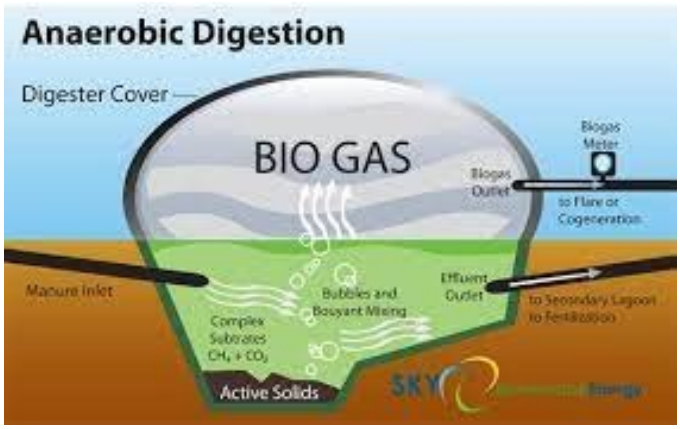


Figure 23. Anerobic Digestion Process

Options available to enhance biogas production, but not limited to, are 1) Digester 1 and 2 cleaning, rehabilitation, new covers, maintain HRT to 15 to 18 days; 2) Redirect Rio de Flag biosolids to interim storage and not the headworks of Wildcat Hill WRP, thicken with Wildcat Primary sludge; 3) Dedicate Digester 1 for thickened Rio de Flag and Wildcat Hill primary sludge; 4) Dedicate Digester 2 for Wildcat Hill waste activated sludge (WAS) and external digested sludge; and 5) Redirect FOG to a processing facility.

The City is currently engaged in the development, design, and construction of Digesters 3 and 4.

Biogas Use – Options

Biogas use options fall in three general areas: Combined heat and power (CHP); RNG; and CNG/Liquified Natural Gas (LNG).

7.5 Combined Heat and Power - Cogeneration

CHP is the use of a heat engine or power to generate electricity and useful heat at the same time. Cogeneration is an efficient of fuel or heat, because otherwise wasted heat from electricity generation is put to productive use by using thermal energy for heating. The Flagstaff Wildcat plant is a typical example of a small system with decentralized energy production.

The City is moving forward with this option and the solution includes two new engines and the gas condition infrastructure. The positive outcome of this option is the direct offset of energy costs, and carbon footprint reduction (GHG).

7.6 Renewable Natural Gas

RNG, also known as sustainable natural gas or biomethane, is a biogas which has been upgraded to a quality similar to fossil natural gas having a methane concentration of 90 percent or greater. By increasing the concentration of methane to similar level as natural gas, it becomes possible to distribute the gas via the existing gas grid.

The RNG option is collecting the gas and cleaning it to pipeline quality then injecting it into the existing El Paso Natural Gas pipelines adjacent to the Wildcat Hill WRP. Typically, significant capital is needed to build a pipeline to the connection point of the interstate pipeline. However, in the case of Wildcat Hill an interstate gas pipeline is in very close proximity to the WRP, minimizing the cost. Pipeline companies have very strict standards for quality and M&V which requires management control and increases operating cost.

7.7 Compressed Natural Gas

Compressed natural gas is a fuel gas mainly composed of methane. It is stored and distributed in pressure vessels at 2,900 to 3,600 psig. CNG is used in traditional internal combustion (IC) engine vehicles that have been modified, or in engines manufactured for use with CNG. CNG combustion produces less GHG than traditional liquid fossil fuels.

Biogas Monetization

Typically, capital investment for RNG is offset by income from two sources. The gas itself has a commodity value and can be retailed on the natural gas market. The commodity value is established by Henry Hub, a large natural gas collection and distribution point in Erath, Louisiana, south of Lafayette, Louisiana. The average commodity price per dekatherm (1,000,000 BTU) over the last five years is $2.932. The other income source is from selling the Renewable Identification Number (RIN) credits generated from the biogas based on the Renewable Fuel Standard (RFS). The RFS requires the blending of Renewable Fuels with the nation's motor vehicle fuel supply. The RIN market was created in 2007 by the passage of the Renewable Fuels Standard Act and the 2009 RFS Act by the United States Congress. RINs are sold to petroleum refiners to offset the GHG production associated with petroleum products. The RIN market average over the last 5 years is $26.84 per dekatherm for what is called a D3 RIN credit. D3 RINs can only be generated from biogas derived from natural sources, such as biosolids in a wastewater treatment facility. Blending or co-digestion of biosolids, such as FOG classifies the RIN as a D5. The average D5 RIN price for the last five years is $16.27 per dekatherm.

CNG requires less capital investment in the gas conditioning infrastructure as the connecting pipeline is replaced by onsite storage and a gas dispensing station, which is not as costly. CNG can receive commodity revenues and RIN credits if the biogas is being used for transportation assets. The significant limitation to this option is identifying long term off takers, which is a business currently evolving but not fully mature.

The City has allocated CIP budget for the upgrade of the gas conditioning system and addition of two new IC engines. Cogeneration is a prime focus of the City to reduce GHG and offset to the maximum extent power costs.

7.8 Diffuser Replacement

The Rio de Flag aeration system incorporates fine bubble 9-inch diameter disc diffusers which are operating beyond their expected life cycles. If the City is contemplating replacing the diffusers and is seeking to expand the capacity of the plant, it would be beneficial to consider high oxygen transfer efficiency diffusers which will permit higher organic loading increasing the capacity of the biological reactors. To re-rate the WRP, all of the supporting processes will require upgrading.

Wildcat Hill WRP utilizes coarse to medium bubble diffusers for aggressive agitation and mixing of the fixed media modules. The plant has no ability to split flow in the aeration basins, consequently any upgrades will require a complete shutdown which is not practical or possible.



Figure 24. Fine Bubble Disk Diffusers

7.9 Influent Pumping

Rio de Flag WRP's five (5) 100 hp influent pumps are aged and will need to be replaced with dry pit submersible pumps or equivalent. Smart pumping protocols may be incorporated to leverage VFD benefits achievable through Laws of Affinity and optimized specific energy outcome resulting in carbon footprint reduction (GHG). The WRP will benefit by achieving a higher resiliency through the upgrade of the influent pumping station.



Figure 25. Submersible Pump

7.10 Plantwide Equipment Upgrade

Due to the age of both the WRPs, the electrical switchgear, pumps, motors, and controls need to be updated to avoid treatment processing interruptions and arch flash hazard. Existing motors should be substituted with premium efficiency units and motor control centers that offer shut down of specific operations installed instead of the entire systems. This upgrade will deliver energy savings, resulting in carbon footprint reduction (GHG).



Figure 26. Electrical Components

7.11 Trickling Filter Tanks

The Wildcat Hill WRP original wastewater treatment included a trickling filter treatment process, which was replaced by the existing IFAS process. Three tanks that were part of the original treatment train have been abandoned in place. An option to store Rio de Flag biosolids prior to thickening is a possibility to generate additional biogas. Portions of these tanks are below ground level and the balance is above ground. Typically, structural design of trickling filter tanks does not permit water storage, limiting their use. The repurposing option requires structural analysis and evaluations which are outside the scope of this assessment. Additionally, trickling filter bottom configuration is open, which will have to be further evaluated for retrofitting as a containment tank.

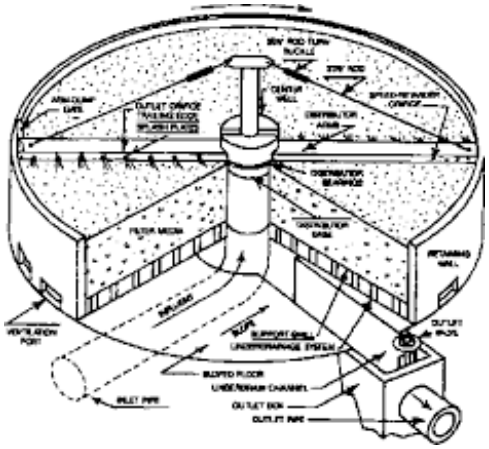


Figure 27. Filter Schematic

If storage is possible, the tanks would be ideally suited to store Rio de Flag biosolids which may be blended with the primary solids generated in the Wildcat Hill WRP, subsequently thickened, and pumped into a dedicated digester. This protocol may increase the biogas production above the existing 66,000 cubic feet per day.

7.12 Disinfection

Wildcat Hill WRP has utilized chlorine gas for effluent disinfection. This is an effective means for disinfection, except that chlorine gas is highly toxic and dangerous. From a human health and environmental safety standpoint, alternative disinfection with hypochlorite, peracetic acid or UV radiation (like Rio de Flag) is desirable.

7.13 Wildcat Hill WRP Replacement/Expansion

The long-term plan for Wildcat Hill WRP is to be expanded with the addition of a standalone membrane bioreactor (MBR) plant at the current biosolids management area. The driver behind the MBR plant is to expand treatment capacity and produce high quality effluent that can be redirected to the reclaim water distribution network. Evaluation of this solution and plan is outside the scope of the PAR.

7.14 Auxiliary Power

Rio de Flag WRP does not have an auxiliary power supply source thereby making it vulnerable to long term power outages. Connecting a microgrid to a generator within the WRP to support critical treatment processes will minimize the risk or untreated wastewater bypassing the plant.



Figure 28. Auxiliary Power Unit

7.15 Summary of Additional ECMs Evaluated

The additional ECMs evaluated for quantification of potential savings (electricity, O&M), emissions impacts and estimated capital cost. The results are summarized in the following table.

Table 12. Summary of Additional ECMs Evaluated

Energy Conservation Measure	Estimated Capital Budget	Annual Electricity Savings	Annual O&M Savings	Annual O&M Costs	Annual Reduction of CO2 (metric tons) (note 1)	Implementation Method
Biosolids Solar Dryer (Wildcat Hill)	$22,110,000	$522,000		(72)	*(Note 2)*	Flagstaff Future Capital Improvements
Biosolids Solar Dryer w/Heat (Wildcat Hill)	$22,030,000	$522,000		(11)	*(Note 2)*	Flagstaff Future Capital Improvements
Grit Removal (Rio de Flag)	$8,770,000	$72,000		(103)	*(Note 2)*	Flagstaff Future Capital Improvements
Blower Replacement (2 x 100%) (Wildcat Hill)	$2,360,000	$83,000		415	445	Flagstaff Future Capital Improvements
Cogeneration with Biogas (Wildcat Hill)	$10,730,000	$157,000		206	1,004	Flagstaff Current Capital Improvements (in design)
Renewable Natural Gas (Wildcat Hill)	$13,710,000	$340,000		57	354	Flagstaff Future Capital Improvements
Compressed Natural Gas (Wildcat Hill)	$7,440,000	$357,000		-	-	Flagstaff Future Capital Improvements
Diffuser Replacement (Rio de Flag)	$1,700,000	$15,000		1	1	Flagstaff Future Capital Improvements
Diffuser Replacement/Upgrade (Wildcat Hill)	$1,030,000	$33,000		49	23	Flagstaff Future Capital Improvements
Influent Pumping (Rio de Flag)	$1,030,000	$11,000		52	24	Flagstaff Future Capital Improvements

Energy Conservation Measure	Estimated Capital Budget	Annual Electricity Savings	Annual O&M Savings	Annual O&M Costs	Annual Reduction of CO2 (metric tons) (note 1)	Implementation Method
Plantwide Equipment Upgrade (Rio de Flag)	$2,060,000	$21,000		45	42	Flagstaff Future Capital Improvements
Plantwide Equipment Upgrade (Wildcat Hill)	$3,400,000	$49,000		81	124	Flagstaff Future Capital Improvements
Trickling Filter Tanks (Wildcat Hill)	$4,130,000	$16,000		-	-	Flagstaff Future Capital Improvements

Note 1: We calculated GHG emissions based on natural gas therms multiplied by 0.007 factor (metric tons of CO2 equivalent/therms) per the environmental protection agency's Emissions & Generation Resource Integrated Database (eGRID).
Note 2: Additional electricity required for new equipment will be generated by a net-zero renewable source.

8. Conclusions

NORESCO recommends seven of the ECMs presented for inclusion in the next phase of the Energy Service Contract as noted below.

1-Wildcat Hill Biosolids Dewatering

- Resolves biosolids management issues
- O&M savings
- Minimal GHG increase
- Compatible with biosolids drying option using biogas for heating

2 -Wildcat Hill Blower Replacement

- Energy footprint reduction
- Plant flow pacing
- O&M savings
- Performance enhancement
- GHG reduction

3-Wildcat Hill FOG Receiving

- Removal from digesters
- New revenue generation
- Enhanced digester operations
- O&M savings

4-Rio de Flag Automation & Controls

- Energy footprint reduction
- Plant flow pacing
- O&M savings
- Performance enhancement
- GHG reduction

5-Wildcat Hill Automation & Controls

- Energy footprint reduction
- Plant flow pacing
- O&M savings
- Performance enhancement
- GHG reduction

6-Wildcat Hill Reclaim Water

- Smart pumping
- O&M savings
- GHG reduction

7-Rio de Flag Reclaim Water

- Smart pumping
- O&M savings
- GHG reduction

The ECMs require capital investment of approximately $9.3 million and will deliver almost $20 million of financial benefit over a project 20-year project term. This includes $1.9 of positive cash flow net of annual project costs (finance payment, maintenance, and M&V costs). A projected 856 metric tons of reduced GHG emissions will result from project implementation.

The balance of the ECMs analyzed and presented herein *(Additional ECMs Evaluated)* are necessary projects recommended for inclusion in a follow-on phase, funded by the City's proposed wastewater CIP budget allocations. By accelerating the implementation of these projects, the City can take advantage of capital cost avoidance at a lesser cost than in the subsequent years.



NORESCO

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9. B.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Genevieve Pearthree, Resilience Analyst
Co-Submitter:	Alaxandra Pucciarelli
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration and approval of Preliminary Plat: A request by Presidio Tract M, LLC for approval of the Preliminary Plat for Miramonte at Presidio in the Pines VI Condominiums (City of Flagstaff project number PZ-19-00204-05), a 39-unit multi-family residential condominium subdivision. The 2.77-acre site is located at 2950 W. Presidio Dr. in the Highway Commercial (HC) zone with a Resource Protection Overlay (RPO). The site will develop as a Planned Residential Development (PRD) under the T4N.2 (Transect) Zone standards.

STAFF RECOMMENDED ACTION:

Approve the Preliminary Plat in accordance with the findings presented in this report and the Planning and Zoning Commission recommendation of approval (5-0 vote on February 8, 2023).

Executive Summary:

The Preliminary Plat for Miramonte at Presidio in the Pines VI Condominiums consists of 39 residential units across three buildings on 2.77 acres in the HC zone at 2950 W. Presidio Dr.

Financial Impact:

No financial impacts are anticipated with this Preliminary Plat.

Policy Impact:

There are no policy impacts anticipated with this Preliminary Plat.

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

Carbon Neutrality Plan

- DD-1: Encourage vibrancy, appropriate density, and attainability in existing neighborhoods, so that more residents live within walking distance of their daily needs.

PBB Key Community Priorities/Objectives

- Robust Resilient Economy - Grow and strengthen a more equitable and resilient economy.

Regional Plan Policies and Goals

- Policy LU.5.1. Encourage development patterns within the designated growth boundaries to sustain efficient infrastructure projects and maintenance.

- Policy LU.5.2. Promote infill development over peripheral expansion to conserve environmental resources, spur economic investments, and reduce the cost of providing infrastructure and services.
- Goal NH.1. Foster and maintain healthy and diverse urban, suburban, and rural neighborhoods in the Flagstaff region.
- Policy WR.4.3. Development requiring public utility services will be located within the Urban Growth Boundary.

Has There Been Previous Council Decision on This:

- In May 2004, City Council approved a rezoning request (Ordinance No. 2004-05) to enable the development of the larger 91-acre Presidio in the Pines master-planned community, of which Tract M (where this development is located) is a small part. City Council also approved the associated Development Agreement, which was recorded on September 20, 2004.
- 2007, 2008, and 2012: City Council approved three subsequent amendments to the Development Agreement.
- On December 1, 2020, City Council approved a fourth amendment to the Development Agreement to: 1) permit Tract M of the Presidio in the Pines subdivision to be developed as a multifamily residential development according to an approved Site Plan, 2) require the formation of a homeowners' association and condo declarations stipulating a minimum lease length of 30 days, and 3) provide "Attainable Housing" (a minimum of 10% of the total units to be sold at or below 100% of the Area Median Income "AMI").
- On September 28, 2021, City Council granted a Conditional Use Permit for this site to allow a Planned Residential Development consisting of 39 multi-family residential units.

Options and Alternatives:

1. Approve the Preliminary Plat with no conditions, as recommended by staff and the Planning and Zoning Commission.
2. Approve the Preliminary Plat with conditions.
3. Deny the Preliminary Plat based on non-compliance with the Zoning Code, the Subdivision Code, and/or the Engineering Standards and Specifications for New Infrastructure.

Background/History:

Development History

This plat is located on Tract M of the Presidio in the Pines subdivision plat. The 2.77-acre site has HC zoning and an RPO. This development proposes 39 multifamily residential units distributed among three 3-story buildings (13 units per building). The site also contains the required surface parking, landscaping, lighting, and infrastructure (stormwater, water, sewer, etc.). City Staff approved the Site Plan for this development on September 25, 2020. Civil Engineering Plans were approved on March 27, 2021, and Building Plans are currently under review. City staff administratively approved this Preliminary Plat on January 19, 2023.

Multifamily residential development is an allowed use in the HC zone as a Planned Residential Development (PRD), subject to the issuance of a Conditional Use Permit (CUP). The Flagstaff City Council granted the CUP on September 28, 2021. PRDs require developments to be constructed under transect zone stands, in addition to picking a specific building type and private frontage type. This project will develop under the T4N.2 standards and is using an Apartment Building Type and Forecourt Private Frontage Type. The three buildings total 19,650 square feet, and residential units will range from 514 – 1,064 square feet. The permitted density range is 10-22 units per acre for properties in the HC Zone with a RPO. That allows 28 to 61 units on this site; the development has 39 units. The lot coverage is 12.6% (the maximum is 80% per the T4N.2 standards).

On December 1, 2020, City Council approved a fourth amendment to Presidio in the Pines Development Agreement to allow Tract M to be developed as a multifamily residential development (the Development

Agreement had previously required Tract M to be a church site or other indoor neighborhood use). The Amendment also requires the formation of a homeowners' association and condo declarations stipulating a minimum lease length of thirty (30) days, and that the developer provide "Attainable Housing" (at least 10% of the units must be sold at or below 100% of the Area Median Income ["AMI"]).

Type of Plat

The purpose of this preliminary condominium plat application is to allow multifamily residential units to be sold individually. The plat delineates all the elements affiliated with the individual units. In this case, the units are defined as the airspace within each unit. The vertical boundaries start at the finish floor elevation (FFE) of each unit and extend to the ceiling of that unit. The horizontal boundaries start at the inside of the walls enclosing each unit. Most of the units have one or two porches or decks; these elements are being platted as limited common elements associated with each unit. All common areas in the building, including the breezeway/entryway, the spaces between walls and floor plates, the mechanical elements, and the fire riser rooms, etc. are common elements. Tract A, which includes all areas outside of the buildings and the limited common elements (such as landscaping, parking, open space, drainage, etc.), will be dedicated to the homeowner's association.

Key Considerations:

The City Council shall find the Preliminary Plat meets the findings for approval, which is compliance with the following City Code sections:

1. City Code Title 10, Flagstaff Zoning Code
2. City Code Division 11-20, Subdivision and Land Split Regulations
3. City Code Title 13, Engineering Design Standards and Specifications

Community Benefits and Considerations:

The Preliminary Plat facilitates the addition of 39 new for-sale housing units to the City of Flagstaff. The new housing will be a mix of one-, two-, and three-bedroom multifamily residential units.

Community Involvement:

Inform. No public hearings or public outreach are required by either the Zoning Code or the Subdivision Code as part of a Preliminary Plat subdivision review process.

Attachments: Staff Report
Application
Preliminary Plat
Presentation

PLANNING AND DEVELOPMENT SERVICES STAFF REPORT
PRELIMINARY PLAT

PZ-19-00204-05

DATE: January 19, 2023
MEETING DATE: February 8, 2023
REPORT BY: Genevieve Pearthree

REQUEST:
Presidio Tract M, LLC requests Preliminary Plat approval for Miramonte at Presidio in the Pines VI Condominiums (case number: PZ-19-0204-05). The subdivision consists of 39 residential condominium units located at 2950 West Presidio Drive. The condominium plat is on 2.77 acres and will develop as a Planned Residential Development (PRD) under the T4N.2 (Transect) Zone standards. The site has a Resource Protection Overlay (RPO).

STAFF RECOMMENDATION:
Staff recommends the Planning and Zoning Commission, in accordance with the findings presented in this report, forward the Preliminary Plat to the City Council with a recommendation for approval.

PRESENT LAND USE:
The site is currently vacant.

PROPOSED LAND USE:
Miramonte at Presidio in the Pines VI Condominiums is a residential condominium subdivision development that consists of 39 dwelling units across three buildings located on 2.77 acres. The site also contains the required surface parking, landscaping, lighting, and infrastructure (stormwater, water, sewer, etc.).

NEIGHBORHOOD DEVELOPMENT:
See the attached vicinity map.

North:	Single family development (High Density Residential [HR] zone), Woody Mountain Road
East:	Single family development (High Density Residential [HR] zone) and attached duplex development (Highway Commercial [HC] zone)
South:	I-40
West:	Woody Mountain Road, Vacant Land (Single Family Residential [R1] Zone)

REQUIRED FINDINGS:
The Planning and Zoning Commission shall find the Preliminary Plat meets the requirements of the City Code Title 10, Flagstaff Zoning Code; City Code Title 11, General Plans and Subdivisions; and City Code Title 13, Engineering Design Standards and Specifications.

STAFF REVIEW:

I. Project Information

A. Background
The project is located on Tract M of the Presidio in the Pines subdivision plat. The 2.77-acre site has HC zoning and an RPO. This development proposes 39 multifamily residential units distributed among three 3-story buildings (13 units per building). The site also contains the required surface parking, landscaping, lighting, and infrastructure (stormwater, water, sewer, etc.). City Staff approved the Site Plan for this development on September 25, 2020. Civil Engineering Plans were approved on March 27, 2021, and Building Plans are currently under review.

Multifamily residential development is an allowed use in the HC zone as a PRD, subject to the issuance of a Conditional Use Permit (CUP). The Flagstaff City Council granted the CUP on September 28, 2021. PRDs require developments to be constructed under transect zone stands, in addition to picking a specific building type and private frontage type. This project will develop under the T4N.2 standards and is using an Apartment Building Type and Forecourt Private Frontage Type. The three buildings total 19,650 square feet and residential units will range from 514 – 1,064 square feet. The permitted range of density per acre is 10-22 units per acre for properties in the HC Zone within the Resource Protection Overlay. That allows for between 28 and 61 units; the development has 39 units. The lot coverage is 12.6% (the maximum is 80% per the T4N.2 standards).

On December 1, 2020, City Council approved a fourth amendment to Presidio in the Pines Development Agreement to allow Tract M to be developed as a multifamily residential development (the Development Agreement had previously required Tract M to be a church site or other indoor neighborhood use). The Amendment also requires the formation of a homeowners' association and condo declarations stipulating a minimum lease length of thirty (30) days, and that the developer provide "Attainable Housing" (at least 10% of the units must be sold at or below 100% of the Area Median Income ["AMI"]).

B. Type of Plat

The purpose of this preliminary condominium plat application is to allow multifamily residential units to be sold individually. The plat delineates all the elements affiliated with the individual units. In this case, the units are defined as the airspace within each unit. The vertical boundaries start at the finish floor elevation (FFE) of each unit and extend to the ceiling of that unit. The horizontal boundaries start at the inside of the walls enclosing each unit. Most of the units have one or two porches or decks; these elements are being platted as limited common elements.

All common areas in the building, including the breezeway/entryway, the spaces between walls and floor plates, the mechanical elements, and the fire riser rooms, etc. are common elements. Tract A, which includes all areas outside of the buildings and the limited common elements, will be dedicated to the homeowner's association as a common element.

II. Required Findings: Conformance with City Development Standards

Staff reviewed and approved the Site Plan, Civil Plans, and Preliminary Plat for this project based on conformance with City Code Title 10, Flagstaff Zoning Code; City Code Title 11, General Plans and Subdivisions; and City Code Title 13, Engineering Design Standards and Specifications.

A. City of Flagstaff Zoning Code

i. T4N.2 Zone, Apartment Building Type, Forecourt Private Frontage Type

The buildings meet the T4N.2 standards for building form and placement, including minimum setbacks and lot coverage. The applicant elected to use the Apartment Building Type, which is permitted in the HC Zone. The Apartment Building Type is a medium-to-large-sized structure that consists of up to 32 side-by-side and/or stacked dwelling units accessed from the exterior of the building through one or more common entries. The Forecourt Private Frontage Type requires a portion of the main facade of the building to be at or near the frontage line and a small percentage to be set back, creating a small court space.

ii. Pedestrian and Vehicle Circulation Systems

Pedestrian and vehicle access to the site is from Presidio Drive, which takes access off Woody Mountain Road. A sidewalk along the south side of Presidio Drive provides pedestrian access, while a new driveway from Presidio Drive onto the site provides vehicle access.

iii. Parking and Automobile Access

This project is providing 74 parking spaces. Seventy-three spaces are required. This number includes a 5% parking reduction that the project is eligible for because it is providing 12 bicycle parking spaces (only 4 are required). Surface parking spaces are located in a parking lot on-site.

iv. Landscaping

A landscape plan was approved with civil engineering plans. The development is meeting the required landscaping (street buffer, parking lot, building foundation, and peripheral buffer) through existing and new landscaping.

v. Resource Protection and Open Space

Development in commercial zones is required to protect at least 30% of the existing tree resources and 60% of steep slopes. This development will save 36% of tree resources. The property also has an existing Tree Resource Preservation Easement from the original Presidio in the Pines subdivision plat that will not be disturbed as part of the construction of this project. There are no slopes with a 17% or greater grade on the property. Further, the Regional Plan shows a traffic interchange at Woody Mountain Rd. and I-40. Thus, the applicant is showing potential future ADOT right of way and has located all development outside that area. The development is also meeting the requirement to set aside at least 15% of the lot area as open space (59,944 square feet are provided—49.7% of the lot area).

B. Title 13: City of Flagstaff Engineering Standards

Staff conducted a public systems analysis as part of Site Plan approval to verify conformance with City Engineering Standards.

i. Traffic/Right-of-Way Impact

This development is within the parameters of the original Traffic Impact Analysis (TIA) conducted for the larger Presidio in the Pines neighborhood. Thus, a new TIA was not required for this development. No new edge improvements (sidewalk, curb/gutter, parkway, etc.) are required for this development because they are already installed on both Woody Mountain Road and Presidio Drive. However, an existing streetlight on Presidio Drive will have to be relocated to accommodate the new driveway into this development.

ii. Water and Wastewater Impact

This development is within the parameters of the original Water Sewer Impact Analysis (WSIA) conducted for the larger Presidio in the Pines neighborhood. Thus, no off-site water or sewer improvements will be required other than those necessary to serve the development. However, there is currently no infrastructure in the ground on the site to support this development, so all on-site sewer and water systems will have to be designed and built.

iii. Water

The developer will need to tie into the existing 8" water line in Presidio Drive. It is the developer's responsibility to design and construct all on-site and connecting water infrastructure per the City of Flagstaff Engineering Standards.

iv. Wastewater

The developer will need to tie into the existing 8" sewer in Presidio Drive. It is the developer's responsibility to design and construct all on-site and connecting water infrastructure per the City of Flagstaff Engineering Standards.

v. Stormwater Analysis

A Preliminary Drainage Report was required as part of the Site Plan review. The development is required to provide a detention basin on the southeast corner of the project site to meet low impact development (LID)

standards. A Drainage Maintenance Easement (DME) across the entire detention basin will be dedicated to the City of Flagstaff with final plat.

C. Title 11: General Plans and Subdivisions, Chapter 11-20: Subdivision and Land Split Regulations

i. Preliminary Plat
City staff approved the Preliminary Plat based on conformance with the procedures and application requirements outlined in Section 11-20.60: Preliminary Plat.

ii. Subdivision Standards and Regulations
These standards are not applicable to this plat because it is a condominium plat (it is not creating any new lots, streets, alleys, or city blocks).

iii. Minimum Required Subdivision Improvements
Staff review of the Site Plan and Preliminary Plat identified no required improvements to adjacent streets or pedestrian ways, in conformance with Section 11-20.130: Minimum Required Subdivision Improvements.

REQUIRED FINDINGS:
The Planning and Zoning Commission shall find the proposed Preliminary Plat meets the requirements of the City Code Title 10, Flagstaff Zoning Code; City Code Title 11, General Plans and Subdivisions; and City Code Title 13, Engineering Design Standards and Specifications.

Recommendation
Staff recommends the Planning and Zoning Commission, in accordance with the required findings presented in this report, forward the Preliminary Plat to the City Council with a recommendation for approval.

Attachments:

- Application
- Preliminary Plat (14 sheets)

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City of Flagstaff — Community Development Division

211 W. Aspen Ave
Flagstaff, AZ 86001
www.flagstaff.az.gov
P: (928) 213-2618

Date Received	**Application for Subdivision Review**	File Number

Property Owner(s)	Presidio Tract M, LLC	**Phone**	520-615-8900
Mailing Address	2502 E. River Road	**City, State, Zip** Tucson, AZ. 85718	**Email** chris@kemmerly.com
Applicant(s)	Presidio Tract M LLC	**Phone**	520-615-8900
Mailing Address	2502 E. River Road	**City, State, Zip** Tucson, AZ. 85718	**Email** chris@kemmerly.com
Project Representative	Charity Lee- Project Manager	**Phone**	928-600-3594
Mailing Address	102 S. Mikes Pike	**City, State, Zip** Flagstaff, AZ. 86001	**Email** clee@miramontehomes.com

Requested Review:
- ☐ Development Master Plan
- ☐ Conceptual Plat
- ☒ Preliminary Plat P&Z and Council
- ☐ Modified Subdivision
- ☐ Preliminary Plat
- ☐ Final Plat- Council

Project Name:	Presidio Tract M	**Site Address** 2950 W. Presidio Drive	**Parcel Number** 112-62-483
Proposed Use	Condominiums	**Existing Use** Vacant Land	**Subdivision, Tract & Lot Number** Presidio Tract M Presidio in the Pines

Zoning District	**Regional Plan Category**	**Flood Zone**	**Size of Site (Sq. ft. or Acres)**
HC (P.R.D utilizing the T4N.2 zone	Suburban	None	2.76

Property Information:
- ☐ Yes ☒ No Located in an existing Local/National Historic District? (Name:_____)
- ☐ Yes ☒ No Existing structures are over 50 years old at the time of application?
- ☐ Yes ☒ No Subject property is undeveloped land?

Surrounding Uses	**North**	**South**	**East**	**West**
(Res, Com, Ind)	MR, HR	HWY	HR	RES

Proposed Use:	**Number of Lots**	**Number of Units**	**Number of acres per use**	**Building Square Feet**
Condominiums	39	39	14.09 units/acre	19,650

Please complete a "*Subdivision Review Application*" and provide an initialed "*Application and Information Checklist*" form along with the required number of plans and information as appropriate for a Development Master Plan, Conceptual, Preliminary or Final Plat. **Incomplete submittals will not be scheduled.**

Property Owner Signature: (required)	**Date:**	**Applicant Signature:**	**Date:**
DocuSigned by: Chris Kemmerly 5158C2211827409...	10/31/2022	DocuSigned by: Chris Kemmerly 5158C2211827409...	10/31/2022

For City Use

Date Filed:	**Case Number (s)**	
P & Z Hearing Date:	**Publication and Posting Date:**	
Council Hearing Date:	**Publication and Posting Date:**	
Fee Receipt Number:	**Amount:**	**Date:**

Action by Planning and Zoning Commission:	**Action By City Council:**
☐ Approved	☐ Approved
☐ Denied	☐ Denied
☐ Continued	☐ Continued

Staff Assignments	**Planning**	**Engineering**	**Fire**	**Public Works/Utilities**	**Stormwater**

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CITY OF FLAGSTAFF	**Concept Plat** Development Application Checklist

Minimal Submittal Requirements:

Following is a list of items that will be required for concept plat submittal. An application that does not include all required items will not be accepted. By signing the application, the Applicant acknowledges that all required documents/information are included within the submittal. **If, in the Applicant's opinion, any of the listed required items are not applicable to the proposed development, please identify them as "Not Applicable" on the concept plat checklist or within the project narrative.**

If you have any questions regarding the information above, please contact the Planning and Development Services front counter at the information listed in the footer of this checklist.

PART I – GENERAL REQUIREMENTS

Staff Use Only		Description of Documents Required for Complete Application. No application shall be accepted without all items marked below. **One complete set of all submitted documents will be required in hard copy form folded, in addition to an electronic copy**.
Req'd	Sub'd	
☒	☐	**I.1 Concept Plat Development Application Checklist** (this list)
☒	☐	**I.2 Application Fee**
☒	☐	**I.3 Completed Application for Concept Plat Review** The application must be signed by the Applicant and the current property owner of record. If the property owner is unavailable to sign the application, a Letter of Authorization must be submitted.
☒	☐	**I.4 – Electronic Submittal** An electronic copy of all submitted information (.pdf or .tif format)

PART II – REQUIRED PLANS & RELATED DATA

Staff Use Only		**Description of Documents Required for Complete Application.** No application shall be accepted without all items marked below. **One complete set of all submitted documents will be required in hard copy form folded, in addition to an electronic copy**.
Req'd	Sub'd	
☒	☐	**II.1 Descriptive (Project) Narrative** Submit a brief narrative describing the proposed project on an 8.5" x 11" sheet. This information will aid staff if providing comments and answering questions about the project. The narrative should include the following • Project title and date • Describe project/development request • Legal description of the parcel • Site acreage (gross and net) • Proposed building square footage, lot coverage, and FAR (non-residential projects) • Number of dwelling units, types (e.g. single-family, duplex, condo, townhome, apartment, etc.) • Describe known heritage resources (if any) • Any additional information or details pertinent to the case i.e. land uses in addition to residential • Tentative proposals regarding traffic impacts • Primary access and interior circulation including vehicular, bicycle and pedestrian ways • Preservation of special scenic locations and view corridors • Flood Hazards • Tentative proposals regarding solid and liquid waste disposal, storm sewer, electric and gas utility services

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☒	☐	**II.2 Concept Plan** Plan must be drawn to a standard engineering scale (e.g. 1:10, 1:20, but no larger than 1:60). The site plan shall include the following information: **Project Information** • Development Name • Site Address • Assessor's Parcel Number (APN) • Scale and North arrow • Size in Acres • Number of residential units and/or lots • Area of Non-residential buildings (sq. ft.) • Existing and proposed zoning • Property owner's name and contact information • Developer's name and contact information • Preparer's name and contact information • Date Prepared • Legend • Record parcel boundaries and dimensions • Vicinity Map ○ Project Area indicated **Within the Subject Site and Extending 200-feet Beyond the Site's Boundary (City GIS Data Acceptable)** • Contour lines at two-foot intervals (existing and approximate finished grade) • Identify offsite drainage flows, stormwater discharge points and floodplains • Proposed and existing building footprints. • Location of public rights-of-way with street names (existing and proposed with approx. grade calculation) • Points of access and driveways (existing and proposed) • General location of pedestrian facilities/sidewalks (existing and proposed) • Location of any existing improvements on the property • Location, size, and type of existing and proposed utilities (water, sewer, reclaim lines, fire hydrants/lines and services). • Easements • Clearview zones **Within the Subject Site** • Preliminary connection locations to public utilities • General location of proposed building footprints and parking areas with required calculations. • Existing walls and fences • Preliminary detention and Low Impact Development (LID) stormwater management systems and their locations on the site. • Natural Features, slopes, and drainage courses • Existing drainage easements. • FEMA 100-year floodplain elevation, floodplain limits, and floodway limits • Total existing and proposed impervious surface calculations (roof area, pavement, sidewalks, etc.) • Existing and Proposed solid waste locations. • Commercial building footprints that are over 50-years old at the time of application • Residential building footprints built before 1946 • Open space or parks (existing and proposed) **Concept (Preliminary) Landscape Plan** Landscape plans shall be drawn to the same engineering scale as the concept plan. All preliminary landscape plans must include or show the following information, in accordance with Section 10-50.60.030 of the Zoning Code: • Landscaping calculations and proposed planting areas • General location of trees that may be credited for landscaping

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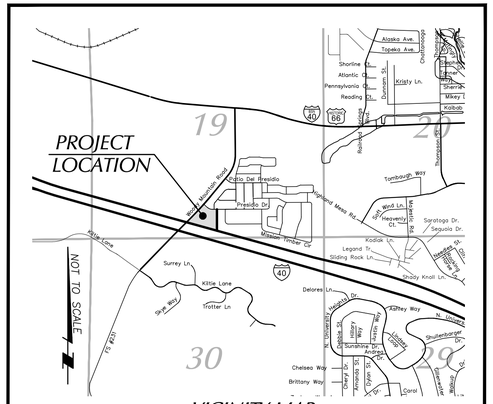
☒	☐	**II.3 Preliminary Natural Resource Protection Plan** A preliminary natural resource protection plan shows the general location of natural resources on the site before and after the proposed development (refer to Section 10-50.90.080 of the Zoning Code for applicability). **This section is applicable to properties located in the Resource Protection Overlay (RPO) zone.** The intent of this section is to identify resources early in the process so they can be taken into account during the site planning. All proposed improvements, such as buildings, paved areas, roads, etc., must be shown on the plan in relation to all on-site resources. For the purpose of the preliminary resource protection plan, forest and slope resources may be estimated. Please visit the Planning and Development Services front counter to obtain the site's aerial photography and topography through the City's website. Resources that must be estimated are listed below: • General forested areas • Moderate slopes (17 to 24 percent) • Steep slopes (25 to 35 percent) • Slopes greater than 35 percent • Rural and Urban Floodplain • Wetlands • Architectural/historical preservation site • Other site features
☒	☐	**II.4 Site Analysis** A complete site analysis plan that depicts the terrain, scenic views, natural watercourses, preservation of vegetation, and relationships to existing development (refer to Section 10-30.60.030 of the Zoning Code). The following items are essential components of an analysis of undeveloped property or building expansions greater than 25% : (Not applicable to change of use or duplex applications) • Topography of the site • Solar orientation or aspect • Existing or native vegetation types and relative quality • View corridors • Climatic considerations • Subsurface conditions • Drainage swales and stream corridors • Built environment and land use context

PRELIMINARY PLAT
FOR
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

A SUBDIVISION OF INSTRUMENT #3905535
LOCATED IN THE S1/2 OF SECTION 19,
TOWNSHIP 21 NORTH, RANGE 7 EAST, G&S.R.M.
FLAGSTAFF, COCONINO COUNTY, ARIZONA

LEGEND & ABBREVIATIONS

	CENTERLINE (CL or ℄)
	RIGHT OF WAY (R.O.W.)
	PROPERTY LINE (PL or ℄)
EX W	EXISTING WATER LINE
W	NEW WATER LINE (WL)
S	NEW SEWER LINE (SL)
FS	NEW FIRE SERVICE (FS)
WS	NEW WATER SERVICE (WS)
BSL	NEW BUILDING SUPPLY LINE (BSL)
SS	NEW SEWER SERVICE (SS)
EX S	EXISTING SEWER MANHOLE
S	NEW SEWER MANHOLE (MH)
	EXISTING EDGE OF PAVEMENT / CURB
	NEW EDGE OF PAVEMENT / CURB
	PUBLIC UTILITY EASEMENT (PUE)
GL	GRADING LIMITS (GL)
EX OVHD	EXISTING OVERHEAD UTILITY LINE (EX OVHD)
	EXISTING FIRE HYDRANT (EX FH)
	NEW FIRE HYDRANT (FH)
	EXISTING WATER VALVE (EX WV)
	NEW WATER VALVE (WV)
	EXISTING WATER METER (EX WM)
	NEW WATER METER (WM)
	EXISTING STREET LIGHT (EX SL)
	NEW STREET LIGHT (SL)
X-ING	CROSSING
RP	RADIUS POINT
R	RADIUS
IS	INTERSECTION
DC	DEPRESSED CURB
BC	BACK OF CURB (TOP)
FC	FACE OF CURB (TOP)
BSW	BACK OF SIDEWALK
FSW	FACE OF SIDEWALK
C&G	CURB AND GUTTER
EOP	EDGE OF PAVEMENT
S/W	SIDEWALK
PKY	PARKWAY
D/W	DRIVEWAY
℄ or FL	FLOWLINE
EG	EXISTING GRADE
FG	FINISH GRADE
EOL	END OF LINE BLOWOFF
TS&V	TAPPING SLEEVE and VALVE
SDMH	STORM DRAIN MANHOLE
DB	DRAIN BASIN
CB	CATCH BASIN
TW	TOP OF WALL
GB	GRADE BREAK
(TYP)	TYPICAL
EX	EXISTING
SHT	SHEET
VG	VALLEY GUTTER
FFE	FINISH FLOOR ELEVATION (PRELIMINARY)
EA	EACH
LF	LINEAL FEET
SF	SQUARE FOOT
SY	SQUARE YARDS
CY	CUBIC YARDS
D.E.	DRAINAGE EASEMENT
S.E.	SLOPE EASEMENT
G	GUTTER
P	PAVEMENT
C	CONCRETE
LT	LEFT
RT	RIGHT
TRANS	TRANSITION
B.F.P.	BACK FLOW PREVENTION
HC	HANDICAP
MES	MOGOLLON ENGINEERING & SURVEYING, INC.
E.V.	ELECTRIC VEHICLE
C.O.F.	CITY OF FLAGSTAFF



VICINITY MAP
N.T.S.

INDEX TO SHEETS

1	COVER SHEET, PROJECT INFORMATION
2	UNDERGROUND UTILITIES
3	RESOURCE PROTECTION
4	PRELIMINARY PLAT
5-13	PRELIMINARY PLAT (UNITS)
14	AREA MAP

OPEN SPACE

TOTAL LOT AREA:	120,564	S.F.
LESS IMPERVIOUS AREAS:	60,620	S.F.
OPEN SPACE AREA:	59,944	S.F.
OPEN SPACE PERCENTAGE:	49.7	%

IMPERVIOUS SURFACES

EXISTING IMPERVIOUS:	0	S.F.
NEW BUILDINGS:	19,650	S.F.
NEW A.C. PAVEMENT, CURB & DUMPSTER:	33,185	S.F.
NEW CONCRETE SIDEWALKS:	7,545	S.F.
NEW BIKE RACKS:	240	S.F.
TOTAL NEW IMPERVIOUS:	60,620	S.F.

ROCV REQUIRED = 60,620 x 1/12 = 5,052
ROCV PROVIDED = 5,175 C.F. AT 2.15' PONDING

UNIT COUNT and PARKING INFORMATION

PARKING CALCULATIONS:	TOTAL No. OF UNITS		PARKING PER UNIT	REQUIRED PARKING SPACES
MARKET RATE UNITS				
STUDIO UNITS:	3	x	1.25	3.75 (4)
ONE BEDROOM UNITS:	12	x	1.5	18
TWO BEDROOM UNITS:	18	x	2	36
THREE BEDROOM UNITS:	6	x	2	12
TOTAL MARKET RATE UNITS:	39			70
VISITOR PARKING:	*0.25/EACH 2+ BEDROOM = 24*0.25 = 6*			
REQUIRED PARKING:	76 SPACES REQUIRED			

PARKING REDUCTIONS: 20% MAXIMUM = 15 SPACE MAX. REDUCTION
5% MAX. PER 10-50.80.060 F: 3 SPACE REDUCTION (12 BIKE RACKS / 4 = 3)
REQUIRED PARKING (AFTER REDUCTIONS): 76 - 3 = 73 SPACES REQUIRED (AFTER REDUCTION)
TOTAL PARKING PROVIDED: 74 SPACES
TOTAL HANDICAP PARKING PROVIDED: 4 SPACES

FEMA DESIGNATION

THIS PROJECT IS LOCATED IN FEMA ZONE X (UNSHADED) AREA OF MINIMAL FLOODING

PRELIMINARY CUT FILL QUANTITIES

EARTHWORK (FOR DRIVE AISLES AND PARKING LOT ONLY)
CUT = 1,350 C.Y.
FILL = 500 C.Y.

PRELIMINARY FINISH FLOOR ELEVATIONS

THE FINISH FLOOR ELEVATIONS SHOWN ON THIS SITE PLAN ARE PRELIMINARY AND MAY CHANGE DURING DESIGN.

P.U.E.'s FOR WATER & SEWER

PUBLIC UTILITY EASEMENT RECORDED INSTRUMENT 3933751

PUBLIC WATER & SEWER MAINS

ALL NEW 8" WATER & SEWER MAINS SHALL BE PUBLIC.

WATER & SEWER SERVICES

ALL NEW SEWER SERVICES SHALL BE 6" MINIMUM AND ALL NEW WATER SERVICES SHALL BE 2".

ADEQUATE WATER SUPPLY

THE CITY OF FLAGSTAFF PROVIDES WATER (UTILITY) SERVICE PURSUANT TO STATE LAW, AND IS CURRENTLY OPERATING UNDER A DESIGNATION OF ADEQUATE WATER SUPPLY GRANTED BY THE ARIZONA DEPARTMENT OF WATER RESOURCES, APPLICATION No. 41-900002.0002.

REGISTERED LAND SURVEYOR — PRELIMINARY — NOT FOR CONSTRUCTION OR RECORDING — ARIZONA U.S.A.

SURVEY WAS PERFORMED BY APEX LAND SURVEYS, JOB 12-03-20RR IN FEBRUARY OF 2021. INFORMATION SHOWN HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

UNITS

2940 S. WOODY MOUNTAIN ROAD

BUILDING 1

FIRST FLOOR UNIT IDENTIFICATION	SECOND FLOOR UNIT IDENTIFICATION	THIRD FLOOR UNIT IDENTIFICATION
104 103 102	204 202	304 302
105 101	205 201	305 301

BUILDING 2

FIRST FLOOR UNIT IDENTIFICATION	SECOND FLOOR UNIT IDENTIFICATION	THIRD FLOOR UNIT IDENTIFICATION
109 108 107	209 207	309 307
110 106	210 206	310 306

BUILDING 3

FIRST FLOOR UNIT IDENTIFICATION	SECOND FLOOR UNIT IDENTIFICATION	THIRD FLOOR UNIT IDENTIFICATION
114 113 112	214 212	314 312
115 111	215 211	315 311

UTILITY COMPANY ACKNOWLEDGMENT

MARTIN CONBOY
UNISOURCE ENERGY (NATURAL GAS) DATE

KEVIN WAGER
LUMEN (TELEPHONE and INTERNET) DATE

CHAD BROOKS
ARIZONA PUBLIC SERVICE (ELECTRICITY) DATE

SANFORD YAZZIE
OPTIMUM (CABLE TELEPHONE, T.V. and INTERNET) DATE

PROJECT INFORMATION

SUBDIVISION NAME:	MIRAMONTE AT PRESIDIO IN THE PINES VI
PROJECT LOCATION:	2940 S. WOODY MOUNTAIN ROAD
LEGAL DESCRIPTION:	TRACT "M" PRESIDIO IN THE PINES
INSTRUMENT No:	3633963
APN NUMBER:	112-62-483
TOTAL LOT S.F.:	120,564
TOTAL LOT ACREAGE:	2.76777±
NUMBER OF LOTS:	39
DENSITY:	14.09 UNITS / ACRE (10 min., 22 max.)
ZONING DISTRICT:	HC (P.R.D. UTILIZING THE T4N.2 ZONE)
REGIONAL PLAN DESIGNATION:	SUBURBAN
BUILDING TYPE:	APARTMENT
FRONTAGE TYPE:	FORECOURT
CURRENT USE:	VACANT
PROPOSED USE:	CONDOMINIUMS
FLOODPLAINS:	NONE
OWNER/DEVELOPER:	PRESIDIO TRACT M, LLC 2502 E. RIVER ROAD TUCSON, AZ. 85718

PROJECT BENCHMARK: IS A FOUND ALUMINUM CAP (C.O.F. RLS 40321) AT THE INTERSECTION OF PRESIDIO DRIVE SOUTH and JOSSELYN DRIVE
ELEVATION = 7090.64

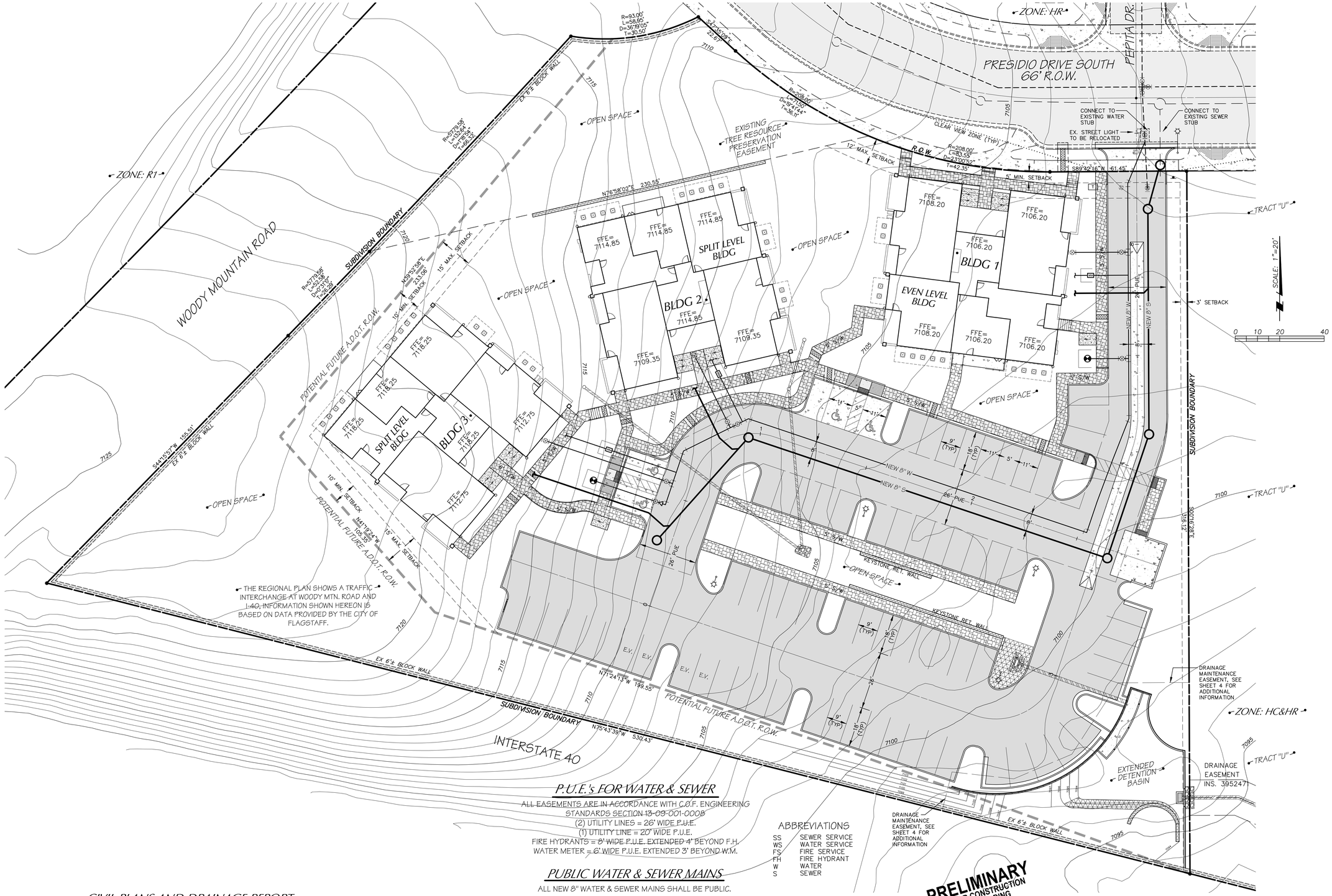
BASIS OF BEARING: IS FROM A FOUND ALUMINUM CAP (C.O.F. RLS 40321) AT THE INTERSECTION OF PRESIDIO DRIVE SOUTH AND JOSSELYN DRIVE TO A FOUND ALUMINUM CAP (C.O.F. RLS 40321) AT THE INTERSECTION OF PRESIDIO DRIVE SOUTH AND PEPITA DRIVE
BEARING OF S 89°42'15" W - 254.62'

Mogollon Inc ENGINEERING &SURVEYING
411 W. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

12/20/22
MES# 15159
PRELIMINARY PLAT
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING

DATE: 12/20/22	PROJECT NO. 15159	REVISIONS PER C.O.F. COMMENTS DATED 12/6/22	
DESIGNED BY:	FN: SHEET-01.DWG	VERT. SCALE: N/A	HOR. SCALE: N/A
DRAWN BY:			CHECKED BY: KVH



P.U.E.'s FOR WATER & SEWER

ALL EASEMENTS ARE IN ACCORDANCE WITH C.O.F. ENGINEERING STANDARDS SECTION 13-03-001-0008
(2) UTILITY LINES = 26' WIDE P.U.E.
(1) UTILITY LINE = 20' WIDE P.U.E.
FIRE HYDRANTS = 8' WIDE P.U.E. EXTENDED 4' BEYOND F.H.
WATER METER = 6' WIDE P.U.E. EXTENDED 3' BEYOND W.M.

PUBLIC WATER & SEWER MAINS

ALL NEW 8" WATER & SEWER MAINS SHALL BE PUBLIC.

WATER & SEWER SERVICES

ALL NEW SEWER SERVICES SHALL BE 6" MINIMUM AND ALL NEW WATER SERVICES SHALL BE 2".

ABBREVIATIONS

SS	SEWER SERVICE
WS	WATER SERVICE
FS	FIRE SERVICE
FH	FIRE HYDRANT
W	WATER
S	SEWER

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING

CIVIL PLANS AND DRAINAGE REPORT

CIVIL PLANS INCLUDING DRAINAGE REPORT APPROVED 6/27/22.

SHEET NO. 2 OF 14

COF PROJECT # PZ-19-00204

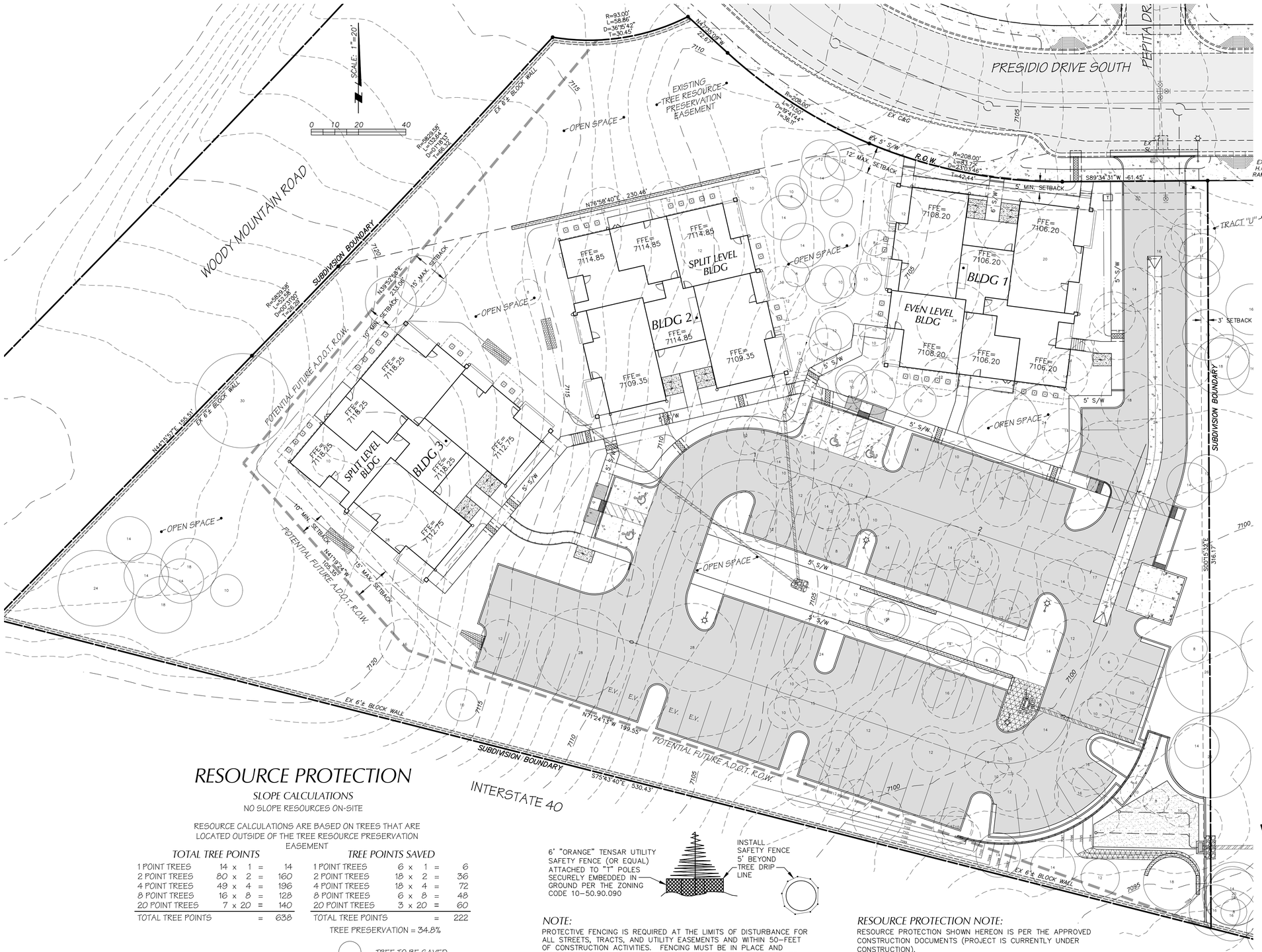
Mogollon Inc ENGINEERING & SURVEYING
411 W. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

12/20/22
MES# 15159

PRELIMINARY PLAT
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING

DATE: 12/20/22	PROJECT NO. 15159	REVISIONS PER C.O.F. COMMENTS DATED 12/6/22
DESIGNED BY: MW	FN: SHEET-02.DWG	
DRAWN BY: MW	VERT SCALE: N/A	
CHECKED BY: KVH	HOR SCALE: 1"=20'	



RESOURCE PROTECTION

SLOPE CALCULATIONS

NO SLOPE RESOURCES ON-SITE

RESOURCE CALCULATIONS ARE BASED ON TREES THAT ARE LOCATED OUTSIDE OF THE TREE RESOURCE PRESERVATION EASEMENT

TOTAL TREE POINTS

1 POINT TREES	14	x 1	=	14
2 POINT TREES	80	x 2	=	160
4 POINT TREES	49	x 4	=	196
8 POINT TREES	16	x 8	=	128
20 POINT TREES	7	x 20	=	140
TOTAL TREE POINTS			=	638

TREE POINTS SAVED

1 POINT TREES	6	x 1	=	6
2 POINT TREES	18	x 2	=	36
4 POINT TREES	18	x 4	=	72
8 POINT TREES	6	x 8	=	48
20 POINT TREES	3	x 20	=	60
TOTAL TREE POINTS			=	222

TREE PRESERVATION = 34.8%

TREE TO BE SAVED

TREE TO BE REMOVED

TREE PROTECTION DETAIL
N.T.S.

NOTE:
PROTECTIVE FENCING IS REQUIRED AT THE LIMITS OF DISTURBANCE FOR ALL STREETS, TRACTS, AND UTILITY EASEMENTS AND WITHIN 50-FEET OF CONSTRUCTION ACTIVITIES. FENCING MUST BE IN PLACE AND INSPECTED BY THE CITY OF FLAGSTAFF PLANNING DIVISION PRIOR TO COMMENCEMENT OF GRADING.

RESOURCE PROTECTION NOTE:
RESOURCE PROTECTION SHOWN HEREON IS PER THE APPROVED CONSTRUCTION DOCUMENTS (PROJECT IS CURRENTLY UNDER CONSTRUCTION).

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING

SHEET NO. 3 OF 14

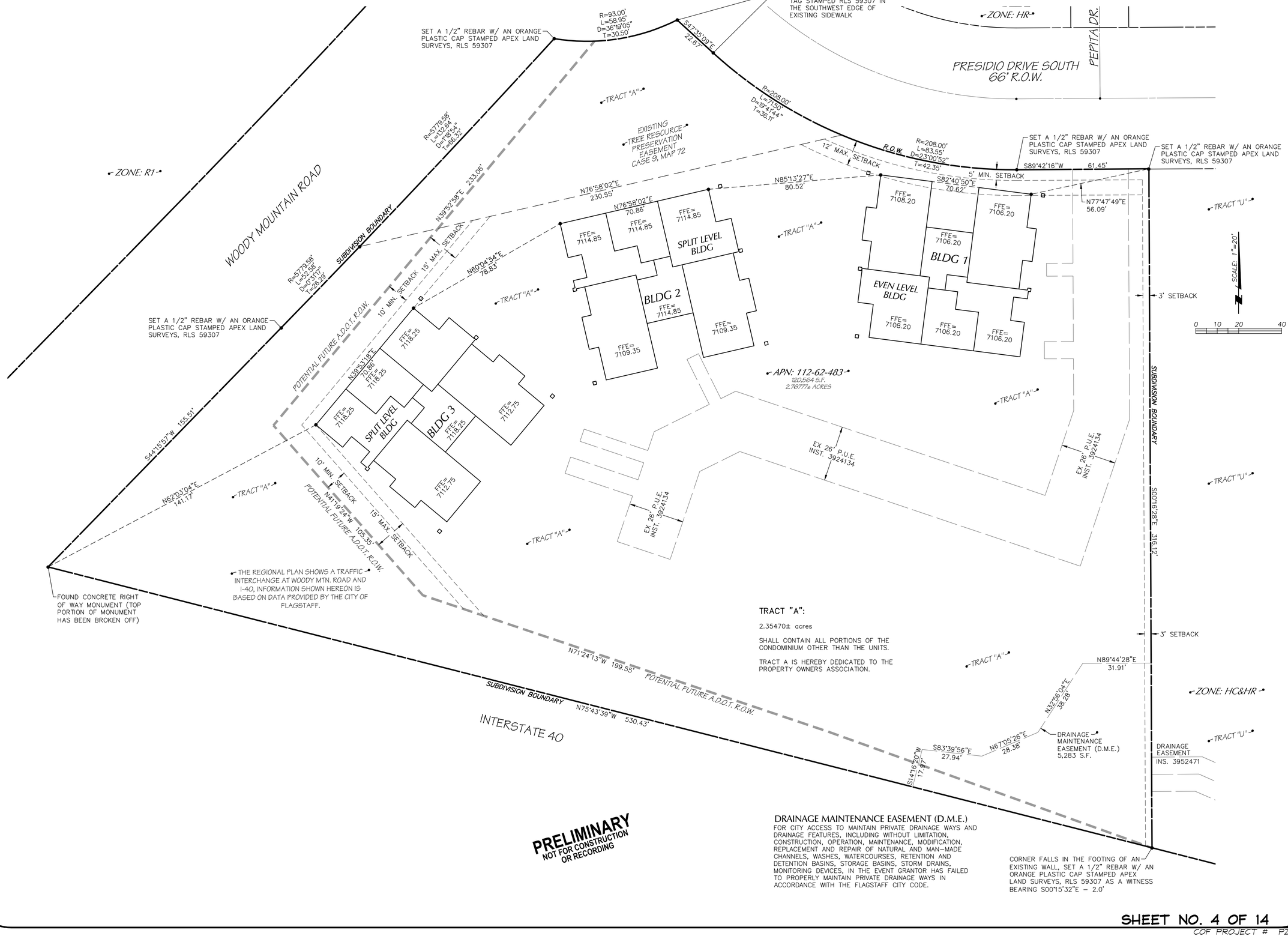
COF PROJECT # PZ-19-00204

Mogollon Inc
ENGINEERING &SURVEYING
411 W. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

PRELIMINARY PLAT
MIRAMONTE AT PRESIDIO IN THE PINES VI
CONDOMINIUMS- RESOURCE PROTECTION

12/20/22
MES# 15159

DATE: 12/20/22
DESIGNED BY: MW
DRAWN BY: MW
CHECKED BY:
PROJECT NO. 15159
FN: SHEET-03.DWG
VERT SCALE: N/A
HOR SCALE: 1"=20'
REVISIONS PER C.O.F. COMMENTS DATED 12/8/22



DRAINAGE MAINTENANCE EASEMENT (D.M.E.)

FOR CITY ACCESS TO MAINTAIN PRIVATE DRAINAGE WAYS AND DRAINAGE FEATURES, INCLUDING WITHOUT LIMITATION, CONSTRUCTION, OPERATION, MAINTENANCE, MODIFICATION, REPLACEMENT AND REPAIR OF NATURAL AND MAN-MADE CHANNELS, WASHES, WATERCOURSES, RETENTION AND DETENTION BASINS, STORAGE BASINS, STORM DRAINS, MONITORING DEVICES, IN THE EVENT GRANTOR HAS FAILED TO PROPERLY MAINTAIN PRIVATE DRAINAGE WAYS IN ACCORDANCE WITH THE FLAGSTAFF CITY CODE.

PRELIMINARY PLAT
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

12/20/22
MES# 15159

Mogollon Inc
ENGINEERING &SURVEYING
411 W. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING

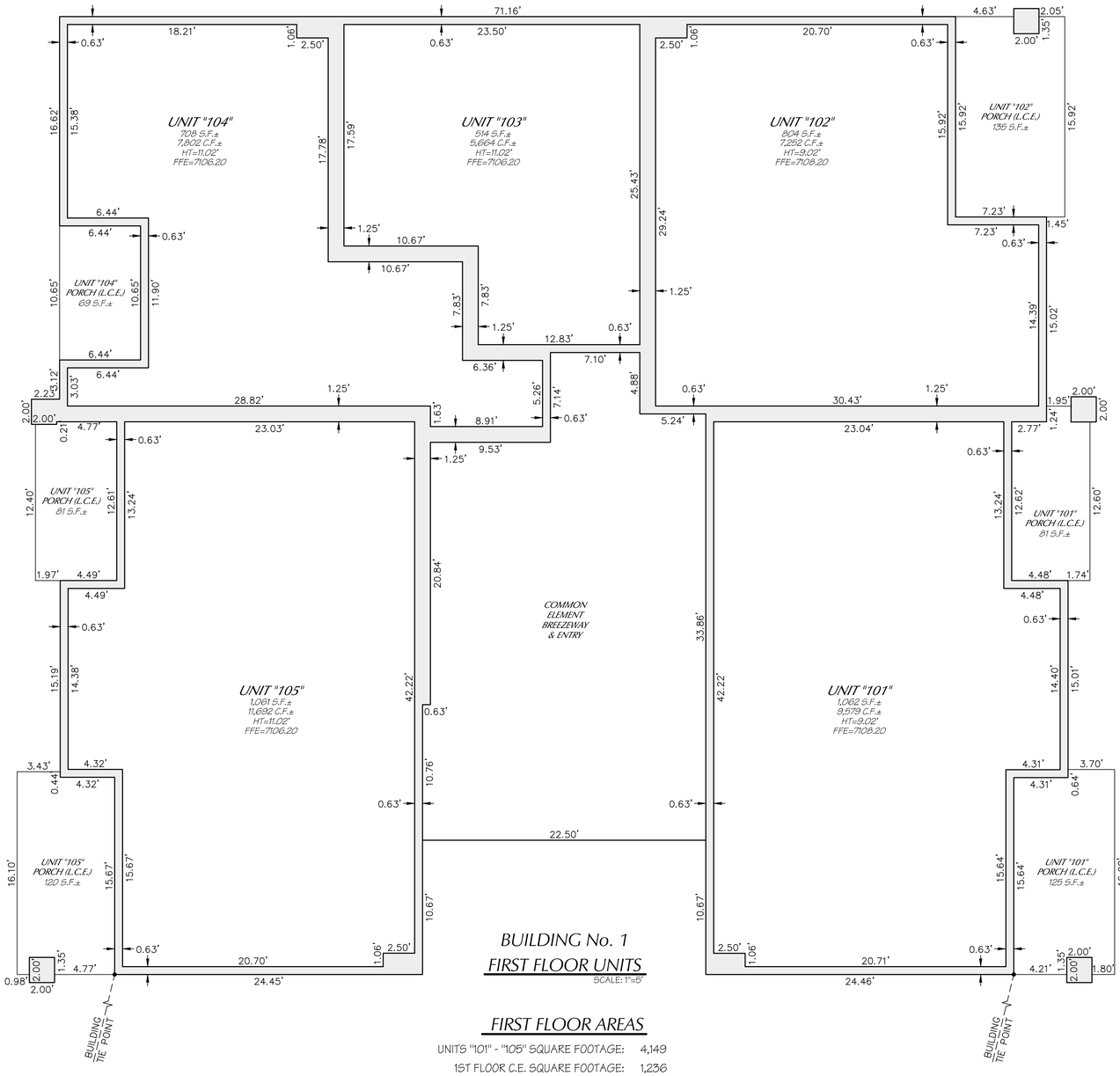
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DESIGNED BY: MW	FN: SHEET-04.DWG	VERT SCALE: N/A	HOR SCALE: 1"=20'
DRAWN BY: MW			
CHECKED BY: KVH			

SITE #9

COF PROJECT # PZ-19-00204

PRELIMINARY PLAT
FOR
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

A SUBDIVISION OF INSTRUMENT #3905535
LOCATED IN THE S1/2 OF SECTION 19,
TOWNSHIP 21 NORTH, RANGE 7 EAST, G&S.R.M.
FLAGSTAFF, COCONINO COUNTY, ARIZONA



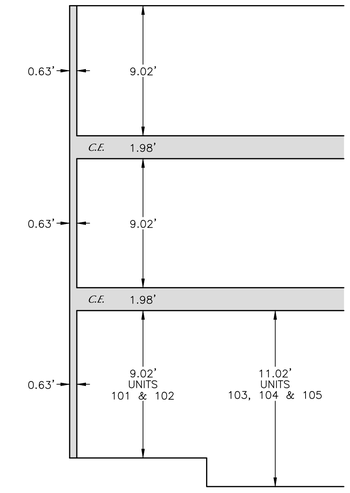
BUILDING No. 1
FIRST FLOOR UNITS
SCALE: 1"=5'

ABBREVIATIONS

FFE	FINISH FLOOR ELEVATION
S.F.	SQUARE FEET
C.F.	CUBIC FEET
HT	HEIGHT
C.E.	COMMON ELEMENT
L.C.E.	LIMITED COMMON ELEMENT

FIRST FLOOR AREAS

UNITS "101" - "105" SQUARE FOOTAGE:	4,149
1ST FLOOR C.E. SQUARE FOOTAGE:	1,236
1ST FLOOR L.C.E. SQUARE FOOTAGE:	611



VERTICAL BOUNDARIES
SCALE: N.T.S.

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING

SHEET NO. 5 OF 14
COF PROJECT # PZ-19-00204

Mogollon Inc
ENGINEERING &SURVEYING
411 N. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

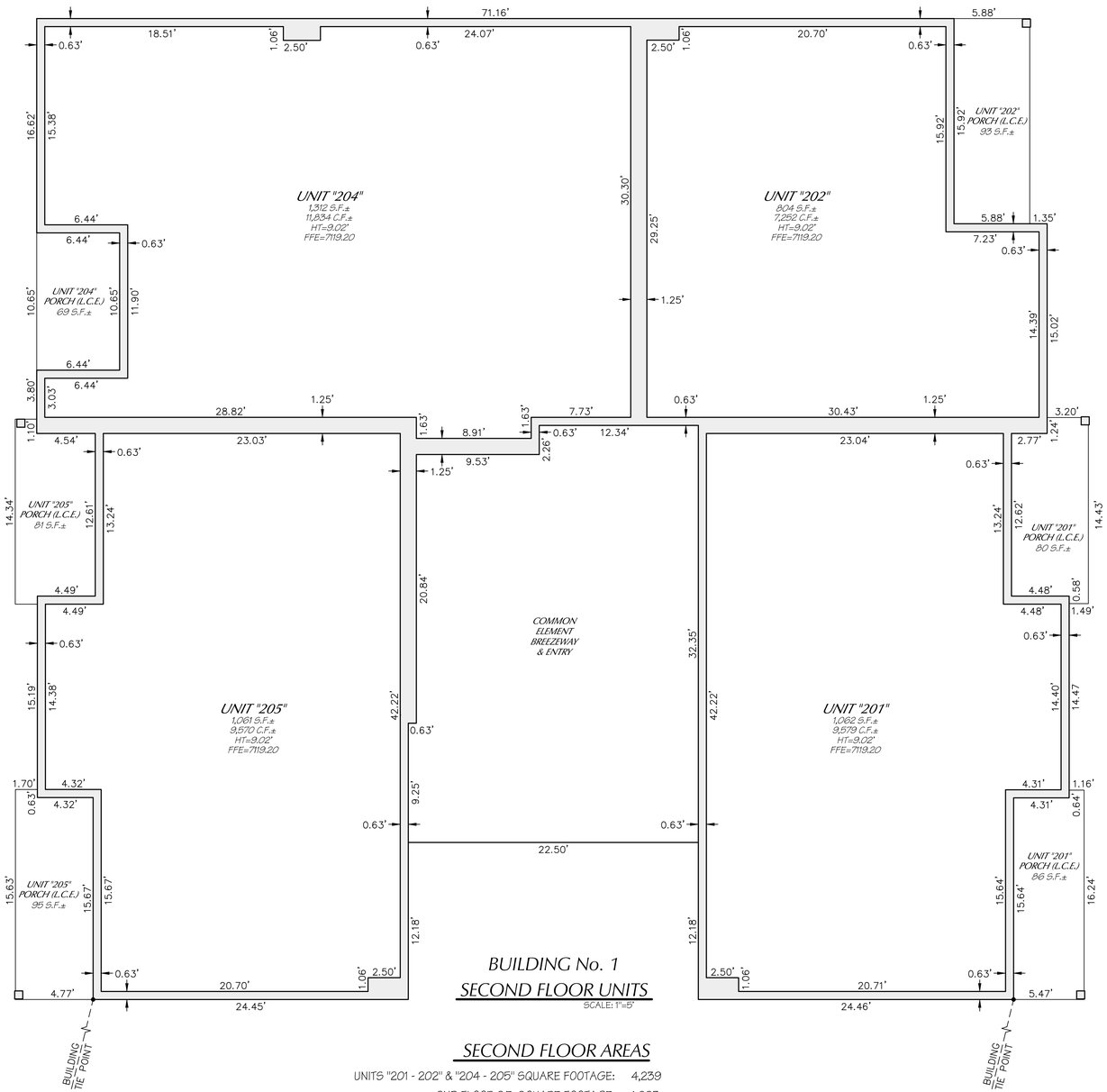
PRELIMINARY PLAT 12/20/22
MIRAMONTE AT PRESIDIO IN THE PINE VI
CONDOMINIUMS FLOOR PLANS AND ELEVATIONS MES# 15159

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING
Signed .....
ARIZONA U.S.A.

DATE: 12/20/22
DESIGNED BY: MK
DRAWN BY: MW
CHECKED BY: KVH
PROJECT NO. 15159
FN: SHEET-05.DWG
VERT SCALE: N/A
HOR SCALE: 1"=5'
REVISIONS: PER C.O.F. COMMENTS DATED 12/6/22

PRELIMINARY PLAT
FOR
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

A SUBDIVISION OF INSTRUMENT #3905535
LOCATED IN THE S1/2 OF SECTION 19,
TOWNSHIP 21 NORTH, RANGE 7 EAST, G&S.R.M.
FLAGSTAFF, COCONINO COUNTY, ARIZONA



BUILDING No. 1
SECOND FLOOR UNITS
SCALE: 1"=5'

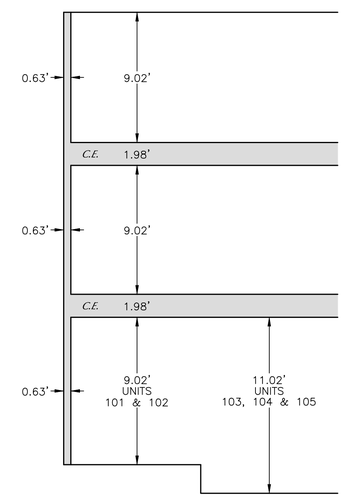
SECOND FLOOR AREAS

UNITS "201 - 202" & "204 - 205" SQUARE FOOTAGE:	4,239
2ND FLOOR C.E. SQUARE FOOTAGE:	1,093
2ND FLOOR L.C.E. SQUARE FOOTAGE:	504

ABBREVIATIONS

FFE	FINISH FLOOR ELEVATION
S.F.	SQUARE FEET
C.F.	CUBIC FEET
HT	HEIGHT
C.E.	COMMON ELEMENT
L.C.E.	LIMITED COMMON ELEMENT

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING



VERTICAL BOUNDARIES
SCALE: N.T.S.

SHEET NO. 6 OF 14
COF PROJECT # PZ-19-00204

Mogollon Inc
ENGINEERING & SURVEYING
411 W. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

PRELIMINARY PLAT
MIRAMONTE AT PRESIDIO IN THE PINE VI
CONDOMINIUMS FLOOR PLANS AND ELEVATIONS MES# 15159

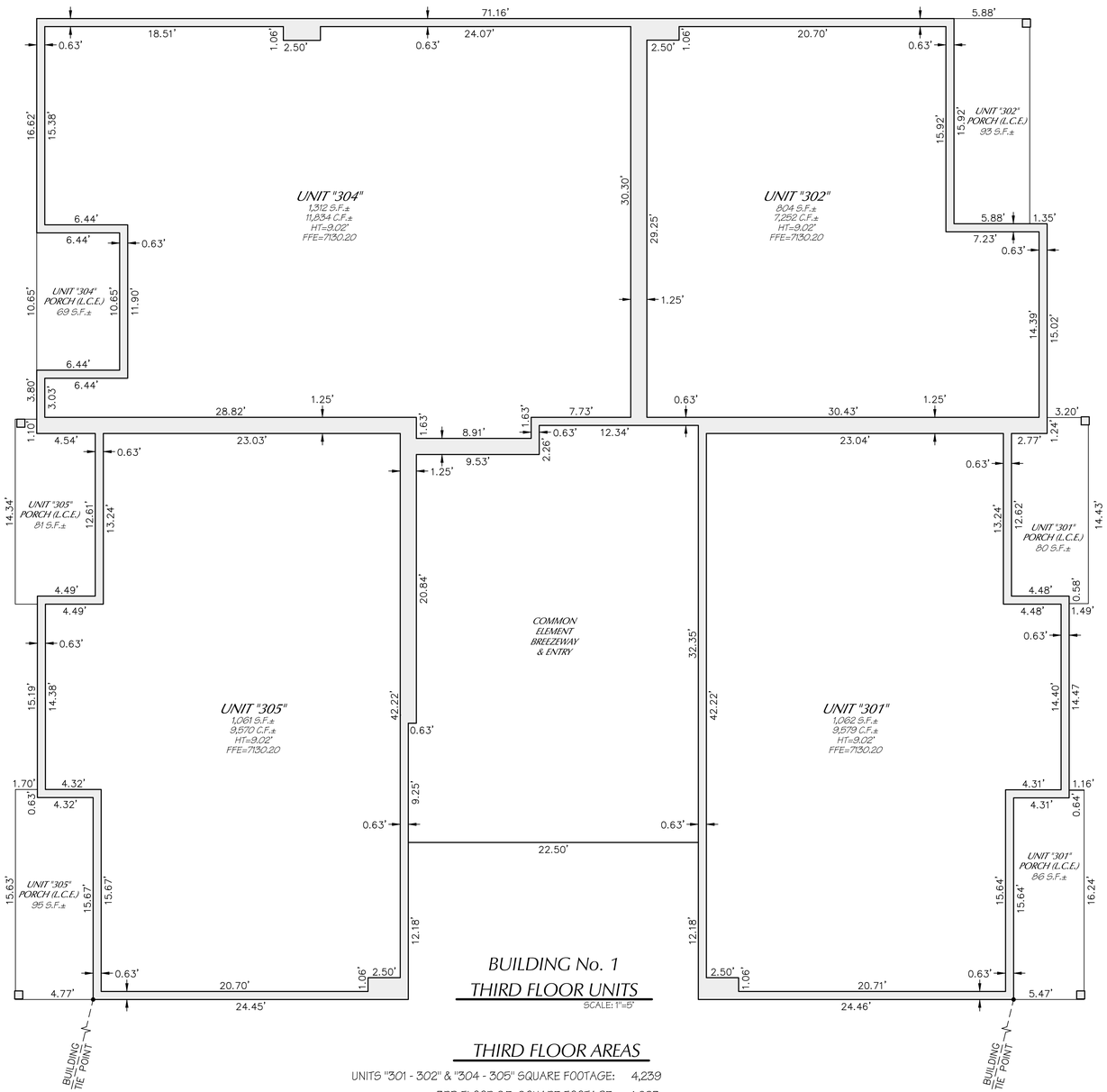
12/20/22

REGISTERED LAND SURVEYOR
CERTIFICATE NO. 15159
PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING
Signed
ARIZONA U.S.A.

DATE: 12/20/22
DESIGNED BY: MW
DRAWN BY: MW
CHECKED BY: KVH
REVISIONS: PER C.O.F. COMMENTS DATED 12/6/22
PROJECT NO. 15159
FN: SHEET-06.DNG
VERT SCALE: N/A
HOR SCALE: 1"=5'

PRELIMINARY PLAT
FOR
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

A SUBDIVISION OF INSTRUMENT #3905535
LOCATED IN THE S1/2 OF SECTION 19,
TOWNSHIP 21 NORTH, RANGE 7 EAST, G&S.R.M.
FLAGSTAFF, COCONINO COUNTY, ARIZONA



BUILDING No. 1
THIRD FLOOR UNITS
SCALE: 1"=5'

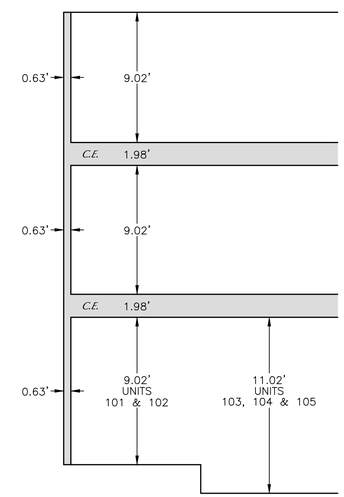
ABBREVIATIONS

FFE	FINISH FLOOR ELEVATION
S.F.	SQUARE FEET
C.F.	CUBIC FEET
HT	HEIGHT
C.E.	COMMON ELEMENT
L.C.E.	LIMITED COMMON ELEMENT

THIRD FLOOR AREAS

UNITS "301 - 302" & "304 - 305" SQUARE FOOTAGE:	4,239
3RD FLOOR C.E. SQUARE FOOTAGE:	1,093
3RD FLOOR L.C.E. SQUARE FOOTAGE:	504

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING



VERTICAL BOUNDARIES
SCALE: N.T.S.

Mogollon Inc
ENGINEERING
& SURVEYING
411 W. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

REGISTERED LAND SURVEYOR
CERTIFICATE NO. 15154
PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING
Signed
ARIZONA U.S.A.

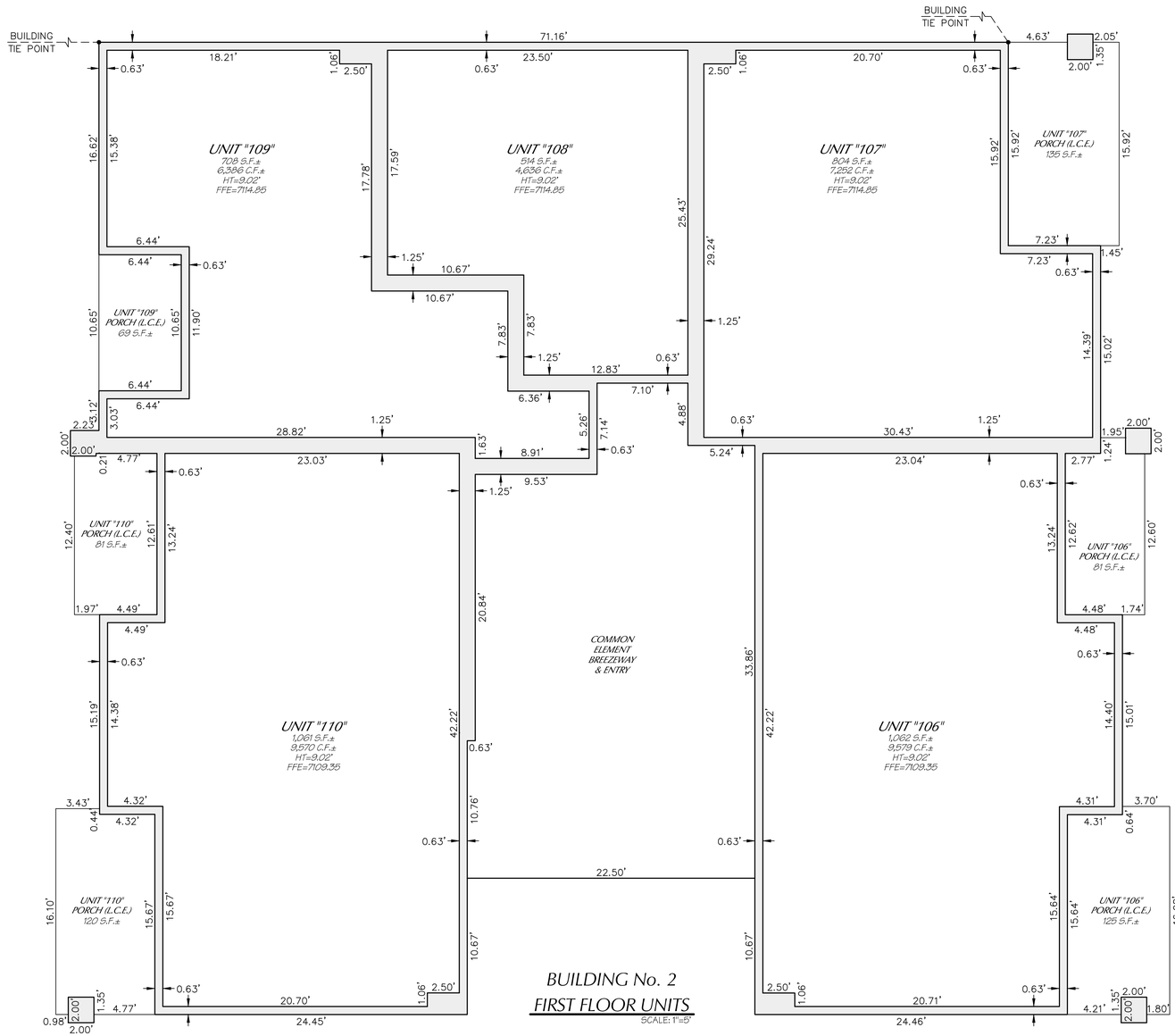
PRELIMINARY PLAT
MIRAMONTE AT PRESIDIO IN THE PINE VI
CONDOMINIUMS FLOOR PLANS AND ELEVATIONS MES# 15159
12/20/22

DATE: 12/20/22
DESIGNED BY: MW
DRAWN BY: MW
CHECKED BY: KVH
REVISIONS: PER C.O.F. COMMENTS DATED 12/6/22
PROJECT NO. 15154
FN: SHEET-07.DWG
VERT SCALE: N/A
HOR SCALE: 1"=5'

COF PROJECT # PZ-19-00204

PRELIMINARY PLAT
FOR
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

A SUBDIVISION OF INSTRUMENT #3905535
LOCATED IN THE S1/2 OF SECTION 19,
TOWNSHIP 21 NORTH, RANGE 7 EAST, G&S.R.M.
FLAGSTAFF, COCONINO COUNTY, ARIZONA



BUILDING No. 2
FIRST FLOOR UNITS
SCALE: 1"=5'

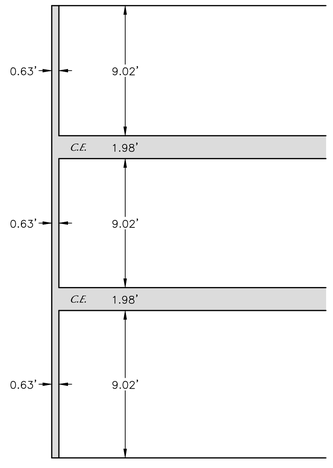
ABBREVIATIONS

FFE	FINISH FLOOR ELEVATION
S.F.	SQUARE FEET
C.F.	CUBIC FEET
HT	HEIGHT
C.E.	COMMON ELEMENT
L.C.E.	LIMITED COMMON ELEMENT

FIRST FLOOR AREAS

UNITS "106" - "110" SQUARE FOOTAGE:	4,149
1ST FLOOR C.E. SQUARE FOOTAGE:	1,236
1ST FLOOR L.C.E. SQUARE FOOTAGE:	611

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING



VERTICAL BOUNDARIES
SCALE: N.T.S.

SHEET NO. 8 OF 14
COF PROJECT # PZ-19-00204

Mogollon Inc
ENGINEERING &SURVEYING
411 W. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

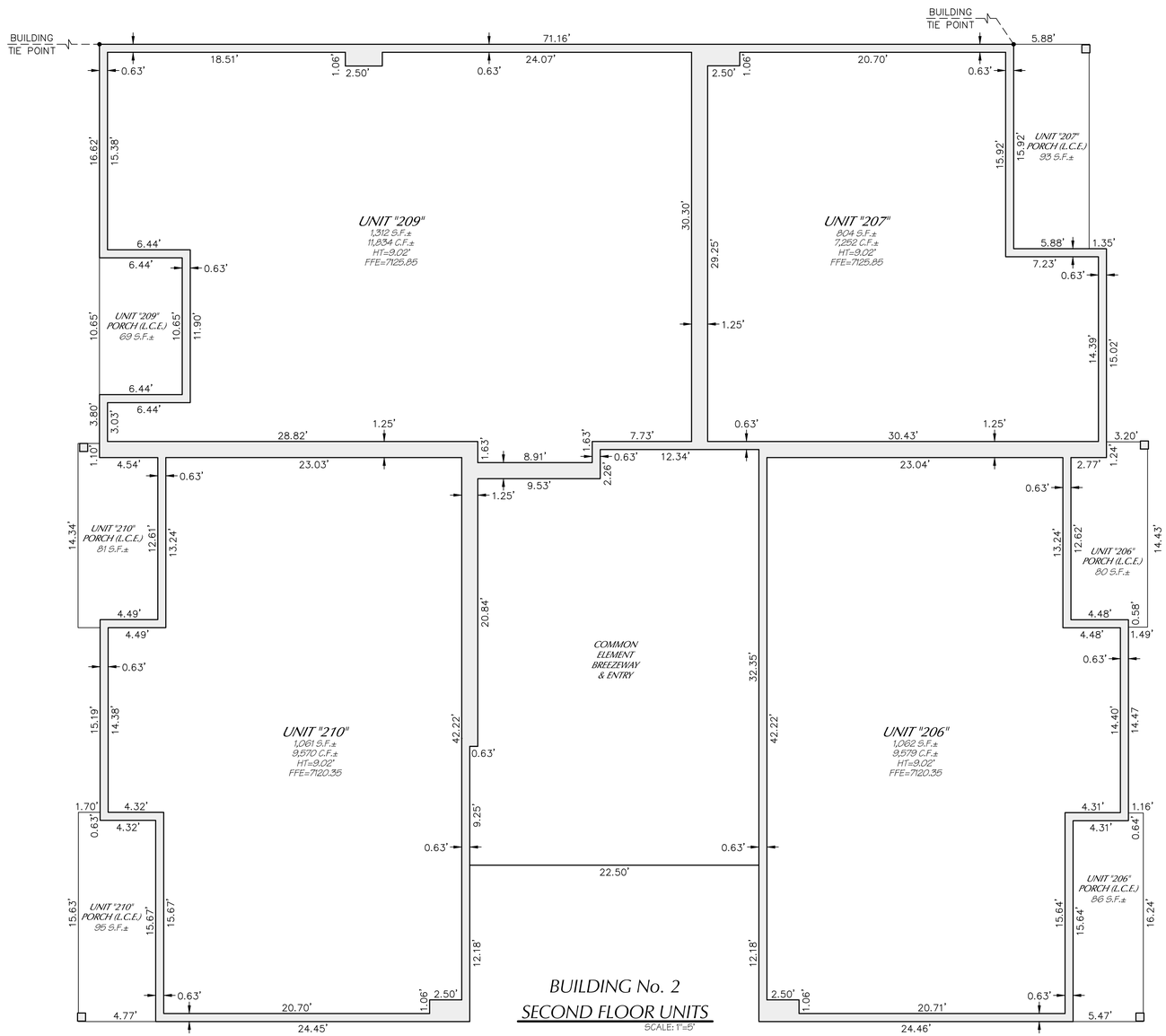
REGISTERED LAND SURVEYOR
CERTIFICATE NO.
PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING
Signed
ARIZONA U.S.A.

PRELIMINARY PLAT
MIRAMONTE AT PRESIDIO IN THE PINE VI
CONDOMINIUMS FLOOR PLANS AND ELEVATIONS MES# 15159
12/20/22

DATE: 12/20/22
DESIGNED BY: MW
DRAWN BY: MW
CHECKED BY: KVH
PROJECT NO. 1589
FN: SHEET-08.DWG
VERT SCALE: N/A
HOR SCALE: 1"=5'
REVISIONS PER C.O.F. COMMENTS DATED 12/6/22

PRELIMINARY PLAT
FOR
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

A SUBDIVISION OF INSTRUMENT #3905535
LOCATED IN THE S1/2 OF SECTION 19,
TOWNSHIP 21 NORTH, RANGE 7 EAST, G&S.R.M.
FLAGSTAFF, COCONINO COUNTY, ARIZONA



BUILDING No. 2
SECOND FLOOR UNITS
SCALE: 1"=5'

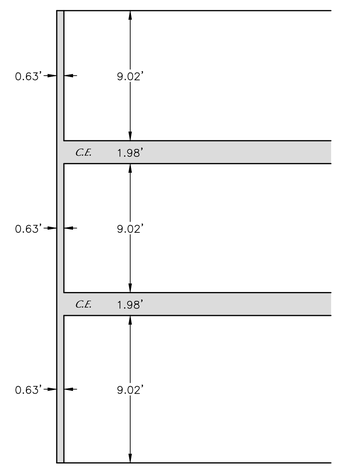
ABBREVIATIONS

FFE	FINISH FLOOR ELEVATION
S.F.	SQUARE FEET
C.F.	CUBIC FEET
HT	HEIGHT
C.E.	COMMON ELEMENT
L.C.E.	LIMITED COMMON ELEMENT

SECOND FLOOR AREAS

UNITS "206 - 207" & "209 - 210" SQUARE FOOTAGE:	4,239
2ND FLOOR C.E. SQUARE FOOTAGE:	1,093
2ND FLOOR L.C.E. SQUARE FOOTAGE:	504

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING



VERTICAL BOUNDARIES
SCALE: N.T.S.

SHEET NO. 9 OF 14
COF PROJECT # PZ-19-00204

Mogollon Inc
ENGINEERING & SURVEYING
411 W. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

REGISTERED LAND SURVEYOR
CERTIFICATE NO. 15159
PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING
Signed _____
ARIZONA U.S.A.

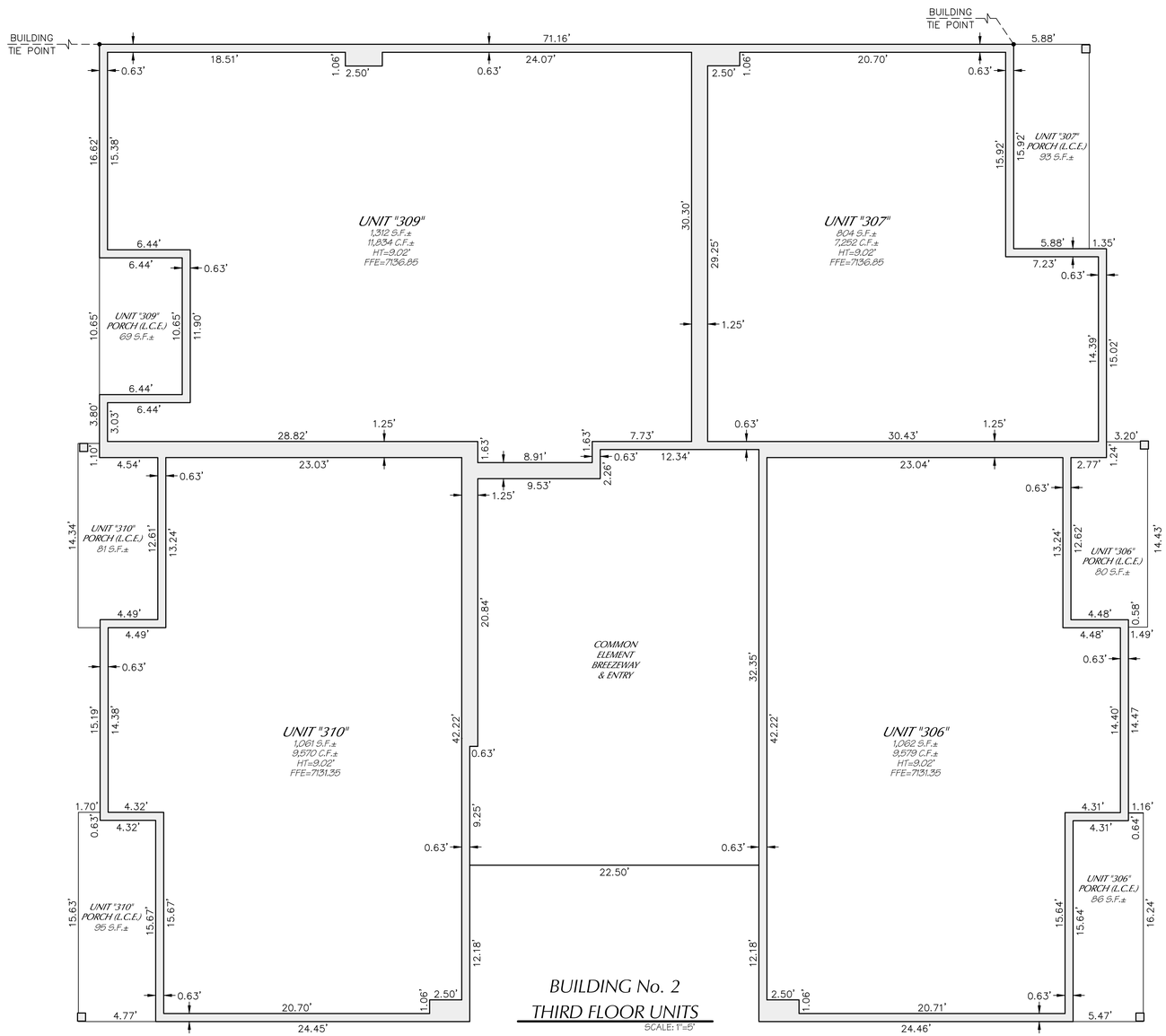
PRELIMINARY PLAT
MIRAMONTE AT PRESIDIO IN THE PINE VI
CONDOMINIUMS FLOOR PLANS AND ELEVATIONS MES# 15159

12/20/22

DATE: 12/20/22
DESIGNED BY: TMH
DRAWN BY: TMH
CHECKED BY: KVH
PROJECT NO. 15159
FN: SHEET-09.DWG
VERT SCALE: N/A
HOR SCALE: 1"=5'
REVISIONS PER C.O.F. COMMENTS DATED 12/6/22

PRELIMINARY PLAT
FOR
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

A SUBDIVISION OF INSTRUMENT #3905535
LOCATED IN THE S1/2 OF SECTION 19,
TOWNSHIP 21 NORTH, RANGE 7 EAST, G&S.R.M.
FLAGSTAFF, COCONINO COUNTY, ARIZONA



BUILDING No. 2
THIRD FLOOR UNITS
SCALE: 1"=5'

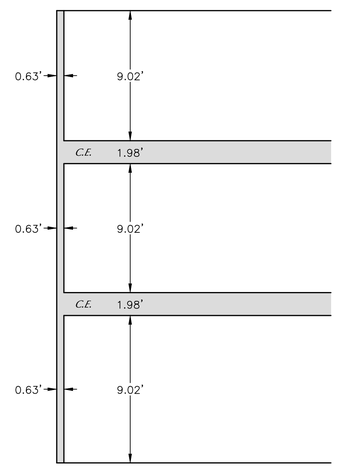
ABBREVIATIONS

FFE	FINISH FLOOR ELEVATION
S.F.	SQUARE FEET
C.F.	CUBIC FEET
HT	HEIGHT
C.E.	COMMON ELEMENT
L.C.E.	LIMITED COMMON ELEMENT

THIRD FLOOR AREAS

UNITS "306 - 307" & "309 - 310" SQUARE FOOTAGE:	4,239
3RD FLOOR C.E. SQUARE FOOTAGE:	1,093
3RD FLOOR L.C.E. SQUARE FOOTAGE:	504

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING



VERTICAL BOUNDARIES
SCALE: N.T.S.

SHEET NO. 10 OF 14
COF PROJECT # PZ-19-00204

Mogollon Inc
ENGINEERING & SURVEYING
411 W. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

PRELIMINARY PLAT
MIRAMONTE AT PRESIDIO IN THE PINE VI
CONDOMINIUMS FLOOR PLANS AND ELEVATIONS MES# 15159

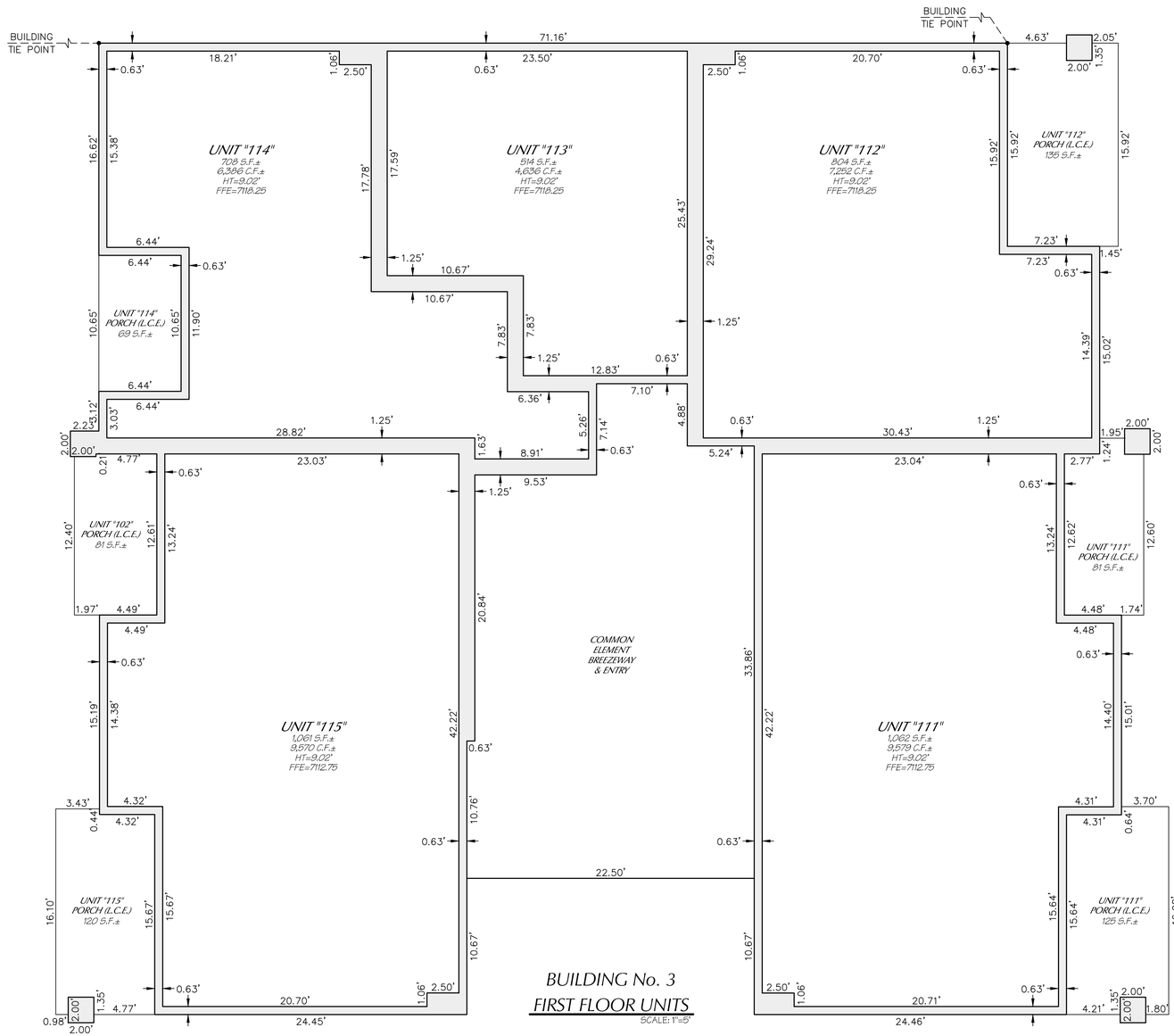
12/20/22

REGISTERED LAND SURVEYOR
CERTIFICATE NO. 15159
PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING
Signed _____
ARIZONA U.S.A.

DATE: 12/20/22
DESIGNED BY: TMH
DRAWN BY: TMH
CHECKED BY: KVH
PROJECT NO. 15159
FN: SHEET-10.DWG
VERT SCALE: N/A
HOR SCALE: 1"=5'
REVISIONS PER C.O.F. COMMENTS DATED 12/6/22

PRELIMINARY PLAT
FOR
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

A SUBDIVISION OF INSTRUMENT #3905535
LOCATED IN THE S1/2 OF SECTION 19,
TOWNSHIP 21 NORTH, RANGE 7 EAST, G&S.R.M.
FLAGSTAFF, COCONINO COUNTY, ARIZONA



BUILDING No. 3
FIRST FLOOR UNITS
SCALE: 1"=5'

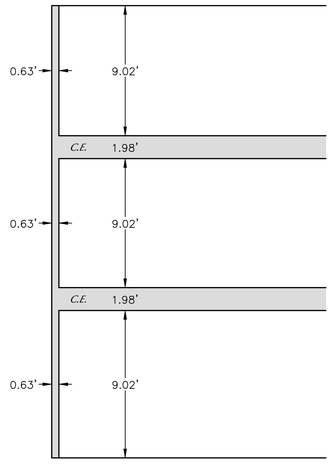
ABBREVIATIONS

FFE	FINISH FLOOR ELEVATION
S.F.	SQUARE FEET
C.F.	CUBIC FEET
HT	HEIGHT
C.E.	COMMON ELEMENT
L.C.E.	LIMITED COMMON ELEMENT

FIRST FLOOR AREAS

UNITS "111" - "115" SQUARE FOOTAGE:	4,149
1ST FLOOR C.E. SQUARE FOOTAGE:	1,236
1ST FLOOR L.C.E. SQUARE FOOTAGE:	611

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING



VERTICAL BOUNDARIES
SCALE: N.T.S.

SHEET NO. 11 OF 14
COF PROJECT # PZ-19-00204

Mogollon Inc
ENGINEERING & SURVEYING
411 W. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

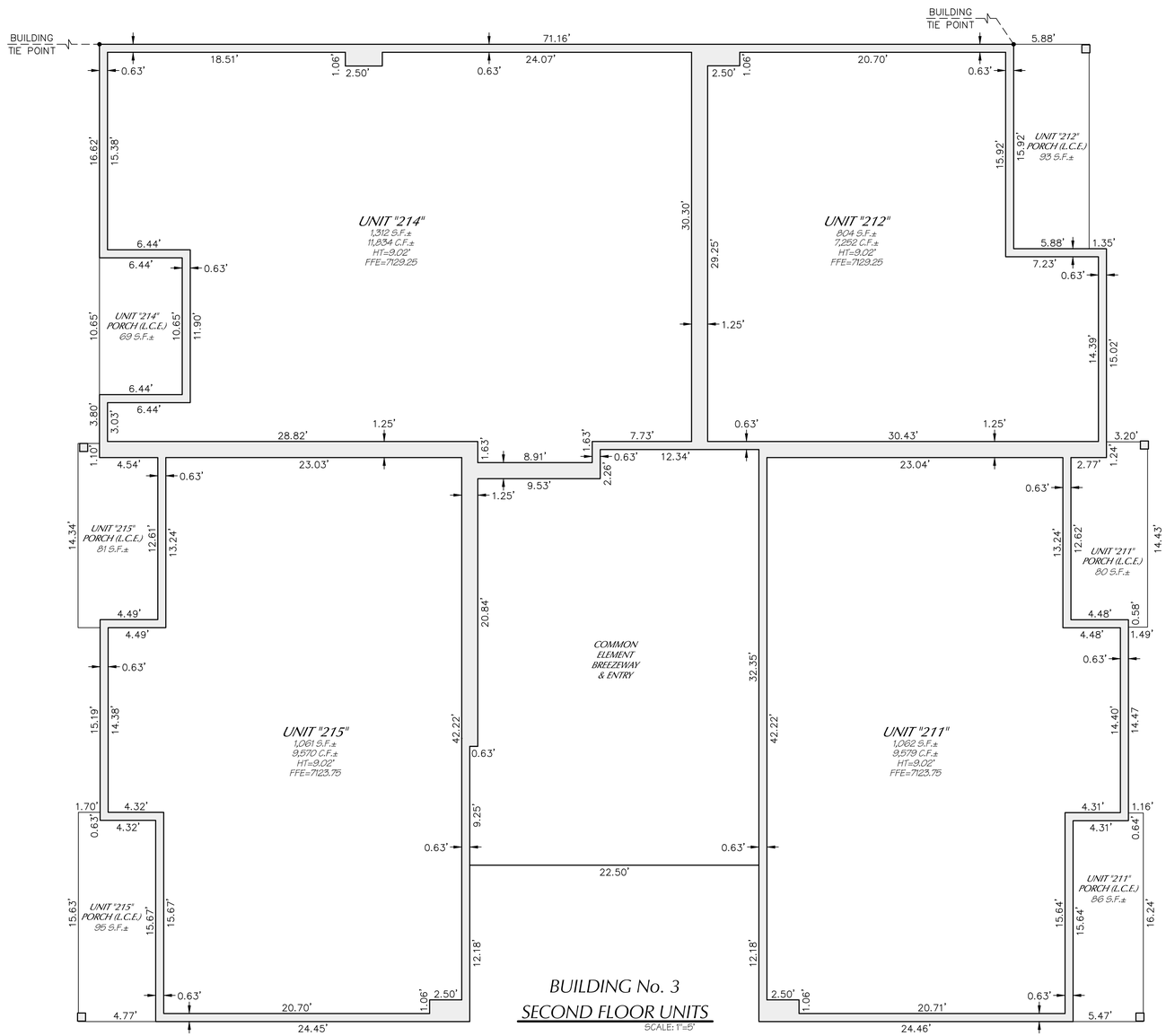
REGISTERED LAND SURVEYOR
CERTIFICATE NO.
PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING
Signed
ARIZONA U.S.A.

PRELIMINARY PLAT
MIRAMONTE AT PRESIDIO IN THE PINE VI
CONDOMINIUMS FLOOR PLANS AND ELEVATIONS MES# 15159
12/20/22

DATE: 12/20/22
DESIGNED BY: MW
DRAWN BY: MW
CHECKED BY: KVH
PROJECT NO. 1589
FN: SHEET-11.DWG
VERT SCALE: N/A
HOR SCALE: 1"=5'
REVISIONS PER C.O.F. COMMENTS DATED 12/6/22

PRELIMINARY PLAT
FOR
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

A SUBDIVISION OF INSTRUMENT #3905535
LOCATED IN THE S1/2 OF SECTION 19,
TOWNSHIP 21 NORTH, RANGE 7 EAST, G&S.R.M.
FLAGSTAFF, COCONINO COUNTY, ARIZONA



BUILDING No. 3
SECOND FLOOR UNITS
SCALE: 1"=5'

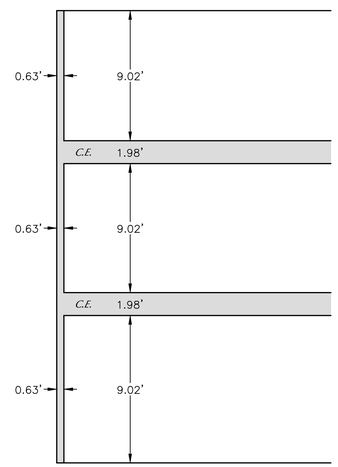
ABBREVIATIONS

FFE	FINISH FLOOR ELEVATION
S.F.	SQUARE FEET
C.F.	CUBIC FEET
HT	HEIGHT
C.E.	COMMON ELEMENT
L.C.E.	LIMITED COMMON ELEMENT

SECOND FLOOR AREAS

UNITS "211 - 212" & "214 - 215" SQUARE FOOTAGE:	4,239
2ND FLOOR C.E. SQUARE FOOTAGE:	1,093
2ND FLOOR L.C.E. SQUARE FOOTAGE:	504

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING



VERTICAL BOUNDARIES
SCALE: N.T.S.

SHEET NO. 12 OF 14
COF PROJECT # PZ-19-00204

Mogollon Inc
ENGINEERING & SURVEYING
411 W. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

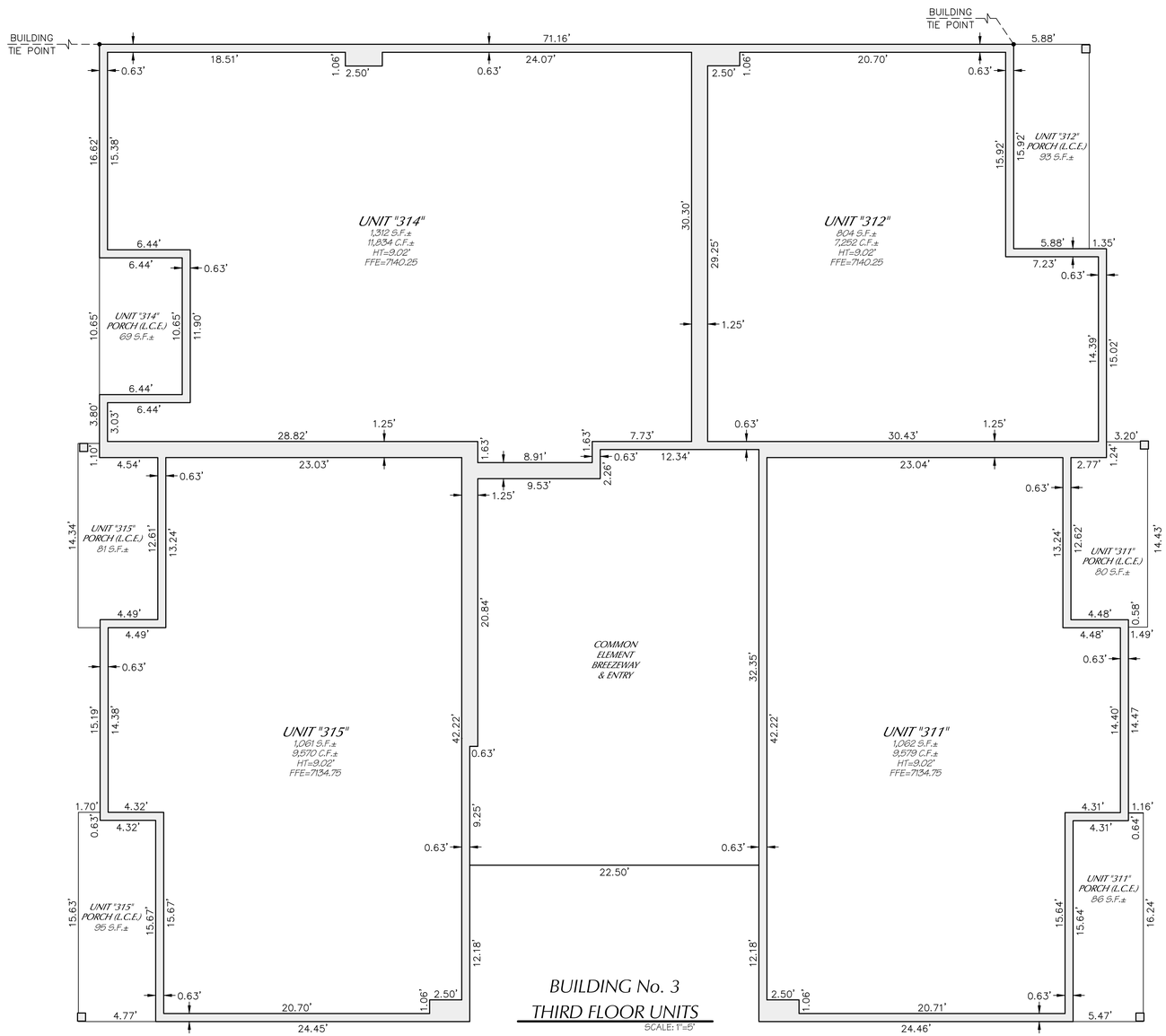
REGISTERED LAND SURVEYOR
CERTIFICATE NO. 15159
PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING
Signed _____
ARIZONA U.S.A.

PRELIMINARY PLAT
MIRAMONTE AT PRESIDIO IN THE PINE VI
CONDOMINIUMS FLOOR PLANS AND ELEVATIONS MES# 15159
12/20/22

DATE: 12/20/22	REVISIONS PER C.O.F. COMMENTS DATED 12/6/22
DESIGNED BY: TMH	PROJECT NO. 1559
DRAWN BY: TMH	FN: SHEET-12.DWG
CHECKED BY: KVH	VERT SCALE: N/A
	HOR SCALE: 1"=5'

PRELIMINARY PLAT
FOR
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

A SUBDIVISION OF INSTRUMENT #3905535
LOCATED IN THE S1/2 OF SECTION 19,
TOWNSHIP 21 NORTH, RANGE 7 EAST, G&S.R.M.
FLAGSTAFF, COCONINO COUNTY, ARIZONA



BUILDING No. 3
THIRD FLOOR UNITS
SCALE: 1"=5'

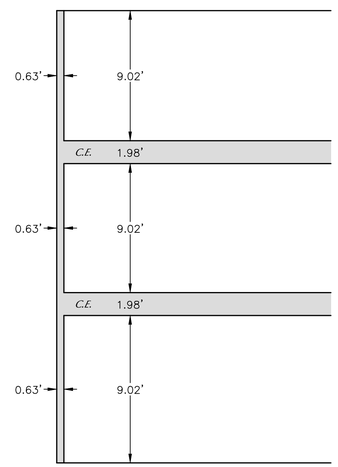
THIRD FLOOR AREAS

UNITS "311 - 312" & "314 - 315" SQUARE FOOTAGE:	4,239
3RD FLOOR C.E. SQUARE FOOTAGE:	1,093
3RD FLOOR L.C.E. SQUARE FOOTAGE:	504

ABBREVIATIONS

FFE	FINISH FLOOR ELEVATION
S.F.	SQUARE FEET
C.F.	CUBIC FEET
HT	HEIGHT
C.E.	COMMON ELEMENT
L.C.E.	LIMITED COMMON ELEMENT

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING



VERTICAL BOUNDARIES
SCALE: N.T.S.

SHEET NO. 13 OF 14
COF PROJECT # PZ-19-00204

Mogollon Inc
ENGINEERING & SURVEYING
411 W. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

REGISTERED LAND SURVEYOR
CERTIFICATE NO. 15159
PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING
Date Signed
ARIZONA U.S.A.

PRELIMINARY PLAT
MIRAMONTE AT PRESIDIO IN THE PINE VI
CONDOMINIUMS FLOOR PLANS AND ELEVATIONS MES# 15159
12/20/22

DATE: 12/20/22	REVISIONS PER C.O.F. COMMENTS DATED 12/6/22
DESIGNED BY: TMH	PROJECT NO. 1559
DRAWN BY: TMH	FN: SHEET-13.DWG
CHECKED BY: KVH	VERT SCALE: N/A
	HOR SCALE: 1"=5'

EXISTING CONTOURS

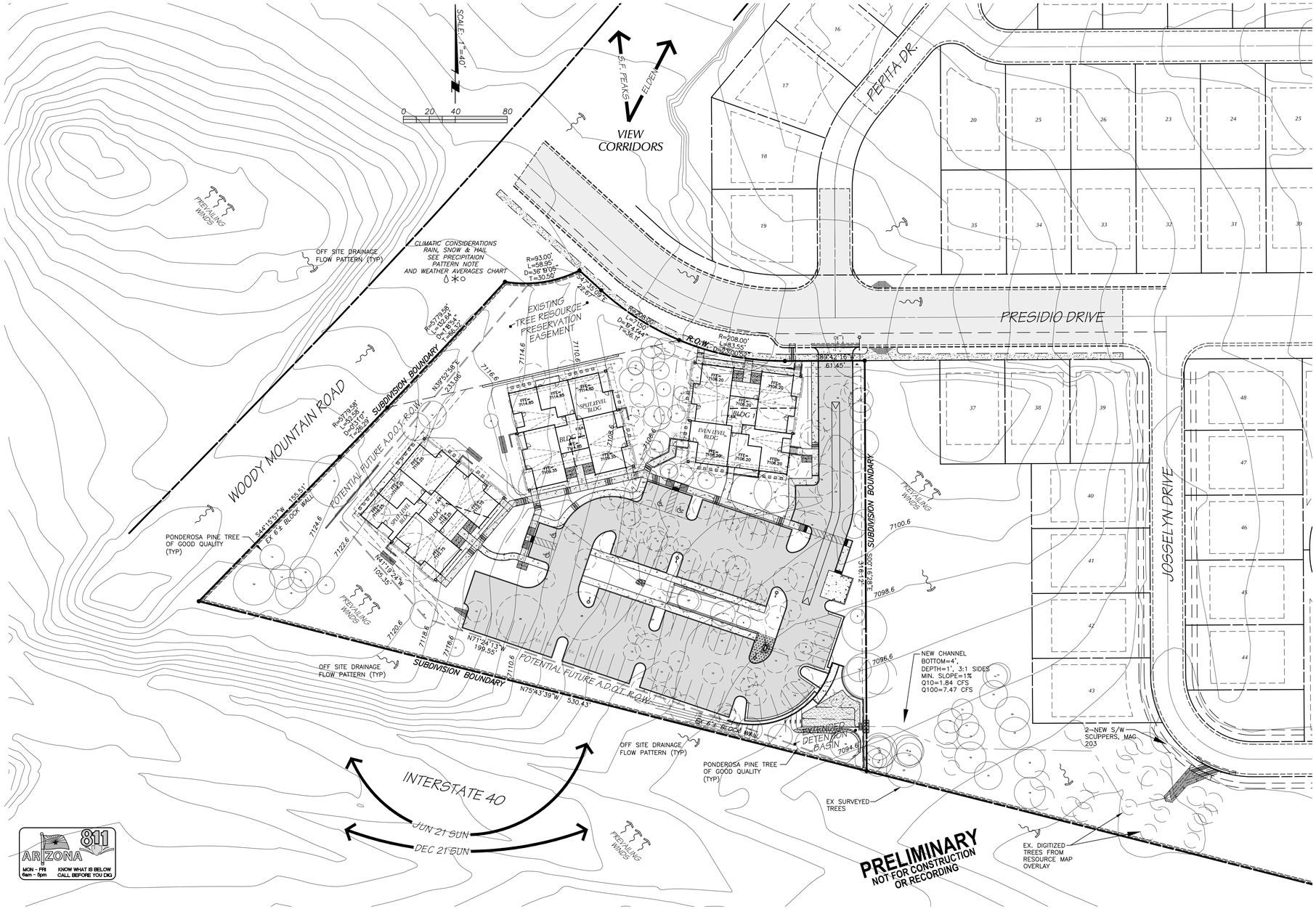
THE EXISTING CONTOURS SHOWN HEREON ARE BASED ON CITY OF FLAGSTAFF G.I.S. DATA WHICH IS BASED ON THE NAVD 88 DATUM. THE PRESIDO IN THE PINES APPROVED CONSTRUCTION DOCUMENTS ARE BASED ON THE NGVD 29 DATUM. THE CONTOURS SHOWN HAVE BEEN LABELED TO REFLECT THE 3.412' DIFFERENCE (BASED ON VERTICAL DATUM CONVERSION FACTORS FOR THE CLAY AVENUE WASH - FEMA FLOOD INSURANCE STUDY (DATED SEPTEMBER 3, 2010))

STORMWATER NOTE:

PER THE TECHNICAL DRAINAGE STUDY FOR PRESIDIO IN THE PINES, PREPARED BY "TRC–BV ENGINEERING NEVADA", DATED SEPTEMBER 3, 2004, AND THE CONSTRUCTION PHASING PLAN FOR PRESIDIO IN THE PINES, PREPARED BY MARTIN & MARTIN CIVIL ENGINEERS, DATED JUNE 6, 2006 THE PROJECT SITE HAD A DEVELOPED SCS RUNOFF CURVE NUMBER OF 82. THE ORIGINAL REPORT AND PHASING PLAN SHOWED THIS SITES DEVELOPED RUNOFF ENTERING THE ADOT RIGHT–OF–WAY AND DISCHARGING EASTERLY UN–DETAINED INTO THE UNNAMED EPHEMERAL WASH ALONG PRESIDIO'S EASTERLY BOUNDARY. THE ORIGINAL REPORT AND PHASING PLAN OVERALL BALANCED THE TOTAL DEVELOPED RUNOFF TO MATCH THE EXISTING UN–DEVELOPED CONDITION.

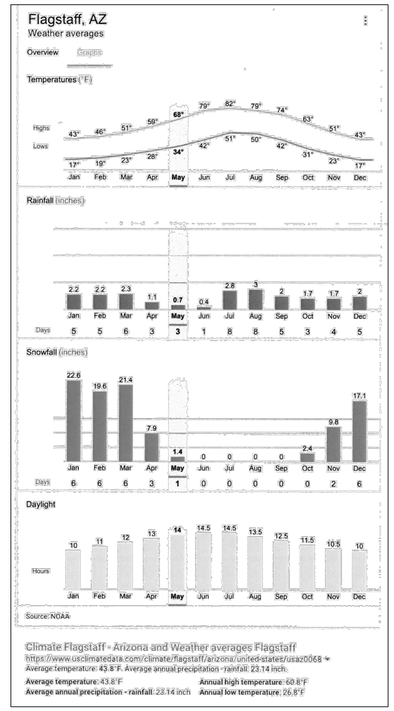
UNDER THE CURRENT UN–DEVELOPED CONDITION A SMALL PORTION OF THE SITE'S RUNOFF DRAINS EASTERLY ALONG THE I–40 RIGHT–OF–WAY WALL, INSIDE THE PRESIDIO'S BOUNDARY TO THE UNNAMED WASH AND A MAJORITY PORTION OF THE RUNOFF DRAINS TOWARDS THE DOWNSTREAM STREET SECTIONS AND DISCHARGES INTO THE EXISTING DETENTION BASIN NO. 4.

WE PROPOSE TO PROVIDE A DETENTION BASIN TO ADDRESS ANY INCREASE IN RUNOFF COMPARED TO THE ORIGINAL REPORT'S DEVELOPED RUNOFF CURVE NUMBER OF 82. THIS RUNOFF DISCHARGE WILL BE CHANNELIZED ACROSS TRACT "U" TO A SET OF NEW SIDEWALK SCUPPERS AT THE CURVE ON MISSION TIMBER CIRCLE.



811 ARIZONA — MON - FRI 6am - 5pm — KNOW WHAT IS BELOW CALL BEFORE YOU DIG

WEATHER AVERAGES CHART



SLOPES

THERE ARE NO SLOPES OVER 17% LOCATED WITHIN THE PROJECT AREA.

PRECIPITATION PATTERN NOTE

THERE ARE TWO DISTINCT PERIODS OF PRECIPITATION IN FLAGSTAFF. THE FIRST OCCURS DURING THE WINTER MONTHS FROM NOVEMBER THROUGH APRIL WHEN THE JET STREAM CAN BE LOCATED OVER THE STATE ALLOWING PACIFIC STORM SYSTEMS TO MOVE OVERHEAD. THE OTHER DISTINCT PERIOD IS CLASSIFIED AS THE SUMMER RAINY SEASON, OR 'SUMMER MONSOON.' THE MONSOON RAINY PERIOD USUALLY OCCURS DURING JULY AND AUGUST WHEN MOST OF ARIZONA IS SUBJECTED TO WIDESPREAD THUNDERSTORM ACTIVITY. THESE THUNDERSTORMS ARE EXTREMELY VARIABLE IN INTENSITY AND LOCATION AND OCCUR MAINLY BETWEEN THE HOURS OF 11 a.m AND 6 p.m.. SOME OF THESE STORMS CAN REACH SEVERE LEVELS, WITH LARGE HAIL, DAMAGING WINDS, AND OCCASIONALLY EVEN A TORNADO. (EXCERPT FROM THE CITY OF FLAGSTAFF SUSTAINABILITY PROGRAM RECOMMENDATIONS - CLIMATE SECTION - DATED OCTOBER 17, 2012)

SOIL PROPERTIES

SOILS ARE BROLLIAR STONY CLAY LOAM BASED ON INFORMATION PROVIDED BY THE U.S DEPT. OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE - CUSTOM SOIL RESOURCE REPORT (DATED MARCH 26, 2020)

NOTE

THERE ARE NO PREHISTORIC OR HISTORIC SITES, STRUCTURES OR ROUTES LOCATED ON THE SUBJECT PARCELS.

SHEET NO. 14 OF 14

COF PROJECT # PZ-19-00204

Mogollon Inc
ENGINEERING & SURVEYING
411 W. Santa Fe Avenue
Flagstaff, Arizona 86001
Phone: 928-214-0214

12/20/22
MES# 15159

AREA MAP
MIRAMONTE AT PRESIDIO
IN THE PINES VI CONDOMINIUMS

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

DATE: 12/20/22
DESIGNED BY:
DRAWN BY:
CHECKED BY: KVH

PROJECT NO. 15159
FN: SHEET-14.DWG
VERT SCALE: N/A
HOR SCALE: N/A

REVISIONS: PER C.O.F. COMMENTS DATED 12/8/22

Miramonte at Presidio in the Pines VI Condominiums Preliminary Plat

(PZ-19-00204-05)

City Council | March 21, 2023

Alaxandra Pucciarelli | Current Planning Manager

CITY OF FLAGSTAFF · ARIZONA · ESTABLISHED 1882 ·

TEAM FLAGSTAFF

WE MAKE THE CITY BETTER

Request Overview

- Request from Presidio Tract M, LLC for Preliminary Plat approval Miramonte at Presidio in the Pines VI Condominiums located at 2950 West Presidio Drive
- Plats are not discretionary reviews. Plats are reviewed and approved based on conformance with City Code

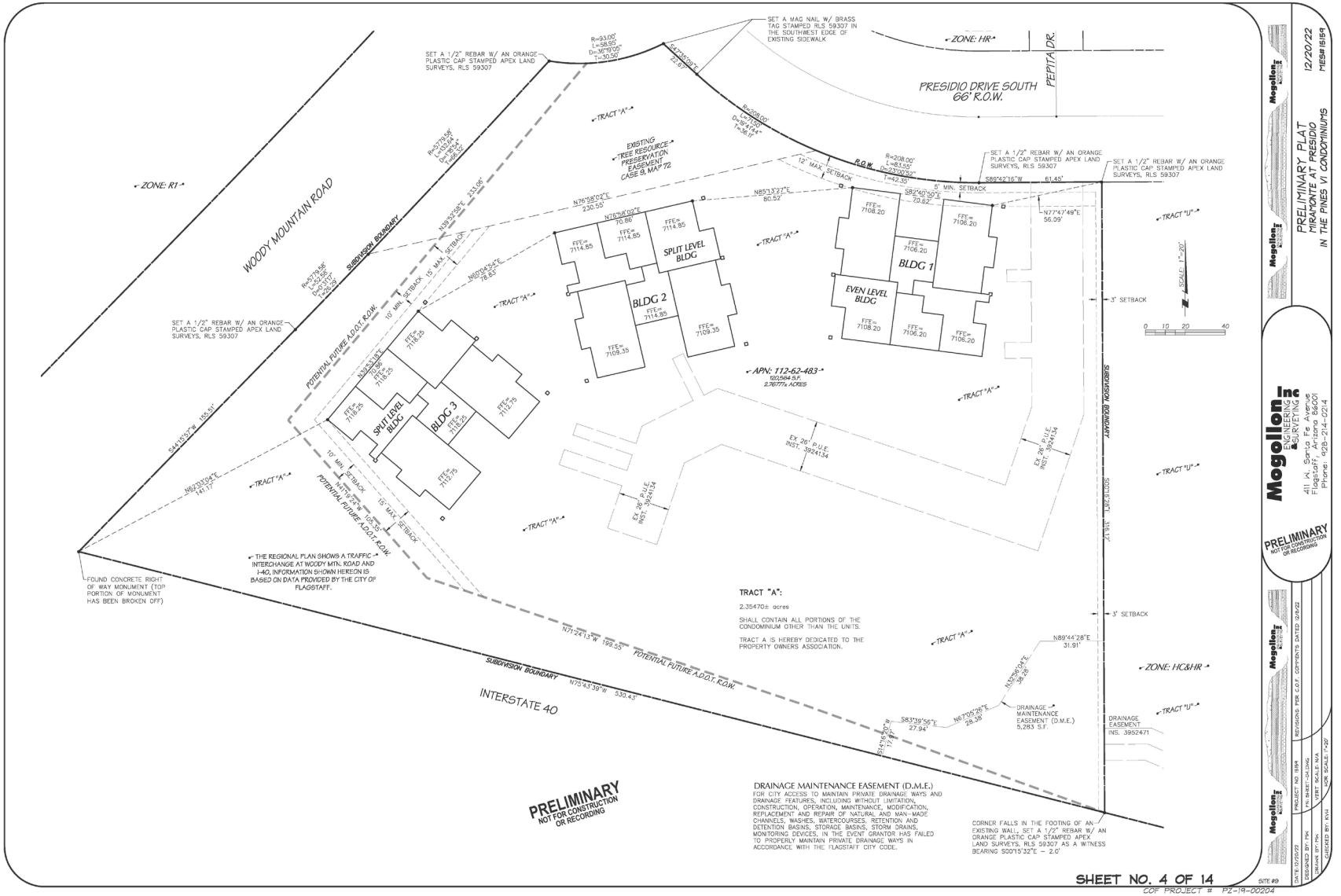


Condominium Plat

- Vertical and horizontal boundaries of residential units
- Limited Common Elements are associated with individual units (porches and decks)
- Common Elements are shared among all owners
  - Common areas in the building (breezeway/entryway, spaces between walls and floor plates, mechanical elements, etc.)
  - Tract A - open space, resource protection, parking, ingress/egress, drainage, etc.
- **Purpose of plat is to allow each unit to be sold individually**

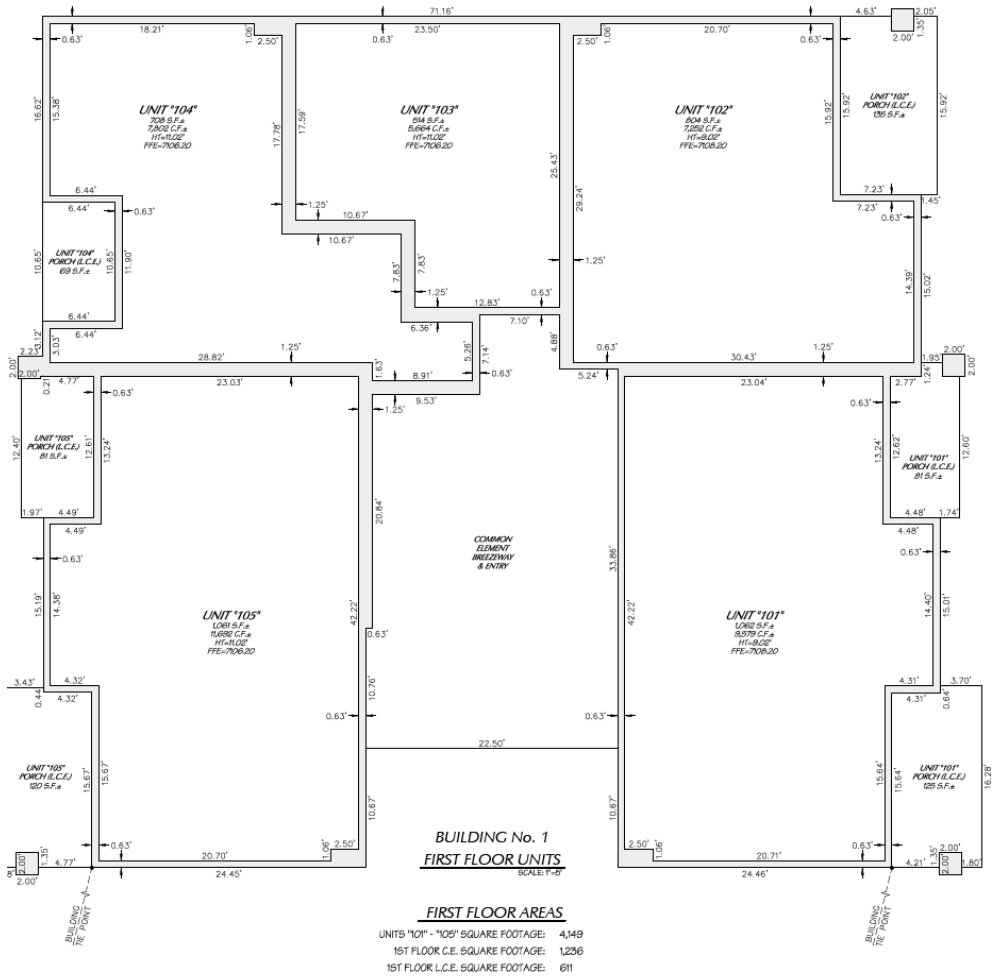
Condominium Plat

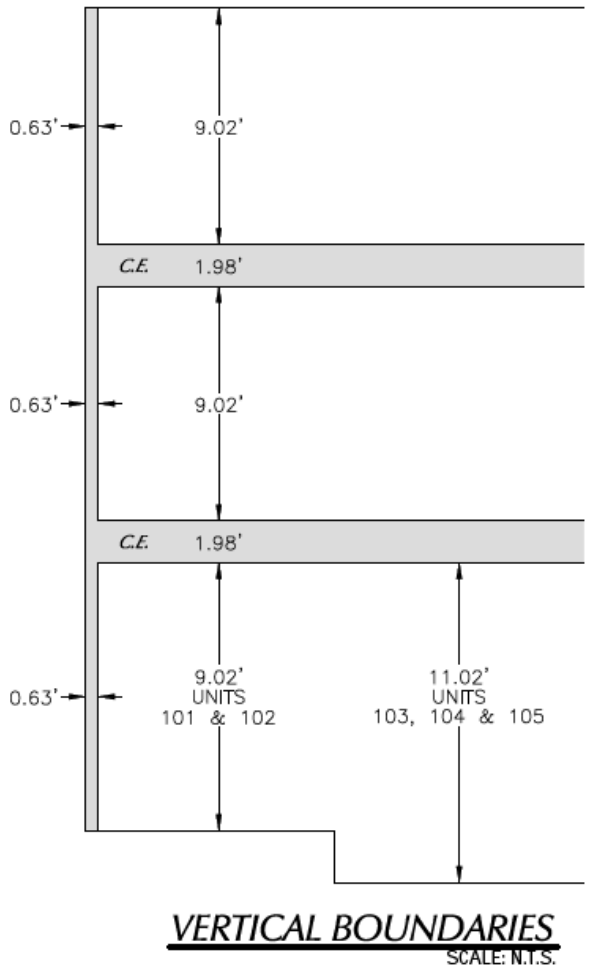
- Identifies tracts, easements, and unit locations
- Does not create lots through the division of land (Subdivision Plat)



Condominium Plat

- Identifies unit airspace by horizontal & vertical boundaries





Finding #1: Meets Zoning Code

Meets requirements of the specific zoning district

- Highway Commercial (HC) zone allows multifamily residential as a Planned Residential Development with a Conditional Use Permit
  - Transect zone, Building Type, and Private Frontage Type standards guide building form/placement
  - Meets T4N.2, Apartment Building Type, and Courtyard Private Frontage Type standards
  - 39 residential units on 2.77 acres meets HC zone standards for density (10-22 units/acre allowed; 14 units/acre proposed)
- Meets Landscaping, Open Space, and Resource Protection standards

Finding #2: Meets Subdivisions Code

Meets Subdivision and Land Split Regulations

- Preliminary Plat procedures and application requirements
- Minimum Required Subdivision Improvements
  - Identified in public systems analyses
- Subdivision Standards and Regulations
  - Includes Lot Design, Street Design, Block Design (not applicable to Condo Plat)
  - Easement Design (plat includes Public Utility Easement and Drainage Easement)

Finding #3: Meets Engineering Standards

Traffic, Water, Wastewater, Stormwater

- Traffic Impact Analysis (TIA)
  - Approved for original development; new TIA not required
- Water Sewer Impact Analysis (WSIA)
  - Approved for original development; new WSIA not required
  - New 8” water and sewer lines installed on site
- Drainage Impact Analysis
  - Drainage report approved in 2020
  - Development provides detention basin to meet low impact development (LID) standards
  - Drainage Maintenance Easement (DME) dedicated to City of Flagstaff with final plat

Findings and Recommendation

Required Findings

- **Preliminary Plat meets the required findings for approval**:
  - City Code Title 10, Flagstaff Zoning Code
  - City Code Title 11, General Plans and Subdivisions
  - City Code Title 13, Engineering Design Standards

Recommendation

- Staff administratively approved the Preliminary Plat on January 19, 2023
- Planning and Zoning Commission recommend the **City Council approve the Preliminary Plat** (5-0 vote on February 8, 2023)

City Council Meeting - FINAL **10. A.**

Meeting Date: 03/21/2023

Co-Submitter: Patrick St. Clair, Planner **From:** Genevieve Pearthree, Resilience Analyst

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Information

TITLE:

Public Hearing and Consideration and Adoption of Ordinance No. 2023-06: An ordinance of the City Council of the City of Flagstaff, amending the Flagstaff Zoning Map to rezone approximately 17.02 acres of real property generally located at 2950 East Butler Avenue, from the Rural Residential (RR) and Medium-Density Residential (MR) zones with a Resource Protection Overlay (RPO) to the Highway Commercial (HC) zone with an RPO, providing for severability, authority for clerical corrections, and establishing an effective date.

STAFF RECOMMENDED ACTION:

At the March 21, 2023, Council Meeting:

1. Hold the Public Hearing
2. Read Ordinance No. 2023-06 by title only for the first time
3. City Clerk reads Ordinance No. 2023-06 by title only (if approved above)

At the April 4, 2023, Council meeting:

4. Read Ordinance No. 2023-06 by title only for the final time
5. City Clerk reads Ordinance No. 2023-06 by title only (if approved above)
6. Adopt Ordinance No. 2023-06

Executive Summary:

Direct to Ordinance Zoning Map Amendment request from MICM BUTLER LOFTS PROJECT LP of approximately 17.02 acres located at 2950 East Butler Avenue from the Rural Residential (RR) and Medium-Density Residential (MR) zones to the Highway Commercial (HC) zone with an RPO for a mixed-use development (containing commercial office space and multi-family residential uses) and future commercial retail development.

The Flagstaff Planning and Zoning Commission held a Public Hearing on March 8, 2023, to consider the Direct to Ordinance Zoning Map Amendment. At that hearing, the Commission voted (4-1) in favor of forwarding the application to the City Council with a recommendation of approval subject to conditions.

Financial Impact:

There are no financial impacts anticipated with this request.

Policy Impact:

There are no policy impacts anticipated with this request.

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

Priority Based Budget Key Community Priorities and Objectives:

- Safe and Healthy Community: Ensure the built environment is safe through the use of consistent standards, rules and regulations, and land use practices.
- Robust Resilient Economy: Support and strengthen a more robust, diverse, and sustainable economy in ways that reflect community values and provides for affordable housing opportunities.
- Livable Community: Achieve a well maintained community through comprehensive and equitable code compliance and development that is compatible with community values.

Carbon Neutrality Plan:

- Priority One - Neighborhoods:
  - DD-2 Create inclusive networks for walking and biking that are continuous, attractive, safe, comprehensive and convenient for people of all ages.
  - DD-5 Invest in comprehensive and equitable transit.
- Priority Two - Energy Sources:
  - FS-2 Encourage new buildings to rely on the electric grid as their main energy source.
- Priority Three - Consumption:
  - WS-1 Improve water infrastructure and expand water reuse.
  - WS-2 Improve ecosystem management for protection of water resources.
- Priority Four - Commitments
  - HF-5 Encourage diverse native plant ecosystems in the built environment.
  - HS-4 Improve the resilience of public infrastructure and City facilities.

Regional Plan:

- A complete analysis of the Regional Plan goals and policies can be found in the attached Planning and Zoning Commission staff report dated February 15, 2023.

Has There Been Previous Council Decision on This:

There has been no previous Council decision on this application.

Options and Alternatives:

The City Council may approve the ordinance as proposed, approve the ordinance with modified conditions, or deny the ordinance.

Background/History:

The applicant proposes the development of a mixed-use project consisting of a commercial office and multi-family residential uses. A 5,600 SF clubhouse and commercial office building is sited adjacent to the Butler Ave frontage. The residential component of the project consists of 172 multi-family units (1, 2, and 3 bedroom units, totaling 344 bedrooms) within (43) two-story buildings.

The applicant is also proposing a separate parcel as a development site for future commercial development, in keeping with the Regional Plan objectives for an activity center.

Key Considerations:

Zoning Map Amendment Findings

An application for a Zoning Map Amendment shall be submitted to the Planning Director and shall be reviewed and a recommendation prepared. The Planning Director's recommendation shall be transmitted to the Planning and Zoning Commission in the form of a staff report prior to a scheduled public hearing. The recommendation shall include: an evaluation of the consistency and conformance of the proposed amendment with the goals and policies of the General Plan and any applicable specific

plans; the grounds for the recommendation based on the standards and purposes of the zones set forth in Section 10-40.20 (Establishment of Zones) of the Zoning Code; and whether the amendment should be granted, granted with conditions to mitigate anticipated impacts caused by the proposed development, or denied.

Zoning Map Amendments shall be evaluated based on the following findings:

A. Finding #1:
The proposed amendment must be found to be consistent with and in conformance with the goals and policies of the General Plan and any applicable specific plans. If the application is not consistent with the General Plan, and any other applicable specific plan, the applicable plan must be amended in compliance with the procedures established in Chapter 11-10 of the City Code (Title 11: General Plans and Subdivisions) prior to considering the proposed amendment.
A complete analysis of the Regional Plan goals and policies can be found in the attached Planning and Zoning Commission staff report dated February 15, 2023.

B. Finding #2
To meet the finding, the proposed amendment must be determined not to be detrimental to the public interest, health, safety, convenience, or welfare of the City of Flagstaff (the "City") and will add to the public good as described in the General Plan.

Staff believes that the proposed project will not be detrimental to the public health, safety, or welfare so long as it is developed in accordance with all codes and requirements.

C. Finding #3
To meet the finding, the affected site must be determined to be physically suitable in terms of design, location, shape, size, and operating characteristics; and the provision of public and emergency vehicle access, public services, and utilities to ensure that the requested zone designation and the proposed or anticipated uses and/or development will not endanger, jeopardize, or otherwise constitute a hazard to the property or improvements in the vicinity in which the property is located.

Staff believes that the proposed application meets this finding. The Inter-Division Staff reviewed the application and concluded that the site was suitable for the proposed development with the improvements as identified in this report. The IDS team based its conclusion on the review of all applicable codes and requirements as well as impact analyses for the site.

Community Benefits and Considerations:

Community benefits and considerations related to this request are addressed in more detail in the attached Planning and Zoning staff report, dated February 15, 2023.

Community Involvement:

Public hearings before the Planning and Zoning Commission and City Council are conducted in conjunction with requests for Zoning Map Amendments. In accordance with Arizona State Statute, notice of the public hearing was provided by placing an ad in the Arizona Daily Sun, posting notices on the property, and mailing a notice to all property owners within 300 feet of the site excluding rights-of-way.

The applicant held two neighborhood meetings regarding this case. The first meeting was held on October 3, 2022, and included one attendee. The second meeting was held on October 6, 2022, and included two attendees. The meetings were held virtually via Zoom meeting platform. Staff has not received any comments from the public as of the writing of this report.

Attachments

Ord. 2023-06
Exhibits to Ordinance
Staff Report
Application
Area Context Map
Project Narrative and Regional Plan 2030 Analysis
Site Plan Drawings
Citizen Participation Plan and Meeting Report
Legal Notice
Presentation
Draft Development Agreement
Draft Development Agreement Exhibits

ORDINANCE NO. 2023-06

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF FLAGSTAFF, AMENDING THE FLAGSTAFF ZONING MAP TO REZONE APPROXIMATELY 17.12 ACRES OF REAL PROPERTY GENERALLY LOCATED AT 2950 EAST BUTLER AVE FROM THE RURAL RESIDENTIAL (RR) AND MEDIUM-DENSITY RESIDENTIAL (MR) ZONES TO THE HIGHWAY COMMERCIAL (HC) ZONE WITH CONDITIONS; PROVIDING FOR SEVERABILITY, AUTHORITY FOR CLERICAL CORRECTIONS, AND ESTABLISHING AN EFFECTIVE DATE

RECITALS:

WHEREAS, MICM Butler Lofts Project LP ("the Applicant"), has applied for a Direct to Ordinance Zoning Map Amendment to rezone approximately 17.12 acres of real property located within the City of Flagstaff, a legal description of which is provided in Exhibit A attached hereto and incorporated by this reference ("the Property"), from Rural Residential (RR) and Medium Density Residential (MR) zones to the Highway Commercial (HC) zone for purposes of developing a mixed-use commercial retail and multi-family residential project; and

WHEREAS, the Applicant proposes to develop the Property pursuant to the terms and conditions of this Ordinance and a Development Agreement between Applicant and the City ("Agreement"), which will be presented to the City Council through a proposed resolution at the second reading of this Ordinance; and

WHEREAS, the Applicant conducted two (2) neighborhood meetings on October 3, 2022 and October 6, 2022 to discuss the proposed Zoning Map Amendment with the surrounding community, as required by Section 10-20.50.040 of the Flagstaff Zoning Code; and

WHEREAS, the Planning and Zoning Commission has formally considered the proposed Direct to Ordinance Zoning Map Amendment application, following proper notice and one (1) hearing on March 8, 2023, and has recommended approval of the requested Zoning Map Amendment application, subject to the Applicant's compliance with certain conditions set forth below; and

WHEREAS, the Council finds that the applicant has complied with all application requirements set forth in Chapter 10-20 of the Flagstaff Zoning Code; and

WHEREAS, staff have recommended approval of the Direct to Ordinance Zoning Map Amendment application, subject to the conditions proposed by the Planning and Zoning Commission, and the Council has considered each of the conditions and has found each condition to be appropriate for the Property and necessary for the proposed development; and

WHEREAS, the Council has read and considered the staff reports prepared by the current Planning Division staff and all attachments to those reports, the Applicant's application, the narrative provided by the Applicant, and all statements made by the Applicant and its representatives or agents during the presentation to Council, and the Council finds that the proposed Direct to Ordinance Zoning Map Amendment, subject to the conditions set forth below, meets the findings required by Section 10-20.50.040(F)(1)(a) of the Flagstaff Zoning Code.

ENACTMENTS:

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF FLAGSTAFF AS FOLLOWS:

SECTION 1. The foregoing recitals are incorporated as if fully set forth herein.

SECTION 2. The amendment requested in the application is consistent with and conforms to the goals of the Regional Plan.

SECTION 3. The amendment requested in the application will not be detrimental to the public interest, health, safety, convenience, or welfare of the City, and will add to the public good as described in the General Plan.

SECTION 4. The affected site is physically suitable in terms of design, location, shape, size, operating characteristics, and the provision of public and emergency vehicle access and public services and utilities to ensure that the amendment requested in the application will not endanger, jeopardize, or otherwise constitute a hazard to the property or improvements in the vicinity in which the property is located.

SECTION 5. The Zoning Map designation for the Property is hereby amended from Rural Residential (RR) and Medium Density Residential (MR) zones to the Highway Commercial (HC) zone as set forth in “Exhibit B”, attached hereto and incorporated by reference.

SECTION 6. That the Zoning Map Amendment be contingent on approval of the Development Agreement between the City of Flagstaff and the Applicant, approved by the City Council through Resolution No. 2023-14 on April 4, 2023.

SECTION 7. That the Zoning Map Amendment be further conditioned upon the Applicant’s satisfaction of the following conditions proposed by the Planning and Zoning Commission:

CONDITIONS:

1. The subject property must be developed in accordance with the approved Site Plan and the conditions of approval dated February 2, 2023. Modifications (other than minor modifications) to the approved site plan will require an amendment to this Direct to Ordinance Zoning Map Amendment request.
2. All other requirements of the Zoning Code and other City codes, ordinances, and regulations, shall be met by the proposed development.
3. All terms, conditions, and restrictions detailed within the “DEVELOPMENT AGREEMENT between THE CITY OF FLAGSTAFF and MIRAMONTE ACQUISITIONS, LLC for THE LOFTS ON BUTLER” must be fully satisfied.
4. The Developer’s failure to obtain certificate of occupancy for the entirety of the Project within five (5) years of the effective date of the rezoning ordinance shall entitle the City, in its sole discretion, to conduct a public hearing for the purpose of reverting the Highway Commercial (HC) zoning on the Property to its former zoning classification of Medium Density Residential (MR) and Rural Residential (RR), in accordance with Arizona Revised Statutes § 9-462.01.
5. All parcel reconfigurations must be completed prior to the issuance of the first Building Permit.

SECTION 8. That City staff is hereby authorized to take such other and further measures and actions as are necessary and appropriate to carry out the terms, provisions, and intents of this Ordinance.

SECTION 9. If any section, subsection, sentence, clause, phrase, or portion of this ordinance or any part of the code adopted herein by reference is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions thereof.

SECTION 10. Effective Date

This Ordinance shall be effective thirty (30) days following adoption by the City Council.

PASSED AND ADOPTED by the City Council of the City of Flagstaff this 4th day of April, 2023.

MAYOR

ATTEST:

CITY CLERK

APPROVED AS TO FORM:

CITY ATTORNEY

Exhibits:
Legal Description
Zoning Map(s)

Exhibit A

Legal Description

Legal Description

The Land referred to herein below is situated in the County of Coconino, State of Arizona, and is described as follows:

PARCEL NO. 1:

The East half of the Northeast quarter of the Northeast quarter of Section 23, Township 21 North, Range 7 East of the Gila and Salt River Base and Meridian, Coconino County, Arizona;

EXCEPT the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter;

AND EXCEPT a strip of land 88.00 feet in width, the centerline of which is described as follows: BEGINNING at a point from which the Northeast corner of said Section 23 bears North 00° 44' 59" West, a distance of 753.26 feet;

THENCE South 70° 09' 11" West, a distance of 32.67 feet to a point of curvature of a curve to the left having a radius of 600.00 feet and a central angle of 12° 48' 25";

THENCE along said curve, a distance of 134.11 feet to a point of tangency;

THENCE South 57° 20' 46" West, a distance of 340.23 feet to the North line of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23 and the POINT OF TERMINUS;

AND EXCEPT a portion said Section 23 more particularly described as follows:

COMMENCING at the Northeast corner of said Section 23;

THENCE South 00° 46' 03" East, along the East line of said Section 23, a distance of 706.73 feet to the TRUE POINT OF BEGINNING, being on the Northerly right-of-way of Butler Avenue, as described in Docket 918, Page 572, records of Coconino County, Arizona;

THENCE continuing South 00° 46' 03" East, a distance of 616.61 feet to the North 1/16th corner of Sections 23 and 24;

THENCE South 88° 39' 50" West, along the South line of the Southeast quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23, a distance of 326.90 feet to the Southeast corner of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23;

THENCE North 00° 42' 07" West, along the East line of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, a distance of 330.79 feet to the Northeast corner of said Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23;

THENCE South 88° 38' 54" West, along the North line of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23, a distance of 191.13 feet to the Northerly right-of-wayline of said Butler Avenue;

THENCE North 57° 19' 47" East (North 57° 19' 47" West, record), along said Northerly right-of-way line, a

distance of 403.84 feet to a point of curvature;

THENCE along a curve to the right, concave to the Southeast, having a central angle of 12° 46' 01" (12° 48' 25" record), and a radius of 645.31 feet (644.00 feet, record), an arc distance of 143.79 feet to a point of tangency;

THENCE continuing along said Northerly right-of-way line of Butler Avenue, North 70° 05' 48" East, a distance of 47.97 feet back to the TRUE POINT OF BEGINNING.

PARCEL NO. 2:

That part of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of Section 23, Township 21 North, Range 7 East of the Gila and Salt River Base and Meridian, Coconino County, Arizona, more particularly described as follows:

COMMENCING for reference at the Northeast corner of said Section 23;

THENCE South 00° 44' 59" East, along the East line of said Section 23, a distance of 1323.33 feet to the Southeast corner of the Northeast quarter of the Northeast quarter of said Section 23;

THENCE South 88° 39' 50" West, along the South line of said Northeast quarter of the Northeast quarter of said Section 23, a distance of 653.80 feet to the Southwest corner of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, being also that parcel described in Instrument recorded in Docket 376, Page 654, records of Coconino County, Arizona;

THENCE North 00° 12' 45" West, along the West line of said Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, a distance of 249.28 feet to the Northerly line of said Butler Avenue, as described in Docket 934, Page 44, records of Coconino County, Arizona and the TRUE POINT OF BEGINNING;

THENCE continuing North 00° 12' 45" West, along the West line of said Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, a distance of 81.26 feet to the Northwesterly corner thereof;

THENCE North 88° 38' 08" East, along the North line of said Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, a distance of 132.05 feet to the Northerly right-of-way line of said Butler Avenue;

THENCE South 57° 20' 46" West, along the Northerly right-of-way line of said Butler Avenue, a distance of 156.44 feet back to the TRUE POINT OF BEGINNING.

PARCEL NO. 3:

That part of the Southeast quarter of the Southeast quarter of Section 14, Township 21 North, Range 7 East of the Gila and Salt River Base and Meridian, Coconino County, Arizona, lying Southerly of the Southerly right-of-way line of Interstate Highway 40, as described in Instrument recorded in Docket 296, Page 515, records of Coconino County, Arizona.

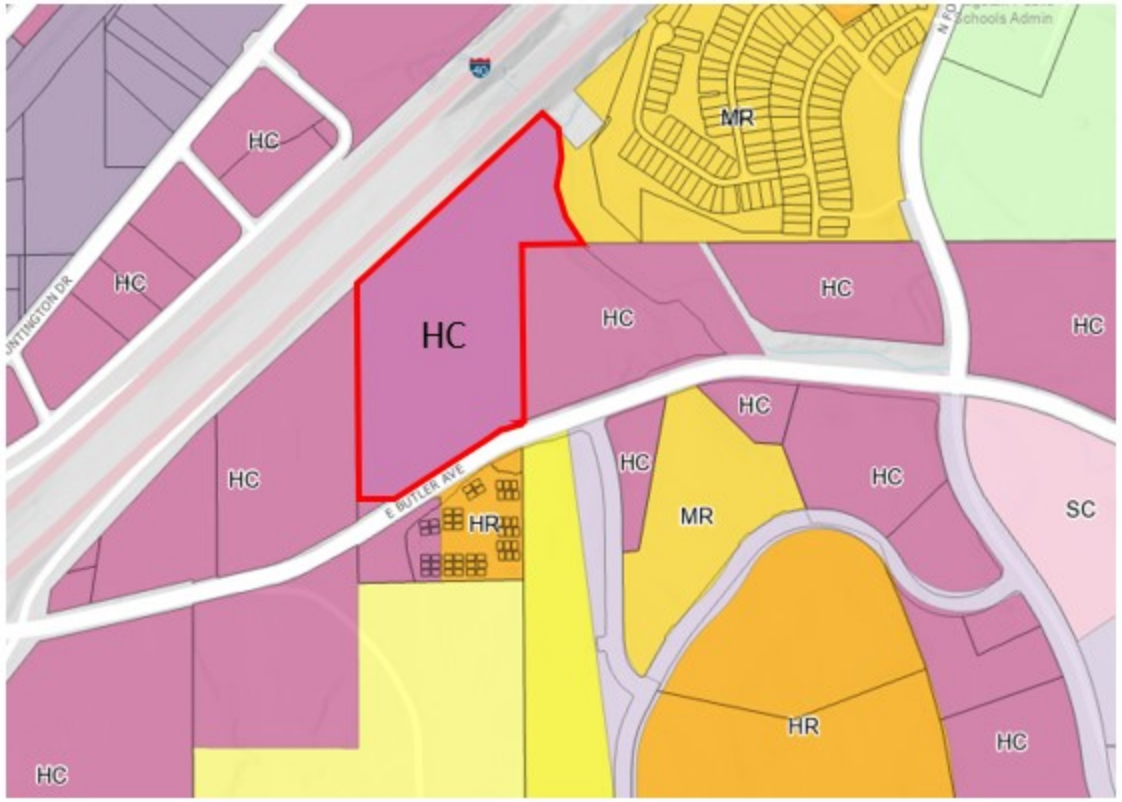
PARCEL NO. 4:

Tract J, FOREST SPRINGS TOWNHOMES, UNIT 1, as shown on the plat thereof, recorded in Case 9, Maps 92-92B, inclusive, records of Coconino County, Arizona.

Exhibit B

Amended Partial Zoning Map

Request: Zoning Map Amendment



Request:

Rezone parcels

APN 106-04-006B, 107-11-001B, and 107-44-062

from

- Medium Density Residential (MR) and Rural Residential (RR)

to

- Highway Commercial (HC)

PLANNING AND DEVELOPMENT SERVICES REPORT
DIRECT TO ORDINANCE ZONING MAP AMENDMENT

PUBLIC HEARING
PZ-21-00284-03

DATE: February 15, 2023
MEETING DATE: March 08, 2023
REPORT BY: Patrick St. Clair

REQUEST:
A request from MICM BUTLER LOFTS PROJECT LP for a Direct to Ordinance Zoning Map Amendment of approximately 17.02 acres of real property located generally at 2950 East Butler Avenue from the Rural Residential (RR) and Medium-Density Residential (MR) zones with a Resource Protection Overlay (RPO) to the Highway Commercial (HC) zone with an RPO.

STAFF RECOMMENDATION:
Staff recommends the Planning and Zoning Commission, in accordance with the findings presented in this report, forward the Direct to Ordinance Zoning Map Amendment application to the City Council with a recommendation for approval with conditions as indicated in the "Recommendations" section at the end of this report.

PRESENT LAND USE:
The subject property is approximately 17.02 acres of undeveloped land. The site is heavily treed and has some steep slopes isolated near the northeastern portion of the development site.

PROPOSED LAND USE:
The applicant proposes to construct a mixed-use development consisting of 172 multi-family residential units and commercial office space, in addition to setting aside an approximately 1.09-acre section of the site for future commercial development.

NEIGHBORHOOD DEVELOPMENT:
Please see the attached area context map.

North:	Interstate 40
East:	The Bluffs of Flagstaff senior living facility, zoned HC; Forest Springs Townhomes, zoned MR
South:	Butler Avenue frontage, beyond to south – Woodshire on Butler multi-family development, zoned HC and High-Density Residential (HR)
West:	Black Bart's RV Park, zoned HC

I. Project Introduction

A. Proposed Rezoning and Development Plan

This application from MICM BUTLER LOFTS PROJECT LP proposes to develop four vacant parcels (APN 106-04-007C, 106-04-006B, 107-11-001B, and 107-44-062) into a mixed-use project within the HC zone that will include 172 residential units, 2,154 SF of office space, and a future separate parcel to be developed as a commercial use. Two of the parcels (APN 106-04-006B and 107-11-001B) currently have RR zoning and parcel APN 107-44-062 is zoned MR. The remaining parcel (APN 106-04-007C) is currently already zoned HC.

The purpose of the rezoning is to create an entire 17.02-acre site zoned HC and with an RPO. 1.09-acres of the total site will become a separate parcel dedicated to a future commercial building (not included in the approved Site Plan.) The remaining approximate 15.93-acre parcel will be the development site for the mixed-use project (please reference the approved Site Plan drawings attached to this report.)

On the approximate 15.93-acre development site, the mixed-use project will consist of (43) 5,550-sq. ft., 2-story residential buildings containing 4 units each, and a separate 4,960-sq. ft. building with 2,806 sq. ft. of clubhouse space and 2,154 of sq. ft. of commercial office space. There will be (26) 1-bedroom units, (120) 2-bedroom units, and (26) 3-

bedroom units. The proposed density for the development is 10.8 units per acre, below the maximum 29 units per acre allowed in the zone. The proposed density also meets the minimum Regional Urban Activity Center characteristic of 8 units per acre in mixed-use developments.

The Highway Commercial zone is characterized by the development of commercial uses in addition to residential uses to provide diversity in housing choices. The requested rezoning would allow the development of a mixed-use project consisting of commercial office space and multi-family residential uses on the parcel. The commercial portion of the mixed-use project is required to be constructed either prior to, or simultaneous with, the residential component of the development and may not at any time be separated from the existing parcel. Residential uses with more than two units are permitted in the HC zone as part of a mixed-use development located above or behind the commercial uses. Office uses are permitted in the HC zone.

The development includes vehicular and bicycle parking spaces, open and civic spaces and provides 5% of the residential units as Affordable Housing units.

B. Mixed Use Standards

Section 10-40.60.260 of the Zoning Code outlines standards for mixed-use developments. Per the Flagstaff Zoning Code, the Regional Plan promotes the concept of a more compact development pattern for the city by mapping and describing activity centers in urban, suburban, and rural area types, and encouraging mixed-use development. Mixed-use is intended to encourage infill development of vacant parcels with a compatible and balanced mix of residential, commercial, and institutional uses within close proximity to each other, rather than the separation of uses. Mixed-use developments foster pedestrian-oriented residential and commercial development by providing more housing options, reducing traffic congestion, providing a stronger economy in commercial areas, and encouraging pedestrian trips. Mixed-use also has the potential to provide increased opportunities for affordable housing.

A mixed-use development combines residential and nonresidential uses on the same site with the residential units either located above the nonresidential uses (vertical mixed use) or allowed at ground level behind street-fronting nonresidential uses (horizontal mixed use). The project proposes a horizontal mixed-use of commercial office space and residential. This meets the requirement that a mixed-use development shall incorporate a minimum of two uses.

The proposed commercial retail space meets the minimum depth of 20-feet required of pedestrian-oriented commercial space in mixed-use developments within urban activity centers. The requirement that outdoor lighting for commercial uses shall be appropriately shielded to limit impacts on the residential units will be confirmed with the Outdoor Lighting Permit application at the time of Building Permit. A mixed-use development proposing a commercial component shall operate between the hours from 6:00 a.m. to 10:00 p.m. to ensure that the commercial uses will not negatively impact the residential uses within the development, or any adjacent residential uses.

The code requires that a mixed-use development shall be designed to achieve the following objectives:

- The design shall provide for internal compatibility between the residential and nonresidential uses on the site.
- Potential glare, noise, odors, traffic, and other potential nuisance conditions for residents shall be minimized to allow a compatible mix of residential and nonresidential uses on the same site.
- The design shall take into consideration existing and potential future uses on adjacent properties and shall include specific design features to minimize potential impacts.
- The design shall ensure that the residential units are of a residential character, and that appropriate privacy between residential units and other uses on the site is provided.
- Site planning and building design shall provide for convenient pedestrian access from streets, courtyards, plazas, and walkways.

- Site planning and building design shall be compatible with and enhance the adjacent and surrounding residential neighborhood in terms of building design, color, exterior materials, landscaping, lighting, roof styles, scale, and signage.

Staff has found that the project meets these objectives, as well as the site layout and design standards of a mixed-use development. The office use will have minimal impact on the residents. The location of the commercial use near the front of the site will limit interactions and the use has no excessive glare, noise, odor, or traffic. The project includes a series of inter-connected on-site sidewalks that lead to the Butler Ave frontage, which contains public sidewalks, bike lanes, and a new nearby bus stop to connect with multi-modal transit from the site. The scale and design of the proposed residential buildings is compatible with the adjacent residential uses.

The development provides both trash and recycling that is conveniently located for both the residential and commercial uses.

Mixed-use development shall be designed to provide residential uses with common or private open space. As shown in the building floor plans, each residential unit is provided a private exterior patio and additional unstructured common open space is provided on site.

II. Staff Site Plan Review

On February 2, 2023, the Inter-Department Staff (IDS) approved an application for Site Plan Review of the proposed development subject to successfully obtaining a Direct to Ordinance Zoning Map Amendment (rezoning). A copy of the rezoning application is attached to this report.

A. Zoning – City of Flagstaff Zoning Code

If this Direct to Ordinance Zoning Map Amendment request is approved, approximately 17.02 acres will be rezoned to the HC zone. Development of the site will be conditioned to the approved site plan and a final development agreement. Any substantial change to the approved site plan would require a new rezoning request and further review and approvals by the Planning and Zoning Commission and City Council. The Site Plan provided includes preliminary grading plans, preliminary utility plan, resource protection plans, architectural site and amenity plans, residential and commercial building floor plans and elevations, and preliminary landscaping plans.

i. Site Planning Standards

In accordance with Section 10-30.60.030 of the Zoning Code a site analysis was completed in conjunction with the concept plan for this project that examines the topography of the site, solar orientation, existing/native vegetation types, view corridors, climate, subsurface conditions, drainage swales and stream corridor, and the built environment and land use context. Located at 2950 E Butler Ave, the existing topography slopes down to the east and south. Existing vegetation contains medium to dense ponderosa pine stands. The site includes scattered openings containing sparse native grasses and groundcovers. Notable view corridors are generally non-existent due to the forest coverage; however, a small portion of the site includes narrow views looking north to the San Francisco Peaks.

The site plan design places the commercial component of the project as close as feasible to the Butler Avenue frontage to address building forward site design requirements and to place the commercial component in front of the residential structures and uses on the site. The Project will provide a clubhouse building with for-rent commercial office space on its second floor and meeting/recreation area, kitchen, and fitness center on the first floor for residents. The eastern vehicular access drive from Butler Avenue is adjacent to the commercial/clubhouse structure. The western access drive is adjacent to the future commercial parcel before continuing to the residential parking areas.

ii. Resource Protection

The proposed development site is a Resource Protection Overlay zone. The highest priority resource to protect under the Resource Protection Overlay zone is rural and urban floodplains. A small portion of the northeast corner of the development site is within the Rural Floodplain. This area is not intended for development but rather a Drainage Maintenance Easement (DME) will be provided for his area within the property. The boundaries of the DME will be finalized and dedicated prior to Civil Plan approval. The DME is addressed within the Development Agreement for the project. This dedication will remove hinderances to maintenance of the floodplain at that location at the requests of the Stormwater division.

The next priority is steep slopes, which located in the northwest corner of the development site. The Zoning Code requires 70% of the 17-24.99% slope area to be protected. The proposed development protects 100% of these slope resources. Slopes 25-34.99% are required to be saved at an 80% rate and the proposed development protects 100% of these slopes. There are no slopes greater than 35% located on the site, which are not allowed to be disturbed.

The Zoning Code requires 30% of the tree resources on a commercially zoned site to be saved. If the rezoning to the requested Highway Commercial (HC) zone is approved, the proposal complies with the tree resource protection requirements of that zone. Post-development saves 29% of the trees outside of the steep slopes. The code allows for additional credits for excess steep slope to be applied to the tree resources. With those additional credits, the Resource Protection Plans show a tree resource protection rate of 35%.

iii. Open Space & Civic Space

The development is required to provide 15% (2.39 acres) of the site as common open space. This space is provided at three main areas of the site: the northeast corner of the development (1.78 acres), and the two "courtyard" areas at the center of the site (0.93 and 0.78 acres). The applicant proposes to include 0.38 acres at a fenced-in stormwater basin; however, this area does not meet the requirements for open space. Even without this area, the project exceeds the code required minimum with 3.49 acres of open space.

Section 10-30.60.060.B.1.b of the Zoning Code requires developments with 50 or more dwelling units to provide a minimum of 5% of the site as civic space. This space must be accessible to the public. A total of 0.80-acres of civic space is required for this project and the site plan identifies a total of 0.91-acres of civic space within the development (5.7% of the site area). Divided into three areas on the site, the largest of these civic spaces (0.48-acres) is in the south of the development site adjacent the Butler Avenue frontage near the commercial building and the most active portion of the site. The other two civic spaces (0.22 and 0.21 acres) are located near the north of the parcel adjacent the internal drive aisle. Amenities in both the civil and common open spaces include ramadas, pedestrian paths, bicycle parking, and benches.

iv. Pedestrian and Bicycle Circulation Systems

The applicant will be contributing funds for the parcel frontage improvements along Butler Avenue which will be constructed as part of the city's Butler-Fourth Improvements project. The project includes 6-foot-wide sidewalks and 5-foot-wide bike lanes (separated from the vehicular travel lanes.) There are also bus stops located along Butler Avenue

The applicant has proposed sidewalks connecting the buildings, civic spaces, common open spaces, and parking areas to each other. The project will provide 16 uncovered and 24 covered public bicycle racks. The applicant also proposes a future single-track connection within the site to a future FUTS located in Switzer Canyon Wash to the northeast of the parcel.

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v. Compatibility and Architectural Design Standards

Compatibility does not mean "the same as" but rather it refers to how well a new development is sensitive to the character of existing development. The Zoning Code breaks down compatibility into three categories: Patterns of Development, Scale, and Continuity.

Patterns of Development include streetscapes, site relationships, signage, and landscape features. The project's contribution to the Butler/Fourth Improvements project will provide consistent design elements along the corridor. The project design places the commercial building as close to the Butler Ave frontages as feasible. Most of the residential structures are placed behind the commercial use arranging them among existing tree resources and open space areas. The proposed development conforms to development patterns of the surrounding neighborhoods and promotes urban activity centers with two-story buildings fronting public sidewalks.

Scale refers to similar or harmonious proportions, overall height and width, the visual intensity of the development, and the building massing. The development as proposed does not look like a typical apartment complex, instead it consists of building types that more closely represent a townhome single family development, in keeping with the two-story single-family appearance of the Woodshire condominiums across Butler Avenue. The building heights proposed for this development are in keeping with overall heights of similar development in the neighborhood. The development scatters the residential structures across the site and orients the structures such that they maximize existing mature ponderosa pine tree resources for open space and to shield the residential structures from view of other surrounding development.

Continuity encompasses patterns of development and scale, but also site development, building forms, texture, materials, details, and colors. The exterior building design is in a style compatible with the Flagstaff area. The buildings all express four-sided architecture. The exterior colors and finishes will complement the natural surroundings utilizing traditional architectural materials such as wood and metal siding and metal roofing. The residential and commercial buildings use many of the same finishes to clad forms appropriate to their different uses. This develops individual identity between site uses but expresses similar patterns of development across the site. The preservation of native pines in and around the buildings adds to the quintessential natural Flagstaff look.

vi. Landscaping

Landscaping plans are not required in conjunction with a Direct to Ordinance Zoning Map Amendment. The applicant provided a conceptual landscaping plan, showing all landscape areas and tree locations. The conceptual plan generally meets the requirements of parking lot landscaping, street buffer landscaping, building foundation, peripheral buffer landscaping, and native seeding or retention of native state for unused areas of the site found within Section 10-50.60 of the Zoning Code. A final Landscape Plan will be reviewed at the time of civil plan submittal.

vii. Outdoor Lighting

Located within Lighting Zone II, the property is allowed a total of 35,000 lumens per acre. Outdoor lighting plans are not required in conjunction with a Direct to Ordinance Zoning Map Amendment. An Outdoor Lighting Permit application will be reviewed for compliance with Zoning Code standards at the time of Building Permit submittal.

viii. Parking

Based on the proposed use, the project is required to provide a total of 375 parking spaces, 9 of which shall be accessible. The applicant has elected to not utilize any parking reductions relating to the Affordable Housing component of the proposal. Since the development is located within a quarter mile of a bus stop, they are utilizing a ten percent reduction in required parking. The Zoning Code also allows a reduction in parking spaces by providing on-site bicycle parking spaces. The project proposed a total of (40) bicycle parking spaces, exceeding the minimum requirement of 19 spaces. This allows a maximum reduction of one required motor vehicle

parking space for each four bicycle parking spaces provided up to 5% of the required vehicular parking. The two proposed reductions equate to an overall 12.7 % reduction in on-site parking requirements, resulting in 327 on-site parking spaces being required. The applicant proposes 352 parking spaces.

ix. Historic/Cultural Resources

A Cultural Resource Report and historic record search was completed for the subject property on March 31, 2022. The report indicates that no archaeological or historic resources were observed on the property and that there are no expected impacts to historic properties or significant cultural resources from the proposed undertaking. The report was reviewed and approved by the Heritage Preservation Officer as part of the IDS review process.

B. Public Systems Impact Analysis

i. Traffic/Right-of-Way Impact

A Traffic Impact Analysis (TIA) was completed November 21, 2022, and approved January 5, 2023. Based on the TIA, the applicant's traffic mitigation shall be accomplished through a combination of construction and cash-in-lieu contributions to the city's Butler/Fourth Improvements project. Prior to the construction of a roundabout at the western driveway, the applicant is responsible for the design and construction of a new left turn lane and right turn lane on Butler Avenue. The applicant is also required to dedicate public right of way for a right turn lane into the development at the eastern driveway and pay the development's proportional share cost for constructing a permanent traffic signal at the Fourth Street and Butler Avenue intersection.

ii. Water and Wastewater Impact

A Water and Sewer Impact Analysis (WSIA) was completed on August 31, 2022. The proposed development is located within the City of Flagstaff urban growth boundary and can be served by City water and sewer utilities. Currently there is no infrastructure in the ground on-site to support this development, so all on-site sewer and water systems will have to be designed and built. It is the applicant's responsibility to design and construct all on-site and connecting water and sewer infrastructure per the City of Flagstaff Engineering Standards.

Water

Water will be provided by a new on-site 8-inch public water main connecting at two locations to the existing 24-inch water main in Butler Avenue. The applicant will also contribute a proportional share to the city's Soliere Transmission Main project which will provide a secondary water source to the area.

Wastewater

Sewer service will be provided by a new on-site 8-inch public sewer main connecting to the existing 8-inch sewer main in Butler Avenue.

iii. Stormwater Analysis

The project is proposing to provide full volumetric retention between the pre and post development conditions for the 100-year 24-hour storm event. Specific objectives currently included in the design are as follows:

1. Determine existing and proposed peak runoff flowrates and assess the impacts of the site improvements.
2. Provide a minimum 1-inch LID retention storage for additional impervious areas.
3. Provide volumetric retention to mitigate any increase of peak flowrate or total volume leaving the site due to development for the 100-year 24-hour event.
4. Provide a water quality component for 1/2-inch LID volume from all new impervious areas or provide a system to treat up to the 2-year post developed peak flowrate discharging from the site.

To mitigate the increased runoff from the development, and provide the water quality component, the project will route runoff within the site into three new above ground storage basins and a below ground chamber system located throughout the site. Runoff from the central and north portion of the site will be routed to the northern two surface basins. An emergency overflow outlet will be installed for these basins that will route excess volume to the north via a storm drainage system that outfalls into Switzer Canyon Wash. Runoff from the southern portion of the site will be captured and routed to a combined underground storage chamber and the third surface basin located along the Butler Avenue right of way. This portion of the site will continue to route excess volume to the Butler right of way.

A small portion of the northeast corner of the development site is within the Rural Floodplain. This area is not intended for development but rather a Drainage Maintenance Easement (DME) will be provided for the rural floodplain area within the property. The boundaries of the DME will be finalized and dedicated prior to Civil Plan approval. The DME is addressed within the Development Agreement for the project.

III. Direct to Ordinance Zoning Map Amendment

An application for a Direct to Ordinance Zoning Map Amendment shall be submitted to the Planning Director and shall be reviewed and a recommendation prepared. The Planning Director's recommendation shall be transmitted to the Planning and Zoning Commission in the form of a staff report prior to a scheduled public hearing. The recommendation shall include: an evaluation of the consistency and conformance of the proposed amendment with the goals and policies of the General Plan and any applicable specific plans; the grounds for the recommendation based on the standards and purposes of the zones set forth in Section 10-40.20 (Establishment of Zones) of the Zoning Code; and, whether the amendment should be granted, granted with conditions to mitigate anticipated impacts caused by the proposed development, or denied.

Direct to Ordinance Zoning Map Amendments shall be evaluated based on the following findings:

A. Finding #1:

The proposed amendment must be found to be consistent with and in conformance with the goals and policies of the General Plan and any applicable specific plans. If the application is not consistent with the General Plan, and any other applicable specific plan, the applicable plan must be amended in compliance with the procedures established in Chapter 11-10 of the City Code (Title 11: General Plans and Subdivisions) prior to considering the proposed amendment.

i. General Plan/Flagstaff Regional Plan (FRP 2030) Process and Analysis Summary

When staff performs a Regional Plan (the "Plan") analysis, staff reviews all maps, text, and goals and policies to determine which are the most relevant in relation to the proposed application. The Plan's Future Growth Illustration on Maps 21 and 22 (same map; one is regional scale and one city scale) and the text of the Plan provide supplemental information for the interpretation of goals and policies. In the case of any conflict between the Future Growth Illustration and the Plan's goals and policies, the goals and policies will prevail. The Future Growth Illustration has two types of land use designations: "Area Types" describe the place-making context of Urban, Suburban, Rural, or Employment, and "Place Types" such as activity centers, corridors, and neighborhoods which provide the framework for the density, intensities, and mix of uses within the area types.

Staff has identified that the subject property is designated as Future Urban area type and is located within a Future Urban Activity Center (U5) place type on the Plan's Future Growth Illustration, Map 22. This Future Urban Activity Center has a Regional Scale Pedestrian Shed. Residential characteristics of an Urban Activity Center anticipates mainly loft and apartment-style living in the commercial core that is bike, pedestrian, and transit oriented to support workforce and student housing. Mixed use developments including office space and commercial development along corridors in this area are supported by the Plan and activity centers are the most appropriate locations for more dense residential uses, particularly multi-family and attached housing developments. Urban Activity Centers require a minimum density of 8+ units per acre (the proposal provides 10.8

units per acre). Rezoning the parcel to HC and stipulating that rezoning on the proposed Site Plan will introduce just such a mixed-use development into the core of this Future Urban Activity Center.

ii. Applicable General Plan Goals and Policies

As part of its review, staff identified relevant Regional Plan Goals and Policies that could be applied to support or not support the proposed Zoning Map Amendment. These goals and policies are identified within the applicant's attached narrative. The following is a discussion of how the project generally meets or conflicts with goals and policies in each chapter. Staff believes that the proposal is consistent with the goals and policies of the Flagstaff Regional Plan 2030.

a. Environmental Planning & Conservation (Air Quality, Climate Change and Adaptation, Dark Skies, Ecosystem Health, Environmentally Sensitive Lands, Natural Quiet, Soils, and Wildlife)

Policy E&C.2.1 encourages the reduction of all energy consumption, especially fossil-fuel generated energy, and the proposed development will be all electric. Water demand will be reduced by using landscaping native to the region, addressing Policy E&C 6.8. Policy E&C.3.3 indicates the value of forest health and watershed protection measures. Retaining the natural drainage of the parcel into the Switzer Canyon Wash retains the natural watercourses of the area which supports animal and insect populations existing near and within preserved areas of the development. The project also will integrate into the Butler/Fourth Improvements redevelopment of stormwater maintenance to better support vulnerabilities of the existing ecosystem and natural resources to climate change as addressed in Policy E&C.4.1.

b. Open Space (Natural Resources and Open Space, Open Space Planning, Applying an Open Space Plan)

Policy OS.1.5 encourages the integration of open space qualities into the built environment. The development includes open spaces with benches and ramadas, connecting to a system of sidewalks though all areas of the parcel, utilizing existing resource trees to buffer these amenities from the residential buildings on the parcel. The proposed future single-track connection to the future FUTS trail addresses aspects of Policy OS.1.4 to use open space to interact with and enjoy nature. Staff has therefore concluded that the rezoning will increase the quality of the open space provided to the residents and commercial customers of the site.

c. Water Resources (Water Sources, Water Demand, Stormwater and Watershed Management, and Water Quality)

Rainwater harvesting will be employed in the project to passively irrigate landscaping and address Policy WR.3.4. To meet Goal WR.5 and its subject policies to manage watersheds, stormwater, water quality, and environmental protections. The landscape concept for the development aims to support the City's long-term goals to encourage low-impact design principles, the use of native and regionally adapted plant materials, and preservation of natural vegetation and slope areas. Stormwater basins on-site will be used for LID and peak flow detention and can overflow into additional stormwater infrastructure to support healthy watershed characteristics and improve flood control and flood attenuation for the development site and surrounding area as indicated in policies WR.5.7 and WR.6.4.

d. Efficient Use of Energy Goals and Policies

Policy E.1.4 promotes cost-effective, energy-efficient technologies and design in all new residential buildings. The project proposes all electric buildings with low VOC carpets, cabinets, and paints. Regarding Policy E.1.13 which promotes energy efficient modes of transportation, the project includes four parking spaces with EV ready outlets and circulation paths to off-site pedestrian, bicycle, and public transit access. Also, the adopted Building Code requires that new commercial and residential structures be designed and constructed as "solar ready," meaning that they include proposed locations for and electrical infrastructure to support solar systems later. All units will be equipped with double heavy-duty baskets in the kitchens and property

management will include educational materials to residents regarding recyclable materials as expected in Policy E.1.3.

e. Community Character (Scenic Resources and Natural Setting, Heritage Preservation, Community Design, and Arts, Sciences and Education)

Pursuing Policy CC1.2 and CC.3 initiatives, the site layout will encourage visits to the commercial areas of the site from the surrounding neighborhoods via bus, bicycle, or by walking through the City's established sidewalk or FUTS pathways. The commercial uses are placed adjacent to Butler Avenue incorporating Policy CC.4.3 by implementing these mixed-use development standards to the benefit of the activity center, and providing needed land uses where most accessible by the highest volume of intended users. In accordance with Policy CC3.2, all buildings will use materials common in appearance to those traditionally used in Flagstaff, at a scale proportional to the buildings themselves and to the context of the surrounding neighborhood. The proposed landscaping, which preserves clusters of native ponderosas within the open spaces of the development and employs new code compliant landscaping at civic spaces and new structures address Policy CC.4.5 and CC.4.6 to integrate native vegetation and a well landscaped community for financial benefit and positive image identity for the region.

f. Growth Areas & Land Use (Reinvestment, Greenfield, Urban Area, Suburban Area, Rural Area, Employment Area, Special Planning Area, and Activity Centers)

The proposed project is in an Urban Activity Center, envisioned to hold a greater density of housing and intensities of commercial and retail space to support transit and places of social interaction. Classified as a "regional scale" activity center, this area is encouraged to provide higher-density projects to support and fulfill goals such as LU.1 and LU3.1 to invest in existing neighborhoods and activity centers for purposes of developing complete and connected places. Besides providing increased residential density and commercial office space, the project reserves area for a future commercial development. The project seeks to develop the future urban place type connectivity and activity, while addressing the transition of scale and character with the existing neighborhood context, aligning with Policy LU.6.3 to encourage mixed-use neighborhoods in appropriate locations. The project is located about three miles away from downtown Flagstaff, and about one mile from other commercial developments along Butler Avenue, N Fourth Street, and historic Route 66. The project is near Foxglenn Park and the Flagstaff Aquaplex recreation center; reachable by public bus, walking, or bicycle along existing and expected sidewalks and FUTS trails. The proposed single-track connection to the future Switzer Wash FUTS trail exemplifies the prioritization of connectivity in urban neighborhoods and activity centers emphasized in Policy LU.10.1. The goal of this in-fill project is to provide quality, affordable housing for a variety of residents and their families, set within a connected series of spaces for activity, business growth, employment, entertainment, and the enjoyment of nature. The mixed-use project looks to policies such as LU18.1 and LU18.6 as indicators supporting location of commercial space and increased density within appropriate activity centers and corridors. With a mix of housing options, commercial services, accessibility of nearby employment opportunities, developed civic space, and open natural spaces this project seeks to provide a variety of scales and uses. This proposal is in line with Policy LU.18.9 to appropriately plan within activity centers to their prospective regional or neighborhood scale. Additionally, the proposed affordable housing units addresses Policy LU.18.4 to provide activity centers with various price points in multi-family housing.

g. Transportation (Mobility and Access, Safe and Efficient Multimodal Transportation, Environmental Considerations, Quality Design, Pedestrian Infrastructure, Bicycle Infrastructure, Transit, Automobile, Passenger Rail and Rail Freight, Air Travel, and Public Support for Transportation)

Existing plans for upgrades to the Butler Avenue frontage through the Butler/Fourth Improvements project are being accommodated in the proposed design for access to and from this project. A combination of in-lieu fees and applicant provided infrastructure will be regulated through a development agreement. This infrastructure will provide safe and efficient movement of vehicles, bicycles, and pedestrians through the

area in agreement with Policy T.2.1. The site is located along the permanent transit network for the Flagstaff NAIPTA bus system. A new bus stop will be located within 1/4 mile of the development. These contributions are consistent with Goals T3.3 and T.8.1 regarding development of land uses that enhance and protect the quality of the activity center, support employment centers, and enhance efficient alternative transportation means across the city. The project's location is ideal for bicycle enthusiasts, as it is amid and connected to Flagstaff's established and interconnected system of paths and walks. The proposed single-track connection to the future Switzer Wash FUTS directly addresses Policy T.6.2 to establish and maintain a comprehensive, consistent, and highly connected system of bike ways and FUTS trails. In addition to enhanced bicycle and pedestrian connection, the development provides increased residential density and commercial uses consistent with the place type and needs of people, in support of a continuous transportation system with convenient transfer from one mode of travel to another as required by Policies T.1.3 and T.1.4. Impacts of the project's future residents on the existing local traffic patterns have been studied and complied into a comprehensive and approved Traffic Impact Analysis as requested in Policy T.11.1.

h. Neighborhoods, Housing, and Urban Conservation

In line with policy NH1.3, on-site (accessible) sidewalks connecting the structures throughout the site to open and civic spaces, the commercial building and commercial pad in effort to provide complete streets, sidewalks, and trails in an urban neighborhood. A portion of the residential units will be made available to lower-income residents, consistent with Policy NH3.1. to provide housing choices to meet the financial and lifestyle needs of a diverse population. Following the intentions of Goal NH.4.4 to encourage green practices and energy efficient homes the project proposes all electric units clad in modern and durable exterior materials that are in line with traditional forms, materials, and details common to neighborhoods in Flagstaff and the region.

j. Economic Development

An infill site along a circulation corridor, surrounded by existing residential and commercial development, the project helps achieve Goal ED.8 to promote the continued physical and economic viability of the region's commercial districts by focusing investment on existing and new activity centers and addresses Goal ED.9 to promote infill to promote community economic, planning, and environmental goals. This mixed-use development supports the intentions of a regional scale activity center because the development site is in an appropriate location for commercial uses and dense multi-family development which increases pedestrian, bicycle, and transit connectivity.

k. Non-Conformance to Regional Goals and Policies

The proposal does not conform to Goal LU.13 and Policy LU.13.7 from Growth Areas and Land Use chapter 9 to develop employment uses in activity centers. While the development will bring some employment opportunities to the activity center, for the permanent on-site office space and commercial pad for future development, the parcel will not be developed as an employment center.

B. <u>Finding #2</u>

To meet the finding the proposed amendment must be determined not to be detrimental to the public interest, health, safety, convenience, or welfare of the City of Flagstaff (the "City"); and will add to the public good as described in the General Plan. Staff believes that the proposed project will not be detrimental to the public interest.

The applicant has identified the following Community Benefits and Public Good:

- The project will develop an underutilized infill property in the middle of Flagstaff.
- The project will provide 172 housing units, with 5% of the units designated permanently affordable for 30 years.
- The project provides a cash-in-lieu contribution to the city for an off-site public water main.
- The project provides a cash-in-lieu contribution to the city for off-site public traffic improvements along

Butler Avenue.
- The project is a sustainable, all-electric development.
- The project includes both recycling and waste management.
- The project meets resource protection standards.
- The project meets low-impact development stormwater standards.
- The project promotes the use of alternate modes of transportation such as walking, biking, and riding the bus.

C. Finding #3

To meet the finding the affected site must be determined to be physically suitable in terms of design, location, shape, size, operating characteristics; and the provision of public and emergency vehicle access, public services, and utilities to ensure that the requested zone designation and the proposed or anticipated uses and/or development will not endanger, jeopardize, or otherwise constitute a hazard to the property or improvements in the vicinity in which the property is located.

Staff believes that the proposed application meets this finding. The Inter-Division Staff reviewed the application and concluded that the site was suitable for the proposed development. The IDS team based its conclusion on the review of all applicable codes and requirements as well as impact analyses for the site. Any potential impacts shall be mitigated by the applicant and cash-in-lieu payments shall be made for the required frontage improvements, as well as proportional contributions to the area's public improvements.

IV. DEVELOPMENT AGREEMENT

A draft development agreement has been prepared and continues to be negotiated throughout the review of this project. The primary purpose of this agreement is to set out roles and responsibilities regarding the administration of the Affordable Housing units, in-lieu costs for frontage improvements, the proportional share of the improvements to the Fourth Street and Butler Avenue intersection, and the proportional share associated with the Soliere Transmission Main project.

V. CITIZEN PARTICIPATION

Public hearings before the Planning and Zoning Commission and City Council are conducted in conjunction with requests for Direct to Ordinance Zoning Map Amendments. In accordance with State Statute, notice of the public hearing was provided by placing an ad in the Daily Sun, posting notices on the property, and mailing a notice to all property owners within 300 feet of the site excluding rights-of-way.

The applicant held two neighborhood meetings regarding this case. The first meeting was held on October 3, 2022 and included one attendee. The second meeting was held on October 6, 2022 and included two attendees. The meetings were held virtually via Zoom meeting platform. The meetings opened with an introduction of the proposed development by the Applicant, with an overview of the development's components and design. In a charette-style interaction, the Applicant encouraged attendees' questions or comments regarding the proposed development, which were then discussed with the group. A Neighborhood Meeting Report, attached, was prepared in response to the questions, comments, and concerns presented.

In general, the major themes of attendee questions and applicant responses addressed topics including the impacts of traffic from the development, the intention to create for-rent residential units and not owner-occupied units, and clarification that the Affordable Housing portion of the development is intended to be permanent by the standards of the Zoning Code. Additionally, discussion clarified questions concerning the site plan design for the locations of commercial uses and proposed development access points. The applicant noted that traffic issues, as determined by the Traffic Impact Study, have been addressed regarding potential impacts and increases to traffic from the proposal. It was also clarified that the applicant has agreed to pay in-lieu fees for the frontage improvements, and they will be included as part of the city's construction project.

RECOMMENDATION:

Staff recommends the Planning and Zoning Commission, in accordance with the findings presented in this report, forward the Direct to Ordinance Zoning Map Amendment request to the City Council with a recommendation for approval of case PZ-21-00284-03, subject to the following five conditions which will be included into the zoning map amendment ordinance:

1. The subject property must be developed in accordance with the approved Site Plan and the conditions of approval dated February 2, 2023. Modifications (other than minor modifications) to the approved site plan will require an amendment to this Direct to Ordinance Zoning Map Amendment request.
2. All other requirements of the Zoning Code and other City codes, ordinances, and regulations, shall be met by the proposed development.
3. All terms, conditions, and restrictions detailed within the "Development Agreement between the City of Flagstaff and Miramonte Acquisitions, LLC for the Lofts on Butler" must be fully satisfied.
4. The Developer's failure to obtain certificate of occupancy for the entirety of the Project within five (5) years of the effective date of the rezoning ordinance shall entitle the City, in its sole discretion, to conduct a public hearing for the purpose of reverting the Highway Commercial (HC) zoning on the Property to its former zoning classification of Medium Density Residential (MR) and Rural Residential (RR), in accordance with Arizona Revised Statutes § 9-462.01.
5. All parcel reconfigurations must be completed prior to the issuance of the first Building Permit.

Attachments:

- Area Context Map
- Application
- Project Narrative and Regional Plan 2030 Analysis
- Approved Site Plan Drawings
- Site Plan Approval Letter and Conditions of approval
- Citizen Participation Plan and Meeting Report
- Legal Notice

DocuSign Envelope ID: 84547213-AE34-4AE4-81C3-52B88DD501F0

City of Flagstaff — Community Development Division

211 W. Aspen Ave
Flagstaff, AZ 86001
www.flagstaff.az.gov

P: (928) 213-2618
F: (928) 213-2609

Application for Direct to Ordinance Zoning Map Amendment

Date Received			**File Number**
Project Name	The Lofts on Butler		
Site Address	2950 E. Butler Avenue	**Parcel Number(s)** 106-04-006B, 106-04-007C, 107-11-001B, 107-44-062	**Subdivision & Lot Number** NA / **Site Acreage** 17
Existing Zoning District	RR, HC, MR	**Proposed Zoning District** HC	**Existing Regional Plan Area and Place Type** Future Urban Activity Center, U5 Urban
Existing Use	Vacant Land	**Proposed Use**	Mixed- Use development, commercial and multi-family apartments
Property Information:	☐ Yes ☒ No Located in an existing Local/National Historic District? (Name:_____) ☐ Yes ☒ No Existing structures are over 50 years old at the time of application? ☒ Yes ☐ No Subject property is undeveloped land?		
Type of Zoning Map Amendment (Small, Medium, Large or Multi-Phase)	Large		

Property Owner(s)	Sierra Vista No. 6 LLC, Brookstone Ventures L.C.	**Phone**	928-606-2543
Mailing Address	2335 Carl Lampland Flagstaff, AZ. 86005 (City, State, Zip)	**E-mail**	lydelm@mlmis5.com
Applicant(s)	Miramonte Acquisitions LLC	**Phone**	520-615-8900
Mailing Address	2502 E. River Road, Tucson, AZ. 85718 (City, State, Zip)	**E-mail**	chris@kemmerly.com
Project Representative(s)	Charity Lee	**Phone**	928-600-3594
Mailing Address	102 S. Mikes Pike, Flagstaff, AZ.86001 (City, State, Zip)	**E-mail**	clee@miramontehomes.com

Property Owner Signature (required)	**Date** 9-16-22	**Applicant Signature** DocuSigned by: Chris Kemmerly 5158C2211827409...	**Date** 9/19/2022

For City Use

Date Filed:	**File Number(s):**	
P & Z Hearing Date:	**Publication and Posting Date:**	
Council Hearing Date:	**Publication and Posting Date:**	
Fee Receipt Number:	**Amount:**	**Date:**

Action by Planning and Zoning Commission:	**Action by City Council:**
☐ Approved	☐ Approved
☐ Denied	☐ Denied
☐ Continued	☐ Continued

Staff Assignments	Planning	Engineering	Fire	PW/Water Services	Stormwater

FILE: P:\2021\21272\DRAWINGS\EXHIBITS\21272 VICINITY MAP 11X17.DWG EKEISER

PLOTTED: Aug 29, 2022–3:04pm



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DATE:	AUG 22
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK
CHECKED:	SCI

BUTLER MULTI–FAMILY

FLAGSTAFF
ARIZONA

VICINITY MAP

SHEET 1 OF 1

LOFTS ON BUTLER
2950 E. BUTLER AVENUE
ZONING MAP AMENDMENT
PROJECT NARRATIVE
UPDATED
3-2-23
PZ-21-00284-03

DEVELOPER/BUYER

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MIRAMONTE HOMES

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9. PHASING PLAN
10. MATERIAL MANAGEMENT PLAN
11. PUBLIC PARTICIPATION PLAN
12. PUBLIC PARTICIPATION REPORT

I. ABOUT US

Since 1992, Miramonte has been building the finest homes and commercial properties across the state of Arizona. From the Sonoran Desert to the mountains of Flagstaff, Arizona is a land of stunning diversity. No one understands this better than the Miramonte Companies. Capturing the essence of each environmentally and culturally unique community it serves within the Grand Canyon State has helped transform this Arizona-based regional company into the state's premier privately held homebuilder.

Miramonte has been building homes in Flagstaff, Arizona since 2012 and has developed; Forest Springs Phase I and II, Switzer Canyon, Presidio in the Pines Phases I, II, and II, Miramonte Mountain Reserve, Miramonte Mountain Pines, Enclave at Presidio, Miramonte Garden Pines, Dale Condos, Montvale, Walnut Cottages, Ponderosa Parkway, and Timber Sky, Deer Creek at Pine Canyon, Elk Pass at Pine Canyon, and Flagstaff Ranch.

Miramonte stands as a hallmark of craftsmanship, value, and customer focus. Miramonte's portfolio spans the entire range of the building continuum, including high-density, multi-family urban dwellings, semi-custom, and first move-up communities, and Miramonte's visually stunning business, office, and warehouse spaces.

Owned by Chris Kemmerly and led by a team of experienced building professionals, Miramonte is a fully integrated builder with unparalleled scope, resources, and capabilities.

II. OBJECTIVE

Miramonte desires to respond to City's December 2020 "Housing Crisis Emergency Declaration" (Resolution No. 2020-66) by providing additional rental units to Flagstaff. The Butler Lofts Project will address the Overarching Goal, Element Two of the City of Flagstaff's 10-Year Housing Plan (the "Housing Plan") by creating 172 additional housing units with a minimum of 5% of them being permanently affordable for thirty (30) years. According to the Housing Plan, Flagstaff needs over 7,976 housing units by 2031.

The Butler Lofts Project proposes to develop approximately 17 acres of land that is underutilized and in a future urban activity zone in the middle of town. Developing the site as proposed in this document will require a re-zoning. Throughout this document, General Plan Goals will be identified to support the requested Zoning Map Amendment. By approving the re-zoning and the Butler Lofts Project, the City Council will be meeting the goals and visions of the community and providing the much-needed additional housing for Flagstaff.

MIRAMONTE HOMES

III. PROPERTY LOCATION

The Project is located at 2950 E. Butler Ave in Flagstaff, Arizona. The Project site is positioned in a portion of Section 23, 14, and 13 Township 21 North, and Range 7 East, of the Gila and Salt River Base Meridian, Coconino County.



Figure 1: Vicinity Map

IV. ENTITLEMENTS
REQUESTED ZONING

The Project consists of four undeveloped parcels. The project will combine the four parcels to total approximately 17 acres. The two primary parcels 106-04-006B, and 107-11-001B are zoned RR – Rural Residential. The other two parcels,106-04-007C, and 107-44-062 are zoned HC-Highway Commercial and MR-Medium Residential. The Project proposes to re-zone the site to HC- Highway Commercial. Approximately 1 -acre will be split off to create a new parcel in the southwest corner. This parcel will have a commercial use to create a mixed-use development. The Developer intends to re-zone the Property to develop 172 dwelling units in conformance with the Flagstaff Regional Plan 2030. The re-zoning will be pursued by a Direct Ordinance Zoning Map Amendment.



Figure 2: Zoning Map

V. URBAN ACTIVITY CENTER

This property is in a Future Urban Activity Center in a Regional Scale Pedestrian Shed. "Activity Centers are mixed-use areas where there is a concentration of commercial and other land uses typically defined by a pedestrian shed. Activity centers are the appropriate locations for higher-density residential development, such as mid-rise and apartment buildings. They include a high degree of pedestrian and bicycle connectivity." **Flagstaff Regional Plan, BUILT ENVIRONMENT, Land Use IX-17.**

Regional activity centers focus on mainly loft and apartment-style living in a commercial core that is a bike, pedestrian, and transit-oriented. The Flagstaff Regional Plan sets forth the community's vision of how land use in the region should occur for the next 20 years. "Future growth is to be concentrated in reinvestment areas and include a balance of infill and redevelopment." **Flagstaff Regional Plan, BUILT ENVIRONMENT, Land Use IX-1.** The Butler Lofts Project site is an infill site, this is the perfect location for reinvestment. This site is over 17 acres and is between commercial

development. The proposed project is a mixed-use development that will include multi-family and offices as well as one acre that will be developed at a future date as a possible drive-thru coffee shop.

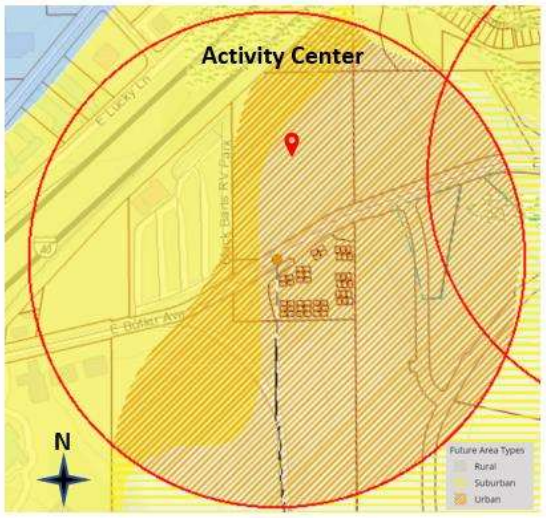


Figure 2: Map 21 and 22 Future Growth Illustration Flagstaff Regional Plan Chapter IX: Growth and Land Use Pages IX-26-IX 29

Mixed-use developments that include office space and commercial development located along corridors in this area type are supported in the Flagstaff Regional Plan 2020 Goals and Policies. Flagstaff's Regional Plan and High Occupancy Housing Specific Plan acknowledge that Activity Centers are the most appropriate locations for more dense residential uses, particularly multi-family and attached housing. Activity centers promote compact development, two and three-story buildings fronting the sidewalk are typical in this area type. The minimum density in this area is 8+ units per acre.

FLAGSTAFF REGIONAL PLAN GOALS AND OBJECTIVES

COMMUNITY DESIGN GOALS AND POLICIES

Goal CC.3. Preserve, restore, enhance, and reflect the design traditions of Flagstaff in all public and private development efforts.

- Policy CC.3.1. Encourage neighborhood design to be respectful of traditional development patterns and enhance the overall community image.

REINVESTMENT GOALS AND POLICIES

Goal LU.1. Invest in existing neighborhoods and activity centers for the purpose of developing complete, and connected places.

- Policy LU.1.1 Plan for and support reinvestment within the existing city centers and neighborhoods for increased employment and quality of life.
- Policy LU.1.3. Promote reinvestment at the neighborhood scale to include infill of vacant parcels, redevelopment of underutilized properties, aesthetic improvements to public spaces, remodeling of existing buildings and streetscapes, maintaining selected appropriate open space, and programs for the benefit and improvement of the local residents.

- Policy LU.1.6. Establish greater flexibility in development standards and processes to assist developers in overcoming challenges posed by redevelopment and infill sites.

APPLICABLE TO ALL LAND USES GOALS AND POLICIES

Goal LU.3. Continue to enhance the region's unique sense of place within the urban, suburban, and rural contexts.

- Policy LU.3.1. Within the urban, suburban, and rural context, use neighborhoods, activity centers, corridors, public spaces, and connectivity as the structural framework for development.

Goal LU.5. Encourage compact development principles to achieve efficiencies and open space preservation.

- Policy LU.5.2. Promote infill development over peripheral expansion to conserve environmental resources, spur economic investments, and reduce the cost of providing infrastructure and services.
- Policy LU.5.3. Promote compact development appropriate to and within the context of each area type: urban, suburban, and rural.
- Policy LU.5.5. Plan for and promote compact commercial development as activity centers with mixed uses, allowing for efficient multi-modal transit options and infrastructure.
- Policy LU.5. Encourage the distribution of density within neighborhoods in relation to associated activity centers and corridors, infrastructure, transportation, and natural constraints such as slopes and drainages.

Goal LU.6. Provide for a mix of land uses.

- Policy LU.6.1. Consider a variety of housing types and employment options when planning new development and redevelopment projects.
- Policy LU.6.2. Consider commercial core areas, corridors, activity centers, employment centers, research and development parks, special planning areas, and industrial uses as appropriate place types and area types for employment opportunities.
- Policy LU.6.3. Encourage new mixed-use neighborhoods in the appropriate location within the growth boundary.

URBAN AREA GOALS AND POLICIES

Goal LU.9. Focus reinvestment, partnerships, regulations, and incentives on developing or redeveloping urban areas.

- Policy LU.9.1. Reinvest in urban areas.

Goal LU.10. Increase the proportion of urban neighborhoods to achieve walkable, compact growth.

- Policy LU.10.1 Prioritize connectivity within all urban neighborhoods and activity centers.
- Policy LU.10.2. support on-street parking shared lots, and parking structures.
- Policy LU.10.5. Consider vacant and underutilized parcels within the City's existing urban neighborhoods as an excellent location for contextual redevelopment that adds housing, shopping, employment, entertainment, and recreational options for nearby residents and transit patrons.

- Policy LU.10.7. Invest in infrastructure and right-of-way enhancements that favor the pedestrian and transit as an incentive for private investment in urban neighborhoods and activity centers.
- Policy LU.10.6. In mixed-use developments encourage residential uses located above and behind commercial uses within urban areas as well as a variety of housing types where appropriate.
- Policy LU.10.9. Civic spaces must be well-designed, accessible, and central to the urban fabric.
- Policy LU.10.10. Future urban activity centers and neighborhoods are designed based on gridded street systems, considering constraints on connectivity, such as topography, the railroad, and highways.

EMPLOYMENT AREA GOALS AND POLICIES

Goal LU.15. Plan for and encourage employee-intensive uses throughout the area as activity centers, corridors, research, and development office, business parks, and light industrial area to encourage efficient infrastructure and multimodal commuting.

- Policy LU.15.2. Consider the compatible integration of residential uses and proposed employment centers to reduce vehicle trips and commute times.

ACTIVITY CENTERS AND COMMERCIAL CORRIDORS GOALS AND POLICIES

Goal LU.18. Develop well-designed activity centers and corridors with a variety of employment, business, shopping, civic engagement, cultural opportunities, and residential choices.

- Policy LU.18.1. Design activity centers and corridors appropriate to and within the context of each area type: urban, suburban, or rural.
- Policy LU.18.2. Strive for activity centers and corridors that are characterized by contextual and distinctive identities, derived from history, environmental features, a mix of uses, well-designed public spaces, parks, plazas, and high-quality design.
- Policy LU.18.3. Redevelop underutilized properties, upgrade aging infrastructure, and enhance rights-of-way and public spaces so that existing activity centers and corridors can realize their full potential.
- Policy LU.18.4. Encourage developers to provide activity centers and corridors with the housing of various types and price points, especially attached and multi-family housing.
- Policy LU.18.5. Plan for and support multi-modal activity centers and corridors with an emphasis on pedestrian and transit-friendly design.
- Policy LU.18.6. Support increased densities within activity centers and corridors.
- Policy LU.18.7.Concentrate commercial, retail, services, and mixed-use within the activity center's commercial core.
- Policy LU.18.8. Increase residential densities, live-work units, and home occupations within the activity center's pedestrian shed.
- Policy LU. 18.9. Plan activity centers and corridors appropriate to their respective regional or neighborhood scale.
- Policy LU.18.10. Corridors should increase their variety and intensity of uses as they approach activity centers.
- Policy LU. 18.11. Land use policies pertaining to a designated corridor generally apply to a depth of one parcel or one and one-half blocks, whichever is greater.

- Policy LU. 18.12 Corridors should focus on commercial development to the corridor frontage and residential to the back.
- Policy LU.18.13. Promote higher density development in targeted areas where economically viable and desired by the public.
- Policy LU.18.14. Endorse efficiency of infrastructure with compact development within targeted activity centers.
- Policy LU.18.15. Actual pedestrian-shed boundaries will be established considering opportunities and constraints posed by natural and man-made barriers like terrain or the interstate, road networks, and existing development patterns.
- Policy LU. 18.16. Adopt traffic regulations to increase awareness of pedestrian-oriented design for activity centers.
- Policy LU.18.17. Mixed-use development over 50 units per acre should be located in regional-scale activity centers.
- Policy LU.18.18.New development within existing activity centers should enhance the existing street pattern to meet the goals and policies of the Regional Plan related to connectivity and complete streets.
- Policy LU.18.19. New development in future activity centers should create street patterns that implement the characteristics of urban and suburban place-making within a functional transportation system that minimized dead ends and offset street and driveway connections.
- Policy LU.18.20. Major streets in urban activity centers should have urban-form buildings with their primary pedestrian entrances facing the major street. Secondary entrances could be located to meet other access needs for the building use.

REINVESTMENT GOALS AND POLICIES
NEIGHBORHOODS, HOUSING, & URBAN CONSERVATION
Goal NH.1. Foster and maintain healthy and diverse urban, suburban, and rural neighborhoods in the Flagstaff region.

- Policy NH.1.4. Foster points of activities, services, increased densities, and transit connections in urban and suburban neighborhoods.
- Policy NH. 1.5. Use traditional neighborhood design standards for new and revitalized urban neighborhoods, neighborhood plans, specific plans, or master plans.

Goal NH.6. Neighborhood conservation efforts of revitalization, redevelopment, and infill are compatible with and enhance our overall community character.

- Policy NH.6.1. Promote quality redevelopment and infill projects that are contextual with surrounding neighborhoods. When planning for redevelopment, the needs of existing residents should be addressed as early as possible in the development process.
- Policy NH.6.2. Use urban conservation tools to revitalize existing underutilized activity centers to their potential.

ACTIVITY CENTERS GOALS AND POLICIES
Goal ED.8. Promote the continued physical and economic viability of the region's commercial districts by focusing investment on existing and new activity centers.

REDEVELOPMENT AND INFILL GOALS AND POLICIES
Goal ED.9. Promote redevelopment and infill as a well-established means to accomplish a variety of community economic, planning, and environmental goals.

VI. RESOURCE PROTECTION ZONE

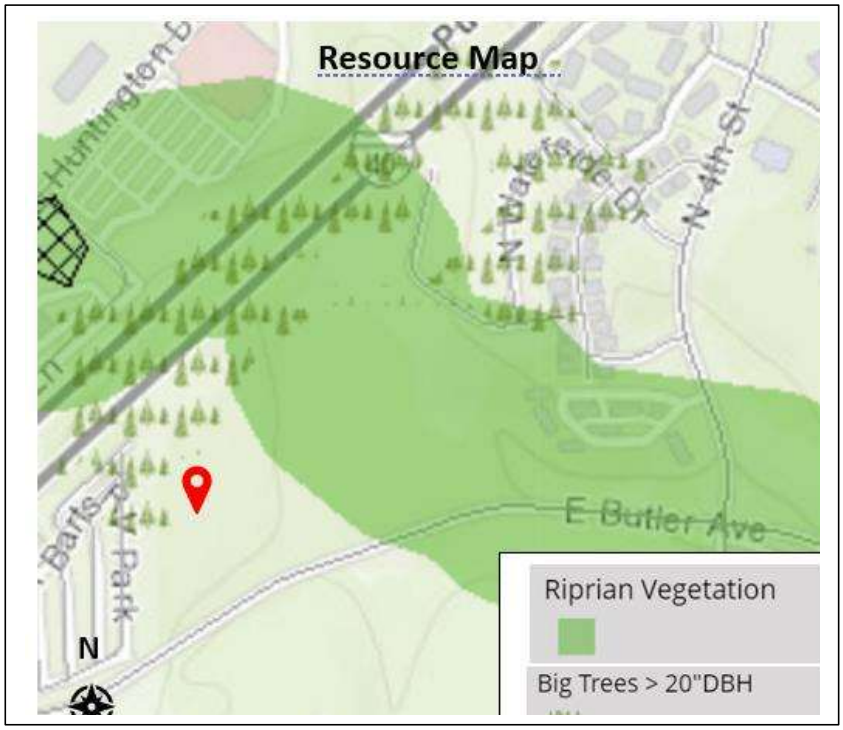


Figure 3: Map 7 Significant Natural Resources Flagstaff Regional Plan
Chapter IV: Planning and Conservation

The site is in a Resource Protection Zone. Existing vegetation contains medium to dense ponderosa pine stands with trunk diameters from 6 to 38 inches and native grasses and weeds, there are no natural streams on site. Flagstaff's subsurface conditions generally consist of rock and or clay material. It is expected that this site will be the same. Rezoning the site to Highway Commercial will require the preservation of 30% of tree resources. The proposed Project preserves 35% of the trees by clustering buildings together and providing open space areas to preserve the greatest number of tree stands. **Refer to Exhibit 1 Site Plan Page 7 of 7.**

An archeological survey was conducted on the Project site by Cornerstone Environmental Consulting, LLC, and no cultural resources were identified on the Project site.

FLAGSTAFF REGIONAL PLAN GOALS AND OBJECTIVES

CLIMATE CHANGE AND ADAPTATION GOALS AND POLICIES
Goal E&C.4 Integrate available science into policies governing the use and conservation of Flagstaff's natural resources.

- Policy E&C.4.1. Assess vulnerabilities and risks of Flagstaff's natural resources in the context of anticipated climate changes and resulting changes to Flagstaff's systems.

SCENIC RESOURCES AND NATURAL SETTING GOALS AND POLICIES

Goal CC. 1. Reflect and respect the region's natural setting and dramatic views in the built environment.

- Policy CC.1.1. Preserve the natural character of the region through planning and design to maintain views of significant landmarks, sloping landforms, rock outcroppings, water courses, floodplains, and meadows and conserve stands of ponderosa pine.
- Policy CC.1.2. Continue to define and further develop the community character by incorporating the natural setting into the built environment at all design scales.
- Policy CC.1.6. Encourage cluster development to preserve open space, viewsheds, and scenic vistas.

HERITAGE PRESERVATION GOALS AND POLICIES

Goal CC.2. Preserve, restore, and rehabilitate heritage resources to better appreciate our culture.

- Policy CC.2.1. Actively locate, identify, interpret, and preserve historical, archaeological, and cultural resources, in cooperation with other agencies and non-governmental organizations, as aspects of our society for future generations to retain, understand, and enjoy their cultural identity.

APPLICABLE TO ALL LAND USES GOALS AND POLICIES

Goal LU.3. Continue to enhance the region's unique sense of place within the urban, suburban, and rural context.

- Policy LU.3.3. Protect sensitive cultural and environmental resources with appropriate land uses and buffers.

Goal LU.4. Balance housing and employment land uses with the preservation and protection of our unique natural and cultural setting.

- Policy LU.4.2. Utilize the following as guidance in the development process: Natural Environment maps, Environmental Planning and Conservation policies, Considerations for Development, Cultural Sensitivity, and Historical Preservation maps, and Community Character policies, while respecting private property rights.

GROWTH AREAS & LAND USE

Goal LU.5. Encourage compact development principles to achieve efficiencies and open space preservation.

- Policy LU.5.1. Encourage development patterns within the designated growth boundaries to sustain efficient infrastructure projects and maintenance.
- Policy LU.5.2. Promote infill development over peripheral expansion to conserve environmental resources, spur economic investments, and reduce the cost of providing infrastructure and services.
- Policy LU.5.4. Encourage development to be clustered in appropriate locations as a means of preserving natural resources and open space, and to minimize service and utility costs, with such tools as Transfer of Development Rights (TDR).
- Policy LU.5.6. Encourage the distribution of density with neighborhoods in relationship to associated activity centers and corridors, infrastructure, transportation, and natural constraints such as slopes and drainages.

ECONOMIC DEVELOPMENT

Goal LU.4 Balance housing and employment land uses with the preservation and protection of our unique natural and cultural setting.

VII. DEVELOPMENT PLAN

A. PROJECT DESCRIPTION

The development proposes a mixed-use Project. According to the Flagstaff Regional Plan, "future development trends foresee a greater emphasis on smaller houses, smaller lots, multi-family and multi-generational housing with access to community amenities, commercial space within easy access (walking and biking) to homes and amenities and will accommodate a wide range of ages, incomes and public transit." "Mixed-use opportunities exist where planned activity centers host a significant amount of growth in office space, retail business, and multi-family housing." **Flagstaff Regional Plan BUILT ENVIRONMENT, Land Use IX-3.**

The Butler Lofts is a cluster development providing (43) four-plex buildings, approximately 4,295 square feet, and a total of 172 rental units, five percent (5%) of the units will be designated affordable for thirty (30) years. There will also be a separate commercial building. The first floor of the commercial building will include approximately 2806 square feet for the residents which will include a fitness center, kitchenette, meeting/recreation area, and leasing office for the complex.

Separate commercial office space will be located on the second level of the building and will be approximately 2,154 square feet. The main lobby is provided on the ground floor of the commercial building which will serve the residents of the community and serve customers of the commercial office user. This commercial office space will have a separate entrance from the clubhouse that faces Butler Avenue. The public will be able to park within the development and access the commercial office space along the 5' sidewalk provided adjacent to the commercial use. Residential uses with more than two units are allowed by right in the HC zone as part of a mixed-use development located behind the commercial uses is permitted in the HC zone. Per the Zoning Code Section 10-40.60, Table 10-40.60. 260. B (1) Pedestrian-oriented commercial space includes a lobby serving other uses in the building or uses not open to the public. (2) Ground floor commercial space shall have a customer entrance opening directly onto the sidewalk.

In addition, a separate commercial pad approximately one acre will be created adjacent to Butler Avenue which will be split off from the multi-family Project and developed at a future date.

The Project will provide a total of 352 parking spaces of which 9 will be ADA spaces and 4 will be EV-ready spaces.

The property is in a Resource Protection Zone and is in the Pedestrian Shed of an Activity Center. The proposed density of the entire site is 9.41 units/acre. The units per acre on the multi-family development site is 10.8, which is below the maximum of 29 units per acre allowed in the HC zone for parcels with a Resource Protection Overlay and, in the Pedestrian, Shed of an Activity Center and is also consistent with the Regional Plan, which requires a minimum density of 8 units per acre in mixed-use developments in Activity Centers. **Refer to Exhibit 1 Site Plan.**

FLAGSTAFF REGIONAL PLAN 2030 GOALS AND POLICIES

COMMUNITY DESIGN GOALS AND POLICIES

Goal CC.4. Design and develop all projects to be contextually sensitive, to enhance a positive image and identity for the region.

- Policy CC.4.1. Design streetscapes to be context-sensitive and transportation systems to reflect the desired land use while balancing the needs of all modes for traffic safety and construction and maintenance costs.

NEIGHBORHOODS, HOUSING, & URBAN CONSERVATION

Goal NH.3. Make available a variety of housing types at different price points, to provide housing opportunities for all economic sectors.

- Policy NH.3.1. Provide a variety of housing types throughout the City and region, including purchase and rental options, to expand the choices available to meet the financial and lifestyle needs of our diverse population.

Goal NH.4. All housing is safe and sanitary.

- Policy NH.4.3. Address accessibility issues and other housing barriers to persons with disabilities or special needs.
- Policy NH.4.7. Enforce compliance with fair housing laws.

APPLICABLE TO ALL LAND USES GOALS AND POLICIES

Goal LU.5. Encourage compact development principles to achieve efficiencies and open space preservation.

- Policy LU.5.3 Promote compact development appropriate to and within the context of each area type: urban, suburban, and rural.
- Policy LU.5.4 Encourage development to be clustered in appropriate locations as a means of preserving natural resources and open space, and to minimize service and utility costs, with such tools as Transfer of Development Rights (TDR).
- Policy LU.5.6. Encourage the placement of institutional and civic buildings centrally within a neighborhood to promote walkability and multi-use recreation spaces.

Goal LU.6. Provide for a mix of land uses

- Policy LU.6.1. Consider a variety of housing types and employment options when planning new development and redevelopment projects.
- Policy LU.6.2 Consider commercial core areas, corridors, activity centers, employment centers, research and development parks, special planning areas, and industrial uses appropriate place types and area types for employment opportunities.

B. ARCHITECTURE

The exterior of the buildings will be quality construction in an attractive style compatible with the Flagstaff area. Exterior colors will complement the natural surroundings. The buildings will be two-story loft-style apartments, all units will include a bedroom on the first level. The style and construction of the Project are in conformance with the new developments in the area, such as Woodshire on Butler which is constructing two-story townhomes south of the Project site. The project will include, twenty-six (26) one-bedroom units, one-hundred twenty (120) two-bedroom units, and twenty-six (26) three-bedroom units. Two-bedroom/two-bedroom combination units may be replaced with a three-bedroom/one-bedroom combination and not affect minimum parking requirements. The Project provides a "sense of place" each unit will have a back yard and front patio looking out onto the tree-lined street. View corridors noticeable from the site include Interstate 40 and the San Francisco Peaks to the north, Black Barts RV park to the west, The Bluffs assisted living community to the east, and Woodshire multi-family community and Butler Avenue to the south. The construction will be wood

frame slab-on-grade floors. The exteriors will feature LP smart siding and corrugated metal. Refer to **Exhibit 2 Architectural Drawings and Exhibit 3 Renderings.**

FLAGSTAFF REGIONAL PLAN 2030 GOALS AND POLICIES

APPLICABLE TO ALL LAND USES GOALS AND POLICIES

Goal LU.6. Provide for a mix of land uses

- Policy LU.6.1. Consider a variety of housing types and employment options when planning new development and redevelopment projects.

COMMUNITY CHARACTER

Goal CC.1. Reflect and respect the region's natural setting and dramatic views in the built environment.

- Policy CC.1.6. Encourage cluster development to preserve open space, viewsheds, and scenic vistas.

COMMUNITY DESIGN GOALS AND POLICIES

Goal CC.3. Preserve, restore, enhance, and reflect the design traditions of Flagstaff in all public and private development efforts.

- Policy CC.3.2. Maintain and enhance existing buildings and blend well-designed new buildings into existing neighborhoods.

Goal CC.4. Design and develop all projects to be contextually sensitive, to enhance a positive image and identity for the region.

- Policy CC.4.3. Employ design solutions that balance the interface of the natural and built environments, with the most urbanized core activity areas being the most built, and the most rural areas being the most natural.

C. SUSTAINABILITY

The development will be all electric, including all electric appliances, natural gas will not be used in this development. Low- VOC and formaldehyde-free materials will be used for the carpet, cabinets, and paint. This development is not using the Sustainable Residential Building Incentives.

C.1. Recycling

The Developer will provide recycling collection facilities at all solid waste enclosures within the Project, which will include signage on City approved recycling materials. The recycling and solid waste collection facilities will be made available for all tenants including the residents and the tenants of the commercial office space. All residential units will include double heavy-duty hidden waste baskets in the kitchen cabinets to promote recycling. Property managers for the residential units and the commercial office space will include educational materials to tenants on what is recyclable in the city of Flagstaff and are allowed in the receptacles. Tenants will also be provided with information on local valet services for recycling and composting and how they can learn more about ways to recycle by contacting the City of Flagstaff Sustainability Program at 928-213-2152 or sustainability@flagstaffaz.gov. The future commercial parcel will include recycling and solid waste collection facilities with signage on City approved recycling materials.

C.2 Electric Vehicle (EV) Parking

The Project will provide four parking spaces with EV-ready outlets per the requirements of the Flagstaff City Code, Title 4 Building Regulations. The EV spaces will be in the locations as identified on the **Site Plan attached as Exhibit 1 on Page 2 of 6.**

C.3 Bicycle Parking

The Developer will provide bicycle parking facilities for 40 bicycles, 16 uncovered and 24 covered. Zoning Code section 10-50.80.050 requires a minimum of 18 bicycle parking spaces for this Project.

C.4 Flagstaff Urban Trail Connection

A single-track trail will be installed in the northeast section of the development as shown on the approved Site Plan and Landscape Plan, providing connectivity to the Flagstaff Urban Trail System.

C.5 Department of Energy / Environmental Protection Agency.

The development will be all electric, including all electric appliances, natural gas will not be used in this development. Low- VOC and formaldehyde-free materials will be used for the carpet, cabinets, and paint. This development is not using the Sustainable Residential Building Incentives.

FLAGSTAFF REGIONAL PLAN 2030 GOALS AND POLICIES

CLIMATE CHANGE AND ADAPTATION GOALS AND POLICIES
Goal E&C.2.Achieve carbon neutrality for the Flagstaff community by 2030

- Policy E&C.2.1 Encourage the reduction of energy and material consumption.
- Policy E&C 2.4. Promote development that help the community achieve carbon neutrality through strategies that reduce the project's emissions from transportation, energy, and consumption.

NEIGHBORHOODS, HOUSING, & URBAN CONSERVATION
Goal NH.4. All housing is safe and sanitary.

- Policy NH.4.4. Encourage green practices in housing construction and rehabilitation that support durable, healthy, and energy-efficient homes.

EFFICIENT USE OF ENERGY GOALS AND POLICIES
Goal E.1. Increase energy efficiency.

- Policy E.1.3 Empower all community members to make smarter energy choices through education and incentives.
- Policy E.1.4. Promote cost-effective, energy-efficient technologies and design in all new and retrofit buildings for residential, commercial, and industrial projects.
- Policy E.1.7. Support policies and programming that reduce electricity, natural gas, and water consumption to conserve natural resources and reduce financial costs.
- Policy E.1.9 Develop standards and guidelines to guide builders, architects, and developers toward the optimal building, water use, and energy performance.
- Policy E.1.13. Promote and encourage the use of fuel-efficient vehicles that use renewable fuels.

SAFE AND EFFICIENT MULTIMODAL TRANSPORTATION GOALS AND POLICIES
Goal T.2. Improve transportation safety and efficiency for all modes.

- Policy T.2.2. Consider new technologies in new and retrofitted transportation infrastructure.

NEIGHBORHOODS, HOUSING, AND URBAN CONSERVATION GOALS AND POLICIES
Goal NH.4.All housing is safe and sanitary

- Policy NH.4.4. Encourage green practices in housing construction and rehabilitation that support durable, healthy, and energy-efficient homes.

D. AMENITIES

Ramadas, pedestrian pathways, and benches will be installed in the civic space and open space areas throughout the development site for residents to enjoy. The Project will provide a clubhouse for the residents which will include a meeting/recreation area, kitchen, and fitness center. A single-track trail will be installed in the northeast section of the development as shown on the approved Site Plan and Landscape Plan, providing connectivity to the Flagstaff Urban Trail System. **to Exhibit 2 Architectural Drawings and Exhibit 3 Renderings and Exhibit 4 Landscape Plan.**

FLAGSTAFF REGIONAL PLAN GOALS AND POLICIES

APPLICABLE TO ALL LAND USES GOALS AND POLICIES
Goal LU.6. Provide for a mix of land uses.

- Policy LU.6.4. Provide appropriate recreational and cultural amenities to meet the needs of residents.

E. OPEN SPACE/CIVIC SPACE.

The Project exceeds the requirements in the Zoning Code for open space and civic space. The Project requires the preservation of 2.39 acres of open space and .80 acres of civic space. The Project will provide 3.87 acres of open space and .91 acres of civic space.

E.1. LANDSCAPING.

Native drought-tolerant plants will be installed as identified in the Landscaping Plan and will be planted in compliance with the City of Flagstaff Landscaping Standards Section 10-50.60. Rainwater harvesting will be utilized by collecting roof runoff in gutters and downspouts to passively irrigate At-Grade landscaping. The added plants will help with runoff, provide clean air into the environment, and provide a natural habitat for insects, pollinators, birds, and small animals. A 15' landscape buffer will be installed between the Project and adjacent commercial development. The remaining tree resources and additional plants installed on the site will maintain the existing small animal community and increase the overall value of the project. **Refer to Exhibit 1 Site Plan and Exhibit 4 Landscape Plan.**

FLAGSTAFF REGIONAL PLAN 2030 GOALS AND POLICIES

CLIMATE CHANGE AND ADAPTATION GOALS AND POLICIES
Goal E&C.3. Prepare Flagstaff's community systems and resources to be more resilient to climate change impacts, and address climate change in a manner that prioritizes those most impacted and ensures the costs and benefits of climate adaptation and mitigation are equitably distributed.

- Policy E&C.3.3. Invest in forest health and watershed protection measures.

Goal E&C.4 Integrate available science into policies governing the use and conservation of Flagstaff's natural resources.

- Policy E&C.4.1. Assess vulnerabilities and risks of Flagstaff's natural resources in the context of anticipated climate changes and resulting changes to Flagstaff's systems.

ECOSYSTEM HEALTH GOALS AND POLICIES

Goal E&C.6. Protect, restore and improve ecosystem health and maintain native plant and animal community diversity across all land ownerships in the Flagstaff region.

- Policy E&C.6.8 Disturbed areas for improvements and landscaping for new developments shall emphasize the use of native, drought-tolerant, or edible species where appropriate to the area.

NATURAL QUIET GOALS AND POLICIES

Goal E&C.8. Maintain areas of natural quiet and reduce noise pollution.

SOILS GOALS AND POLICIES

Goal E&C.9. Protect soils through conservation practices.

- Policy E&C.9.2. Construction projects employ strategies to minimize disturbed areas, soil compaction, soil erosion, and destruction of vegetation.

WILDLIFE GOALS AND POLICIES

Goal E&C.10. Protect indigenous wildlife populations, localized and larger-scale wildlife habitats, ecosystem processes, and wildlife movement areas throughout the planning area.

- Policy E&C.10.1. Encourage local development to protect, conserve, and when possible enhances and restore wildlife habitat.
- Policy E&C.10.5. Support the development of watchable wildlife recreation opportunities.
- Policy E&C.10.6. Conserve and restore important wildlife corridors throughout the planning area to allow wildlife to find suitable habitats in the face of climate change by moving along vegetational and elevational gradients.

OPEN SPACE GOALS AND POLICIES

Goal OS.I. The region has a system of open lands, such as undeveloped natural areas, wildlife corridors and habitat areas, trails, access to public lands, and greenways to support the natural environment that sustains our quality of life, cultural heritage, and ecosystem health.

- Policy: OS.1.3. Use open spaces as natural environment buffer zones to protect scenic views and cultural resources, separate disparate uses, and separate private development from public lands, scenic byways, and wildlife habitats.
- Policy OS.1.4. Use open space as opportunities for non-motorized connectivity, to interact with nature, and to enjoy the views and quiet.
- Policy OS.1.5. Integrate open space qualities into the built environment.

WATER DEMAND GOALS AND POLICIES

Goal WR.3. Satisfy current and future human water demands and the needs of the natural environment through sustainable and renewable water resources and strategic conservation measures.

- Policy WR.3.4. Use reclaimed water and rainwater harvesting wherever appropriate and practical.

APPLICABLE TO ALL LAND USES GOALS AND POLICIES

Goal LU.3. Continue to enhance the region's unique sense of place within the urban, suburban, and rural context.

- Policy LU.3.4. Promote transitions between urban, suburban, and rural areas with an appropriate change in development intensity, connectivity, and open space.

SCENIC RESOURCES AND NATURAL SETTING GOALS AND POLICIES

Goal CC.1. Reflect and respect the region's natural setting and dramatic views in the built environment.

- Policy CC.1.1. Preserve the natural character of the region through planning and design to maintain views of significant landmarks, sloping landforms, rock outcroppings, water courses, floodplains, and meadows, and conserve stands of ponderosa pine.

COMMUNITY DESIGN GOALS AND POLICIES

Goal CC.4. Design and develop all projects to be contextually sensitive, to enhance a positive image and identity for the region.

- Policy CC.4.3. Employ design solutions that balance the interface of the natural and built environments, with the most urbanized core activity areas being the most built, and the most rural areas being the most natural.
- Policy CC.4.5. Encourage local landscaping using Xeriscape, low-impact principles, and native vegetation whenever possible.
- Policy CC.4.6. Use landscaping to benefit the environment and improve aesthetics, in order to maximize the economic benefit that a well-landscaped community provides.

F. ACCESS/CIRCULATION/OFF-SITES

The Project is located off Butler Avenue, an east-west roadway classified as a minor arterial. Butler Avenue provides one lane in each direction without separation. Access to the proposed development will be provided from Butler Avenue by two driveways into the site. A full access driveway is proposed as the north leg of the future roundabout at the intersection of Butler Avenue and the future alignment of Herold Ranch Road. Prior to the realignment of Herold Ranch Road and construction of the roundabout, this driveway is proposed to operate as a minor street stop control intersection. A secondary driveway is proposed approximately 400' from the primary driveway as a right in/right out access from Butler Avenue on the east side of the site. During construction of the roundabout, access will be restricted to the site from the primary driveway and the secondary driveway on the east side of the site will operate as the exclusive site access point. During construction it is recommended that the secondary driveway operate as full access. The multi-use development is anticipated to add approximately 149 trips (entering and exiting) the site during the AM peak hour and 152 trips during the PM peak hour to the roadway network. This site is expected to constitute approximately 3.39% of the total traffic expected at the intersection. **Refer to Exhibit 5, Traffic Impact Analysis.**

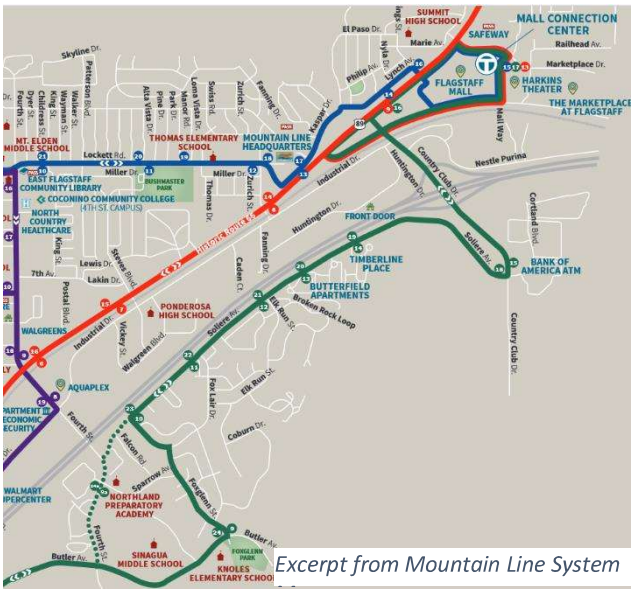
MIRAMONTE
HOMES

F.1. PUBLIC SERVICES

The Project is within the urban growth boundary and can be served by the city of Flagstaff public services. Fire Station #4 is located at 4040 E. Butler Avenue, one mile from the site. Knoles Elementary, Sinagua Middle School, and Northland Preparatory Academy are also located within a mile of the Project. The police station is less than two miles from the site at 911 E. Sawmill Road. Flagstaff Medical Center is located approximately three miles from the site.

F.2. PUBLIC TRANSPORTATION

NAIPTA Bus Route 3 runs on Butler Avenue adjacent to the proposed Project. The location of the project meets Regional Plan goals by tying into current existing energy-efficient alternative transportation systems. Route 3 provides service (without a transfer) to three schools en route to the Downtown Connection Center via Soliere Avenue and Butler Avenue. The route also provides a deviation on school days to accommodate the student riders.



Excerpt from Mountain Line System

Heading east, Route 3 ends at the Mall Connection Center near the employment and shopping opportunities in the vicinity.

Located near the I-40 exchange, Project residents will have easy access to other parts of Flagstaff while bypassing traffic congestion on surface streets. Nestle Purina factory (which employs 300 people[1]), 50+ stores at the Flagstaff Mall approximately 2.5 miles from the Project, and other employment opportunities along Marketplace Drive. In the event the Northern Arizona Healthcare Health Village is approved near Fort Tuthill, I-40 provides a smooth commute for employees and users of the medical center.

F.3. PEDESTRIAN CONNECTIVITY

The Project is in a pedestrian shed. "Pedestrian sheds are the basic building block of walkable neighborhoods. A pedestrian shed is the area encompassed by the walking distance from an activity center, and is often the area covered by a 5-minute walk (about ¼ mile)." **Flagstaff Regional Plan, BUILD ENVIRONMENT, Land Use, IX-17.** Five-foot sidewalks are located throughout the development as well as pedestrian pathways within the open space and civic space areas. Future improvements along Butler Avenue will include a 5' sidewalk a parkway and a bike lane with the future Butler Improvement Project. This future capital improvement project will provide connectivity for the residents to nearby commercial businesses and restaurants located in the proximity of the project and within a ¼ mile.

To promote and encourage alternative modes of transportation such as bicycling, the Project will provide 40 bicycle parking facilities, 16 uncovered and 24 covered, which exceeds the requirements in the Zoning Code requirement of 18 uncovered bicycle parking facilities.

Additionally, the NAIPTA bus stop is located adjacent to the development providing convenience for residents to utilize public transportation.

FLAGSTAFF REGIONAL PLAN 2030 GOALS AND POLICIES

EFFICIENT USE OF ENERGY GOALS AND POLICIES

Goal E.1. Increase energy efficiency.

- Policy: E.1.5. Promote and encourage the expansion and use of energy-efficient modes of transportation.
  a. Public transportation
  b. Bicycles
  c. Pedestrians

COMMUNITY DESIGN GOALS AND POLICIES

Goal CC.4. Design and develop all projects to be contextually sensitive, to enhance a positive image and identity for the region.

- Policy CC.4.1. Design streetscapes to be context-sensitive and transportation systems to reflect the desired land use while balancing the needs of all modes for traffic safety and construction and maintenance costs.
- Policy CC.4.2 Design utilities and infrastructure to be contextual and considered as part of the overall design aesthetics.
- Policy CC.4.5. Design streets and parking lots to balance automobile facilities, recognize human-scale and pedestrian needs, and accentuate the surrounding environment.

REINVESTMENT GOALS AND POLICIES

Goal LU.1. Invest in existing neighborhoods and activity centers for the purpose of developing complete, and connected places.

- Policy LU.1.4 Attract private investment by reinvesting in transportation infrastructure improvements as well as public utility infrastructure for desired development size.
- Policy LU.1.5 Maintain and upgrade existing infrastructure and invest in infrastructure to make redevelopment and infill an attractive and more financially viable development option.

APPLICABLE TO ALL LAND USES GOALS AND POLICIES

Goal LU.5. Encourage compact development principles to achieve efficiencies and open space preservation.

- Policy LU.5.1. Encourage development patterns within the designated growth boundaries to sustain efficient infrastructure projects and maintenance.

Goal LU.6. Provide for a mix of land uses

- Policy LU.6.4 Provide appropriate recreational and cultural amenities to meet the needs of residents

Goal LU.7. Provide public services and infrastructure.

- Policy LU.7.1. Concentrate on urban development in locations that use land efficiently, and are served by roads, water, sewer, and other public facilities and services, and that support transit, reduced vehicle trips, and conservation of energy and water.
- Policy LU.7.3. Require development proposals to address the availability of adequate public services.

EMPLOYMENT AREA GOALS AND POLICIES

Goal LU.15. Plan for and encourage employee-intensive uses throughout the area as activity centers, corridors, research, and development office, business parks, and light industrial area to encourage efficient infrastructure and multimodal commuting.

- Policy LU.15.4. Accommodate safe and convenient walking, biking, and transit facilities in existing and proposed employment centers.

SPECIAL PLANNING AREA GOALS AND POLICIES

Goal LU.17. Protect, manage, and enhance the region's Special Planning Areas to benefit the whole community.

- Policy LU.17.1. Enhance connectivity and coordinate planning efforts with neighborhoods contiguous to special planning areas.

ACTIVITY CENTERS AND COMMERCIAL CORRIDORS GOALS AND POLICIES

Goal LU.19.Develop a manageable evolution of the main corridors into contextual place makers.

- Policy LU.19.4. Balance automobile use, parking, and bicycle access, while prioritizing pedestrian safety along all corridors.

Goal LU.18.Develop well-designed activity centers and corridors with a variety of employment, business, shopping, civic engagement, cultural opportunities, and residential choices.

- Policy LU.18.5. Plan for and support multi-modal activity centers and corridors with an emphasis on pedestrian and transit-friendly design.

RECREATION, PEDESTRIAN, AND BICYCLE (TRANSPORTATION)

Goal REC 1. Maintain and grow the region's health system of convenient and accessible parks, recreation facilities, and trails.

- Policy REC.1.1 Integrate active and passive recreational sites within walking distance throughout the region to promote a healthy community for all City and County residents and visitors.
- Policy REC.1.2 Promote public and private partnerships to offer parks, recreational facilities, and resources.

MOBILITY AND ACCESS GOALS AND POLICIES

Goal T.1. Improve mobility and access throughout the region.

- Policy T.1.3. Transportation systems are consistent with the place type and needs of people.
- Policy T.1.4. Provide a continuous transportation system with convenient transfer from one mode to another.
- Policy T.1.5. Manager the operation and interaction of all modal systems for efficiency, effectiveness, safety, and to best mitigate traffic congestion.

- Policy T.1.6. Provide and promote strategies that increase alternate modes of travel and demand for vehicular travel to reduce peak-period traffic.
- Policy T.1.7. Coordinate transportation and other public infrastructure investments efficiently to achieve land use and economic goals.
- Policy T.1.8. Plan for development to provide on-site, publicly-owned transportation improvements and provide adequate parking.

SAFE AND EFFICIENT MULTIMODAL TRANSPORTATION GOALS AND POLICIES

Goal T.2. Improve transportation safety and efficiency for all modes.

- Policy T.2.1. Design infrastructure to provide safe and efficient movement of vehicles, bicycles, and pedestrians.

Goal T.5. (Pedestrian Infrastructure) Increase the availability and use of pedestrian infrastructure, including FUTS, as a critical element of a safe and livable community.

- Policy T.5.1 Provide accessible pedestrian infrastructure with all public and private street construction and reconstruction.

Goal T.6. (Bicycle Infrastructure) provide for bicycling as a safe and efficient means of transportation and recreation.

- Policy T.6.2 Establish and maintain a comprehensive, consistent, and highly connected system of bikeways and FUTS trails.

TRANSPORTATION

Goal T.1. Improve mobility and access throughout the region.

- Policy T.1.1. Integrate a balanced, multimodal, regional transportation system.
- Policy T.1.5. Manage the operation and interaction of all modal systems for efficiency, effectiveness, and safety, and to best mitigate traffic congestion.
- Policy T.3.3. Couple transportation investments with desired land use patterns to enhance and protect the quality and livability of neighborhoods, activity centers, and community places.
- Policy T.8.1. Promote efficient transportation connectivity to major trade corridors, employment centers, and special districts that enhance the region's standing as a major economic hub.

NEIGHBORHOODS, HOUSING, & URBAN CONSERVATION

Goal NH.1. Foster and maintain healthy and diverse urban, suburban, and rural neighborhoods in the Flagstaff region.

- Policy NH.1.3. Interconnect existing and new neighborhoods through patterns of development, with complete streets, sidewalks, and trails.
- Policy NH.1.4. Foster points of activities, services, increased densities, and transit connections in urban and suburban neighborhoods.

Goal NH.4. All housing is safe and sanitary.

- Policy NH.4.6. Consider and integrate public transportation, when possible, in planning housing developments, to help reduce a household's transportation costs and minimize the impact on the community's roads and transportation system.

TRANSPORTATION

Goal T.1. Improve mobility and access throughout the region.

- Policy T.1.1. Integrate a balanced, multimodal, regional transportation system.
- Policy T.1.5. Manage the operation and interaction of all modal systems for efficiency, effectiveness, and safety, and to best mitigate traffic congestion.
- Policy T.3.3. Couple transportation investments with desired land use patterns to enhance and protect the quality and livability of neighborhoods, activity centers, and community places.
- Policy T.8.1. Promote efficient transportation connectivity to major trade corridors, employment centers, and special districts that enhance the region's standing as a major economic hub.

G. LIGHTING

The Project site is in Lighting Zone 2. All exterior lighting on the site shall meet the requirements of the City of Flagstaff Outdoor Lighting Standards. The Developer shall apply for an Outdoor Lighting Permit with the Building Permit submittal. An approved permit will be received by the City of Flagstaff before installing new or modified existing outdoor lighting.

FLAGSTAFF REGIONAL PLAN 2030 GOALS AND POLICIES

DARK SKIES GOALS AND POLICIES

Goal E&C.5. Preserve dark skies as an unspoiled natural resource, basis for an important economic sector, and core element of community character.

- PolicyE&C.5.3 Continue to enforce dark sky ordinances.

H. SIGNS STANDARDS

All signs installed on site will comply with the Zoning Code Section 10-50.100. Before installing any permanent signage, a Permanent Sign Permit will be obtained.

I. SITE ANALYSIS

Site slopes do not exceed 35% for greater than 10' in elevation difference. Topography is defined by slope resources to the north sloping downhill. Most of the parcel does not exceed 16.99% slope and has a general slope towards the south. **Refer to Page 7 of 7 of Exhibit 1 Site Plan.**

I.1. FLOOD ZONE

The Project is located within Zone X and AE of FEMA firm map #04005C6828G effective September 3, 2010. Zone X is described to be outside the 0.2% annual chance floodplain. Zone AE is described as areas

subject to inundation by the 1.0% annual chance flood event. The Project will not impact the floodplain area, so no further action or analysis is needed. **Refer to Exhibit 6 Preliminary Drainage Report.**

I.2. DRAINAGE/STORMWATER

The proposed grading design will maintain the existing drainage pattern by directing the majority of the runoff into the Switzer Canyon Wash (SCW) as it did in the pre-developed site conditions. To mitigate the increased runoff from the development, the project will route runoff from the central and southern portions of the site into three new above-ground storage basins. Runoff from the central portion of the site will be routed to a storage basin located at an existing local low point along the eastern site boundary. This basin will be used for LID retention and peak flow detention. Additional runoff generated from the development that exceeds this basin volume will overflow into a culvert that crosses beneath the road and enters a second basin to the west of the road. An emergency overflow outlet will be provided in this basin that will route excess volume to the north via a storm drain system that outfalls into SCW. For additional information refer to **Exhibit 6 Preliminary Drainage Report.**

FLAGSTAFF REGIONAL PLAN 2030 GOALS AND POLICIES

CLIMATE CHANGE AND ADAPTATION GOALS AND POLICIES

Goal E&C.3. Prepare Flagstaff's community systems and resources to be more resilient to climate change impacts and address climate change in a manner that prioritizes those most impacted and ensures the costs and benefits of climate adaptation and mitigation are equitably distributed.

- Policy E&C.3.3. Invest in forest health and watershed protection measures.

ENVIRONMENTALLY SENSITIVE LANDS GOALS AND POLICIES

Goal E&C.7. Give special consideration to environmentally sensitive lands in the development design and review process.

- Policy E&C.7.1 Design development proposals and other land management activities to minimize the alteration of natural landforms and maximize the conservation of distinctive natural features.

WILDLIFE GOALS AND POLICIES

Goal E&C.10. Protect indigenous wildlife populations, localized and larger-scale wildlife habitats, ecosystem processes, and wildlife movement areas throughout the planning areas.

- Policy E&C.10.3 Protect sensitive and uncommon habitats such as ephemeral wetlands, riparian habitats, springs and seeps, rare plant communities, and open prairie ecosystems including the physical elements such as water sources and soil types on which they depend through open space acquisition efforts, avoiding these features in the design of subdivisions and other development, etc.

STORMWATER & WATERSHED MANAGEMENT & WATER RESOURCES

Goal WR.5. Manage watersheds and stormwater to address flooding concerns, water quality, environmental protections, and rainwater harvesting.

- Policy WR.5.3. Identify downstream impacts as the result of development and provide for mitigation measures to address impacts. When possible, mitigations should be non-structural in nature.
- Policy WR.5.4. Develop any necessary stormwater infrastructure improvements consistent with City of Flagstaff stormwater master plans or studies as adopted by the City.
- Policy WR.5.6. Implement stormwater harvesting techniques to support water conservation strategies by collecting and using local precipitation in the vicinity where it falls to support both human and overall watershed health needs.
- Policy WR.5.7. Support healthy watershed characteristics through the implementation of practices, consistent with the City of Flagstaff Low Impact Design Manual, that improve flood control and flood attenuation, stormwater quality, and water sustainability; increase groundwater recharge; enhance open space quality; increase biodiversity; and reduce land disturbance and soil compaction.

WATER QUALITY GOALS AND POLICIES

Goal WR.6. Protect, preserve, and improve the quality of surface water, groundwater, and reclaimed water in the region.

- Policy WR.6.4. Encourage low-impact development strategies.

J. WATER AND SEWER

The proposed development lies within the City of Flagstaff urban growth boundary and can be served by City water and sewer utilities. **Refer to Exhibit 1 Site Plan and Exhibit 7 Water Sewer Impact Analysis dated 8-31-2022 and revised October 24, 2022.**

J.1.On-site Modifications:

J.1.1 Water

It is assumed that there is currently no infrastructure on the ground to support this development, all systems for the Project will be designed and built per the City of Flagstaff Engineering Standards. Water to the site will be provided by a new public 8-inch water main on the project site connecting to the existing 24-inch D.I.P. water main in Butler Avenue at two locations to create a new onsite loop. Each provided water service and the meter will serve multiple buildings and units. It is estimated that each service will be 1-1/2-2” and serve 12 to 16 units. The clubhouse will also have their service and meter.

J.1.2 Sewer

It is assumed that there is currently no infrastructure on the ground to support this development, all sewer systems for the Project will be designed and built per the City of Flagstaff Engineering Standards. The sewer will be provided by a new 8” public sewer main connecting to the existing 8-inch V.C. sewer in Butler Avenue. A 4” sewer service will connect each building to the new sewer main. The clubhouse building will also have sewer services.

J.2. Off-site Modifications:

J.2.1. Water

There is currently infrastructure along Butler Avenue that will serve this project. Tapping the waterline will be done by the City of Flagstaff Standards. The Flagstaff Regional Plan community vision is to "focus infrastructure investments where they will have the most impact- in reinvestment areas of activity centers and corridors" **Flagstaff Regional Plan BUILT ENVIRONMENT, Land Use, IX-2**. The Project has been previously identified as a potential beneficiary of a future John Westly Powell Improvement District. As a result, the Developer shall provide cash in lieu to the City of Flagstaff as outlined in the Development Agreement for a secondary water line in Butler Avenue to provide a secondary source of water for this area.

J.2.2. Sewer

There is currently infrastructure along Butler Avenue that will serve this project. Tapping the sewer line will be done by the City of Flagstaff Standards.

FLAGSTAFF REGIONAL PLAN 2030 GOALS AND POLICIES

WATER SOURCES GOALS AND POLICIES

Goal WR.I. Maintain a sustainable water budget incorporating regional hydrology, ecosystem needs, and social and economic well-being.

- Policy WR.I.2. Seek regional opportunities to partner with resource land managers and adjacent landowners to improve water yield and hydraulic processes.

Goal WR.2. Manage a coordinated system of water, wastewater, and reclaimed water utility service facilities and resources at the City level and identify funding to pay for new resources.

- Policy WR.2.2. Maintain and develop facilities to provide reliable, safe, and cost-effective water, wastewater, and reclaimed water services.

WATER DEMAND GOALS AND POLICIES

Goal WR.3. Satisfy current and future human water demands and the needs of the natural environment through sustainable and renewable water resources and strategic conservation measures.

- Policy WR.3.9. Identify adequate funding sources to pay for new resources for a long-term renewable water supply.

Goal WR.4. Logically enhance and extend the City's public water, wastewater, and reclaimed water services including their treatment, distribution, and collection systems in both urbanized and newly developed areas of the city to provide efficient delivery of services.

- Policy WR.4.1. Use the Regional Plan as a guide for the Utilities Integrated Master Plan to better plan for the necessary infrastructure sizing and location to accommodate planned growth and resource management.
- Policy WR.4.3. Development requiring public utility services will be located within the Urban Growth Boundary.

REINVESTMENT GOALS AND POLICIES

Goal LU.1. Invest in existing neighborhoods and activity centers for the purpose of developing complete, and connected places.

- Policy LU.1.4 Attract private investment by reinvesting in transportation infrastructure improvements as well as public utility infrastructure for desired development size.
- Policy LU.1.5 Maintain and upgrade existing infrastructure and invest in infrastructure to make redevelopment and infill an attractive and more financially viable development option.

APPLICABLE TO ALL LAND USES GOALS AND POLICIES

Goal LU.7. Provide public services and infrastructure.

- Policy LU.7.1. Concentrate on urban development in locations that use land efficiently, and are served by roads, water, sewer, and other public facilities and services, and that support transit, reduced vehicle trips, and conservation of energy and water.
- Policy LU.7.3. Require development proposals to address the availability of adequate public services.

Goal LU.8. Balance future growth with available water resources

- Policy LU.8.1. Available water resources should be a consideration for all major development and subdivision applications.
- Policy LU.8.2. Impacts on the City's water delivery infrastructure should be a consideration for all residential and non-residential development proposals.

K. CONSTRUCTION ACTIVITIES

K.1. LOGISTICS

The site has plenty of space for staging and construction parking. The main construction site entrance will be provided off Butler Avenue. Partial shutdowns on Butler Avenue will be required for utility taps, but generally, two lanes should remain open throughout the project. Traffic control measures will be implemented as required by the City of Flagstaff. refer to **Exhibit 8 Logistics Plan.**

K.2. PHASING PLAN

Miramonte proposes to phase the construction of the public improvements into two phases. **Refer to Exhibit 9 Phasing Plan.**

Phase 1 of The Lofts on Butler will include offsite traffic improvements including a temporary eastbound left turn lane into a new western driveway and a westbound right turn lane into the western. Sewer and water for Phase 1 will be provided by a new 8" public sewer main and 8" public water main within a new 26' public utility easement centered in the new private access drive. The proposed Phase 1 access drive will create a full loop from two separate driveways to provide fire access to all parts of the site planned to be improved in Phase 1. Phase 1 will stub two (2) 8" waterlines and one (1) 8" sewer line to Phase 2 to be constructed at a later date. All drainage improvements including storm drain, detention basins, and water quality improvements will be constructed in Phase 1.

Phase 2 of the project will include a secondary access loop into the northern portion of the site. Grading and drainage improvements in Phase 2 will be minimal and generally surface drain to the previously constructed Phase 1 basins. Utility improvements will connect to the Phase 1 stubs and extend through the new loop within a 26' easement similar to Phase 1. Landscaping, pedestrian connections, and site amenities within the Phase 2 improvement limits will be included at this time.

Building phasing in Phase I and II will be determined at a later time in coordination with the Building Department, Planning, Fire, Storm Water, and Development Engineering. Landscaping, pedestrian connections, and site amenities within Phase I and II will be installed as buildings are constructed and before receiving a Certificate of Occupancy for that building or building phase.

K.3. BEST MANAGEMENT PRACTICES

During construction, the contractor will utilize Best Management Practices, and/or required erosion control measures will be installed, inspected, and approved by the City of Flagstaff before clearing and grubbing or any other work activities to control stormwater runoff. Dust control measures will be in place to maintain air quality during each construction phase, such as the use of reclaimed water for dust suppression.

K.4. MATERIALS MANAGEMENT STRATEGIES

The Developer agrees to incorporate infrastructure to support recycling activities on-site, including the provision of adequate space to locate recycling receptacles next to receptacles dedicated for trash and double heavy-duty hidden waste baskets in the kitchen cabinets in all residential units to promote recycling. During construction for the multi-family development and future commercial development, the Developer will have a written solid waste program approved by the City of Flagstaff Sustainability Section that includes a plan for recycling or reuse of paper, cardboard, plastics, and metals; recycling or reuse of lumber scraps; and diversion of masonry, cementitious, and possibly gypsum material from the landfill. To the extent feasible, the Developer will reuse native materials on-site. To ensure compliance with this section the Developer agrees to work with the City and allow the City access to the Project site as needed (including during construction). See **Exhibit 10 Material Management Plan.**

FLAGSTAFF REGIONAL PLAN 2030 GOALS AND POLICIES

AIR QUALITY GOALS AND POLICIES

Goal E&C.1. Proactively improve and maintain the region's air quality

- Policy E&C.1.3. Encourage strategies and partnerships to mitigate dust.

SOILS GOALS AND POLICIES

Goal E&C.9. Protect soils through conservation practices.

- Policy E&C.9.2. Construction projects employ strategies to minimize disturbed areas, soil compaction, soil erosion, and destruction of vegetation.

WATER QUALITY GOALS AND POLICIES

Goal WR.6. Protect, preserve, and improve the quality of surface water, groundwater, and reclaimed water in the region.

- Policy WR.6.3. Implement best management practices to protect, restore, and maintain surface waters and their contributing watersheds.

L. PUBLIC PARTICIPATION PLAN

A Neighborhood Meeting and Citizen Participation Plan was prepared in accordance with Section 10-20.30.030.C of the City of Flagstaff Zoning Code, and was submitted and accepted by the City of Flagstaff on September 20, 2022. **Refer to Exhibit 11 Neighborhood Meeting and Citizen Participation Plan.**

September 20, 2022, notifications of the neighborhood meetings were sent via first-class mail to property owners within 300 feet of the property boundaries, to all Homeowners' Associations (HOAs) within 1,000 feet of the subject property, and all persons or groups whose names are listed on the Registry of Persons Groups. A sign was installed on that day notifying the public of the virtual meetings.

Two virtual neighborhood meetings were held. The first meeting was on Monday, October 3, 2022, there was one attendee. The second meeting was on Thursday, October 6, 2022, two community members attended the meeting. The Public Participation Report is included as **Exhibit 12.**

The Public Hearing notifications were mailed and the sign was posted as required in Section 10-20.30.080 on February 21, 2023.

FLAGSTAFF REGIONAL PLAN GOALS AND POLICIES

REINVESTMENT GOALS AND POLICIES

Goal LU.I. Invest in existing neighborhoods and activity centers for the purpose of developing complete, and connected places.

- Policy LU.I.II. Ensure that there is a collaboration between a developer, residents, and property owners in existing neighborhoods where redevelopment and reinvestment are proposed so that they are included, engaged, and informed.

M. BENEFITS TO THE COMMUNITY

The Lofts at Butler is a thoughtful development that is physically suitable in its design, location, and shape. This development will provide many benefits to the Flagstaff community;

1. Development of an underutilized infill property in the middle of Flagstaff.
2. 172 housing units, with 5% of the units designated permanently affordable for 30 years.
3. Cash in Lieu contributions to the City of Flagstaff for offsite public water main.
4. Cash in Lieu contribution to the City of Flagstaff for offsite public traffic improvements along Butler Avenue.
5. All-electric development.
6. Recycling and Waste Management.
7. Resource protection.
8. Low Impact Development.
9. Promotes alternative modes of transportation such as walking, biking, and public transportation.

N. FINDINGS FOR ZONING MAP AMENDMENT

The Lofts at Butler has demonstrated that it complies with the City of Flagstaff Regional Goals and Policies, Council Goals, Sustainability Goals, and Housing Goals. Under Section 10-20.50.040 of the Zoning Code, an amendment to the Zoning Map may be approved if all the following findings are made, as applicable to the type of amendment:

1. **The proposed amendment is consistent with and conforms to the goals of the Regional Plan.**

   - Throughout the document, the Regional Plan goals and policies have been listed to support the application. Goal E.2. Expand production and use of renewable energy and Policy E.2.4 Encourage small-scale renewable energy production and use on the local level on appropriate residential, commercial and industrial parcels, does not support the application. The City's current policies and best practices promote reducing natural gas consumption because of APS's policies to decarbonize the grid. Therefore small-scale energy production is less viable and not included in the project.

2. **The proposed amendment will not be detrimental to the public interest health, safety, convenience, or welfare of the City and will add to the public good as described in the General Plan**
   - This project is not a detriment to the public interest, health, safety, convenience, or welfare of the City. Surrounding uses are commercial and high-density residential. The proposed residential mixed-use development is a supported use in a future urban activity zone. The development will not present excessive noise, odor, or traffic for the surrounding uses.
   - The project supports the public interest by providing 172 housing units, 5% designated affordable, and an office space for rent.
   - The project has been designed to provide safe ingress/egress for the residents in the development and onto Butler Avenue and includes sidewalks and pedestrian pathways within the development.
   - The project will be all-electric and provide EV-ready parking. Low- VOC and formaldehyde-free materials will be used for the carpet, cabinets, and paint.
   - The project exceeds the open space requirement of 2.39 acres by providing 3.87 acres of open space.
   - The project exceeds the civic space requirement of .80 acres by providing .91acres of civic space.
   - The project exceeds the resource preservation requirements of 30% by preserving 35% of resources in the development.
   - The project exceeds the bicycle parking requirements in the code of 18 parking spaces, by providing 40 spaces, 16 uncovered and 24 covered spaces.
   - The project will provide a cash-in-lieu contribution for offsite public improvements for a future water main and future roadway improvements on Butler Avenue.
   - Drought-tolerant plants will be used in the landscape.
   - The project will provide recycling trash receptacles within the development and in the units.
   - Material management strategies will be implemented during construction to minimize waste.
   - All exterior lighting on the site shall meet the requirements of the City of Flagstaff Outdoor Lighting Standards.
   - The development will comply with all City codes and all permits will be received prior to the start of construction.

MIRAMONTE
HOMES

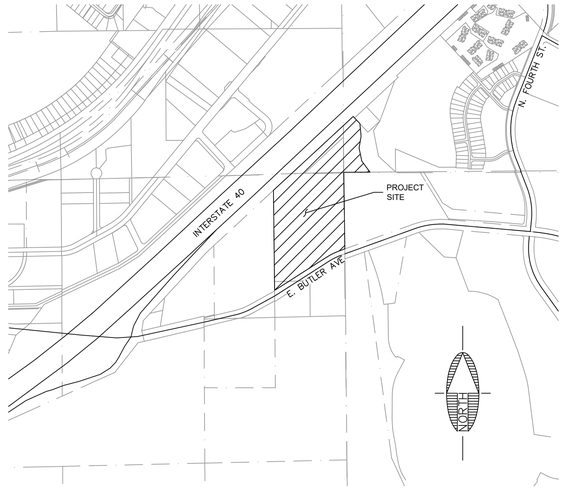
3. **The affected site is physically suitable in terms of design, location, shape, size, operating characteristics, and the provision of public and emergency vehicle (e.g., fire and medical) access and public services and utilities (e.g., fire protection, police protection, potable water, schools, solid waste collection and disposal, storm drainage, wastewater collection, treatment, and disposal), to ensure that the requested zone designation and the proposed or anticipated uses and/or development will not endanger, jeopardize or otherwise constitute a hazard to the property or improvements in the vicinity in which the property is located.**

   - The density for the entire site is 9.41 units/acre. Units per acre on the multi-family development site is 10.8, which is below the maximum of 29 units per acre allowed in the HC zone for parcels with a Resource Protection Overlay and, in the Pedestrian Shed of an Activity Center. The Regional Plan requires a minimum density of 8 units per acre in mixed-use developments in Activity Centers.
   - The proposed development lies within the City of Flagstaff's urban growth boundary and can be served by public and emergency vehicles and public services and utilities.
   - The proposed mixed-use development with multi-family housing and office space will not endanger, jeopardize or constitute a hazard to properties or improvements in the vicinity. Surrounding zones are highway commercial and high-density residential. The proposed use complements the surrounding uses. This proposed project is well designed and in a future urban activity center, multi-family and mixed-use development is a supported use in this location.

PLOTTED: Feb 13, 2023 - 3:52pm

CIVIL SITE PLAN
FOR
LOFTS ON BUTLER
2950 E. BUTLER AVE
FLAGSTAFF, ARIZONA

LOCATED IN NE QUARTER OF SECTION OF 23, SE QUARTER OF SECTION 14 AND SW QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 7 EAST GILA AND SALT RIVER MERIDIAN, COCONINO COUNTY, ARIZONA



VICINITY MAP
N.T.S.

GROSS FLOOR AREA RATIO CALCULATION			
Building Type	**Building Size, sf**	**Qty**	**Total Area, sf**
(1) Bedroom	813	26	21,138
(2) Bedroom	1071	120	128,520
(3) Bedroom	1340	26	34,840
Residential Clubhouse	2806	1	2,806
Commercial	2154	1	2,154
Total Floor Area, sf			189,458
Total Floor Area, acres			4.35
Total Site Area, acres			15.93
Floor Area Ratio (FAR)			0.3
Max Allowed FAR			3.0

PARKING CALCULATIONS		1 Bed	2 Bed	3 Bed
Type	**No. of Bldgs**	*1.5*	*2*	*2*
4-2 bed	30	0	120	0
2-1 bed, 2-3 bed	13	26	0	26
Parking Required		*39*	*240*	*52*
Guest Spaces Required		*0*	*30*	*6.5*
Club House Commercial Required (1 per 300 sf - 2,154 sf of rental office space)			**7**	
ADA Parking Required			**9**	
Bike Parking Required (5% of total)			**18**	
Bike Parking Provided (conceptual)			**40**	
Transit Reduction (10% of Total Required)			**37**	
Total Residential Parking Required			**375**	
Total Required After Reduction			**327**	
Total Residential Parking Provided			**352**	

SHEET LIST TABLE		
SHEET NUMBER	DRAWING NUMBER	SHEET TITLE
1	SP01	COVER & VICINITY
2	SP02	GRADING & DRAINAGE PLAN (1)
3	SP03	GRADING & DRAINAGE PLAN (2)
4	SP04	UTILITY PLAN (1)
5	SP05	UTILITY PLAN (2)
6	SP06	ROADWAY IMPROVEMENTS
7	SP07	NATURAL RESOURCE PROTECTION PLAN

PROJECT INFORMATION

SITE ADDRESS: 2950 E. BUTLER AVE
FLAGSTAFF, AZ 86001

APN	CURRENT ZONING	PROPOSED ZONING	ACREAGE
106-04-006B	RURAL RESIDENTIAL	HIGHWAY COMMERCIAL	±12.72 AC
106-04-007C	HIGHWAY COMMERCIAL	–	±0.13 AC
107-11-001B	RURAL RESIDENTIAL	HIGHWAY COMMERCIAL	±2.38 AC
107-44-062	MEDIUM DENSITY RESIDENTIAL	HIGHWAY COMMERCIAL	±1.79 AC

FUTURE COMMERCIAL PARCEL: 1.09 AC
GROSS MIXED USE PARCEL: 17.02 AC
NET MIXED USE PARCEL (AFTER FUTURE COMMERCIAL PARCEL REMOVED): 15.93 AC

PROPOSED UNITS = 43 BLDGS @ 4 UNITS/BLDG
BLDG FOOTPRINT: 152,173 SF (21.93% COVERAGE, NET PARCEL)

PROPOSED DWELLING UNITS PER ACRE: 172 / 15.93 = 10.79
ALLOWED DWELLING UNITS PER ACRE: 29/AC * 15.93 = 462

APPROXIMATE FUTURE ROW DEDICATION = 0.12 AC (NET PARCEL ACREAGE = 15.81 AC)
APPROXIMATE NET DWELLING UNITS PER ACRE: 172 / 15.81 = 10.88
APPROXIMATE ALLOWED DWELLING UNITS PER ACRE: 29/AC * 15.81 = 458

BUILDING TYPE INFORMATION

OCCUPANCY – CLUBHOUSE: A-3 DWELLING: R-2

CONSTRUCTION – CLUBHOUSE: V-B DWELLING: V-A

UNIT TYPES AND QUANTITY:
(26) ONE-BEDROOM UNITS
(26) THREE-BEDROOM UNITS
(120) TWO-BEDROOM UNITS

OWNER

APN	OWNER	ADDRESS
106-04-006B	SIERRA VISTA NO 6 LLC	2950 E BUTLER AVE FLAGSTAFF, AZ 86004
106-04-007C	SIERRA VISTA NO 6 LLC	FLAGSTAFF, AZ 86004
107-11-001B	SIERRA VISTA NO 6 LLC	FLAGSTAFF, AZ 86004
107-44-062	BROOKSTONE VENTURES LLC	FLAGSTAFF, AZ 86004

CIVIL ENGINEER:
SHEPHARD-WESNITZER INC.
110 WEST DALE AVE
FLAGSTAFF, AZ 86001
CONTACT: STEPHEN IRWIN
(928) 773-0354

DEVELOPER:
MIRAMONTE ACQUISITIONS, LLC
102 S. MIKES PIKE
FLAGSTAFF, AZ 86001
CONTACT: CHARITY LEE
clee@miramontehomes.com
(928) 600-3594

IMPERVIOUS AREA SUMMARY

PRE-DEVELOPMENT IMPERVIOUS AREA = 0 SF
POST DEVELOPMENT IMPERVIOUS AREA = 317,876 SF = 7.30 AC

LID VOLUME REQUIRED = 26,490 CF

PRELIMINARY EARTHWORK QUANTITIES

CUT = 15,000 CY
FILL = 15,500 CY

NET = -500 CY

FLOOD ZONE CLASSIFICATION:

A PORTION OF SUBJECT PARCEL 107-44-062 LIES WITHIN ZONE 'AE' – AREAS DETERMINED TO BE WITHIN THE 0.2% AUNNUAL CHANCE FLOOD PLAIN.

THE REMAINDER OF PARCEL 107-44-062 AND ALL OF PARCEL 106-04-006B, 106-04-007C, AND 107-11-001B LIES WITHIN ZONE 'X' – AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

(PER FEMA FLOOD INSURANCE RATE MAP NUMBER 04005C6809G, EFFECTIVE DATE SEPTEMBER 2, 2010).

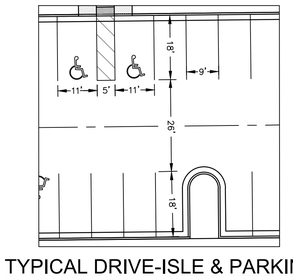
OPEN/CIVIC SPACE:

OPEN SPACE REQUIRED: 15% OF GROSS LOT AREA = 15% * 15.93 AC = 2.39 AC
CIVIC SPACE REQUIRED: 5% OF GROSS LOT AREA = 5% * 15.93 AC = 0.80 AC

OPEN SPACE PROVIDED = 3.87 AC
CIVIC SPACE PROVIDED = 0.91 AC

LEGEND

- ROW
- ROAD CENTERLINE
- PARCEL BOUNDARY
- SETBACK
- STORM DRAIN PIPE
- FIRE HYDRANT
- GATE VALVE
- EX SEWER MANHOLE
- STORM DRAIN MANHOLE
- CATCH BASIN
- LIGHT POLE
- # PARKING SPACE QUANTITY BETWEEN ISLANDS



TYPICAL DRIVE-ISLE & PARKING SPACE DIMENSIONS

NOTE:
1. CONNECTION TO FUTURE FUTS TRAIL IN SWITZER CANYON WASH SHALL BE PROVIDED IN THE GENERAL LOCATION SHOWN. ACTUAL TRAIL ALIGNMENT AND LOCATION SUBJECT TO CHANGE AND WILL BE DETERMINED DURING CONSTRUCTION PLANNING PHASE. TRAIL ALIGNMENT AND GRADING WILL BE DESIGNED TO MINIMALLY IMPACT EXISTING SLOPE AND TREE RESOURCES IN THE AREA.

NORTH
SCALE 1" : 80'
0 40 80

PRELIMINARY
NOT FOR CONSTRUCTION, BIDDING OR RECORDING

COF #PZ-21-00284-02

FLAGSTAFF ARIZONA
BUTLER AVE. MULTI FAMILY
COVER & VICINITY

JOB NO:	21272
DATE:	FEB 23
SCALE:	AS SHOWN
DRAWN:	ELK/SJW
DESIGN:	ELK/SJW
CHECKED:	SCI

REVISIONS			
NO.	DESCRIPTION	DATE	BY

Shephard Wesnitzer, Inc.
110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

Call at least two full working days before you dig, it's the law!
ARIZONA811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

DRAWING NO.
SP01

SHT NO. 1 OF 7

FILE: P:\2021\21272\DRAWINGS\SITE PLANS\COVER & VICINITY-21272.DWG SVOSSLER

PLOTTED: Nov 23, 2022–8:03am

FILE: P:\2021\21272\DRAWINGS\SITE PLANS\GRADING&DRAINAGE-21272.DWG EXEISER



IMPERVIOUS AREA SUMMARY

PRE–DEVELOPMENT IMPERVIOUS AREA = 0 SF
POST–DEVELOPMENT IMPERVIOUS AREA = 314,102 SF
NEW IMPERVIOUS AREA = 314,102 SF

1" LID VOLUME = 26,175 CF

LEGEND

- ROW
- ROAD CENTERLINE
- PARCEL BOUNDARY
- SETBACK
- STORM DRAIN PIPE
- FIRE HYDRANT
- GATE VALVE
- EX SEWER MANHOLE
- STORM DRAIN MANHOLE
- CATCH BASIN
- LIGHT POLE

NORTH

SCALE 1" : 40'
0 20 40

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING OR RECORDING

COF #PZ-21-00284-02

FLAGSTAFF ARIZONA

LOFTS ON BUTLER AVENUE

GRADING & DRAINAGE PLAN (1)

JOB NO:	21272
DATE:	NOV 22
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK, SJV
CHECKED:	SJV, SDJ

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swoz.com

Shepard Wesnitzer, Inc.

REVISIONS

NO.	DESCRIPTION	DATE	BY

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DRAWING NO.
SP02

SHT NO. 2 OF 7

PLOTTED: Nov 23, 2022–8:04am

FILE: P:\2021\21272\DRAWINGS\SITE PLANS\GRADING&DRAINAGE-21272.DWG EKEISER

INTERSTATE 40

400' R.O.W.

15'

APPROXIMATE LIMIT OF 100–YEAR FLOOD PLAIN

APPROXIMATE LIMIT OF 100–YEAR FLOODWAY

SINGLE TRACK CONNECTION

SCREEN WALL

TURN BLOCK WALL OPENING

PROPOSED SOLID WASTE, TYP

PROPOSED MAINTENANCE BUILDING

RAMADA

BENCH

BENCH

PROPOSED POND OUTLET

EXISTING STORM DRAIN OUTLET

18" STORM DRAIN

POND OUTLET, AND OVERSIZED EMERGENCY OVERFLOW STORM DRAIN

FENCE/RAILING AROUND LOWER BASIN

EXISTING 24" DOME GRATE

PROPOSED LID & RETENTION POND BTM=6831.00 TOP=6835.00

EXISTING 24" DOME GRATE

PROPOSED LID & RETENTION POND BTM=6834.00 TOP=6837.00

PROPOSED OPEN SPACE, TYP

PHASE 2

PHASE 1

PROPOSED POND OUTLET STRUCTURE

FFE=6845.00

FFE=6846.00

FFE=6847.50

FFE=6844.00

FFE=6836.00

FFE=6846.50

FFE=6847.00

FFE=6843.00

FFE=6844.00

FFE=6836.50

FFE=6848.00

6815

6820

6825

6830

6835

6840

6845

6850

APN
106-08-009E
PEDRICK LEE DORAN SUCCESSOR TRUSTEE - PEDRICK TRUST UDT
ACRES 4.84 +/-
HIGHWAY COMMERCIAL (HC)

APN
106–08–005H
CSL FLAGSTAFF 2019 LLC
HIGHWAY COMMERCIAL (HC)

LEGEND

- ROW
- ROAD CENTERLINE
- PARCEL BOUNDARY
- SETBACK
- STORM DRAIN PIPE
- FIRE HYDRANT
- GATE VALVE
- EX SEWER MANHOLE
- STORM DRAIN MANHOLE
- CATCH BASIN
- LIGHT POLE

NORTH

SCALE 1" : 40'
0 20 40

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING OR RECORDING

COF #PZ-21-00284-02

GRADING & DRAINAGE PLAN (2)

LOFTS ON BUTLER AVENUE

FLAGSTAFF
ARIZONA

JOB NO:	21272
DATE:	NOV 22
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK, SJV
CHECKED:	SJV, SDI

NO.	DESCRIPTION	DATE	BY
	REVISIONS		

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928.774.8934 fax
www.swiaz.com

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DRAWING NO.
SP03

SHT NO. 3 OF 7

PLOTTED: Nov 23, 2022–8:04am

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LEGEND

- ROW
- ROAD CENTERLINE
- PARCEL BOUNDARY
- SETBACK
- STORM DRAIN PIPE
- FIRE HYDRANT
- GATE VALVE
- EX SEWER MANHOLE
- STORM DRAIN MANHOLE
- CATCH BASIN
- LIGHT POLE

PHASE 1

PHASE 2

APN
106–08–005H

APN
106–04–009E

FIRE HYDRANT, TYP

26' P.U.E.

26' PUE, TYP

FIRE HYDRANT, TYP

PROPOSED PUBLIC 8" SEWER MAIN

PROPOSED PUBLIC 8" WATER MAIN

EXISTING 24" DUCTILE IRON WATER MAIN

EXISTING 8" VC SEWER MAIN

PROPOSED PUBLIC WATER MAIN CONNECTION

PROPOSED PUBLIC SEWER MAIN CONNECTION

20' P.U.E.

FUTURE HIGHWAY COMMERCIAL, 1.09 AC

E. BUTLER AVENUE

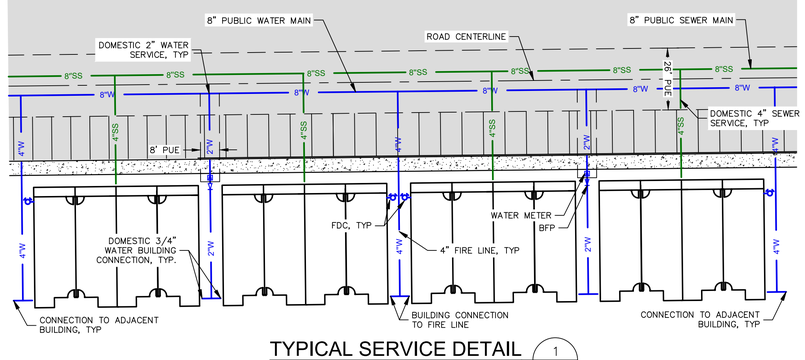
ALL BUTLER R.O.W.

EXISTING 36" CMP STORM DRAIN

PROPOSED SEWER SERVICE FOR COMMERCIAL PARCEL

PROPOSED WATER SERVICE AND FIRE WATER STUBOUT.

PROPOSED PUBLIC WATER MAIN CONNECTION



TYPICAL SERVICE DETAIL (1 / UT01)
NO SCALE

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING OR RECORDING

COF #PZ-21-00284-02

FLAGSTAFF
ARIZONA

LOFTS ON BUTLER AVENUE

UTILITY PLAN (1)

JOB NO:	21272
DATE:	NOV 22
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK, SJV
CHECKED:	SJV, SDJ

REVISIONS

NO.	DESCRIPTION	DATE	BY

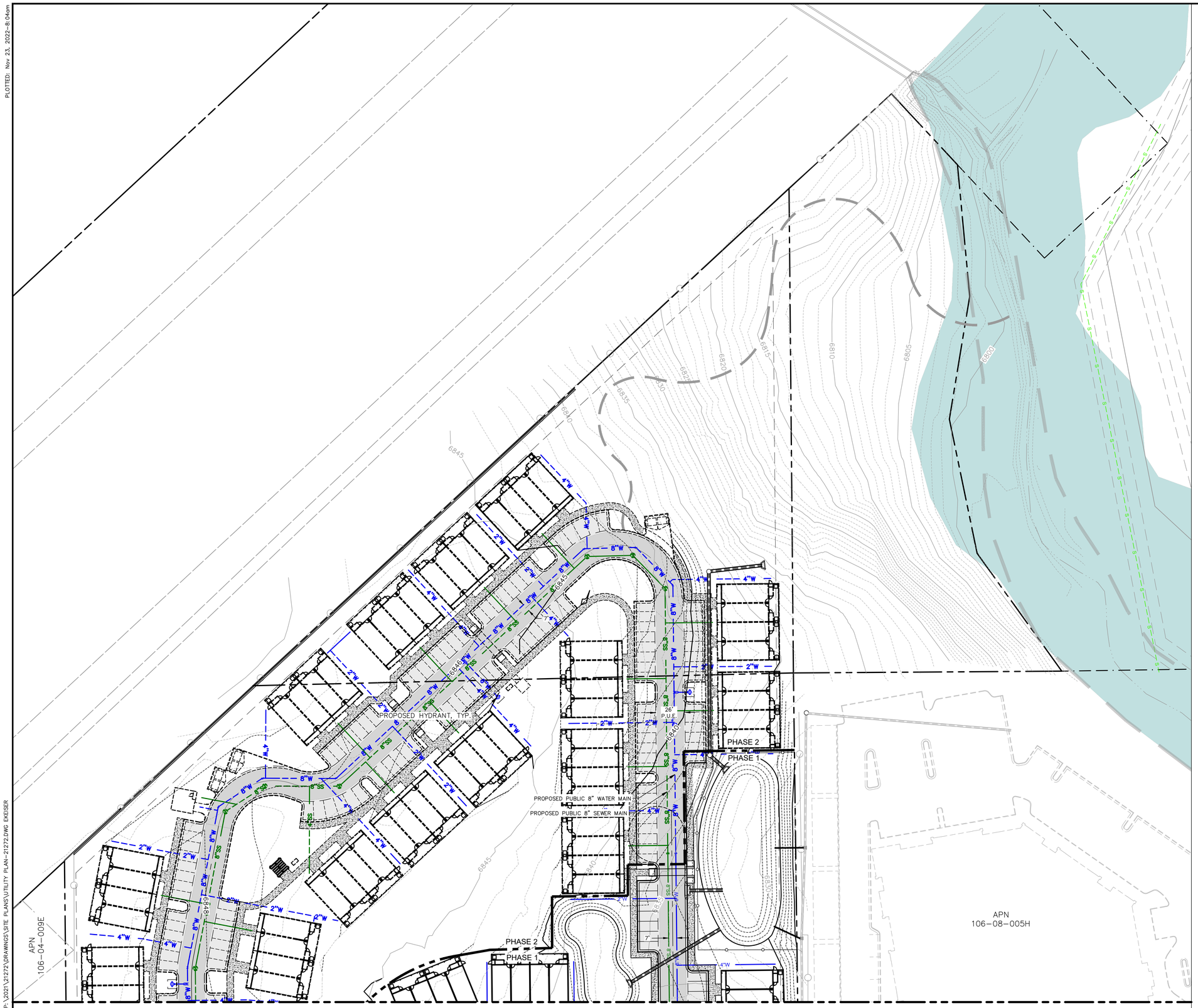
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DRAWING NO.
SP04

SHT NO. 4 OF 7

PLOTTED: Nov 23, 2022–8:04am



LEGEND

- ROW
- ROAD CENTERLINE
- PARCEL BOUNDARY
- SETBACK
- STORM DRAIN PIPE
- FIRE HYDRANT
- GATE VALVE
- EX SEWER MANHOLE
- STORM DRAIN MANHOLE
- CATCH BASIN
- LIGHT POLE

SCALE 1" : 40'
0 20 40

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING OR RECORDING

COF #PZ-21-00284-02

UTILITY PLAN (2)

LOFTS ON BUTLER AVENUE

FLAGSTAFF
ARIZONA

JOB NO:	21272
DATE:	NOV 22
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK, SJV
CHECKED:	SJV, SDJ

REVISIONS NO.	DESCRIPTION	DATE	BY

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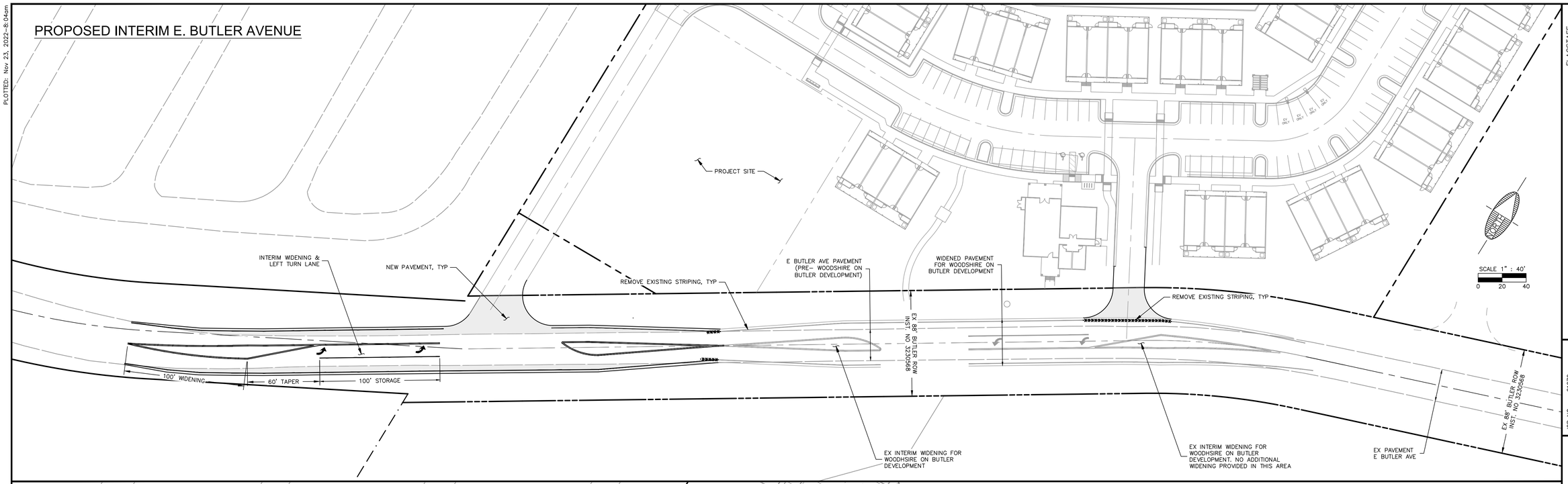
DRAWING NO.
SP05

SHT NO. 5 OF 7

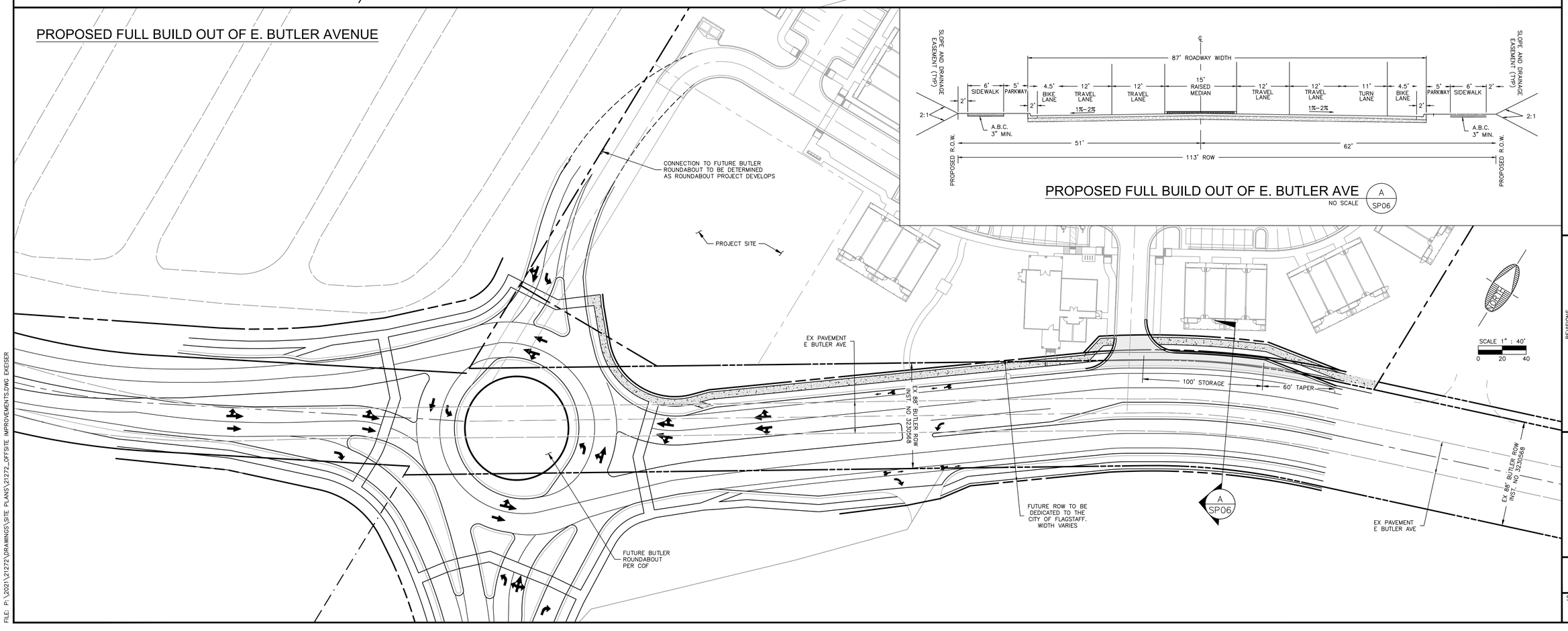
FILE: P:\2021\21272\DRAWINGS\SITE PLANS\UTILITY PLAN-21272.DWG EKEISER

PLOTTED: Nov 23, 2022--8:04am

PROPOSED INTERIM E. BUTLER AVENUE



PROPOSED FULL BUILD OUT OF E. BUTLER AVENUE



PROPOSED FULL BUILD OUT OF E. BUTLER AVE

NO SCALE

A SP06

FILE: P:\2021\21272\DRAWINGS\SITE PLANS\21272_OFFSITE IMPROVEMENTS.DWG EXEISER

FLAGSTAFF ARIZONA

LOFTS ON BUTLER AVENUE

ROADWAY IMPROVEMENTS

JOB NO:	21272
DATE:	NOV 22
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK/SJV
CHECKED:	SJV/SD

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SWI
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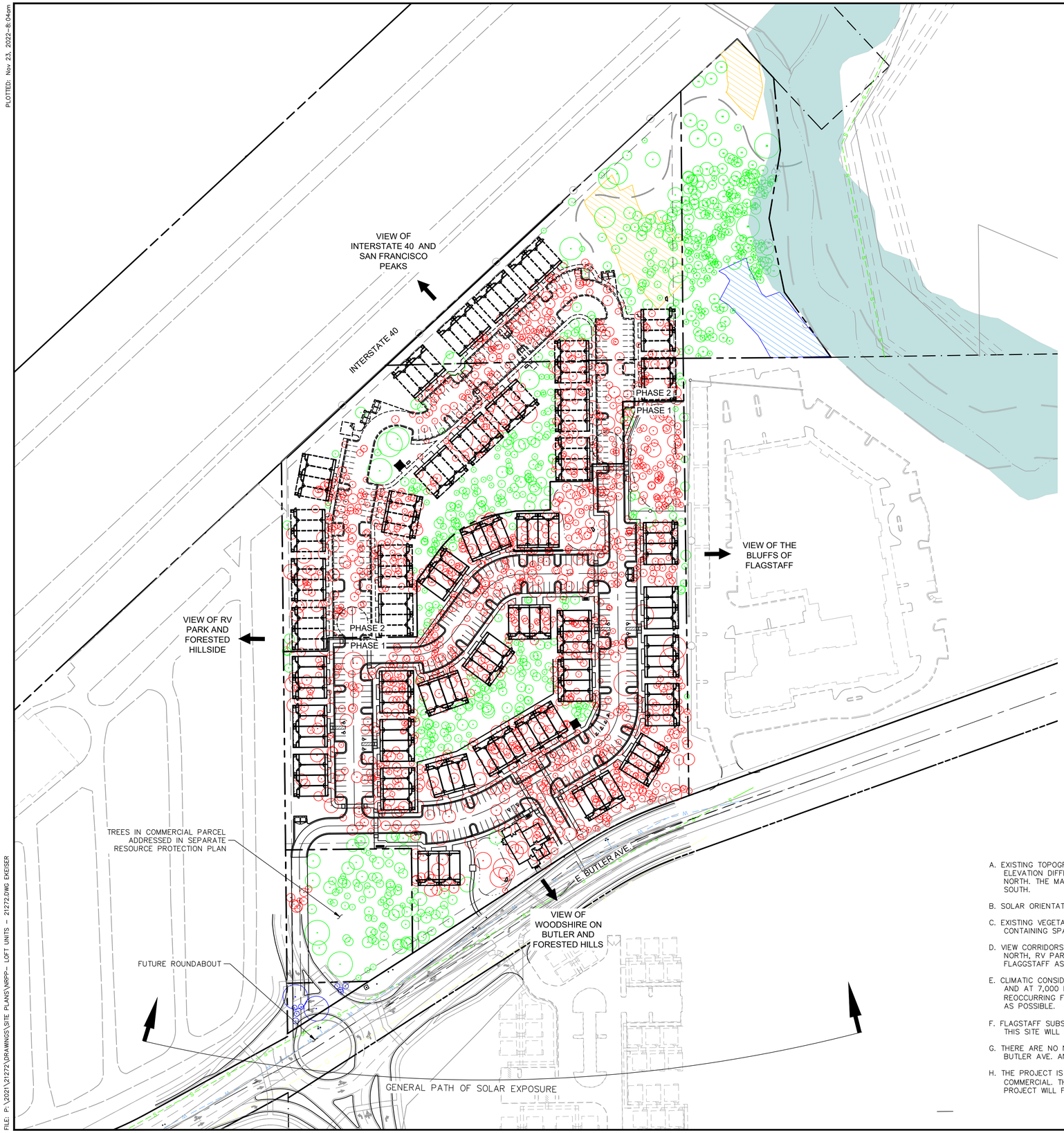
REVISIONS			
NO.	DESCRIPTION	DATE	BY

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DRAWING NO.
SP06

SHT NO.	OF
6	7

PLOTTED: Nov 23, 2022–8:04am



COMMERCIAL PARCEL TREES (NOT COUNTED IN THIS NRPP)					
TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER EXISTING	40	35	16	1	4
NUMBER REMOVED	11	4	1	0	2
NUMBER EXEMPT	8	0	0	0	2
POINTS PER TREE	1	2	4	8	20
EXISTING POINTS	40	70	64	8	80
REMOVED POINTS	11	8	4	0	40
TREE POINTS REMOVED =					63
EXEMPT TREE POINTS FOR FUTURE BUTLER ROW =					48
TOTAL TREE RESOURCE POINTS =					214
TREE POINTS PRESERVED =					199
SUMMARY					
REQUIRED TREE POINTS TO BE PRESERVED - COMMERCIAL (30%)=					64
TOTAL PRESERVATION RATE =					**93.0%**

NOTE:
1. PER CITY OF FLAGSTAFF ZONING CODE SECTION 10-50.90.060, COMMERCIAL ZONES PRESERVATION RATE IS 30%.

TREE RESOURCES - EXISTING

TREE POINTS					
TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER EXISTING	1268	812	186	25	17
POINTS	1	2	4	8	20
SUM OF POINTS	1268	1624	744	200	340
TREE POINTS OUTSIDE OF SLOPE RESOURCE AREAS=					**4176**
TREE POINTS WITHIN SLOPE RESOURCE					
TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER EXISTING	11	21	3	1	2
POINTS	1	2	4	8	20
SUM OF POINTS	11	42	12	8	40
TREE POINTS LOCATED WITHIN SLOPE RESOURCE AREAS=					*113*
25% OF TREE POINTS WITHIN SLOPE RESOURCES=					*28*
MAXIMUM ALLOWED TREE POINTS IN SLOPES TO BE USED (AT A RATIO OF 1 CREDIT POINT PER 50 SQUARE FEET OF TOTAL SLOPE AREA)=					*170*
ACTUAL TREE POINTS IN SLOPE COUNTED TOWARDS REQUIREMENT=					**28**

SLOPE RESOURCES - RESIDENTIAL				
SLOPES	0-16.99%	17-24.99%	25-34.99%	>35%
EXISTING (SF)	-	21921	12116	0
PROTECTED (SF)	-	21921	12116	0
% REQUIRED PROTECTION	-	60%	80%	100%
% PROTECTED	-	100%	100%	NA
SF REQUIRED PROTECTION		13153	9693	NA
PROTECTED ABOVE REQUIREMENT(SF)	-	8768	2423	NA
POINTS PER 50 SF OF EXCESS STEEP		175	48	0
RESOURCE POINTS FROM EXCESS PRESERVED SLOPE AREAS=				**224**

NOTES:
1. Per City Zoning Code Section 10-50.90.050.C.4, for every 50 sf of additional slope area that is determined to be protected over and above the minimum required in this section, then 1 tree point will be credited toward the minimum required forest resources.
2. Per City Zoning Code Section 10-50.90.060.B.4(b), up to 25% of the forest resources in the steep slope area may be counted towards the required amount of forest resources for the entire site at a ratio of 1 tree point to 50 sf of slope area.

POST-DEVELOPMENT TREES					
TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER REMOVED	985	584	129	17	8
POINTS	1	2	4	8	20
SUM OF POINTS	985	1168	516	136	160
TREE POINTS REMOVED =					2965
TOTAL TREE RESOURCE POINTS =					4176
TREE POINTS PRESERVED =					1211
EXCESS SLOPE RESOURCE POINTS COUNTED TOWARDS REQUIREMENT =					28
TREE POINTS FROM SLOPE AREA =					224
TOTAL PRESERVED TREE POINTS =					1463
SUMMARY					
REQUIRED TREE POINTS TO BE PRESERVED - COMMERCIAL (30%)=					1253
TOTAL PRESERVATION RATE =					**35.0%**

NOTE:
1. PER CITY OF FLAGSTAFF ZONING CODE SECTION 10-50.90.060, COMMERCIAL ZONES PRESERVATION RATE IS 30%.

SITE ANALYSIS:

A. EXISTING TOPOGRAPHY OF PROJECT SITE AS SHOWN. SITE SLOPES DO NOT EXCEED 35% FOR GREATER THAN 10' IN ELEVATION DIFFERENCE. TOPOGRAPHY IS DEFINED BY SLOPE RESOURCES TO THE NORTH SLOPING DOWNHILL TO THE NORTH. THE MAJORITY OF THE PARCEL DOES NOT EXCEED 16.99% SLOPE AND HAS A GENERAL SLOPE TOWARDS THE SOUTH.

B. SOLAR ORIENTATION AS SHOWN ON BOTTOM OF SHEET.

C. EXISTING VEGETATION CONTAINS MEDIUM TO DENSE PONDEROSA PINE. THE SITE INCLUDES SCATTERED OPENINGS CONTAINING SPARSE NATIVE GRASSES AND WEEDS.

D. VIEW CORRIDORS NOTICEABLE FROM THE SITE INCLUDE THE INTERSTATE 40 AND SAN FRANCISCO PEAKS TO THE NORTH, RV PARK TO THE WEST, FORESTED HILLS AND BUTLER AVENUE TO THE SOUTH AND THE BLUFFS OF FLAGGSTAFF ASSISTED LIVING TO THE EAST.

E. CLIMATIC CONSIDERATIONS FOR THE PROJECT SITE: THE PREVAILING WINDS ARE GENERALLY FROM THE SOUTHWEST AND AT 7,000 FEET FLAGSTAFF EXPERIENCES SNOW AND LARGE TEMPERATURE SWINGS. AS A RESULT OF REOCCURRING FREEZE/THAW CYCLES, PEDESTRIAN WALKWAYS WILL AVOID THE NORTH SIDE OF BUILDINGS AS MUCH AS POSSIBLE.

F. FLAGSTAFF SUBSURFACE CONDITIONS GENERALLY CONSIST OF ROCK AND/OR CLAY MATERIAL, IT IS EXPECTED THAT THIS SITE WILL BE THE SAME. ALL DESIGN WILL BE PER THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.

G. THERE ARE NO NATURAL STREAMS ON SITE. RUNOFF GENERALLY HEADS SOUTH TO AN EXISTING CULVERT UNDER E. BUTLER AVE. AND EAST ALONG THE EAST SIDE OF THE PARCEL.

H. THE PROJECT IS GENERALLY AN INFILL PROJECT, WITH ALL ADJACENT LOTS ALREADY DEVELOPED AS HOUSING OR COMMERCIAL. THE CITY OF FLAGSTAFF'S MASTER PLAN DEFINES THIS AS AN ACTIVITY CENTER AREA AND SO THIS PROJECT WILL FIT WELL WITH THE SURROUNDING AND ANY FUTURE DEVELOPMENTS.

LEGEND

- PROPERTY BOUNDARY
- SLOPE RESOURCES 17–24.99%
- SLOPE RESOURCES 25–34.99%
- SLOPE RESOURCES >35%
- DISTURBED SLOPE RESOURCES 17–24.99%
- EXISTING TREES
- TREES TO BE DEMOLISHED
- EXEMPT TREES FOR FUTURE BUTLER ROW
- FOREST SPRINGS TOWNHOMES NRPP TREES

SCALE 1" : 80'
0 40 80

PRELIMINARY
NOT FOR CONSTRUCTION, BIDDING OR RECORDING

COF #PZ-21-00284-02

FLAGSTAFF ARIZONA

BUTLER AVE. MULTI FAMILY

NATURAL RESOURCE PROTECTION PLAN

JOB NO: 21272
DATE: NOV 22
SCALE: AS SHOWN
DRAWN: ELK/SJV
DESIGN: ELK/SJV
CHECKED: SCI

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Flagstaff, AZ 86001
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928.774.6934 fax
www.swoz.com

Shephard Wesnitzer, Inc.

REVISIONS

NO.	DESCRIPTION	DATE	BY

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DRAWING NO.
SP07

SHT NO. 7 OF 7

FILE: P:\2021\21272\DRAWINGS\SITE PLANS\NRPP- LOFT UNITS - 21272.DWG EXESER

LOFTS ON BUTLER
LANDSCAPE PLAN

LOCATED IN NE QUARTER OF SECTION OF 23, SE QUARTER OF SECTION 14 AND SW QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 7 EAST GILA TOWNSHIP 21 NORTH, RANGE 7 EAST GILA AND SALT RIVER MERIDIAN, COCONINO COUNTY, ARIZONA

RAINWATER HARVESTING REQUIREMENTS

USE ALL NATIVE/DROUGHT TOLERANT PLANTS IN COMPLIANCE WITH

COF LANDSCAPING STANDARDS & UTILIZE PASSIVE RAINWATER HARVESTING.

NOTES:

1. ROOF RUNOFF COLLECTED IN GUTTERS/DOWNSPOUTS

WILL PASSIVELY IRRIGATE AT-GRADE LANDSCAPING

2. ALL LANDSCAPING INSTALLED PER CITY OF FLAGSTAFF

LANDSCAPE STANDARDS SECTION 10-50.60

PROJECT INFORMATION

PROJECT NAME:	LOFTS ON BUTLER
PROJECT LOCATION:	2950 E. BUTLER AVENUE
APNs:	APN NUMBER: 106-04-006B APN NUMBER: 106-04-006B APN NUMBER: 107-11-001B APN NUMBER: 107-44-062
TOTAL SQUARE FOOTAGE:	839,167 SF
TOTAL ACREAGE:	15.93 ACRES
ZONING DISTRICT:	HIGHWAY COMMERCIAL
BUILDING AREA	126,560 SF
DENSITY:	12.38 UNITS / ACRE
PROPOSED USE:	MIXED USE
CURRENT USE:	VACANT
DEVELOPER:	MIRAMONTE ACQUISITIONS
	2502 E. RIVER ROAD
	TUCSON, AZ. 85718
	520-615-8900

LANDSCAPE NOTES

1. ALL MAINTENANCE SHALL BE PERFORMED PER FLAGSTAFF CITY CODE SECTION #910.12.
2. MAINTENANCE SHALL BE PERFORMED ON A MONTHLY BASIS AS FOLLOWS:
   A. PRUNING AND CLIPPING FOR PEDESTRIAN VEHICULAR ACCESS.
   B. REPLACEMENT OF DEAD AND UNHEALTHY PLANTS WITH PLANTS OF THE SAME SIZE AND TYPE.
   C. REPLACEMENT OF ERODED OR WASHEDOUT D.G. WITH SAME.
   D. MAINTENANCE OF IRRIGATION SYSTEM.
3. DECOMPOSED GRANITE (D.G.) SHALL BE INSTALLED TO A 2" DEPTH OVER ALL PLANTERS AND DISTURBED AREAS INCLUDING ADJACENT RIGHTS OF WAY .
4. MATERIALS WITHIN SITE VISIBILITY TRIANGLES SHALL BE PLACED AND MAINTAINED SO AS NOT TO INTERFERE WITH A VISIBILTY PLANE DESCRIBED BY 2 HORIZONTAL LINES 30 INCHES AND 72 INCHES ABOVE FINISHED GRADE OF THE ROADWAY SURFACE.

IRRIGATION NOTES

1. MAINLINE & VALVE LOCATIONS SHOWN FOR CLARITY LOCATE IN PLANTER AREAS AND WITHIN PROJECT BOUNDARY.
2. ALL MAINLINE SHOWN IS CL200 PVC., ALL POLY SHOWN IS 1/2". INSTALL TRACER WIRE AT ALL MAINLINES.
3. INSTALL ALL PIPE BENEATH WALKS AND PAVING WITHIN A SCH 40 PVC SLEEVE 2 SIZES LARGER THAN IRRIGATION PIPE (PVC AND POLYETHYLENE (PE)).
4. SEE CIVIL DWG. FOR WATER SOURCE SIZE & LOCATION PROVIDE METER PER WATER CO. REQ'S.
5. IRRIGATION DESIGN PRESSURE 30 PSI FOR SYSTEM. CONTRACTOR SHALL VERIFY EXIST. WATER PRESSURE AT VALVE & NOTIFY LANDSCAPE ARCHITECT OF DISCREPANCIES, BETWEEN EXISTING & DESIGN PRESSURE PRIOR TO CONTINUING WORK.
6. ELECTRIC POWER TO THE CONTROLLER IS SUPPLIED BY ELECTRICAL CONTRACTOR IN LOCATIONS SHOWN.
7. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER SOURCE.
8. EACH CONTROLLER TO BE EQUIPPED WITH RAIN SHUT OFF SENSOR AND MOISTURE SENSOR.

TABULATIONS

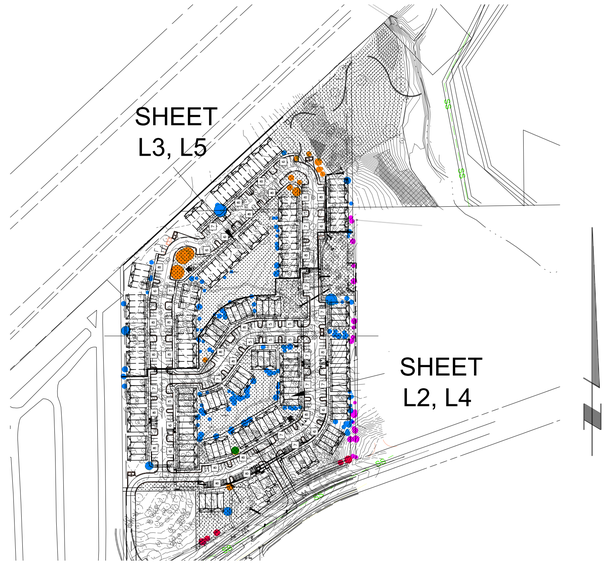
STREET BUFFER:	516 LF/25 = 21 TREES 42 SHRUBS 42 GROUND COVERS REQUIRED
PERIPHERAL BUFFER:	692 LF/25 = 28 TREES 56 SHRUBS 56 GROUND COVERS REQUIRED
PARKING AREAS:	375 / 8 * 2 = 94 TREES 188 SHRUBS 188 GROUND COVERS
BUILDING FOUNDATIONS (4 PLEX):	
TOTAL FOR 43 BUILDINGS:	10277 LF/25 = 411 TREES 822 SHRUBS 822 GROUND COVERS REQUIRED
TOTAL PER BUILDING	239 LF/25 = 9.5 TREES 19 SHRUBS 19 GROUND COVERS REQUIRED
CLUBHOUSE:	230 LF/25 = 9 TREES 18 SHRUBS 18 GROUND COVERS REQUIRED
FACILITY BUILDING	80 LF/25 = 3 TREES 6 SHRUBS 6 GROUND COVERS REQUIRED
EXISTING TREES CREDITS:	194 TREES 388 SHRUBS 388 GROUND COVERS
TOTAL PLANTS REQUIRED WITHOUT CREDITS	566 TREES 1132 SHRUBS 1132 GROUND COVERS REQUIRED
TOTAL PLANTS REQUIRED: WITH CREDITS	
NEW TREES PROVIDED:	372
NEW SHRUBS PROVIDED:	744 (2 PLANTED @ EACH TREE)
NEW GROUNDCOVER PROVIDED:	744 (2 PLANTED @ EACH TREE)

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	REMARKS	SIZE	QTY.
TREES					
	ACER FREEMANII	AUTUMN BLAZE MAPLE		6' HT.	3
	CERCIS OCCIDENTALIS	WESTERN REDBUD		6' HT.	121
	FRAXINUS VELUTINA	ARIZONA ASH	NATIVE	15 G.C.	12
	GLEDITSIA TRIACANTHUS 'INERMIS'	HONEY LOCUST		6' HT	71
	MALUS SPECIES	FLOWERING CRAB APPLE		6' HT	53
	PICEA PUNGENS	COLORADO BLUE SPRUCE		6' HT	108
	PINUS EDULIS	PINYON PINE	NATIVE	15 G.C.	4
SHRUBS					
	ARCTOSTAPHYLOS PUNGENS	MANZANITA	NATIVE	1 G.C.	253
	BERBERIS FREMONTII	FREMONT BARBERRY	NATIVE	1 G.C.	330
	FALLUGIA PARADOXA	APACHE PLUME	NATIVE	1 G.C.	19
	JUNIPERUS CHINENSIS	SEA GREEN JUNIPER		5 G.C.	68
	MAHONIA AQUIFOLIUM	OREGON GRAPE		5 G.C.	74
GROUND COVERS AND ACCENTS					
	ARABIS CAUCASICA	WALL ROCKCRESS		1 G.C.	373
	CALYLOPHUS HARTWEGII	SIERRA SUNDROP		1 G.C.	249
	JUNIPERUS HORIZONTALIS	PROSTRATE JUNIPER		1 G.C.	122

IRRIGATION EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	SPECIFICATION	QUANTITY
C	CONTROLLER	RAINBIRD ESP-SMT – WALL MOUNT 6 STA.	5
	BACKFLOW PREVEVTER	FEBCO 825Y 3/4"	1
	DRIP VALVE ASSEMBLY	RAINBIRD XCZ-075-PRF	29
	TREE EMITTER	RAINBIRD XB-10-6	372
	SHRUB EMITTER	RAINBIRD XB-10-6	1488



KEY PLAN

SCALE 1" = 200'

Two working days before you dig
CALL FOR THE BLUE STAKES
792 2211
Blue Stake Center
CALL COLLECT

COF #PZ-21-00284-02

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
12666
STEVE
ACUNA
11-21-22
Expires 3/31/23

LOFTS ON BUTLER

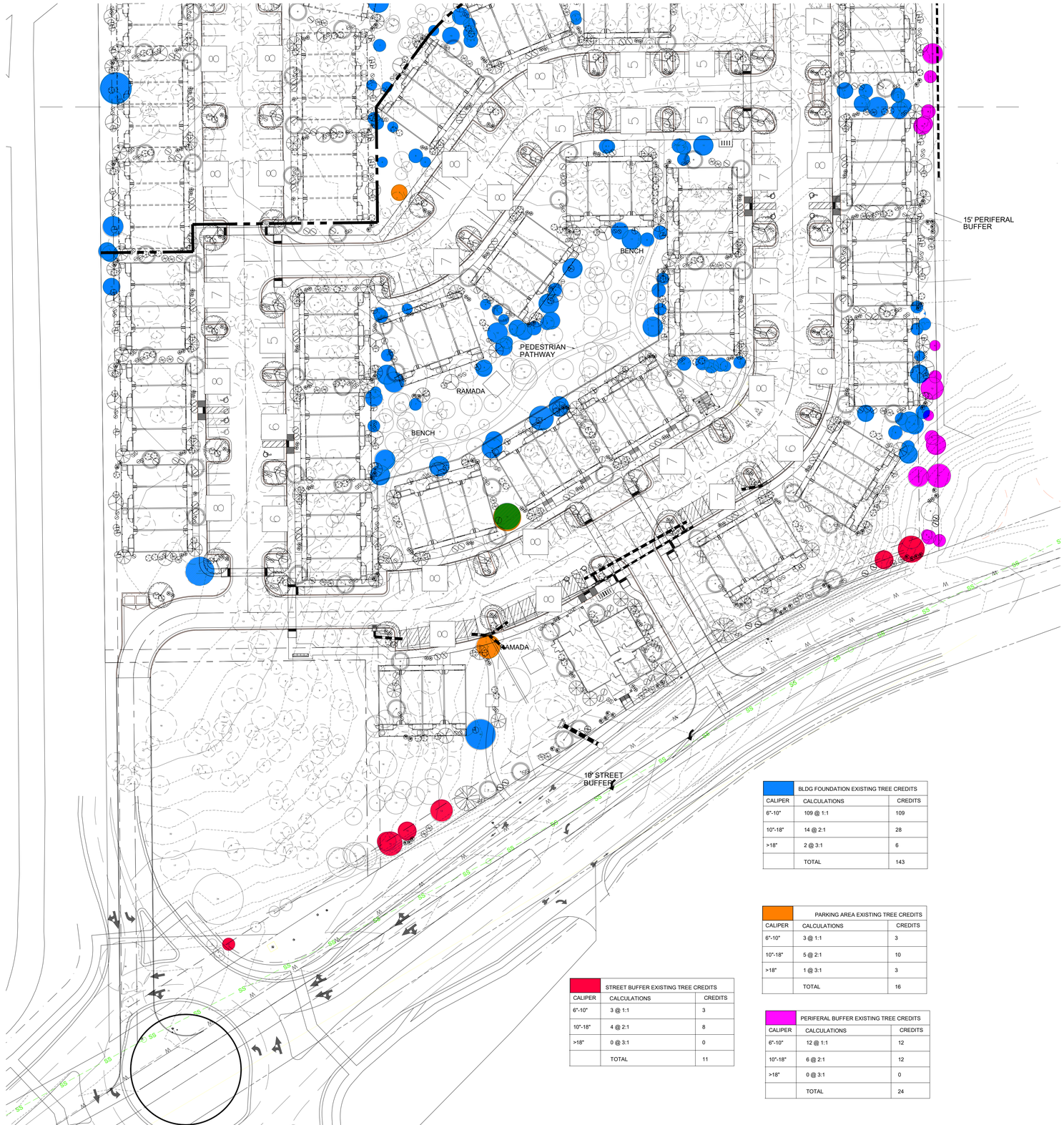
LANDSCAPE PLAN COVER SHEET

HORIZ.	
VERT.	
F.B.	
DESIGN	SA
DRAWN	SA
CHKD.	SA
JOB NO.	

Acuña Coffeen
Landscape Architects
3532 N. Avenida Alber Tucson, Arizona 85745
(520) 441-2754

L1 OF 3

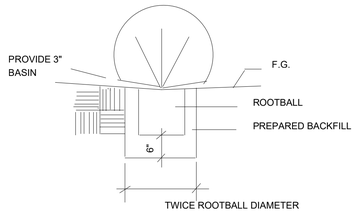
11-22



LANDSCAPE PLAN

North
1"=40'

EXISTING TREE LEGEND	
SYMBOL	DESCRIPTION
6	EXISTING TREE TO BE REMOVED NUMBER WITHIN DENOTES CALIPER
6	EXISTING TREE TO BE PRESERVED IN PLACE NUMBER WITHIN DENOTES CALIPER



1 SHRUB PLANTING DETAIL

NTS

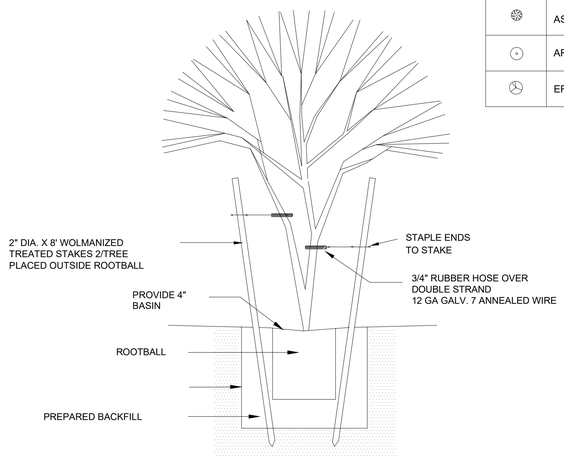
PLANT LIST		
KEY	BOTANICAL NAME	COMMON NAME
TREES		
	ACER FREEMANII	AUTUMN BLAZE MAPLE
	CERCIS OCCIDENTALIS	WESTERN REDBUD
	FRAXINUS VELUTINA	ARIZONA ASH
	GLEDITSIA TRIACANTHUS 'INERMIS'	HONEY LOCUST
	MALUS SPECIES	FLOWERING CRAB APPLE
	PICEA PUNGENS	COLORADO BLUE SPRUCE
	PINUS EDULIS	PINYON PINE
SHRUBS		
	ARCTOSTAPHYLOS PUNGENS	MANZANITA
	BERBERIS FREMONTII	FREMONT BARBERRY
	FALLUGIA PARADOXA	APACHE PLUME
	JUNIPERUS CHINENSIS	SEA GREEN JUNIPER
	MAHONIA AQUIFOLIUM	OREGON GRAPE
GROUND COVERS AND ACCENTS		
	ARABIS CAUCASICA	WALL ROCKCRESS
	CALYLOPHUS HARTWEGII	SIERRA SUNDROP
	JUNIPERUS HORIZONTALIS	PROSTRATE JUNIPER
BUTTERFLY NECTAR PLANT		
	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED
	ARTEMISIA LUDOVICIANA	WHITE SAGEBRUSH
	ERICAMERIA NAUSEOSA	RABBITBRUSH

BLDG FOUNDATION EXISTING TREE CREDITS		
CALIPER	CALCULATIONS	CREDITS
6"-10"	109 @ 1:1	109
10"-18"	14 @ 2:1	28
>18"	2 @ 3:1	6
	TOTAL	143

PARKING AREA EXISTING TREE CREDITS		
CALIPER	CALCULATIONS	CREDITS
6"-10"	3 @ 1:1	3
10"-18"	5 @ 2:1	10
>18"	1 @ 3:1	3
	TOTAL	16

STREET BUFFER EXISTING TREE CREDITS		
CALIPER	CALCULATIONS	CREDITS
6"-10"	3 @ 1:1	3
10"-18"	4 @ 2:1	8
>18"	0 @ 3:1	0
	TOTAL	11

PERIFERAL BUFFER EXISTING TREE CREDITS		
CALIPER	CALCULATIONS	CREDITS
6"-10"	12 @ 1:1	12
10"-18"	6 @ 2:1	12
>18"	0 @ 3:1	0
	TOTAL	24



* NO STAKES FOR BOXED TREES SIZES

2 TREE PLANTING DETAIL

NTS

Two working days before you dig
CALL FOR THE BLUE STAKES
792 2211
Blue Stake Center
CALL COLLECT

COF #PZ-21-00284-02

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
12666
STEVE
ACUNA
DATE SIGNED 11-21-22
Expires 9/31/23

THE LOFTS ON BUTLER

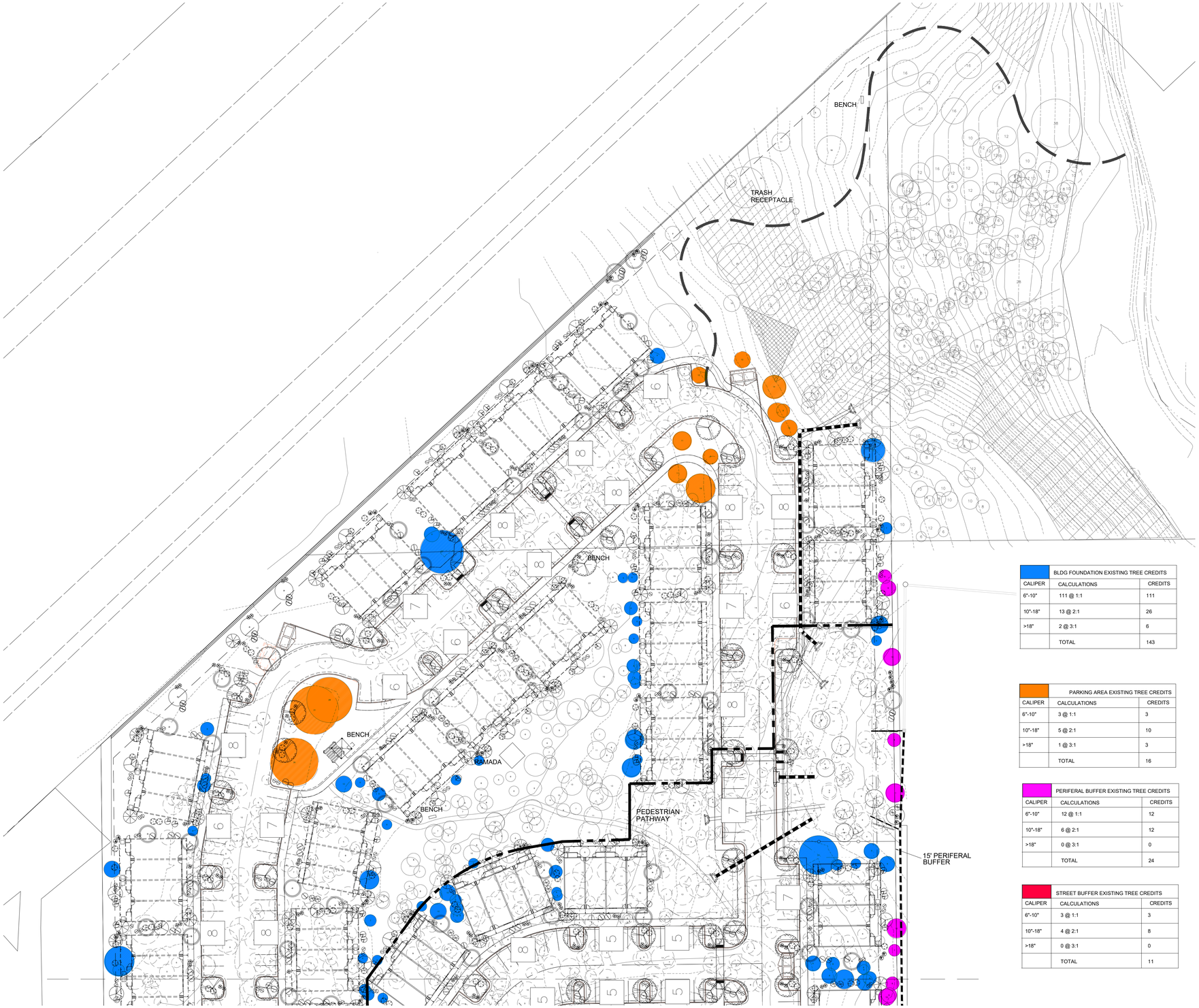
LANDSCAPE PLAN

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Landscape Architects
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L2 OF 3

HORIZ.	
VERT.	
F.B.	
DESIGN	SA
DRAWN	SA
CHKD.	SA
JOB NO.	

11-22



LANDSCAPE PLAN

North
1" = 40'

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME
TREES		
	ACER FREEMANII	AUTUMN BLAZE MAPLE
	CERCIS OCCIDENTALIS	WESTERN REDBUD
	FRAXINUS VELUTINA	ARIZONA ASH
	GLEDITSIA TRIACANTHUS 'INERMIS'	HONEY LOCUST
	MALUS SPECIES	FLOWERING CRAB APPLE
	PICEA PUNGENS	COLORADO BLUE SPRUCE
	PINUS EDULIS	PINYON PINE
SHRUBS		
	ARCTOSTAPHYLOS PUNGENS	MANZANITA
	BERBERIS FREMONTII	FREMONT BARBERRY
	FALLUGIA PARADOXA	APACHE PLUME
	JUNIPERUS CHINENSIS	SEA GREEN JUNIPER
	MAHONIA AQUIFOLIUM	OREGON GRAPE
GROUND COVERS AND ACCENTS		
	ARABIS CAUCASICA	WALL ROCKCRESS
	CALYLOPHUS HARTWEGII	SIERRA SUNDROP
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BUTTERFLY NECTAR PLANT		
	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED
	ARTEMISIA LUDOVICIANA	WHITE SAGEBRUSH
	ERICAMERIA NAUSEOSA	RABBITBRUSH

BLDG FOUNDATION EXISTING TREE CREDITS

CALIPER	CALCULATIONS	CREDITS
6"-10"	111 @ 1:1	111
10"-18"	13 @ 2:1	26
>18"	2 @ 3:1	6
	TOTAL	143

PARKING AREA EXISTING TREE CREDITS

CALIPER	CALCULATIONS	CREDITS
6"-10"	3 @ 1:1	3
10"-18"	5 @ 2:1	10
>18"	1 @ 3:1	3
	TOTAL	16

PERIFERAL BUFFER EXISTING TREE CREDITS

CALIPER	CALCULATIONS	CREDITS
6"-10"	12 @ 1:1	12
10"-18"	6 @ 2:1	12
>18"	0 @ 3:1	0
	TOTAL	24

STREET BUFFER EXISTING TREE CREDITS

CALIPER	CALCULATIONS	CREDITS
6"-10"	3 @ 1:1	3
10"-18"	4 @ 2:1	8
>18"	0 @ 3:1	0
	TOTAL	11

EXISTING TREE LEGEND

SYMBOL	DESCRIPTION
6	EXISTING TREE TO BE REMOVED NUMBER WITHIN DENOTES CALIPER
6	EXISTING TREE TO BE PRESERVED IN PLACE NUMBER WITHIN DENOTES CALIPER

Two working days before you dig
CALL FOR THE BLUE STAKES
792 2211
Blue Stake Center
CALL COLLECT

COF #PZ-21-00284-02

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
12666
STEVE
ACUNA
Expires 9/31/23

THE LOFTS ON BUTLER

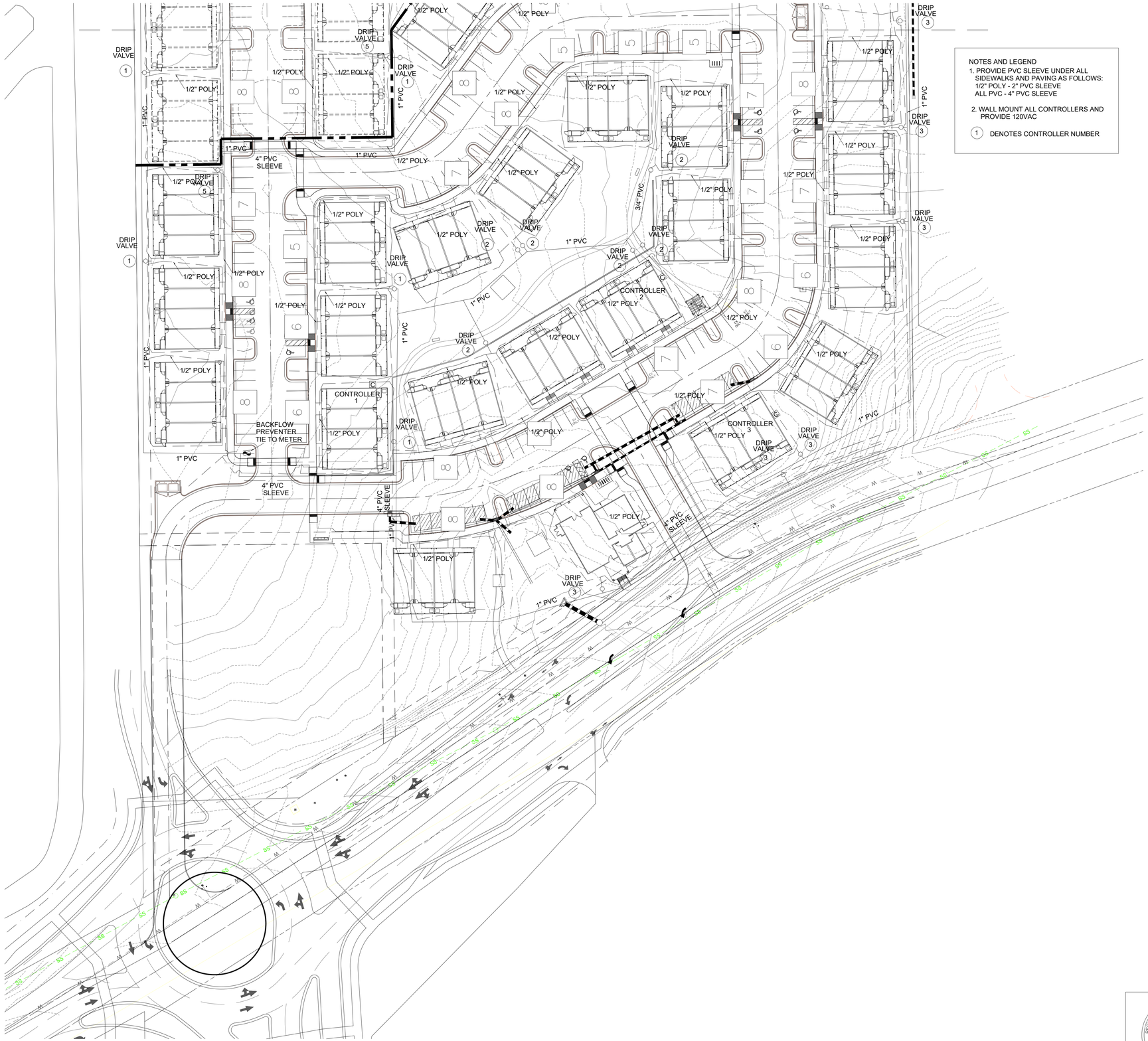
LANDSCAPE PLAN

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L3 OF 3

HORIZ.	
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CHKD.	SA
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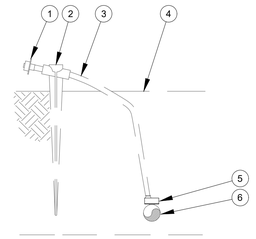


IRRIGATION PLAN

North
1"=40'

NOTES AND LEGEND
1. PROVIDE PVC SLEEVE UNDER ALL SIDEWALKS AND PAVING AS FOLLOWS:
   1/2" POLY - 2" PVC SLEEVE
   ALL PVC - 4" PVC SLEEVE
2. WALL MOUNT ALL CONTROLLERS AND PROVIDE 120VAC

(1) DENOTES CONTROLLER NUMBER

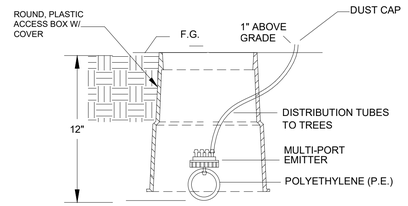


(1) DIFFUSER BUG CAP: RAIN BIRD DBC-025
(2) UNIVERSAL ¼" TUBING STAKE: RAIN BIRD TS-025
(3) ¾" DISTRIBUTION TUBING: RAIN BIRD XQ TUBING (LENGTH AS REQUIRED)
(4) FINISH GRADE
(5) SINGLE-OUTLET BARB INLET X BARB OUTLET EMITTER: RAIN BIRD XERI-BUG EMITTER
(6) ½" POLYETHYLENE TUBING: RAIN BIRD XF SERIES TUBING OR RAIN BIRD XT-700 XERI-TUBE OR RAIN BIRD XBS BLACK STRIPE TUBING

1 SINGLE OUTLET EMITTER DETAIL

NTS

NOTES:
1. USE RAIN BIRD XERIMAN TOOL XM-TOOL TO INSERT EMITTER DIRECTLY INTO ½" POLYETHYLENE TUBING.



1A MULTI OUTLET EMITTER DETAIL

NTS

IRRIGATION EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	SPECIFICATION	QUANTITY
[C]	CONTROLLER	RAINBIRD ESP–SMT – WALL MOUNT 6 STA.	5
	BACKFLOW PREVEVTER	FEBCO 825Y 3/4"	1
⬡	DRIP VALVE ASSEMBLY	RAINBIRD XCZ-075-PRF	29
	TREE EMITTER	RAINBIRD XB-10-6	372
	SHRUB EMITTER	RAINBIRD XB-10-6	1488

Two working days before you dig
CALL FOR THE BLUE STAKES
792 2211
Blue Stake Center
CALL COLLECT

COF #PZ-21-00284-02

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
12666
STEVE ACUNA
DATE SIGNED 1-21-22
Expires 3/31/23

THE LOFTS ON BUTLER

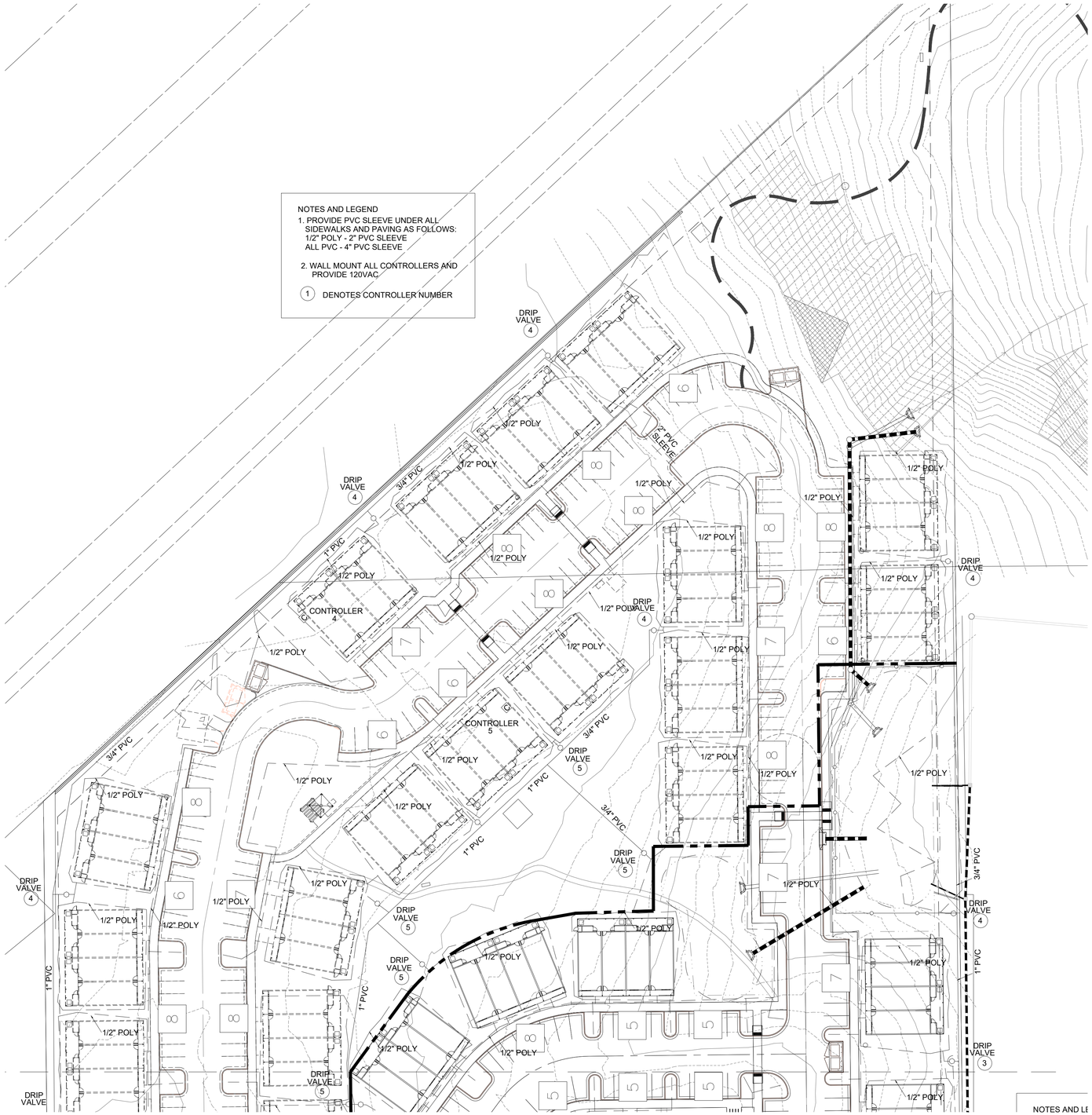
IRRIGATION PLAN

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L4 OF 5

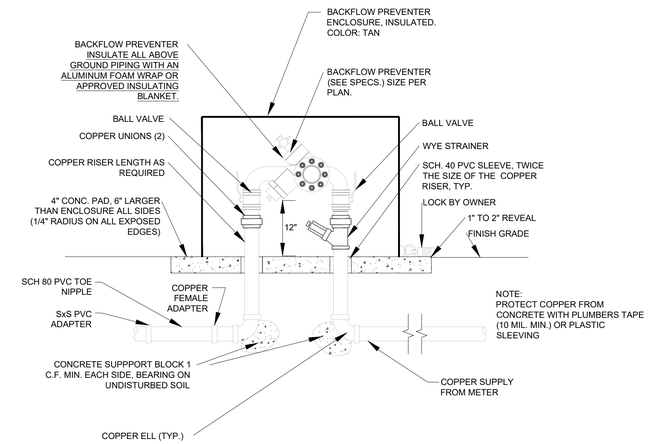
HORIZ.	
VERT.	
F.B.	
DESIGN	SA
DRAWN	SA
CHKD.	SA
JOB NO.	

11-22



IRRIGATION PLAN

North
1"=40'

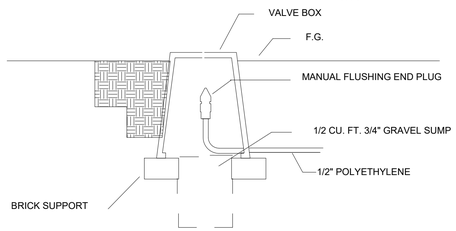


1 BACKFLOW PREVENTER DETAIL

NTS

IRRIGATION EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	SPECIFICATION	QUANTITY
C	CONTROLLER	RAINBIRD ESP–SMT – WALL MOUNT 6 STA.	5
	BACKFLOW PREVEVTER	FEBCO 825Y 3/4"	1
	DRIP VALVE ASSEMBLY	RAINBIRD XCZ-075-PRF	29
	TREE EMITTER	RAINBIRD XB-10-6	372
	SHRUB EMITTER	RAINBIRD XB-10-6	1488



2 HOSE END CAP DETAIL

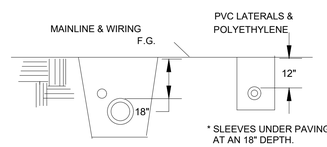
NTS

1. FINISH GRADE
2. STANDARD VALVE BOX WITH COVER: RAIN BIRD VB–STD
3. WATERPROOF CONNECTION: RAIN BIRD DB SERIES
4. VALVE ID TAG
5. 30–INCH LINEAR LENGTH OF WIRE, COILED
6. PRESSURE REGULATING FILTER: RAIN BIRD PRF–075–RBY (INCLUDED IN XCZ–075–PRF KIT)
7. PVC SCH 40 FEMALE ADAPTOR
8. LATERAL PIPE
9. REMOTE CONTROL VALVE: RAIN BIRD LVF–075 (INCLUDED IN XCZ–075–PRF KIT)
10. PVC SCH 40 TEE OR ELL TO MANIFOLD
11. 3–INCH MINIMUM DEPTH OF 3/4–INCH WASHED GRAVEL
12. MANIFOLD PIPE AND FITTINGS

3 DRIP VALVE ASSEMBLY

NTS

USE NON PRESSURE REGULATING FILTER WHERE REMOTE PRESSURE REGULATORS ARE USED.



* SLEEVES UNDER PAVING SHALL BE AT AN 18" DEPTH.

4 TRENCHING DETAIL

NTS

Two working days before you dig
CALL FOR THE BLUE STAKES
792 2211
Blue Stake Center
CALL COLLECT

COF #PZ-21-00284-02

RECORDED LANDSCAPE ARCHITECT
CERTIFICATE NO.
12666
STEVE ACUNA
DATE 11-21-22
ARIZONA U.S.A.
Expires 3/31/23

THE LOFTS ON BUTLER

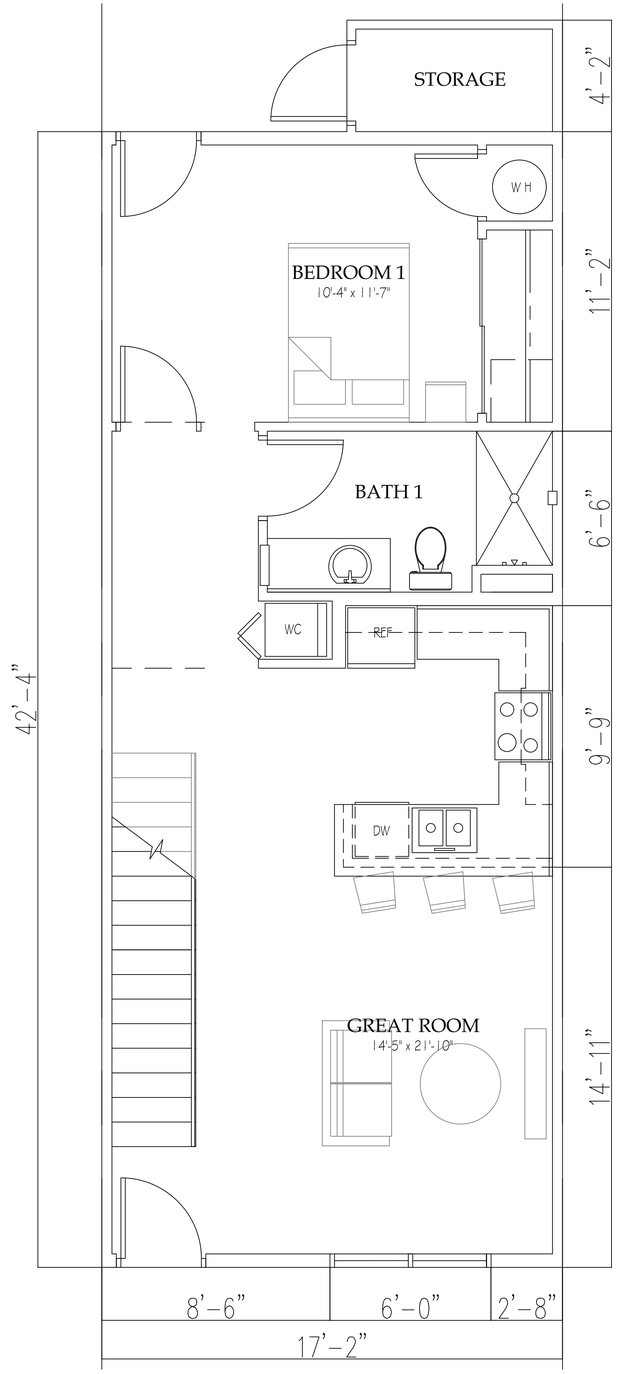
IRRIGATION PLAN

Acuña Coffeen Landscape Architects
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L5 OF 5

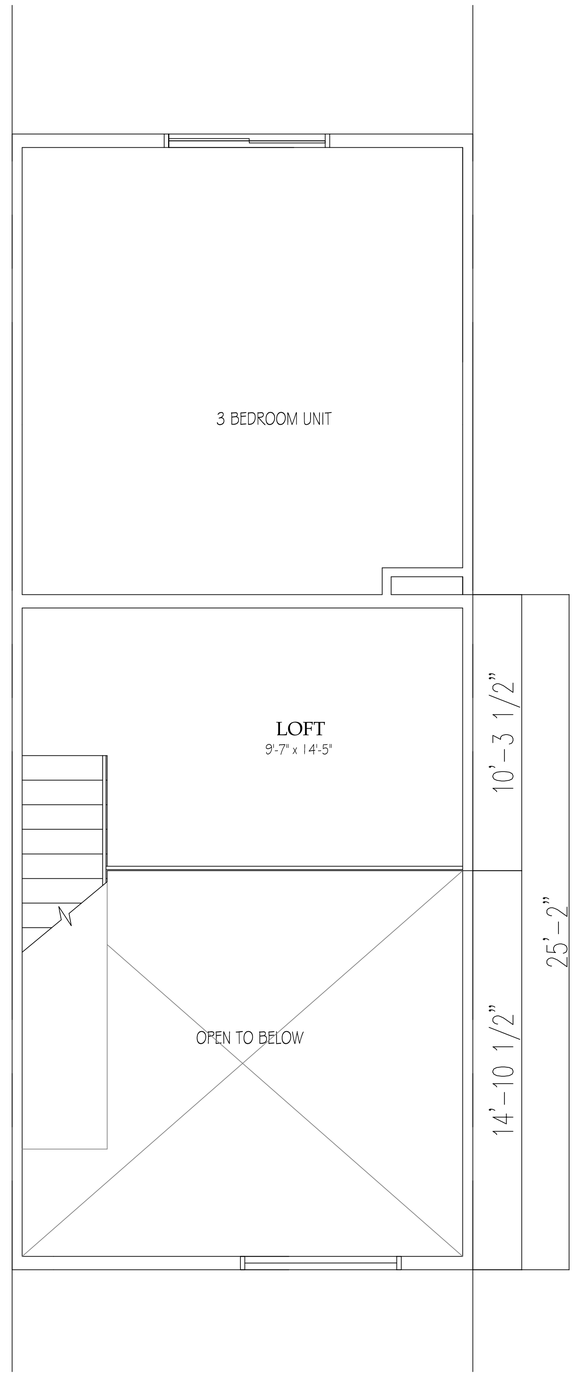
HORIZ.	
VERT.	
F.B.	
DESIGN	SA
DRAWN	SA
CHKD.	SA
JOB NO.	

11-22



1 A1.0 Main Level Floor Plan

Scale 3/8" = 1'-0"



2 A1.0 Upper Level Floor Plan

Scale 3/8" = 1'-0"

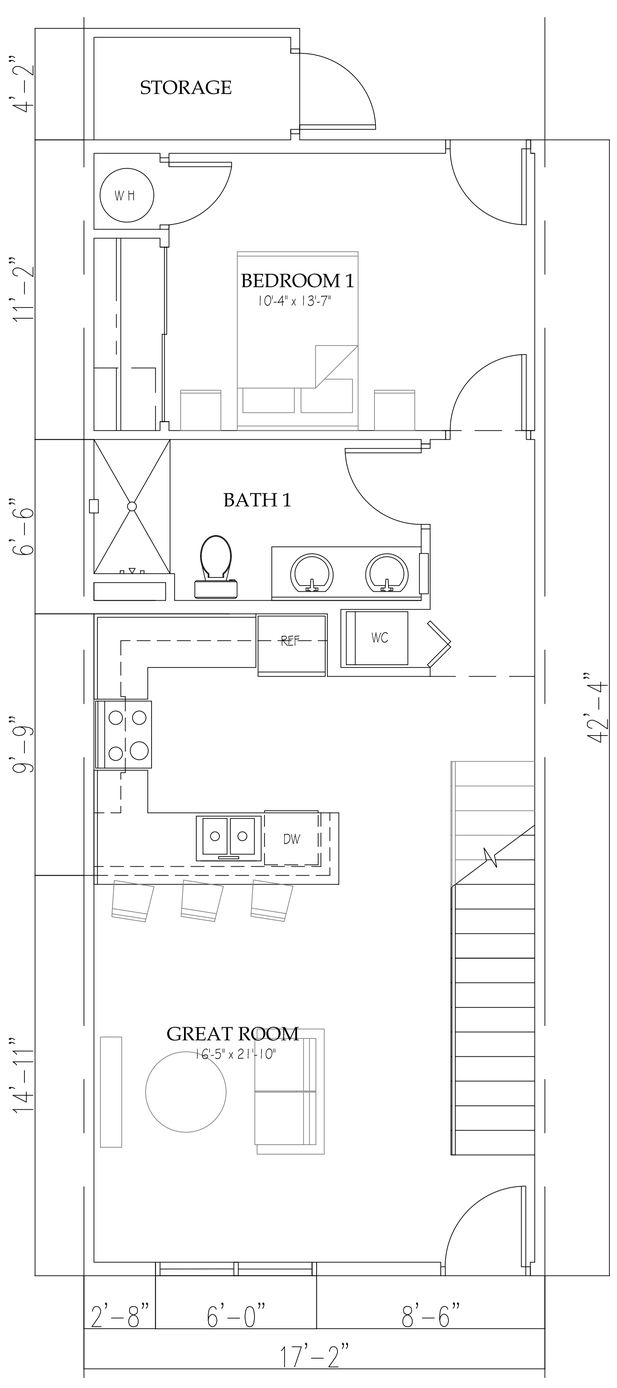
MIRAMONTE HOMES
2492 E. RIVER ROAD S-100 TUCSON, AZ 85718 (520) 615-8900

1 BEDROOM UNIT

TOTAL SQ. FT. 1414

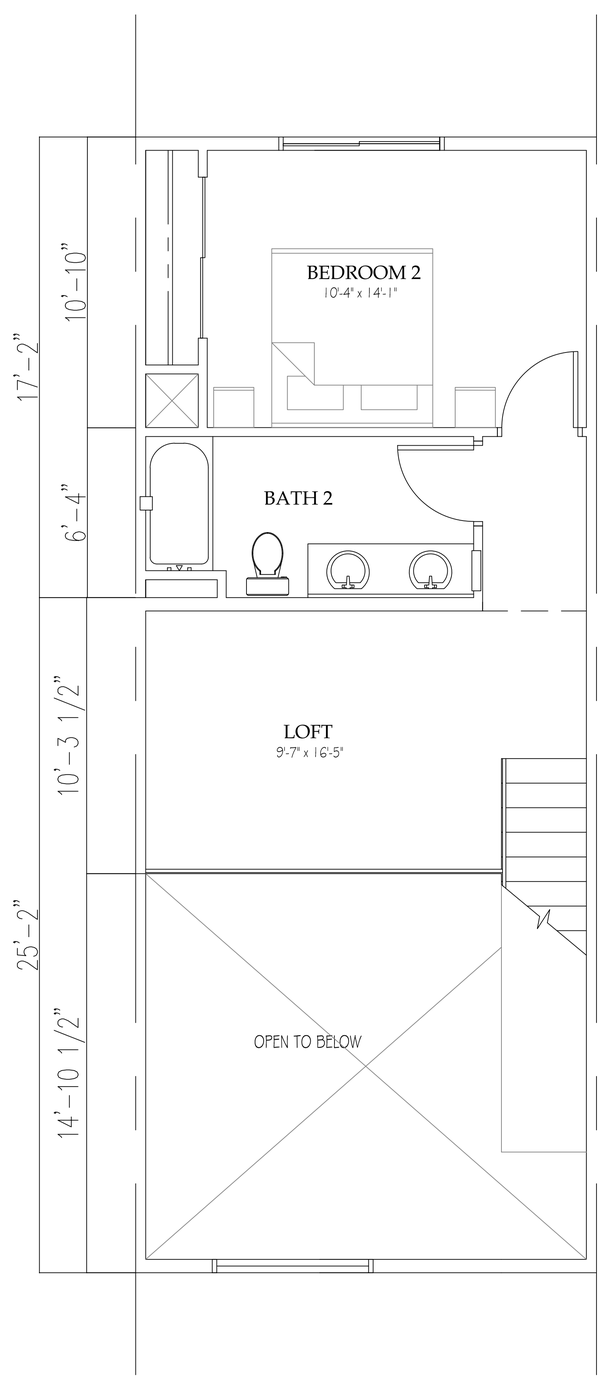
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1 A1.1 Main Level Floor Plan

Scale 3/8" = 1'-0"



2 A1.1 Upper Level Floor Plan

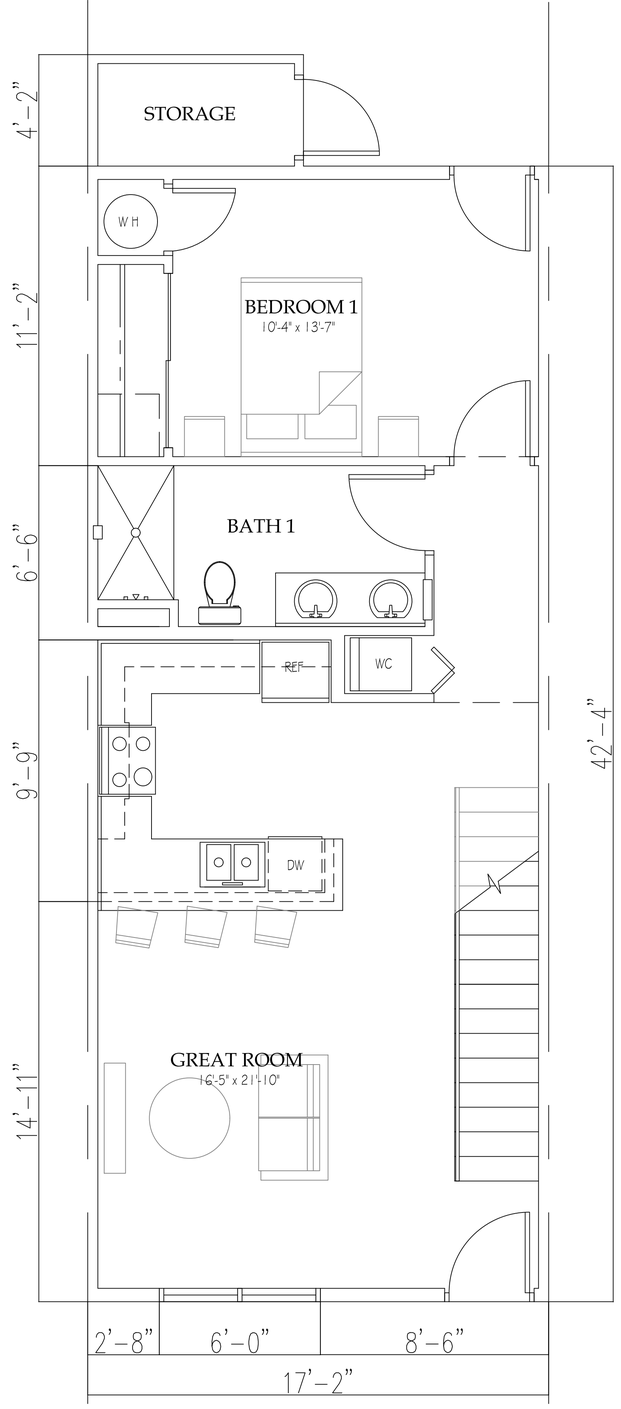
Scale 3/8" = 1'-0"

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2502 E. RIVER ROAD TUCSON, AZ 85718 (520) 268-9128

2 BEDROOM UNIT

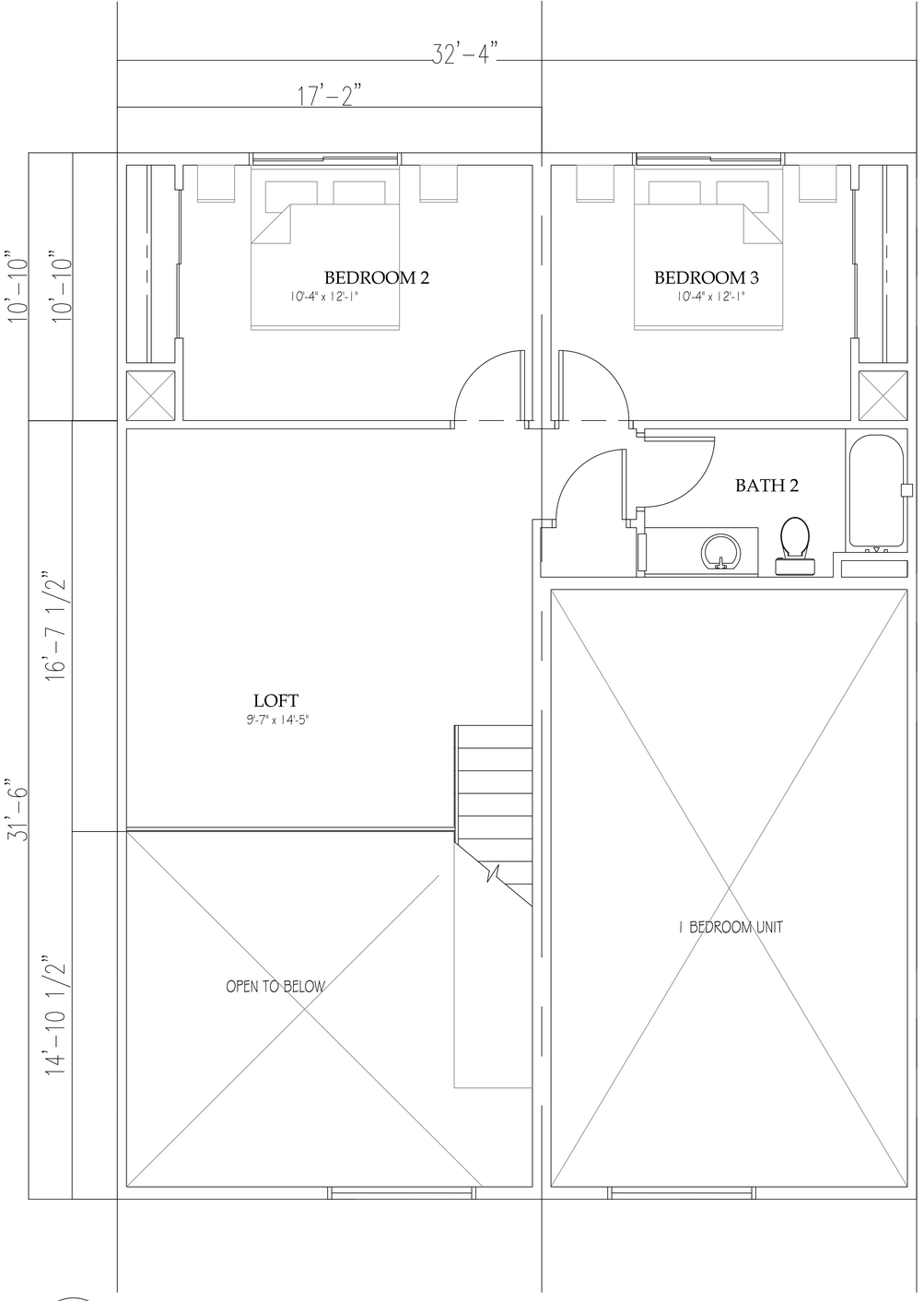
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1 A1.2 Main Level Floor Plan

Scale 3/8" = 1'-0"



2 A1.2 Upper Level Floor Plan

Scale 3/8" = 1'-0"

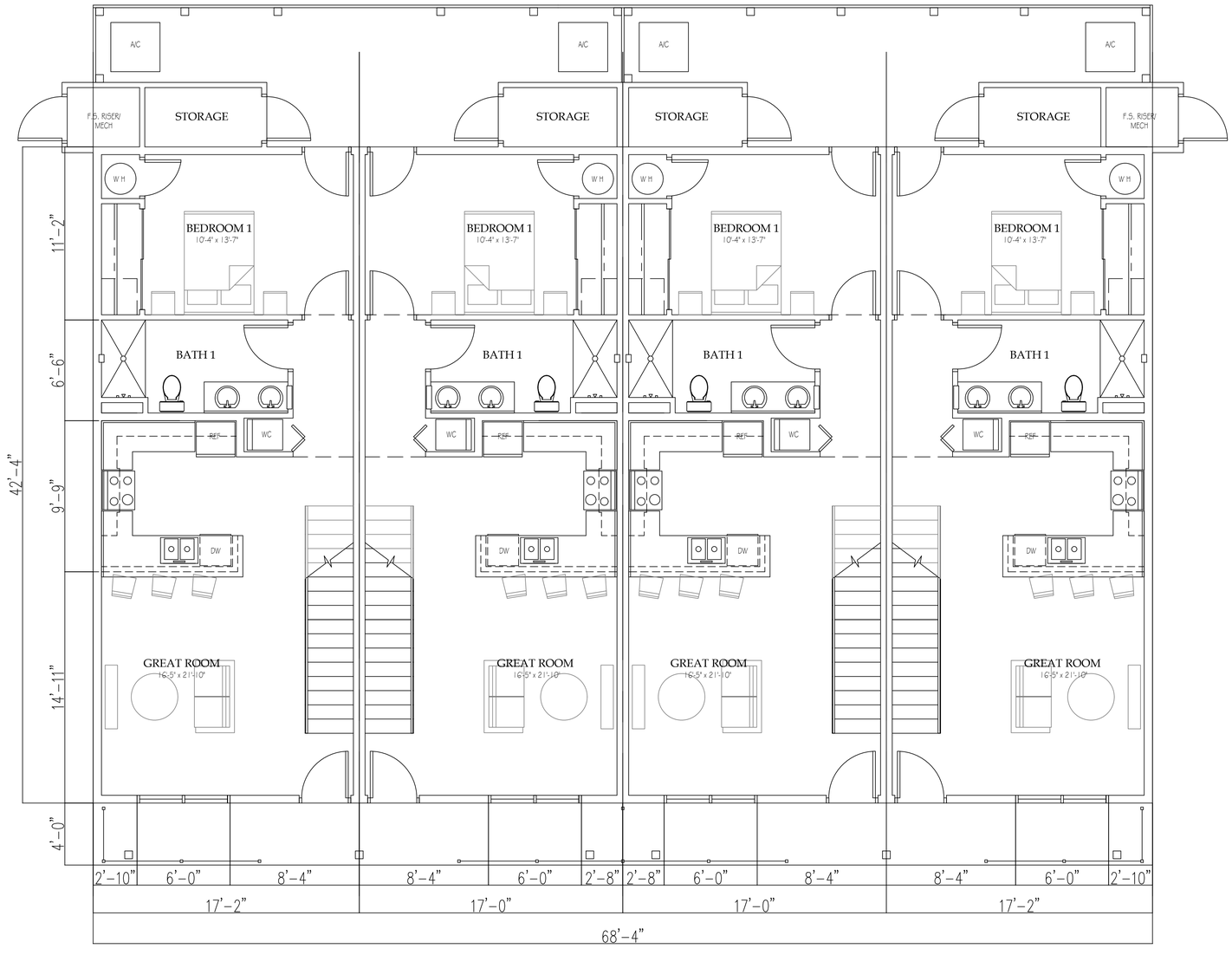
MIRAMONTE HOMES
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3 BEDROOM UNIT

TOTAL SQ. FT. 1414

Butler Lofts
Flagstaff, AZ

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1 Main Level Floor Plan

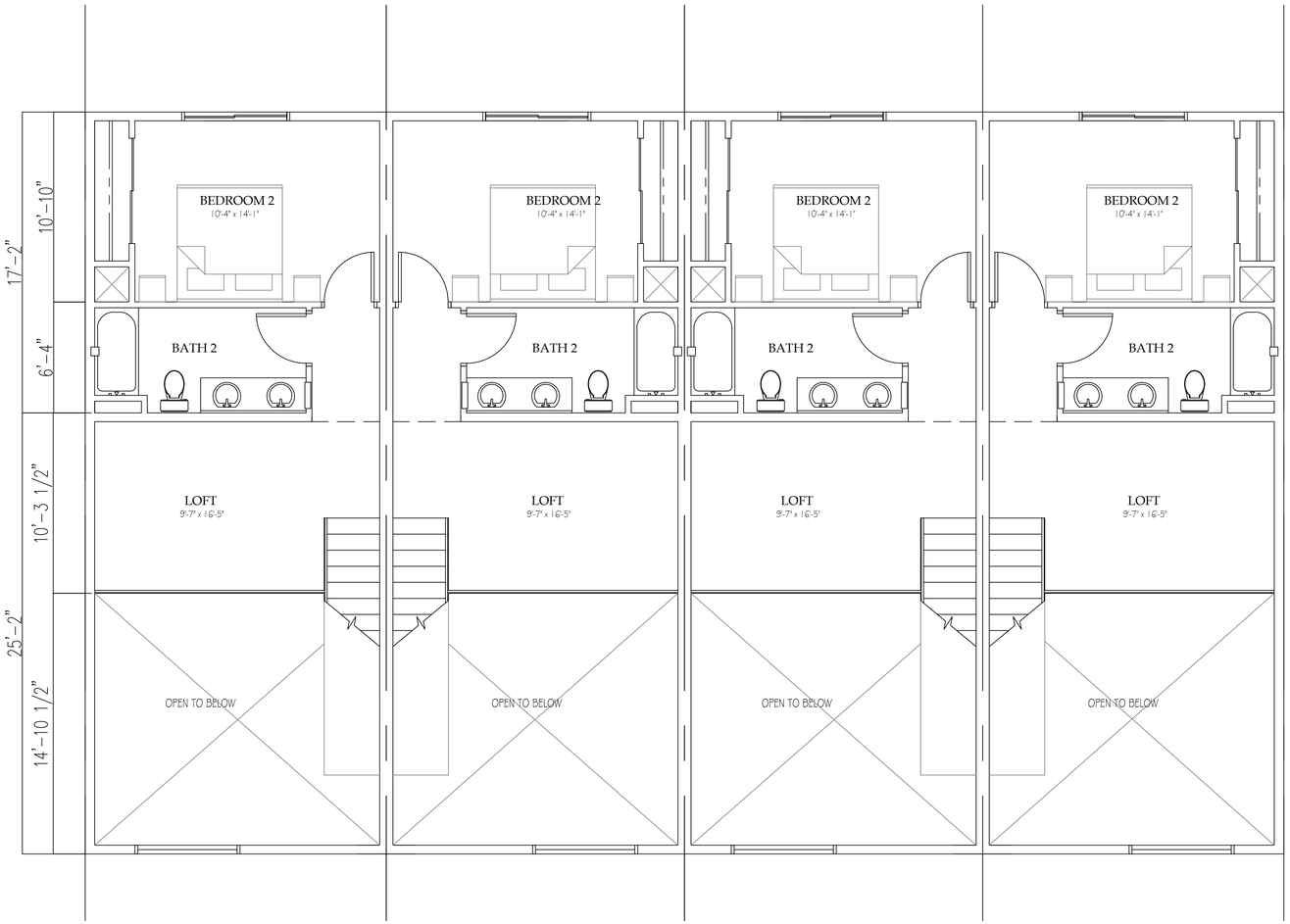
Scale 1/4" = 1'-0"

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4 PLEX FLOOR PLANS

Butler Lofts
Flagstaff, AZ

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2 Upper Level Floor Plan

Scale 1/4" = 1'-0"

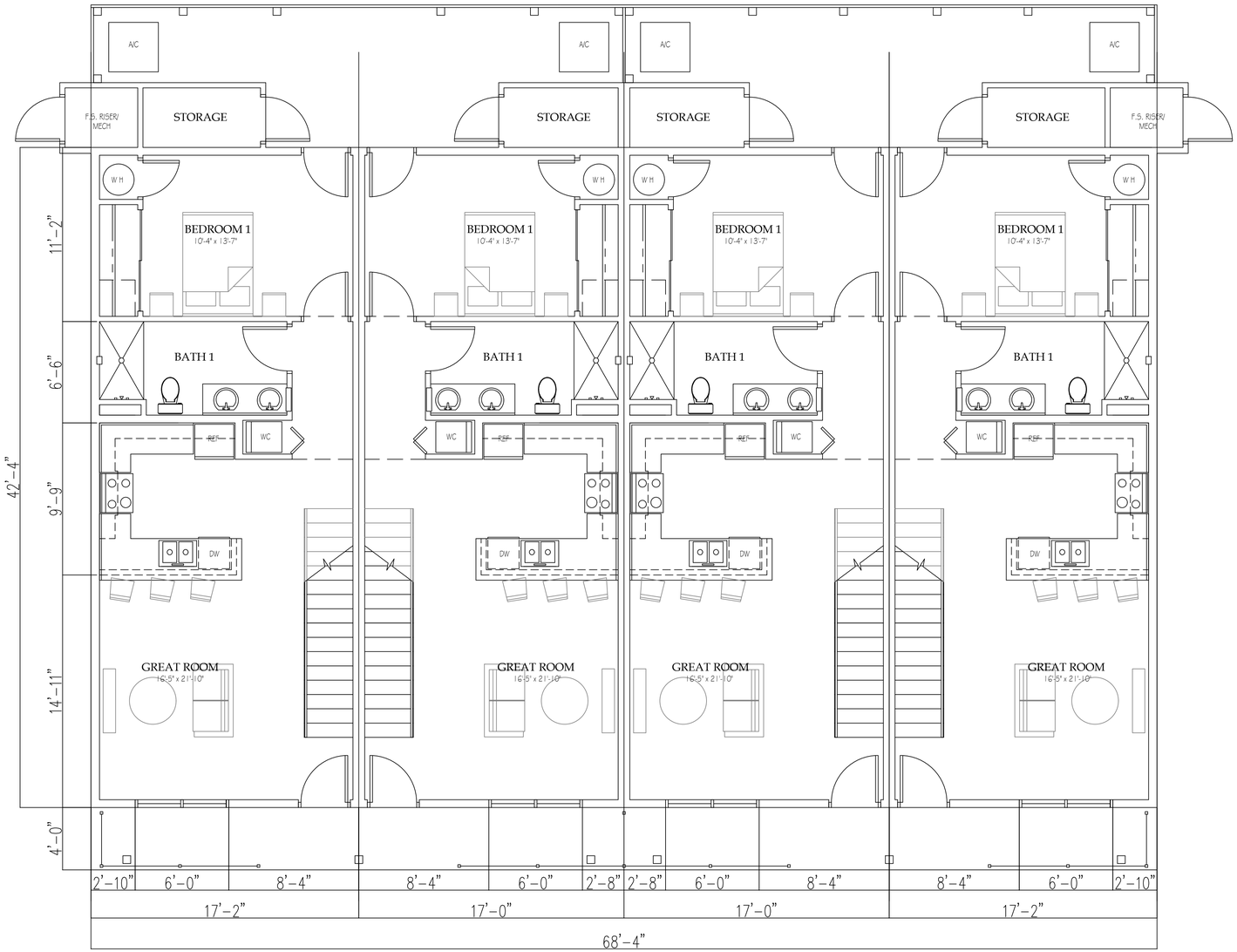
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2502 E [illegible] 3-9128

4 PLEX FLOOR PLANS

Butler Lofts
Flagstaff, AZ

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1 Main Level Floor Plan

Scale 1/4" = 1'-0"

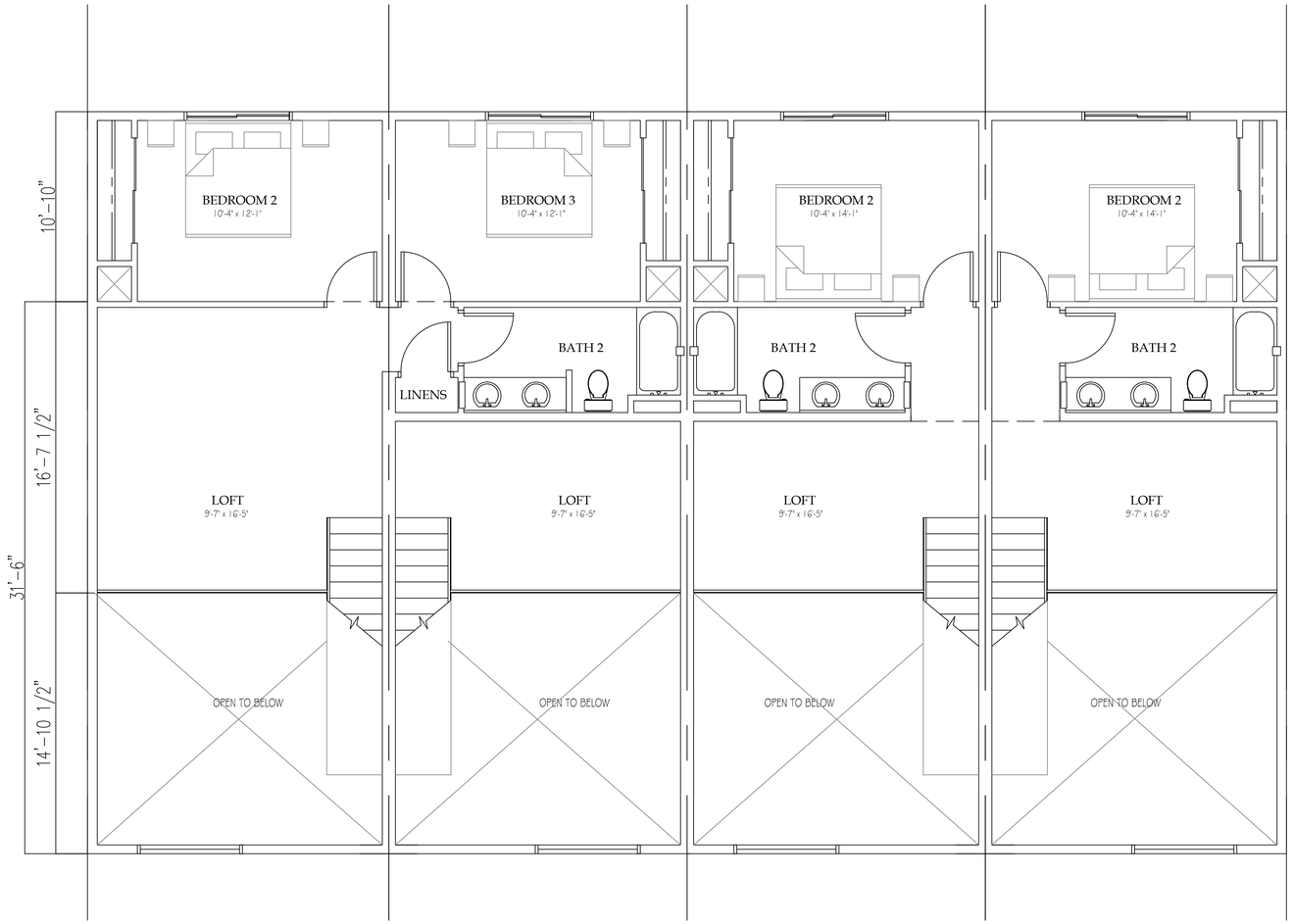
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2492 E [illegible] 615-8900

4 PLEX FLOORPLAN

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2 Upper Level Floor Plan

Scale 1/8" = 1'-0"

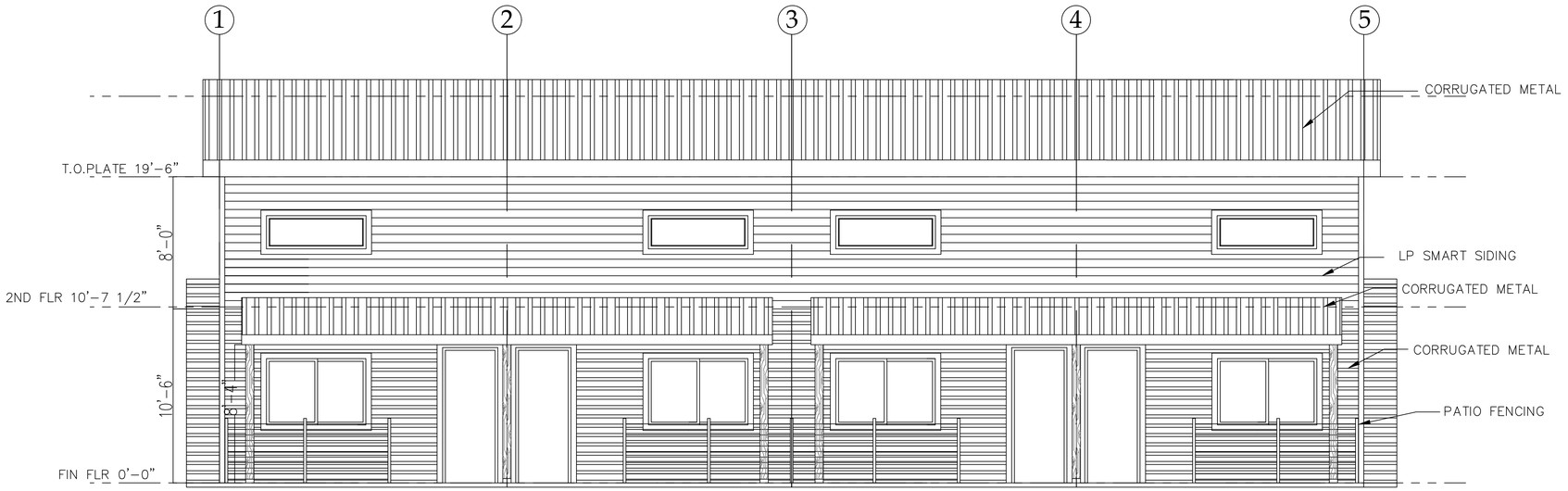
MIRAMONTE HOMES

2492 E) 615-8900

4 PLEX FLOORPLAN

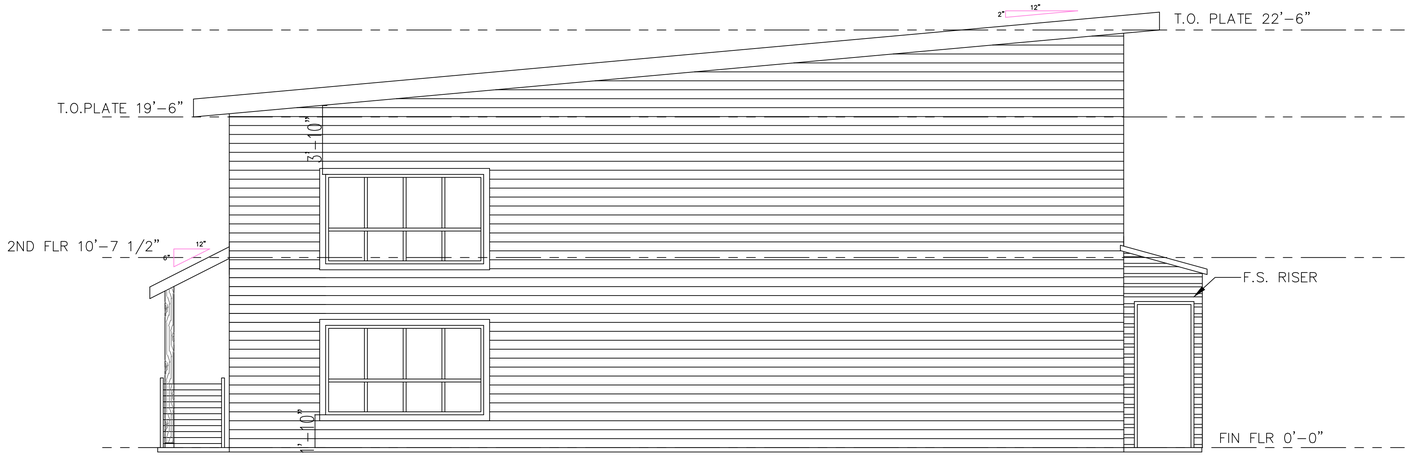
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Flagstaff, AZ

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2 Front Elevation

Scale 1/4" = 1'-0"



1 Right Elevation

Scale 1/4" = 1'-0"

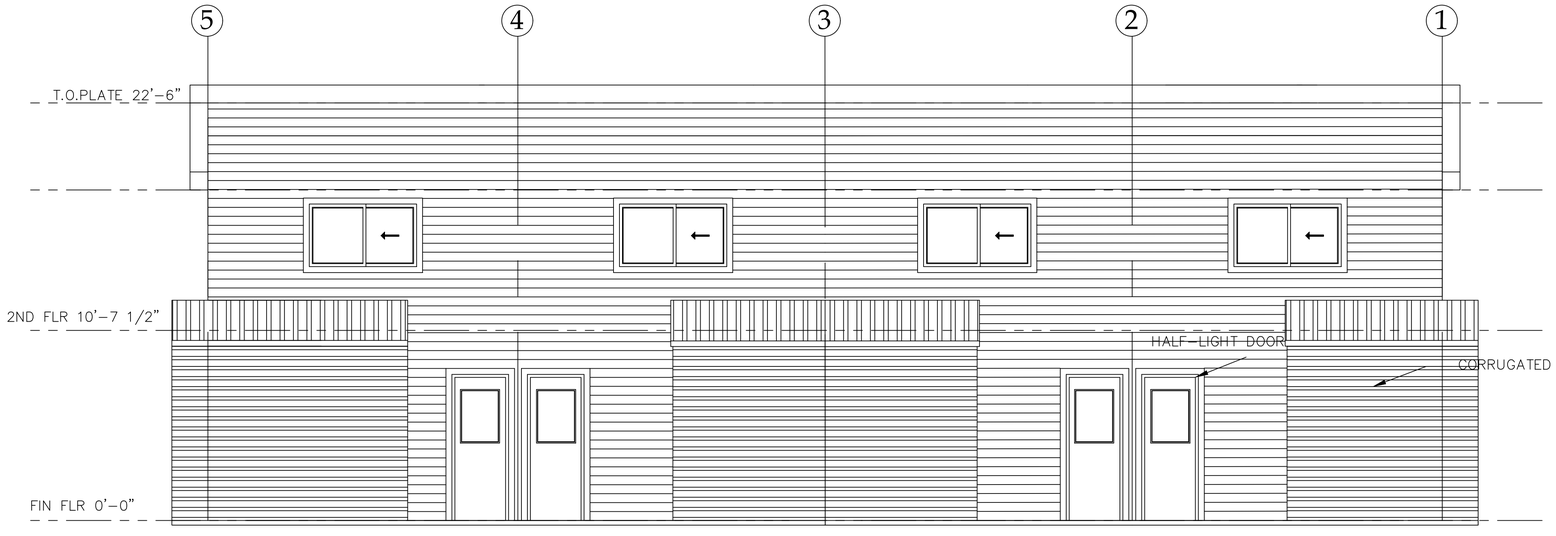
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4 PLEX ELEVATIONS

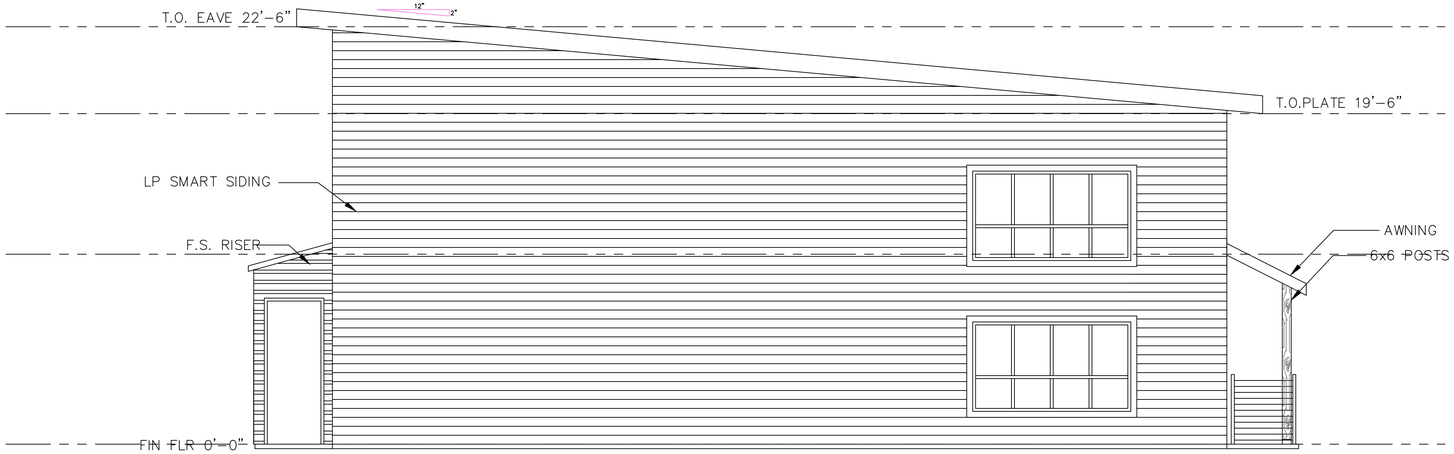
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3 Back Elevation

Scale 1/8" = 1'-0"



4 Left Elevation

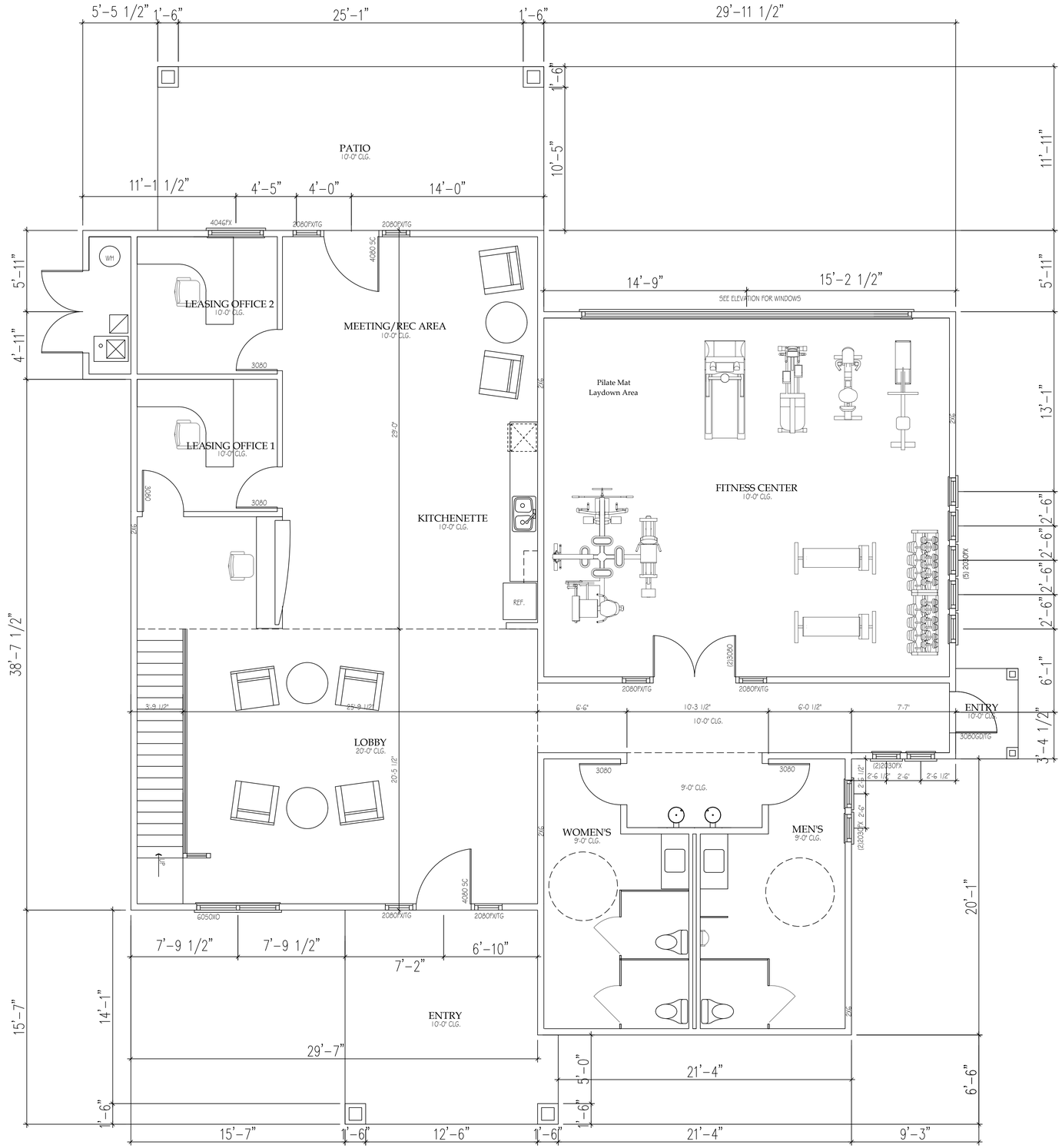
Scale 1/4" = 1'-0"

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2502 E. RIVER ROAD TUCSON, AZ 85718 (520) 268-9128

4 PLEX ELEVATIONS

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LOWER FLOOR PLAN

SCALE: 1/4"=1'-0"

TUCSON

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MIRAMONTE
HOMES, L.L.C.
2492 E. RIVER SUITE 100 TUCSON, AZ 85718 (520) 615-8900

CLUB HOUSE
LOWER FLOOR PLAN

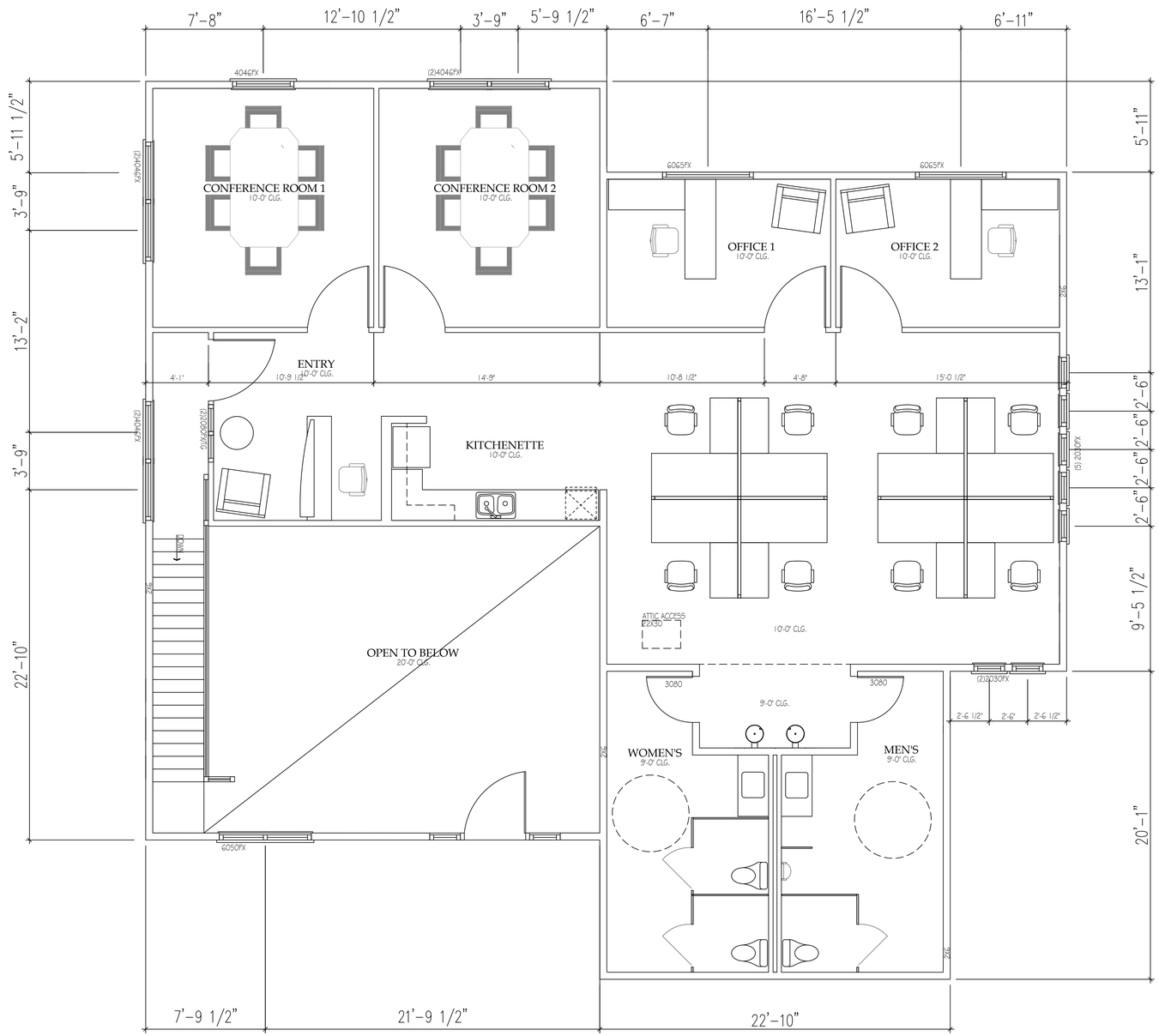
REVISION

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MIRAMONTE
HOMES
2502 E. RIVER ROAD
TUCSON, AZ 85718
(520) 615-8900

PARK PLACE
SEDONA

A1.0



UPPER FLOOR PLAN

SCALE: 1/4"= 1'-0"

MIRAMONTE
HOMES, L.L.C.
2492 E. RIVER SUITE 100 TUCSON, AZ 85718 (520) 615-8900

CLUB HOUSE
UPPER FLOOR PLAN

REVISION

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MIRAMONTE
HOMES
4578 N. 1st AVENUE, SUITE 160
TUCSON, AZ 85718
(520) 615-8900

PARK PLACE
SEDONA

A1.1

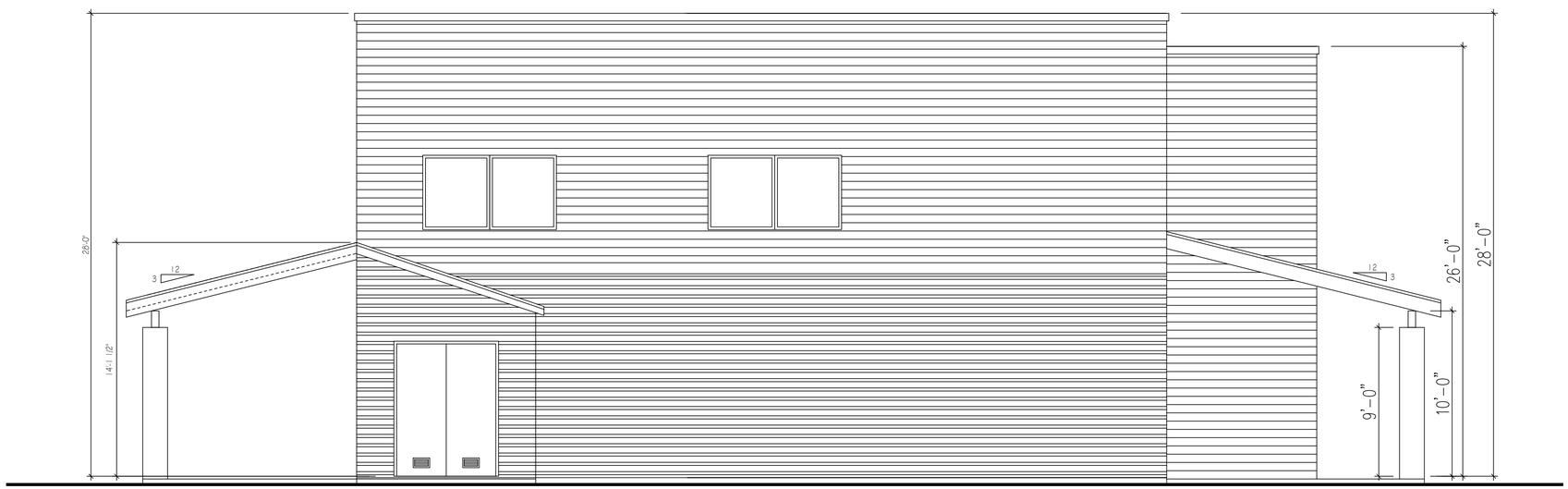
TUCSON

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FRONT ELEVATION

SCALE: 1/4"=1'-0"



LEFT SIDE ELEVATION

SCALE: 1/4"=1'-0"

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HOMES, L.L.C.
2492 E. RIVER SUITE 100 TUCSON, AZ 85718 (520) 615-8900

CLUB HOUSE
EXTERIOR ELEVATIONS

REVISION
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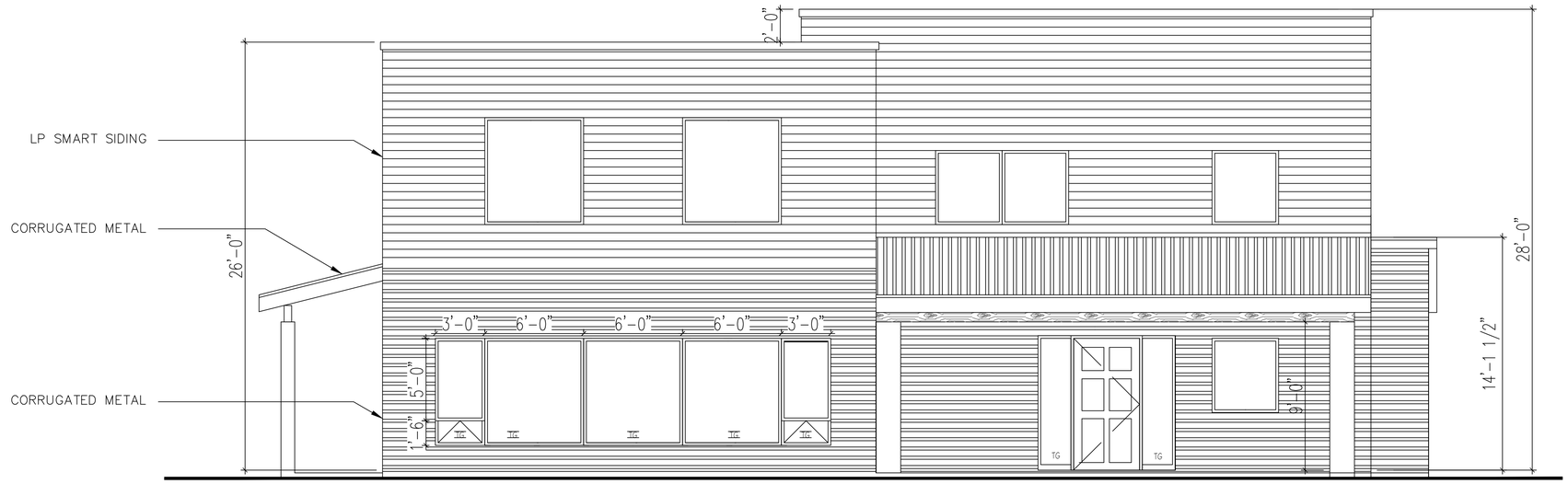
MIRAMONTE
HOMES
4578 N. 1st AVENUE SUITE 160
TUCSON, AZ 85718
TUCSON LICENSE #ROC 156716
(520) 615-8900

PARK PLACE
SEDONA

A2.0

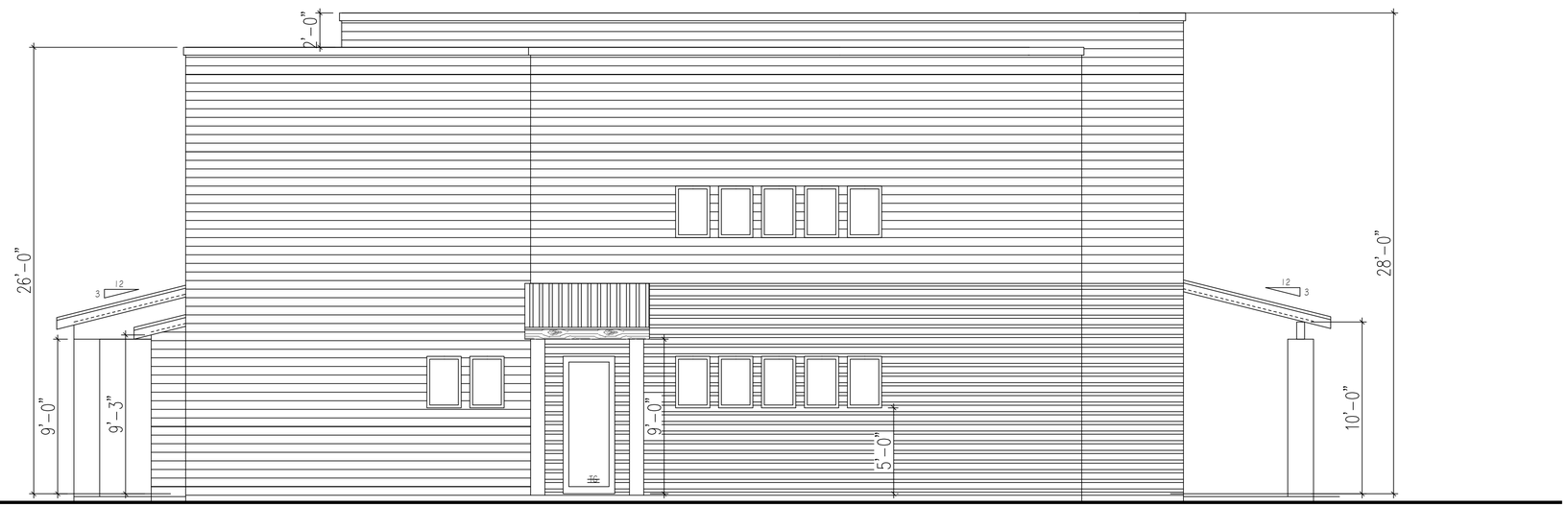
TUCSON

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REAR ELEVATION

SCALE: 1/4"=1'-0"



RIGHT SIDE ELEVATION

SCALE: 1/4"=1'-0"

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HOMES, L.L.C.
2492 E. RIVER SUITE 100 TUCSON, AZ 85718 (520) 615-8900

CLUB HOUSE
EXTERIOR ELEVATIONS

REVISION
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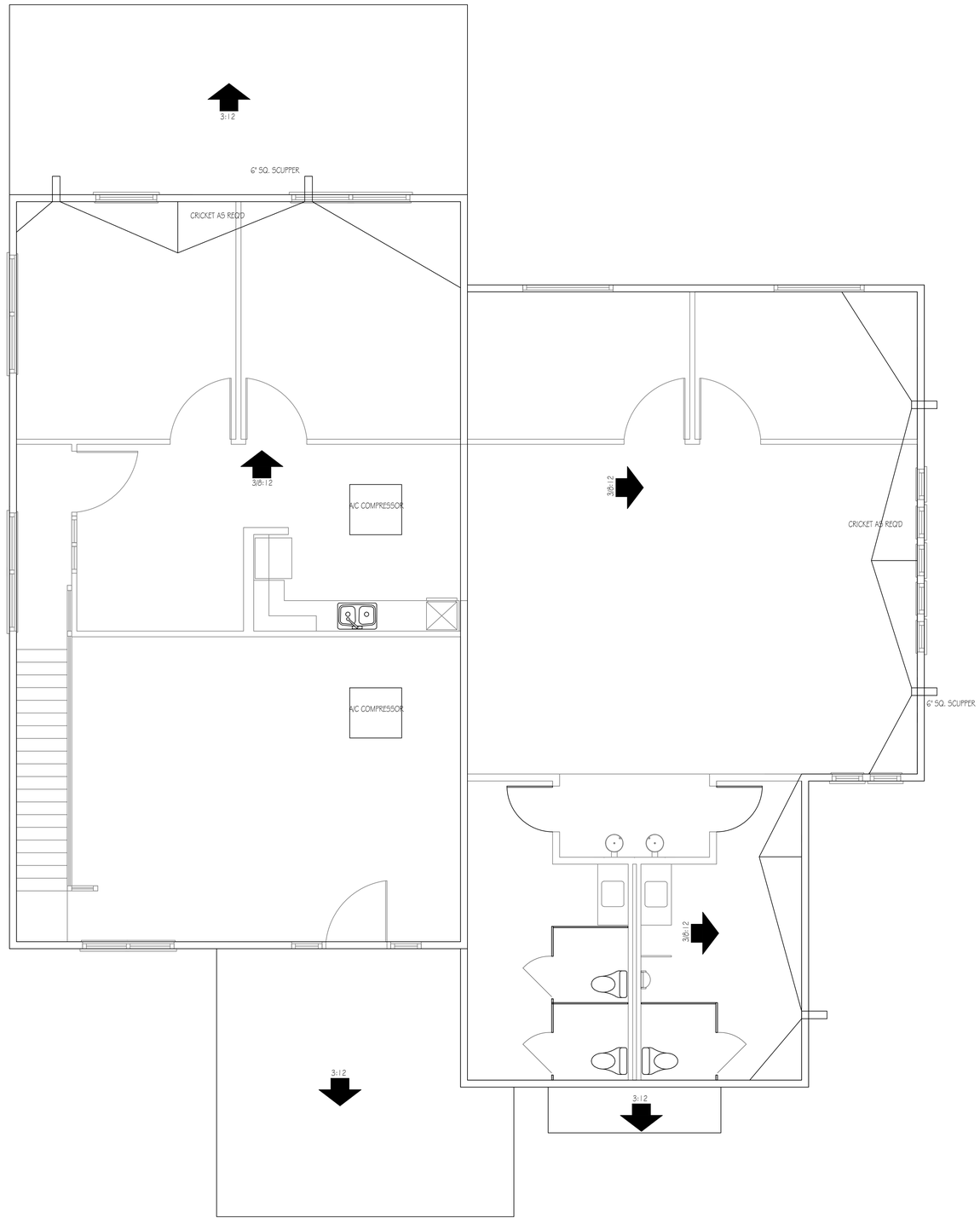
MIRAMONTE
HOMES
4578 N. 1st AVENUE SUITE 160
TUCSON, AZ 85718
TUCSON (520) 615-8900
(520) 615-8900

PARK PLACE
SEDONA

A2.1

TUCSON

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ROOF PLAN

SCALE: 1/4"=1'-0"

TUCSON

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2492 E. RIVER SUITE 100 TUCSON, AZ 85718 (520) 615-8900

CLUB HOUSE
ROOF LAYOUT

REVISION

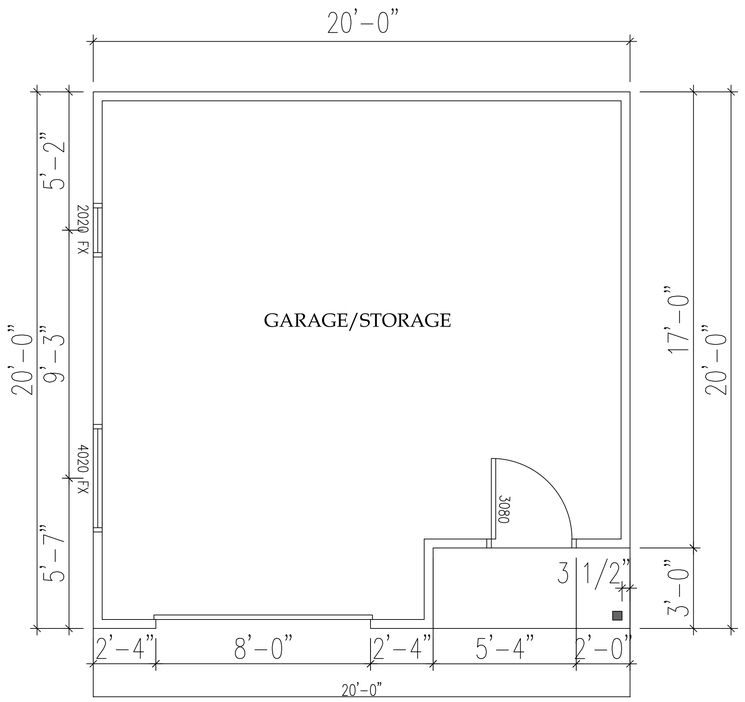
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42620
BOBBIE F. BROWN II
REGISTERED PROFESSIONAL ENGINEER
ARIZONA U.S.A.
8/7/13

MIRAMONTE
HOMES
4578 N. 1st AVENUE, SUITE 160
TUCSON, AZ 85718
(520) 615-8900

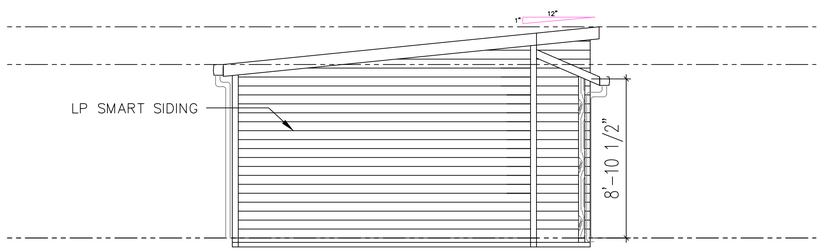
PARK PLACE
SEDONA

R1.0



PLAN

Scale 3/8" = 1'-0"



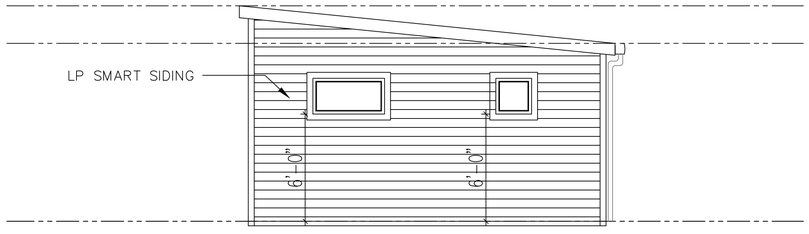
1 RIGHT ELEVATION

Scale 1/4" = 1'-0"



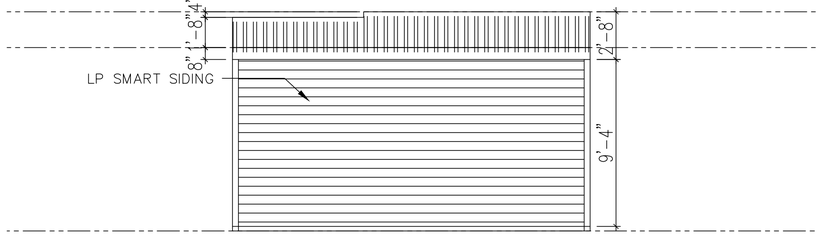
2 FRONT ELEVATION

Scale 1/4" = 1'-0"



3 LEFT ELEVATION

Scale 1/4" = 1'-0"



4 BACK ELEVATION

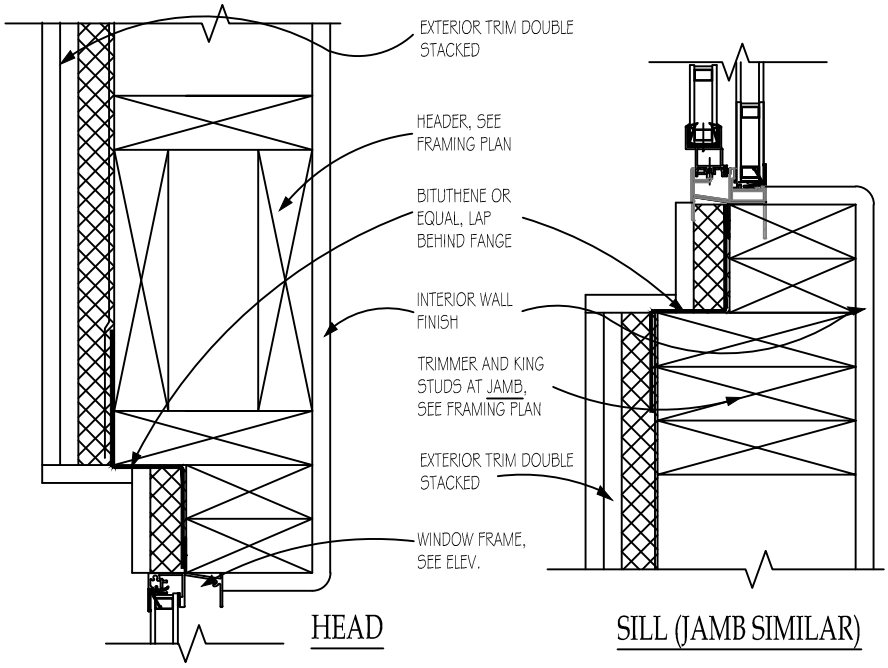
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MIRAMONTE HOMES
2502 E. RIVER ROAD TUCSON, AZ 85718 (520) 268-9128

Maintenance Building

Butler Ave.
Flagstaff, AZ

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D1.0 RECESSED WINDOW DETAIL

SCALE: N.T.S.

FILE: P:\2021\21272\DRAWINGS\EXHIBITS\21272 PHASING PLAN.DWG EKEISER

PLOTTED: Nov 23, 2022–8:42am

LEGEND

- PHASE LIMITS
- PHASE 1 WATER
- PHASE 2 WATER
- PHASE 1 SEWER
- PHASE 2 SEWER
- PHASE 1 AREA
- PHASE 2 AREA
- NOT A PART

INTERSTATE-40

STORM OUTLET
PHASE 1

PHASE 2
PHASE 1

POND 1

POND 2

PHASE 2
PHASE 1

POND 3

FUTURE
COMMERCIAL
PARCEL
1.09 AC

E BUTLER AVE

NORTH

SCALE 1" : 150'

0 75 150

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

Shephard Wesnitzer, Inc.
110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

JOB NO:	21272
DATE:	SEP 22
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK
CHECKED:	SJV/SCI

BUTLER MULTI-FAMILY

FLAGSTAFF
ARIZONA

PHASING PLAN

SHEET 1 OF 1

Neighborhood Meeting Certification

I, Charity Lee, the authorized representative of Miramonte Acquisitions do hereby attest that the neighborhood meeting for Project No. PZ-21-00284-01 was noticed and conducted in compliance with Section 10-20.30.060 of the City of Flagstaff Zoning Code and included the following:

A Citizen Participation Plan, prepared in accordance with Section 10-20.30.030.C of the City of Flagstaff Zoning Code, was submitted to the City of Flagstaff on 09/20/2022 and accepted by the City of Flagstaff on 09/20/2022.

A list of property owners within 300 feet of the subject property boundaries was prepared and submitted to the City of Flagstaff as part of the Citizen Participation Plan.

X Notices of the neighborhood meeting were sent via first class mail on 09/22/2022 to all property owners within 300 feet of the subject property boundaries, to all tenants residing on the subject property, to all Homeowners Associations (HOAs) within 1,000 feet of the subject property, and all persons or groups whose names are listed on the Registry of Persons and Groups.

X A total of 1 neighborhood meeting notification sign(s) were installed on 09/22/2022 at the following location(s):

- 2950 E. Butler Avenue Flagstaff, Az. 86004
- _____
- _____

A written summary of the meetings, known as a Citizen Participation Report, was submitted to the City of Flagstaff on 10-12-2022

Copies of the Citizen Participation Report were sent via ~~first class mail~~ e-mail on 10-12-22 to all persons who recorded their names on the neighborhood meeting sign-in sheet.

Authorized Representative of the Applicant:

Charity Lee

Signature:

Charity Lee

Affidavit of Notifications to Affected Property Owners

Case Number: PZ-21-00284-01

Project Name: The Lofts on Butler

Applicant Name: Miramonte Acquisitions LLC

Location: 2950 E. Butler Avenue, Flagstaff, AZ. 86004

In order to assist in providing adequate notice to interested parties and to meet Arizona State Statute requirements, the applicant for public hearings in the City of Flagstaff shall notify affected property owners as prescribed by Section 10-20.30.080 of the City of Flagstaff Zoning Code. **It shall be the responsibility of the applicant to establish a list of the names and addresses of persons who require notification of a public hearing as established in Sections 10-20.30.060.A, 10-20.30.060.B, and 10-20.30.060.C of the Zoning Code, and mail a notice of required public hearing via first class mail to each of the persons on the list referenced above no later than 15 days prior to the public hearing date. It shall also be the responsibility of the applicant to submit a notarized copy of the mailing list to the Planning Director prior to the fifteenth day before the public hearing date.**

I confirm that the public hearing notifications were mailed as detailed in Section 10-20.30.080 of the City of Flagstaff Zoning Code at least fifteen ~~(15)~~ 10 days prior to the ~~public hearing~~ neighborhood meeting.

Applicant's/Representative's Signature: Charity Lee

SUBSCRIBED AND SWORN before me this 26th day of September, 2022 by:

OFFICIAL SEAL
Kimberly F Cotter
NOTARY PUBLIC - ARIZONA
Coconino County
COMM # 592152
My Comm. Expires December 1, 2024

Kimberly F. Cotter
Notary Public

My Commission Expires:

12/1/24

Affidavit of Sign Posting

Case Number: PZ-21-00284-01

Project Name: The Lofts on Butler

Applicant Name: Miramonte Acquisitions LLC

Location: 2950 E. Butler Avenue, Flagstaff, Az. 86004

In order to assist in providing adequate notice to interested parties and to meet Arizona State Statute requirements, the applicant for public hearings in the City of Flagstaff shall post signs as prescribed by Section 10-20.30.080 of the City of Flagstaff Zoning Code. **It shall be the responsibility of the applicant to erect and to maintain the sign on the subject property 15 days prior to the hearing and to update the hearing information on the sign until final disposition of the case. It shall also be the responsibility of the applicant to remove the sign within seven (7) days after the final disposition of the case.**

I confirm that the site has been posted as detailed in Section 10-20.30.080 of the Zoning Code as well as the Public Hearing Notice Sign Specifications included in this application for the case above, and that the site was posted at least fifteen (~~15~~ 10) days prior to the ~~public~~ hearing. neighborhood meeting.

See attached date stamped photo exhibit of posted signs.

Applicant's/Representative's Signature: Charity Lee

SUBSCRIBED AND SWORN before me this 26th day of September, 2022 by:

OFFICIAL SEAL
Kimberly F Cotter
NOTARY PUBLIC - ARIZONA
Coconino County
COMM # 592152
My Comm. Expires December 1, 2024

Kimberly F Cotter
Notary Public

12/1/24
My Commission Expires:

2:45 LTE

Thursday
9:20 AM

Edit



Public Participation Report
Project: The Lofts on Butler
2950 E. Butler Avenue, Flagstaff, AZ. 86004
Project Number: PZ-21-00284-01
October 12, 2022

Summary

A Citizen Participation Plan was prepared in accordance with Section 10-20-.30.030.C of the City of Flagstaff Zoning Code, and was submitted and accepted by the City of Flagstaff on September 20, 2022. On September 22, 2022 notices of the neighborhood meeting were sent via first-class mail to property owners within 300 feet of the property boundaries, to all Homeowners Associations (HOAs) within 1,000 feet of the subject property, and all persons or groups whose names are listed on the Registry of Persons Groups. A sign was also installed on September 22, 2022 notifying the public of the virtual meetings.

We had two virtual neighborhood meetings for the Lofts on Butler project. The first meeting was held on Monday, October 3, 2022, there was one attendee. The second meeting was on Thursday, October 6, 2022, two community members attended the meeting.

Ramona-
ramonaazrealestate@gmail.com
602-999-8697

Carol Ekdahl
carol.ekdahl@gmail.com
815-546-0485
3119 E. Cold Springs Trail
Flagstaff, AZ 86001

Anne Wittke
wittke.anne@gmail.com
928-606-2064
1616 N. Owl Road
Flagstaff, AZ 86004

Neighborhood Meeting 10.3.2022 Q&A

Question: What exactly is Highway Commercial?

Answer: Highway Commercial allows for commercial development, it also allows for mixed-use development. Our project is proposing a mixed-use development so what that entails is commercial as well as multi-family. What we're planning for the commercial portion of the project is we would split off 1 acre of the parcel and that would be on the Southwest corner of the site (by Blackbarts) and what we're thinking is that we would do possibly a drive-through coffee restaurant. Miramonte isn't planning on doing a site plan or developing on that site at this time. We're really just focusing on the multi-family portion at this time of the project which is proposing 172 rental units and those would be 2-story loft apartments. And then we would also have a commercial component on this site as well which would be a combination of a clubhouse for the residents on the lower level and then on the upper level there would be a for-rent office space which would be a little over 2100 sq ft.

Question: Are you doing what Kierland does here in Scottsdale where all their retail is on the lower level and all of their condominiums are on top of them?

Answer: No, not at all. Our mixed-use development would have just 1 commercial building in the front-facing Butler and that commercial building on the lower level would just be for the residents and then on the upper level the commercial building would just be a for-rent office space. But behind the commercial building there would be 172 loft style apartments and the max height is only 2 story. There would be a combination of 1,2 and 3 bedroom apartments. It's not a typical apartment style building, it's more of a community.

Question: So just so that I am clear on this residential, those are rentals that Miramonte would be renting themselves for potential rentals? They're not for sale, they're for rent?

Answer: That is correct. We would own the property and we would rent them out according to the cost of construction and the market rates at that time. We will be designating 10% (17 units) that will be permanently affordable by definition of the Flagstaff zoning code which is for 30 years. (rent at a lower rate than the market rate if qualified)

Question: The property is currently owned by Miramonte or are they looking at purchasing it? I wasn't sure if that was already completed.

Answer: The purchase has not completed, once we get the rezoning on this project then we will complete the sale.

Question: And where is the community center supposed to be?

Answer: It's just a clubhouse for the residents but we do have that commercial rental space that will be on the second level. If you're looking at the site plan, you'll see 2 entrances into the development, one on the west side next to the roundabout and a secondary entrance to the east. On the left side (west) of the secondary entrance, that's the clubhouse/office.

Question: What are you planning on doing to control the flow of people going in and out? Has there been any planning for traffic control?

Answer: There is plans for a future roundabout. What I'm going to do as far as details and more information about the traffic flow I'm going to refer that over to our engineer that is on the line. We did do a traffic impact analysis on this site, and it was anticipated that there would be about 145 trips entering and exiting the site during am peak hours and 144 trips during the pm peak hours. Our site is expected to constitute approx. 3.3% of the total traffic expected. We will be contributing to those offsite traffic improvements such as the roundabout.

Question: How is a roundabout going to contribute to controlling the traffic? It seems to me that we have several of them down in the phoenix area and they cause more problems than they do solutions.

Answer: That would be a City question.

Question: Is there a vote that's going to be coming up on this? Is it going to be on the 11/11 voting that you would be looking for approval from the community?

Answer: (rezoning) There is a series of different steps so this is step one and then we will have another meeting on 10/6 and from that point we will prepare a report regarding this meeting on the number of attendees and the questions asked and then I'll submit to the City of Flagstaff and then we will schedule the planning and zoning commission meeting and that would be sometime in October or November and from that point P&Z might have a recommendation to approve the rezoning or choose to deny it. There are certain requirements that we have to meet for rezoning. If they happen to deny, then we have the option to appeal. There would be 2 city council meetings. If everything is approved, then there would be an ordinance that would be recorded.

Neighborhood Meeting 10.6.2022 Q&A

Question: What do you anticipate the interior to look like?

Answer: This an example of the lower level. Every unit will have a bedroom on the main floor. You walk in, you have a great room and a kitchen and a bathroom in the back and in the bedroom. If it's a one-bedroom, it would still have stairs that go up to a loft. This gives an example of a three-bedroom, a three-bedroom would have one bedroom downstairs, two bedrooms in the back and then the loft. The two bedrooms would just have the bedroom downstairs with the additional bedroom in the loft.

Question: Are these going to be individually owned or are they going to be owned and rented out?

Answer: They are going to be apartments for rent. We will retain ownership and the units will be rented out.

Question: Do you have a feel for what you anticipate the rents to be?

Answer: I don't know at this time, a lot is going to determine that rate based on construction costs. Right now, what we are looking at is if everything continues on the path that we are, if we get approval for

everything then we would likely develop the property starting horizontal construction this coming May and from there, our first units would be ready about 6 months later. We would be building in a phase development. We're not going to stop construction, we would focus on a building phase so that we could have a number of buildings done before we start leasing them out. A group of maybe 5-10 would be completed and we would receive Certificate of Occupancy for all of those.

Question: These are all outdoor parking there is no covered parking, correct?

Answer: That is correct.

Question: Are you planning anything like EV charging stations for people in the development?

Answer: Absolutely, we are planning to have 4 EV-ready parking spaces. With this technology, it is rapidly changing and developing, the City code is requiring at least 4 with our size of a development. At this time, we haven't committed to installing the stations but we will see as we proceed through this process with the City if that is a requirement or not.

Question: What is going to be the setback with Butler for these units? What would be the distance between the units and Butler and the closest that you have?

Answer: We have some that are adjacent to Butler. It is a 15ft setback.

Question: Will there be an entrance egress from the development itself onto Butler directly, not from 4th street?

Answer: Correct, there are two. There is an egress on the southwest corner and also on the East.

Question: I am wondering, do you know anything about that roundabout on 4th and Butler? When is that going to start taking place?

Answer: I don't see this happening before 2024. They are negotiating with an engineering firm to design Butler and 4th and that may take some time.

Question: Are they intending for that to be a 4-lane thoroughfare?

Answer: Yes, it will be 2 lanes in each direction. The original design had sidewalks on either side but now I believe they will have FUTS (10ft urban trail) on either side. That is what the council has asked for.

Question: Which units are you going to be starting on?

Answer: We have discussed that phase one would be the front section.

Question: Will that be in the center or the ones on Butler?

Answer: We haven't determined that yet, we need to work with our general contractors to determine what makes sense as far as the flow and looking at traffic. We need to also make sure we have mobility for the residents as well as keep construction going. We have talked about phasing the development into two phases.

Question: Is SWI the owners?

Answer: SWI is the engineer on the project. Miramonte will own and operate.

Question: This will be owned by Miramonte and they will be the landlords, correct?

Answer: As far as the eventual ownership, I don't know. Miramonte is the general contractor, and we are acquiring the property. We will be working forward to build the units, but we don't know what the ultimate ownership will be at this time.

Question: Are you responsible for the 4th Street extension? Is that part of your development?

Answer: No, what we are doing on this project is we did a traffic impact analysis and that determines the percentage of traffic that this project will contribute to the road there is an overall cost for this Butler and 4th project and Miramonte will contribute. They have a proportionate share based on their percentage of traffic.

Question: Extending beyond where you are off of 4th street is going to be an additional development that is going to be started now, correct?

Answer: Yes.

Question: Is there anything else that I need to know about this project?

Answer: As far as the traffic impact, our overall development is approximately 3.3% of the overall in that area. We are working with the City to make sure that the corridor is improved. This site will be a nice addition to the City of Flagstaff. Just for your information, they are saying there is a housing shortage of over 7,000 units in Flagstaff we are excited to bring additional housing to Flagstaff. We have so many people that are looking for homes and just can't find them, so we are excited to bring in rental units for the Flagstaff workforce. We will have 17 units permanently affordable for 30 years according to the zoning code.

Question: Are you talking about those 17 units maybe being subsidized in some way?

Answer: We're not looking at section 8 subsidies but in the development agreement, we will be following along with the City of Flagstaff Affordable Housing Plan and so there is going to be a rent restriction based on the area income and based on household size. That will be a restriction that will run with the land and will be on that property for 30 years. We are voluntarily offering that as a contribution to the City of Flagstaff.

Question: Are you widening Butler to two lanes each way?

Answer: Correct. Butler will be widened to a 4-lane road well as a future roundabout and a future urban trail.

Question: Are these condos where you buy one unit?

Answer: No these are for rent. The ownership will be retained, and we will rent the units.

MIRAMONTE HOMES

Date: September 22, 2022

Via First Class Mail

RE: Invitation for Citizen Participation and Feedback
For: Zoning Plan Amendment
Property Owner: Sierra Vista No. 6 L.L.C and Brookstone Ventures, L.C.
Project Name: Lofts on Butler
Project No. PZ-21-00284-01
Property Address: 2950 E. Butler Avenue, Flagstaff, AZ. 86001
A.P.N. Numbers: 106-04-006B, 107-11-001, 106-04-007C and 107-44-062

Dear Neighbors and Interested Parties:

Miramonte Acquisitions, LLC is proposing to develop approximately 17 acres at 2950 East Butler Avenue, Flagstaff, AZ. 86001. The property consists of four parcels that will be combined; APNs 106-04-006B and 107-11-001 are zoned RR- Rural Residential, APN 106-04-007C is zoned HC-Highway Commercial and APN 107-44-062 is zoned MR-Medium Density Residential. This rezoning application requests that these four parcels be rezoned to HC-Highway Commercial. The project will consist of (43) 4-plex buildings (172 units), a clubhouse and, and a maintenance building. The clubhouse will include a 2,154 SF "for rent" commercial space on the second story. One acre of the site will be split off and developed for commercial use proposing a drive-through.

We invite all interested parties to attend these neighborhood meetings to learn more about the proposed project and to provide feedback.

We will be holding two virtual neighborhood meetings on October 3rd and October 6th at 5:00 PM.

1st Neighborhood Meeting:

October 3rd, 5:00 PM
Virtual Public Meeting
Zoom Link:
https://us02web.zoom.us/j/83781509218?pwd=ZlZQcTVCTUxDc0tZSm1Ld0dxNEdsUT09

Meeting ID: 837 8150 9218
Passcode: 481181
Call in Number:
1-669-444-9171 US

MIRAMONTE
HOMES

2nd Neighborhood Meeting:

October 6th, 5:00 PM
Virtual Public Meeting
Zoom Link:

https://us02web.zoom.us/j/89682951126?pwd=MlFraFMrc2FDSE9WUHRyV3QxSTc4QT09

Meeting ID: 896 8295 1126
Passcode: 742424
Dial by your location
+1-719-359-4580 US

At the meeting, we will share additional documents and information about the project. The developer and engineering team will be available at the meeting to answer any questions you may have.

Interested persons may submit their comments/questions in advance of the meeting to, Charity Lee, clee@miramontehomes.com, or by mail at Miramonte Homes, 102 S. Mikes Pike, Flagstaff, AZ. 86001. For more information call Charity Lee at (928)600-3594.

For additional information or the view submitted plans and application materials contact Genevieve Pearthree, Senior Planner at the City of Flagstaff, Community Development Department 211 W. Aspen Avenue, Flagstaff, Arizona, 86001, Genevieve.Pearthree@flagstaffaz.gov, (928) 213-2603.

Mailing List	Mailed out on 9-22-22								
ParcelId	OwnerNameLabelFormat	SiteAddr	SiteCity	State	SiteZipFull	OwnerAddr	City	State	OwnerZipFull
106-04-020	Woodshire On Butler LLC	3001 E Butler Ave Unit: 2	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-021	Woodshire On Butler LLC	3001 E Butler Ave Unit: 3	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-022	Woodshire On Butler LLC	3001 E Butler Ave Unit: 4	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-023	Woodshire On Butler LLC	3001 E Butler Ave Unit: 5	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-024	Woodshire On Butler LLC	3001 E Butler Ave Unit: 6	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-025	Woodshire On Butler LLC	3001 E Butler Ave Unit: 7	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-026	Woodshire On Butler LLC	3001 E Butler Ave Unit: 8	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-028	Woodshire On Butler LLC	3001 E Butler Ave Unit: 10	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-029	Woodshire On Butler LLC	3001 E Butler Ave Unit: 11	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-030	Woodshire On Butler LLC	3001 E Butler Ave Unit: 12	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-031	Woodshire On Butler LLC	3001 E Butler Ave Unit: 13	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-032	Woodshire On Butler LLC	3001 E Butler Ave Unit: 14	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-033	Woodshire On Butler LLC	3001 E Butler Ave Unit: 15	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-034	Woodshire On Butler LLC	3001 E Butler Ave Unit: 16	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-035	Woodshire On Butler LLC	3001 E Butler Ave Unit: 17	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-036	Woodshire On Butler LLC	3001 E Butler Ave Unit: 18	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-037	Woodshire On Butler LLC	3001 E Butler Ave Unit: 19	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-038	Woodshire On Butler LLC	3001 E Butler Ave Unit: 20	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-039	Woodshire On Butler LLC	3001 E Butler Ave Unit: 21	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-040	Woodshire On Butler LLC	3001 E Butler Ave Unit: 22	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-041	Sean Vollendorf & Nathaniel Carlow	3001 E Butler Ave Unit: 23	Flagstaff	AZ	86004	9 E Caroline Ln	Tempe	AZ	85284-3125
106-04-042	Conigliari Family Trust	3001 E Butler Ave Unit: 24	Flagstaff	AZ	86004	1843 E Sleeper Hollow Ct	Flagstaff	AZ	86005
106-04-043	Ramona Panicci	3001 E Butler Ave Unit: 25	Flagstaff	AZ	86004	974 E Leeward Ln	Tempe	AZ	85283-1940
106-04-044	Woodshire On Butler LLC	3001 E Butler Ave Unit: 26	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-045	Brian & Sharane Dorrah	3001 E Butler Ave Unit: 27	Flagstaff	AZ	86004	7662 E Cactus Wren Rd	Scottsdale	AZ	85250-4651
106-04-046	Aaron Eckardt	3001 E Butler Ave Unit: 28	Flagstaff	AZ	86004	12437 S 38th Pl	Phoenix	AZ	85044-3821
106-04-047	Anthony Alles	3001 E Butler Ave Unit: 29	Flagstaff	AZ	86004	3001 E Butler Avenue 29	Flagstaff	AZ	86004
106-04-048	Woodshire On Butler LLC	3001 E Butler Ave Unit: 30	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-049	Anthony Alles	3001 E Butler Ave Unit: 31	Flagstaff	AZ	86004	4622 E Waterman St	Gilbert	AZ	85297-7449
106-04-050	Woodshire On Butler LLC	3001 E Butler Ave Unit: 32	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-051	Woodshire On Butler LLC	300133 E Butler Ave Unit: 33	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116

106-04-052	Woodshire On Butler LLC	3001 E Butler Ave Unit: 34	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-053	Leibovit Mark A Living Trust	3001 E Butler Ave Unit: 35	Flagstaff	AZ	86004	10632 N Scottsdale Rd B-426	Scottsdale	AZ	85254-6164
106-04-054	Woodshire On Butler LLC	3001 E Butler Ave Unit: 36	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-055	Woodshire On Butler LLC	3001 E Butler Ave Unit: 37	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-056	Kristin & Dominik Salamon	3001 E Butler Ave Unit: 38	Flagstaff	AZ	86004	1023 E Hillcrest Dr	Flagstaff	AZ	86004-1605
106-04-057	Genna Groff	3001 E Butler Ave Unit: 39	Flagstaff	AZ	86004	3832 S Timoteo Ln	Flagstaff	AZ	86005-2726
106-04-058	Kenneth Gatt	3001 E Butler Ave Unit: 40	Flagstaff	AZ	86004	3612 E Pasadena Ave	Phoenix	AZ	85018-1512
106-04-059	Sheila & Terrance Long	3001 E Butler Ave Unit: 41	Flagstaff	AZ	86004	22309 N 39th St	Phoenix	AZ	85050-8350
106-04-060	Chasen Marostica	3001 E Butler Ave Unit: 42	Flagstaff	AZ	86004	10990 Henry Dr	Flagstaff	AZ	86004-3035
106-04-061	Michael & Cheryl Schubmehl	3001 E Butler Ave Unit: 43	Flagstaff	AZ	86004	13734 N 150th Ln	Surprise	AZ	85379-4207
106-04-062	Nathalie Potvin	3001 E Butler Ave Unit: 44	Flagstaff	AZ	86004	9073 E Captain Dreyfus Ave	Scottsdale	AZ	85260-7601
106-04-063	Woodshire On Butler LLC	3001 E Butler Ave Unit: 45	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-064	Dana & Shawn Morrison	3001 E Butler Ave Unit: 46	Flagstaff	AZ	86004	6888 Blue Mountain Trl	Flagstaff	AZ	86001-2002
106-04-065	Benjamin & Calyssa Wilkerson	3001 E Butler Ave Unit: 47	Flagstaff	AZ	86004	1990 W Rains Way	San Tan Val	AZ	85142-4509
106-04-066	Julia & Daniella Lamis	3001 E Butler Ave Unit: 48	Flagstaff	AZ	86004	555 W Forest Meadows St #423	Flagstaff	AZ	86001-3611
106-04-067	Paul & Sandra Conigliari	3001 E Butler Ave Unit: 49	Flagstaff	AZ	86004	1843 E Sleeper Hoolow Ct	Flagstaff	AZ	86005-2743
106-04-068	Desai Family Trust	3001 E Butler Ave Unit: 50	Flagstaff	AZ	86004	61656 N 2nd Dr	Phoenix	AZ	85043
106-04-069	Woodshire On Butler LLC	3001 E Butler Ave Unit: 1	Flagstaff	AZ	86004	3550 N Central Ave No 1101	Phoenix	AZ	85012-2116
106-04-006B	Sierra Vista No 6 LLC	2950 E Butler Ave	Flagstaff	AZ	86004	PO Box 10	Scottsdale	AZ	
107-11-001B	Sierra Vista No 6 LLC	2600 E Lucky Ln	Flagstaff	AZ	86004-8520	PO Box 10	Scottsdale	AZ	85252-0010
107-44-060	Miramonte At Forest Springs LLC		Flagstaff	AZ	86004	4578 N 1st Ave No 160	Tucson	AZ	85718
107-44-061	Miramonte At Forest Springs LLC		Flagstaff	AZ	86004	4578 N 1st Ave No 160	Tucson	AZ	85718
107-44-062	Brookstone Ventures LLC		Flagstaff	AZ	86004	PO Box 10	Scottsdale	AZ	85252-0010
107-44-094	Lauren K Mills	3103 E Cold Springs Trl	Flagstaff	AZ	86004-7972	3027 Via Amador	Carlsbad	CA	92010-1362
107-44-095	Brion Smith	3095 E Cold Springs Trl	Flagstaff	AZ	86004-7971	3095 E Cold Springs Trl	Flagstaff	AZ	86004-7971
107-44-096	Brion Smith	3087 E Cold Springs Trl	Flagstaff	AZ	86004-7971	3087 E Cold Springs Trl	Flagstaff	AZ	86004-7971
107-44-134	Forest Springs Townhomes Unit 2 Associa	3088 E Cold Springs Trl	Flagstaff	AZ	86004-7970	323 S River Run Rd No 1	Flagstaff	AZ	86001
107-44-136	City of Flagstaff		Flagstaff	AZ	86004	211 W Aspen Ave	Flagstaff	AZ	86001-5359
106-04-007E	City of Flagstaff	2989 E. Butler Avenue	Flagstaff	AZ	86004	211 W Aspen Ave	Flagstaff	AZ	86001-5359
106-04-070	City of Flagstaff					211 W. Aspen Avenue	Flagstaff	AZ	86001-5359
106-04-069	Woodshire On Butler LLC	3001 E. Butler Avenue #1	Flagstaff	AZ	86004	3550 N. Central Avenue No. 1101	Phoenix	AZ	85012
106-04-068	Desai Family Trust	3001 E. Butler Avenue #50	Flagstaff	AZ	86004	61656 N. 2nd Drive	Phoenix	AZ	85043
107-11-008	Walmart Stores Inc	2601 E. Huntington Drive	Flagstaff	AZ	86004	P.O. Box 8050 MS-0555	Bentonville	AR	72716
107-11-003A	MDC Coast 4 LLC	2600 E. Lucky Lane	Flagstaff	AZ	86004	2202 N. Westshore Blvd 5th Floor	Tampa	FL	33607

107-11-009	Flagstone Lodging LLC	1000 N. Bronco Way	Flagstaff	AZ	86004	8658 E. San Alberto Drive	Scottsdale	AZ	85258
107-11-002	CBOCS West Inc.	2560 E. Lucky Lane	Flagstaff	AZ	86004	P.O. Box 787	Lebanon	TN	37088
106-04-015D	Light Stone Lodging LLC	2540 E. Lucky Lane	Flagstaff	AZ	86004	P.O. Box 237	Flagstaff	AZ	86002
	ADOT Right of Way					205 S. 17th Avenue MD 612E	Phoenix	AZ	85007
106-04-009E	Pedrick Lee Doran Successor Trustee	2760 E. Butler Avenue	Flagstaff	AZ	86004	P.O. Box 1846	Flagstaff	AZ	86002
106-04-005B	Little America Hotels & Resort Inc					P.O. Box 30825	Salt Lake Ci	UT	84130
106-08-040	CDR Land Investors II LLC					3101 N. Central Avenue No. 1600	Phoenix	AZ	85012
106-08-005R	CSL Flagstaff 2019 LLC	3100 E. Butler Avenue	Flagstaff	AZ	86004	930 W. 1st Street No. 400	Fort Worth	TX	76102
104-44-054B	Forest Springs Homeowners Association	1201 N. Fourth Street	Flagstaff	AZ	86004	323 S River Run Rd No 1	Flagstaff	AZ	86001
	CDR Devcorp LTD					3605 S. Flagstaff Ranch Rd	Flagstaff	AZ	86005

"Registry of Persons and Groups"
As Required in Zoning Code Section 10-20.30.080.B

Last updated: January 27, 2022

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Coconino County Community Development
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Flagstaff, Az 86001-1287
jchristelman@coconino.az.gov

"Registry of Persons and Groups"
As Required in Zoning Code Section 10-20.30.080.B

Last updated: January 27, 2022

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Flagstaff Lodging, Restaurant & Tourism Association
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(928) 326-6008

Rachel Bass
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Flagstaff 86001
rsilverton@gmail.com

Requested Notification of
Zoning Code Text Amendments Only

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Neighborhood Homes, LLC
510-331-3380
david@neighborhoodhomes.com

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19 S San Francisco St
Flagstaff, AZ 86001
bllips@aol.com

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Flagstaff, AZ 86001

Northern Arizona Building Association
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Flagstaff, AZ 86004

Betsy McKellar
330 S Ash Lane
Flagstaff, AZ 86004

Northern Arizona Association of Realtors, Jeffrey Herd
1515 East Cedar Avenue, Suite C-4
Flagstaff, AZ 86004

Tish Bogan-Ozmun
5271 Mt. Pleasant Drive
Flagstaff, AZ 86004

Marilyn Weissman
1055 East Apple Way
Flagstaff, AZ 86001

Maury Herman
Coast and Mountain Properties
3 North Leroux Street
Flagstaff, AZ 86001

Jay Christelman
Coconino County Community Development
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Flagstaff, Az 86001-1287

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PO Box 30622

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Flagstaff, AZ 86001

Rachel Bass
3083 W. Easterday Lane
Flagstaff 86001

Norm Wallen
3716 N Grandview
Flagstaff, Az 86004

Celia Barotz
3354 N Crest Street
Flagstaff, AZ 86001

Mary Beth Dreusike
US Navy, Intergovernmental Branch
850 Pacific Highway
Building 1 – 5th Floor, Suite 513
San Diego, CA 92132

Dorenda Coleman
Arizona Army National Guard, AZAA-FMO
5636 E McDowell Rd, M5330
Phoenix, AZ 85008

David Carpenter
495 S River Run Suite 100
Flagstaff, AZ 86001

Barry Levitan
19 S. San Francisco Street
Flagstaff, AZ. 86001

Woodshire On Butler LLC
3550 N Central Ave No 1101
Phoenix AZ 85012

Sean Vollendorf
9 E Caroline Ln
Tempe AZ 85284

Conigliari Family Trust
1843 E Sleeper Hollow Ct
Flagstaff AZ 86005

Ramona Panicci
974 E Leeward Ln
Tempe AZ 85283

Brian Dorrah
7662 E Cactus Wren Rd
Scottsdale AZ 85250

Aaron J Eckardt
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Phoenix AZ 85044

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Flagstaff AZ 86004

Anthony Alles
4622 E Waterman St
Gilbert AZ 85297

Leibovit Mark A Living Trust
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Scottsdale AZ 85254

Kristin Salamon
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Flagstaff AZ 86004

Genna M Groff
3832 S Timoteo Ln
Flagstaff AZ 86005

Kenneth Gatt
3612 E Pasadena Ave
Phoenix AZ 85018

Sheila Long
22309 N 39th St
Phoenix AZ 85050

Chasen Marostica
10990 Henry Dr
Flagstaff AZ 86004

Michael Schubmehl
13734 N 150th Ln
Surprise AZ 85379

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Dana Morrison
6888 Blue Mountain Trl
Flagstaff AZ 86001

Benjamin Wilkerson
1990 W Rains Way
San Tan Valley AZ 85142

Julia Lamis
555 W Forest Meadows St #423
Flagstaff AZ 86001

Paul Conigliari
1843 E Sleeper Hoolow Ct
Flagstaff AZ 86005

Desai Family Trust
61656 N 2nd Dr
Phoenix AZ 85043

Sierra Vista No 6 LLC
PO Box 10
Scottsdale AZ 85252

Miramonte At Forest Springs LLC
4578 N 1st Ave No 160
Tucson AZ 85718

Lauren K Mills
3027 Via Amador
Carlsbad CA 92010

Brion & Kate Smith
3095 E Cold Springs Trl
Flagstaff AZ 86004

Brion & Kate Smith
3087 E Cold Springs Trl
Flagstaff AZ 86004

Forest Springs Townhomes Unit 2 Association
323 S River Run Rd No 1
Flagstaff AZ 86001

Flagstaff City Of
211 W Aspen Ave
Flagstaff AZ 86001

Walmart Stores Inc.
P.O. Box 8050
MS-0555
Bentonville, AR. 72716

MDC Coast 4 LLC
2202 N. Westshore Blvd 5th Floor
Tampa, FL. 33607

Flagstone Lodging LLC
8658 E. San Alberto Drive
Scottsdale, AZ. 85258

CBOCS West Inc.
PO. Box 787
Lebanon, TN. 37088

Light Stone Lodging LLC
PO Box 237
Flagstaff, AZ. 86002

ADOT Right of Way
205 S. 17th Avenue
MD 612E
Phoenix, AZ. 85007

Pedrick Lee Doran
Successor Trustee
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Flagstaff, AZ. 86002

Little America Hotels & Resort Inc.
P.O. Box 30825
Salt Lake City, UT. 84130

Woodshire on Butler LLC
3550 N. Central Avenue
No, 1101
Phoenix, AZ. 85012

CDR Land Investors II LLC
3101 N. Central Avenue
No. 1600
Phoenix, AZ. 85012

CDR Devcorp LTD
3605 S. Flagstaff Ranch Rd.
Flagstaff, AZ. 86005

CSL Flagstaff 2019 LLC
930 W. 1st Street No. 400
Fort Worth, TX. 76102

Forest Springs Homeowners Association
323 S. River Run Rd. No. 1

Desai Family Trust
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Flagstaff, AZ. 85043

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Cheryl Schubmehl
13734 N. 150th Ln.
Surprise, AZ. 85379

Shawn Morrison
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Flagstaff, AZ. 86001

Calyssa Wilkerson
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San Tan Valley, Az. 85142

Daniella Lamis
555 W. Forest Meadows ST.
#423 Flagstaff, AZ. 86001

Sandra Conigliari
1843 E. Sleeper Hoolow Ct.
Flagstaff, AZ. 86005

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the Flagstaff Planning and Zoning Commission will hold a Public Hearing on Wednesday, March 8, 2023, at 4:00 p.m., and the Flagstaff City Council will hold a Public Hearing on Tuesday, March 21, 2023, at 3:00p.m. at City Hall Council Chambers (211 W Aspen Ave), to consider the following:

A. Explanation of Matters to be considered:
A proposed amendment to the official City of Flagstaff zoning map to rezone approximately 17.12 acres from Rural Residential (RR) and Medium Density Residential (MR) zoning with the Resource Protection Overlay (RPO) to Highway Commercial (HC) zoning with the RPO for the purpose of constructing a mixed-use project consisting of 172 residential units and commercial office space, and future commercial development.

B. General Description of the Affected Area:
Approximately 17.12 acres located at 2950 East Butler Avenue, Coconino County Assessor's Parcel Numbers 106-04-006B, 107-11-001B, 106-04-007C, 107-44-062, NE 1/4 of the NE 1/4 of Section 23, T21N, R7E of the G&SRM, City of Flagstaff, Coconino County, Arizona.

Interested parties may file comments in writing regarding the proposed amendment or may appear and be heard at the hearing dates set forth above. Contact the Planner listed for maps and information regarding the proposed amendment. The Council hearing for these items may be continued if the Planning and Zoning Commission has not given a recommendation.

Planning and Zoning Commission meetings are currently being held virtually. For instructions on the virtual meetings visit the following link:
https://www.flagstaff.az.gov/2845/Planning-Zoning-Commission

Council meetings have a virtual public comment platform. At the link below please refer to the posted agenda for any change to the meeting time and how to attend the meeting and submit comments:
https://www.flagstaff.az.gov/328/Meetings

All meetings will be live-streamed on the city's website:
https://www.flagstaff.az.gov/1461/Streaming-City-Council-Meet.

Proposed Zoning Map Amendment
from Rural Residential (RR) and Medium Density Residential (MR) zoning with the Resource Protection Overlay (RPO) to Highway Commercial (HC) zoning with the RPO for the purpose of constructing mixed-use project consisting of 172 residential units and commercial office space, and future commercial development.



ADDRESS: **2950 East Butler Avenue**
APN: 106-04-006B, 107-11-001B, 106-04-007C, 107-44-062
ACRES: Approximately 17.12 Acres,

FOR FURTHER INFORMATION CONTACT

Patrick St. Clair, Planner
Planning & Development Services
211 West Aspen Avenue
Flagstaff, Arizona 86001
(928) 213-2612
pstclair@flagstaffaz.gov

Charity Lee
Miramonte Homes
102 S. Mikes Pike
Flagstaff, Arizona
86001
928-600-3594
clee@miramontehomes.com

Publish:February 18, 2023

Date: February 21, 2023

Via First Class Mail

RE: **Public Hearing Notification**
Zoning Plan Amendment
Property Owner: Sierra Vista No. 6 L.L.C and Brookstone Ventures, L.C.
Project Name: Lofts on Butler
Project No. PZ-21-00284-03
Property Address: 2950 E. Butler Avenue, Flagstaff, AZ. 86001
A.P.N. Numbers: 106-04-006B, 107-11-001, 106-04-007C and 107-44-062

Dear Neighbors and Interested Parties:

MICM Butler Lofts Project LP is proposing to develop approximately 17.24 acres at 2950 East Butler Avenue, Flagstaff, AZ. 86001. The property consists of four parcels that will be combined; APNs 106-04-006B and 107-11-001 are zoned RR- Rural Residential, APN 106-04-007C is zoned HC- Highway Commercial and APN 107-44-062 is zoned MR-Medium Density Residential. This rezoning map amendment requests that approximately 17.12 acres be rezoned to HC-Highway Commercial. The project will consist of (43) 4-plex buildings (172 units), and a clubhouse. The clubhouse will include a 2,154 SF "for rent" commercial space on the second story. One acre of the site will be split off and developed for future commercial use.

We invite all interested parties to attend the public hearing.

NOTICE IS HEREBY GIVEN that the Flagstaff Planning and Zoning Commission will hold a virtual Public Hearing on **March 8th, 2023, at 4:00 p.m,** to consider a zoning map amendment. Visit the link below for instructions on the virtual meeting and to attend the meeting virtually.**https://www.flagstaff.az.gov/2845/Planning-Zoning-Commission**

NOTICE IS HEREBY GIVEN that the City Council will hold a Public Hearing on **March 21st, 2023 at 3:00 p.m. at Flagstaff City Hall, 211 W. Aspen Avenue**
Due to the COVID-19 pandemic, Council meetings may be held virtually.
At the link below please refer to the posted agenda for any change to the meeting time and how to attend the meeting and submit comments:
https://www.flagstaff.az.gov/328/Meetings

The meetings will continue to be live-streamed on the city's website:
https://www.flagstaff.az.gov/1461/Streaming-City-Council-Meetings
For more information, interested parties may contact Charity Lee, Land Acquisition and Entitlements Manager for Miramonte Homes at 928-600-3594 or via e-mail at clee@miramontehomes.com.

MIRAMONTE
HOMES

Written comments may be submitted to Patrick St.Clair by emailing **pstclair@flagstaffaz.gov** or **CDPandZCommission@flagstaffaz.gov.** Any interested person or authorized agent may appear and be heard. The complete application and development file may be viewed by the public at the Community Development Counter at the Flagstaff City Hall at 211 W. Aspen Avenue from 8am-4:30pm, Monday-Friday.

Affidavit of Sign Posting

Case Number: PZ-21-00284-03

Project Name: BUTLER LOFTS

Applicant Name: MICM BUTLER LOFTS PROJECT LP, a Delaware Limited Partnership

Location: 2950 E. Butler Avenue, Flagstaff, AZ. 86004

In order to assist in providing adequate notice to interested parties and to meet Arizona State Statute requirements, the applicant for public hearings in the City of Flagstaff shall post signs as prescribed by Section 10-20.30.080 of the City of Flagstaff Zoning Code. **It shall be the responsibility of the applicant to erect and to maintain the sign on the subject property 15 days prior to the hearing and to update the hearing information on the sign until final disposition of the case. It shall also be the responsibility of the applicant to remove the sign within seven (7) days after the final disposition of the case.**

I confirm that the site has been posted as detailed in Section 10-20.30.080 of the Zoning Code as well as the Public Hearing Notice Sign Specifications included in this application for the case above, and that the site was posted at least fifteen (15) days prior to the public hearing.

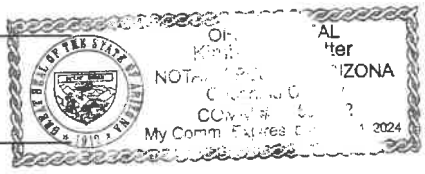
See attached date stamped photo exhibit of posted signs.

Applicant's/Representative's Signature: _____

SUBSCRIBED AND SWORN before me this 21st day of February, 2023 by:

Kimberly J. Cotter
Notary Public

12/1/24
My Commission Expires:



Affidavit of Notifications to Affected Property Owners

Case Number: PZ-21-00284-03

Project Name: BUTLER LOFTS

Applicant Name: MICM BUTLER LOFTS PROJECT LP, a Delaware Limited Partnership

Location: 2950 E. Butler Avenue, Flagstaff, AZ. 86004

In order to assist in providing adequate notice to interested parties and to meet Arizona State Statute requirements, the applicant for public hearings in the City of Flagstaff shall notify affected property owners as prescribed by Section 10-20.30.080 of the City of Flagstaff Zoning Code. **It shall be the responsibility of the applicant to establish a list of the names and addresses of persons who require notification of a public hearing as established in Sections 10-20.30.060.A, 10-20.30.060.B, and 10-20.30.060.C of the Zoning Code, and mail a notice of required public hearing via first class mail to each of the persons on the list referenced above no later than 15 days prior to the public hearing date. It shall also be the responsibility of the applicant to submit a notarized copy of the mailing list to the Planning Director prior to the fifteenth day before the public hearing date.**

I confirm that the public hearing notifications were mailed as detailed in Section 10-20.30.080 of the City of Flagstaff Zoning Code at least fifteen (15) days prior to the public hearing.

Applicant's/Representative's Signature: Charity Lee

SUBSCRIBED AND SWORN before me this 21st day of February, 2023 by:

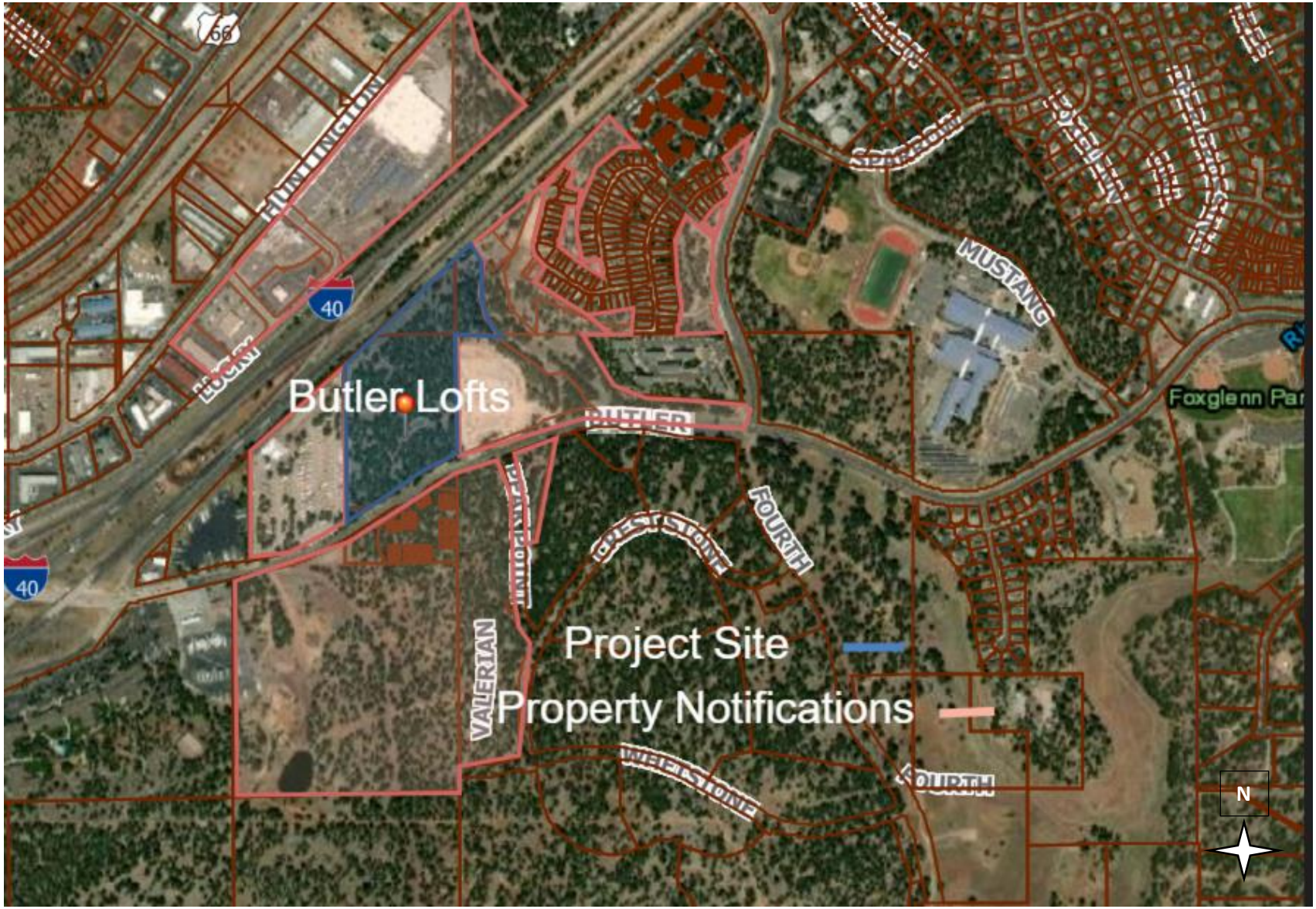
Kimberly F Cotter
Notary Public

OFFICIAL SEAL
Kimberly F Cotter
NOTARY PUBLIC - ARIZONA
Coconino County
COMM # 592152
My Comm. Expires December 1, 2024

My Commission Expires:
12/1/24


NOTICE OF PUBLIC HEARING
Consider the following:
ZONINIG MAP AMENDMENT
Project Number: PZ-21-00284-03
2950 E. BUTLER AVENUE
Application to rezone 17 acres from RR, HC, and MR to HC for a mixed-use development with 172 apartment units.
NOTICE IS HEREBY GIVEN that the Flagstaff Planning and Zoning Commission will hold a virtual Public Hearing on
March 8th 2023 , at 4:00 p.m.
Visit the link below for instructions and to attend the virtual meeting.
https://www.flagstaff.az.gov/2845/Planning-Zoning-Commission
NOTICE IS HEREBY GIVEN that the City Council will hold a Public Hearing on
March 21st 2023 , at 3:00 p.m.
at Flagstaff City Hall, 211 W. Aspen Avenue
Due to the COVID-19 pandemic, Council meetings may be held virtually. At the link below please refer to the posted agenda for any change to the meeting time and how to attend the meeting and submit comments:
https://www.flagstaff.az.gov/328/Meetings
The meetings will continue to be live-streamed on the city's website:
https://www.flagstaff.az.gov/1461/Streaming-City-Council-Meetings
For additional information contact: Miramonte Homes, Charity Lee at 928-600-3594, clee@miramontehomes.com or
Patrick St. Clair, Senior Planner at the City of Flagstaff Community Development Department, 928-213-2612, pstclair@flagstaffaz.gov.
Posting Date February 21st -2023

Property Notifications



"Registry of Persons and Groups"
As Required in Zoning Code Section 10-20.30.080.B

Last updated: January 27, 2022

Friends of Flagstaff's Future
P.O. Box 23462
Flagstaff, AZ 86002
info@friendsofflagstaff.org
(928) 556-8663

Michele A. James
Executive Director
Friends of Flagstaff's Future
P.O. Box 23462
Flagstaff, Arizona 86002

Northern Arizona Building Association
1500 East Cedar Avenue, Suite 86
Flagstaff, AZ 86004
tbociung@nazba.org
(928) 779-3071

Northern Arizona Association of Realtors,
Jeffrey Herd
1515 East Cedar Avenue, Suite C-4
Flagstaff, AZ 86004
naarflag@nazrealtor.com and
naargovaffairs@outlook.com
(928) 779-4303

Tish Bogan-Ozmun
5271 Mt. Pleasant Drive
Flagstaff, AZ 86004
tishflagstaff@gmail.com

Marilyn Weissman
1055 East Apple Way
Flagstaff, AZ 86001
(928) 779-5323
Missymoet@aol.com

Nat White
1120 North Rockridge Road
Flagstaff, AZ 86001
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Charlie Silver
720 West Aspen Avenue
Flagstaff, AZ 86001
Cws720@gmail.com

Betsy McKellar
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Flagstaff, AZ 86004
birdvest8@gmail.com

David Carpenter
1109 W Beal Road
Flagstaff, AZ 86001
dc@hopeaz.com

Dorenda Coleman
Arizona Army National Guard, AZAA-FMO
5636 E McDowell Rd, M5330
Phoenix, AZ 85008
dorenda.j.coleman.nfg@mail.mil

Mary Beth Dreusike
US Navy, Intergovernmental Branch
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Building 1 – 5th Floor, Suite 513
San Diego, CA 92132
marybeth.dreusike@navy.mil

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3354 N Crest Street
Flagstaff, AZ 86001
cbarotz@gmail.com

Norm Wallen
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Flagstaff, Az 86004
normwallenflg@gmail.com

Jay Christelman
Coconino County Community Development
2500 N Fort Valley Rd. Bldg 1
Flagstaff, Az 86001-1287
jchristelman@coconino.az.gov

"Registry of Persons and Groups"
As Required in Zoning Code Section 10-20.30.080.B

Last updated: January 27, 2022

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Flagstaff, AZ 86001
tyler.b.denham@gmail.com

Jess McNeely
Coconino County Community Development
2500 N Fort Valley Rd. Bldg 1
Flagstaff, Az 86001-1287
wmcneely@coconino.az.gov

Steve Finch
Flagstaff Lodging, Restaurant & Tourism Association
PO Box 30622
Flagstaff, AZ 86003
sfinch@flrta.org
(928) 326-6008

Rachel Bass
3083 W. Easterday Lane
Flagstaff 86001
rsilverton@gmail.com

Requested Notification of
Zoning Code Text Amendments Only

David Hayward
Neighborhood Homes, LLC
510-331-3380
david@neighborhoodhomes.com

Barry Levitan
19 S San Francisco St
Flagstaff, AZ 86001
bllips@aol.com

ParcelId	OwnerNm	SiteAddr	SiteCity	SiteState	SiteZipFull	OwnerAdc	OwnerCity	OwnerSta	OwnerZipF
106-04-00	Flagstaff City Of	2989 E Butler Ave	Flagstaff	AZ	86004	211 W Asp	Flagstaff	AZ	86001-535
106-04-00	Pedrick Lee Doran Successor Trus	2760 E Butler Ave	Flagstaff	AZ	86004-60(	PO Box 18	Flagstaff	AZ	86002-184
106-04-01	Light Stone Lodging LLC	2540 E Lucky Ln	Flagstaff	AZ	86004-85(	PO Box 23	Flagstaff	AZ	86002-023
106-04-01	Woodshire On Butler LLC	45095 E Butler Ave Unit:	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-02	Woodshire On Butler LLC	3001 E Butler Ave Unit: 2	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-02	Woodshire On Butler LLC	3001 E Butler Ave Unit: 3	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-02	Woodshire On Butler LLC	3001 E Butler Ave Unit: 4	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-02	Woodshire On Butler LLC	3001 E Butler Ave Unit: 5	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-02	Woodshire On Butler LLC	3001 E Butler Ave Unit: 6	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-02	Woodshire On Butler LLC	3001 E Butler Ave Unit: 7	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-02	Woodshire On Butler LLC	3001 E Butler Ave Unit: 8	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-02	Woodshire On Butler LLC	E Butler Ave	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-02	Woodshire On Butler LLC	3001 E Butler Ave Unit: 1(	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-02	Woodshire On Butler LLC	3001 E Butler Ave Unit: 1	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-03	Woodshire On Butler LLC	3001 E Butler Ave Unit: 1	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-03	Woodshire On Butler LLC	3001 E Butler Ave Unit: 1	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-03	Woodshire On Butler LLC	3001 E Butler Ave Unit: 1	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
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106-04-03	Woodshire On Butler LLC	3001 E Butler Ave Unit: 1	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-03	Woodshire On Butler LLC	3001 E Butler Ave Unit: 2(	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-03	Woodshire On Butler LLC	3001 E Butler Ave Unit: 2	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-04	Woodshire On Butler LLC	3001 E Butler Ave Unit: 2	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-04	Vollendorf, Sean	3001 E Butler Ave Unit: 2	Flagstaff	AZ	86004	9 E Carolin	Tempe	AZ	85284-312
106-04-04	Conigliari Family Trust	3001 E Butler Ave Unit: 2	Flagstaff	AZ	86004	1843 E Sle	Flagstaff	AZ	86005-274
106-04-04	Panicci, Ramona	3001 E Butler Ave Unit: 2	Flagstaff	AZ	86004	974 E Leev	Tempe	AZ	85283-194
106-04-04	Madrid, Nathaniel J	3001 E Butler Ave Unit: 2(	Flagstaff	AZ	86004	923 W Uni	Flagstaff	AZ	86001-309
106-04-04	Dorrah, Brian	3001 E Butler Ave Unit: 2	Flagstaff	AZ	86004	7662 E Cac	Scottsdale	AZ	85250-465
106-04-04	Eckardt, Aaron J	3001 E Butler Ave Unit: 2	Flagstaff	AZ	86004	12437 S 3E	Phoenix	AZ	85044-382
106-04-04	Bhatt, Jankee H	3001 E Butler Ave Unit: 2	Flagstaff	AZ	86004	2070 W 67	Denver	CO	80221-262
106-04-04	Woodshire On Butler LLC	3001 E Butler Ave Unit: 3(	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211

106-04-04	Alles, Anthony	3001 E Butler Ave Unit: 3	Flagstaff	AZ	86004	4622 E Wa	Gilbert	AZ	85297-744
106-04-05	Woodshire On Butler LLC	3001 E Butler Ave Unit: 3	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-05	Woodshire On Butler LLC	300133 E Butler Ave Unit	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-05	Woodshire On Butler LLC	3001 E Butler Ave Unit: 3	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-05	Leibovit Mark A Living Trust	3001 E Butler Ave Unit: 3	Flagstaff	AZ	86004	10632 N S	Scottsdale	AZ	85254-616
106-04-05	Woodshire On Butler LLC	3001 E Butler Ave Unit: 3	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-05	Woodshire On Butler LLC	3001 E Butler Ave Unit: 3	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-05	Salamon, Kristin	3001 E Butler Ave Unit: 3	Flagstaff	AZ	86004	1023 E Hill	Flagstaff	AZ	86004-160
106-04-05	Groff, Genna Marie	3001 E Butler Ave Unit: 3	Flagstaff	AZ	86004	3832 S Tin	Flagstaff	AZ	86005-272
106-04-05	Gatt, Kenneth	3001 E Butler Ave Unit: 4	Flagstaff	AZ	86004	3612 E Pas	Phoenix	AZ	85018-151
106-04-05	Long, Sheila M	3001 E Butler Ave Unit: 4	Flagstaff	AZ	86004	22309 N 3	Phoenix	AZ	85050-835
106-04-06	Marostica, Chasen C	3001 E Butler Ave Unit: 4	Flagstaff	AZ	86004	10990 Her	Flagstaff	AZ	86004-303
106-04-06	Schubmehl, Michael	3001 E Butler Ave Unit: 4	Flagstaff	AZ	86004	13734 N 1	Surprise	AZ	85379-420
106-04-06	Potvin, Nathalie Marie Therese	3001 E Butler Ave Unit: 4	Flagstaff	AZ	86004	9073 E Ca	Scottsdale	AZ	85260-760
106-04-06	Woodshire On Butler LLC	3001 E Butler Ave Unit: 4	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-06	Morrison, Dana	3001 E Butler Ave Unit: 4	Flagstaff	AZ	86004	6888 Blue	Flagstaff	AZ	86001-200
106-04-06	Wilkerson, Benjamin L	3001 E Butler Ave Unit: 4	Flagstaff	AZ	86004	1990 W Ra	San Tan Va	AZ	85142-450
106-04-06	Lamis, Julia	3001 E Butler Ave Unit: 4	Flagstaff	AZ	86004	3001 E But	Flagstaff	AZ	86004
106-04-06	Conigliari, Paul	3001 E Butler Ave Unit: 4	Flagstaff	AZ	86004	1843 E Sle	Flagstaff	AZ	86005-274
106-04-06	Desai Family Trust	3001 E Butler Ave Unit: 5	Flagstaff	AZ	86004	61656 N 2	Phoenix	AZ	85043
106-04-06	Woodshire On Butler LLC	3001 E Butler Ave Unit: 1	Flagstaff	AZ	86004	3550 N Ce	Phoenix	AZ	85012-211
106-04-07	Flagstaff City Of	E Butler Ave	Flagstaff	AZ	86004	211 W Asp	Flagstaff	AZ	86001-535
106-08-00	Csl Flagstaff 2019 LLC	3100 E Butler Ave	Flagstaff	AZ	86004-000	930 W 1st	Fort Worth	TX	76102-274
106-08-04	Cdr Devcorp Ltd		Flagstaff	AZ	86004	3605 S Fla	Flagstaff	AZ	86005
107-11-00	Cbocs West Inc	2560 E Lucky Ln	Flagstaff	AZ	86004-850	PO Box 78	Lebanon	TN	37088-078
107-11-00	Mdc Coast 4 LLC	2600 E Lucky Ln	Flagstaff	AZ	86004-852	2202 N We	Tampa	FL	33607-574
107-11-00	Wal-Mart Stores Inc	2601 E Huntington Dr	Flagstaff	AZ	86004-892	PO Box 80	Bentonvill	AR	72716
107-11-00	Flag Stone Lodging LLC	1000 N Bronco Way	Flagstaff	AZ	86004-600	8658 E Sar	Scottsdale	AZ	85258-430
107-16-00	Flagstaff City Of	2691 E Huntington Dr	Flagstaff	AZ	86004-892	211 W Asp	Flagstaff	AZ	86001-535
107-44-05	Forest Springs Homeowners Asso	1201 N 4th St	Flagstaff	AZ	86004-894	323 S Rive	Flagstaff	AZ	86001-590
107-44-09	Smith, Brion	3095 E Cold Springs Trl	Flagstaff	AZ	86004-797	3095 E Col	Flagstaff	AZ	86004-797
107-44-09	Smith, Brion	3087 E Cold Springs Trl	Flagstaff	AZ	86004-797	3095 E Col	Flagstaff	AZ	86004
107-44-13	Forest Springs Townhomes Unit 2	3088 E Cold Springs Trl	Flagstaff	AZ	86004-797	323 S Rive	Flagstaff	AZ	86001-590

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Sean Vollendorf
9 E Caroline Ln
Tempe AZ 85284

Conigliari Family Trust
1843 E Sleeper Hollow Ct
Flagstaff AZ 86005

Ramona Panicci
974 E Leeward Ln
Tempe AZ 85283

Brian Dorrah
7662 E Cactus Wren Rd
Scottsdale AZ 85250

Aaron J Eckardt
12437 S 38th Pl
Phoenix AZ 85044

Anthony Alles
3001 E Butler Avenue 29
Flagstaff AZ 86004

Anthony Alles
4622 E Waterman St
Gilbert AZ 85297

Leibovit Mark A Living Trust
10632 N Scottsdale Rd B-426
Scottsdale AZ 85254

Kristin Salamon
1023 E Hillcrest Dr
Flagstaff AZ 86004

Genna M Groff
3832 S Timoteo Ln
Flagstaff AZ 86005

Kenneth Gatt
3612 E Pasadena Ave
Phoenix AZ 85018

Sheila Long
22309 N 39th St
Phoenix AZ 85050

Chasen Marostica
10990 Henry Dr
Flagstaff AZ 86004

Michael Schubmehl
13734 N 150th Ln
Surprise AZ 85379

Nathalie Potvin
9073 E Captain Dreyfus Ave
Scottsdale AZ 85260

Dana Morrison
6888 Blue Mountain Trl
Flagstaff AZ 86001

Benjamin Wilkerson
1990 W Rains Way
San Tan Valley AZ 85142

Julia Lamis
555 W Forest Meadows St #423
Flagstaff AZ 86001

Paul Conigliari
1843 E Sleeper Hoolow Ct
Flagstaff AZ 86005

Desai Family Trust
61656 N 2nd Dr
Phoenix AZ 85043

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Northern Arizona Building Association
1500 East Cedar Avenue, Suite 86
Flagstaff, AZ 86004

Betsy McKellar
330 S Ash Lane
Flagstaff, AZ 86004

Northern Arizona Association of Realtors, Jeffrey Herd
1515 East Cedar Avenue, Suite C-4
Flagstaff, AZ 86004

Tish Bogan-Ozmun
5271 Mt. Pleasant Drive
Flagstaff, AZ 86004

Marilyn Weissman
1055 East Apple Way
Flagstaff, AZ 86001

Maury Herman
Coast and Mountain Properties
3 North Leroux Street
Flagstaff, AZ 86001

Jay Christelman
Coconino County Community Development
2500 N Fort Valley Rd. Bldg 1
Flagstaff, Az 86001-1287

Tyler Denham
800 W Forest Meadows St, Apt 119
Flagstaff, AZ 86001

Jess McNeely
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Flagstaff, Az 86001-1287

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Flagstaff Lodging, Restaurant & Tourism Association
PO Box 30622

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Flagstaff, AZ 86001

Rachel Bass
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Flagstaff 86001

Norm Wallen
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Flagstaff, Az 86004

Celia Barotz
3354 N Crest Street
Flagstaff, AZ 86001

Mary Beth Dreusike
US Navy, Intergovernmental Branch
850 Pacific Highway
Building 1 – 5th Floor, Suite 513
San Diego, CA 92132

Dorenda Coleman
Arizona Army National Guard, AZAA-FMO
5636 E McDowell Rd, M5330
Phoenix, AZ 85008

David Carpenter
495 S River Run Suite 100
Flagstaff, AZ 86001

Barry Levitan
19 S. San Francisco Street
Flagstaff, AZ. 86001

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Sierra Vista No 6 LLC
PO Box 10
Scottsdale AZ 85252

Miramonte At Forest Springs LLC
4578 N 1st Ave No 160
Tucson AZ 85718

Lauren K Mills
3027 Via Amador
Carlsbad CA 92010

Brion & Kate Smith
3095 E Cold Springs Trl
Flagstaff AZ 86004

Brion & Kate Smith
3087 E Cold Springs Trl
Flagstaff AZ 86004

Forest Springs Townhomes Unit 2
Association
323 S River Run Rd No 1
Flagstaff AZ 86001

Flagstaff City Of
211 W Aspen Ave
Flagstaff AZ 86001

Walmart Stores Inc.
P.O. Box 8050
MS-0555
Bentonville, AR. 72716

MDC Coast 4 LLC
2202 N. Westshore Blvd 5th Floor
Tampa, FL. 33607

Flagstone Lodging LLC
8658 E. San Alberto Drive
Scottsdale, AZ. 85258

CBOCS West Inc.
PO. Box 787
Lebanon, TN. 37088

Light Stone Lodging LLC
PO Box 237
Flagstaff, AZ. 86002

ADOT Right of Way
205 S. 17th Avenue
MD 612E
Phoenix, AZ. 85007

Pedrick Lee Doran
Successor Trustee
P.O. Box 1846
Flagstaff, AZ. 86002

Little America Hotels & Resort Inc.
P.O. Box 30825
Salt Lake City, UT. 84130

Woodshire on Butler LLC
3550 N. Central Avenue
No, 1101
Phoenix, AZ. 85012

CDR Land Investors II LLC
3101 N. Central Avenue
No. 1600
Phoenix, AZ. 85012

CDR Devcorp LTD
3605 S. Flagstaff Ranch Rd.
Flagstaff, AZ. 86005

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Brion Smith
3095 E Cold Springs Trl
Flagstaff AZ 86004

Pedrick Successor
PO Box 1846
Flagstaff AZ 86002

Light Stone Lodging LLC
PO Box 237
Flagstaff AZ 86002

Forest Springs Homeowners
Association Inc
323 S River Run Rd No 1
Flagstaff AZ 86001

Sean Vollendorf
9 E Caroline Ln
Tempe AZ 85284

Conigliari Family Trust
1843 E Sleeper Hollow Ct
Flagstaff AZ 86005

Flag Stone Lodging LLC
8658 E San Alberto Dr
Scottsdale AZ 85258

Nathaniel J Madrid
923 W University Ave #317
Flagstaff AZ 86001

Brian Dorrah
7662 E Cactus Wren Rd
Scottsdale AZ 85250

Aaron Eckardt
12437 S 38th Pl
Phoenix AZ 85044

Jankee Bhatt
2070 W 67th Pl
Denver CO 80221

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4622 E Waterman St
Gilbert AZ 85297

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Flagstaff AZ 86004

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Flagstaff AZ 86005

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3612 E Pasadena Ave
Phoenix AZ 85018

Sheila Long
22309 N 39th St
Phoenix AZ 85050

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10990 Henry Dr
Flagstaff AZ 86004

Michael Schubmehl
13734 N 150th Ln
Surprise AZ 85379

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Scottsdale AZ 85260

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6888 Blue Mountain Trl
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Benjamin Wilkerson
1990 W Rains Way
San Tan Valley AZ 85142

Julia Lamis
3001 E Butler Ave No 48
Flagstaff AZ 86004

Paul Conigliari
1843 E Sleeper Hoolow Ct
Flagstaff AZ 86005

Csl Flagstaff 2019 LLC
930 W 1st St No 400
Fort Worth TX 76102

Cdr Devcorp Ltd
3605 S Flagstaff Ranch Rd
Flagstaff AZ 86005

Mdc Coast 4 LLC
2202 N Westshore Blvd 5th Floor
Tampa FL 33607

Wal-Mart Stores Inc
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Bentonville AR 72716

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Butler Ave Lofts

Direct to Ordinance Zoning Map Amendment

PZ-21-00284-03

March 21, 2023

Patrick St. Clair, Planner

TEAM FLAGSTAFF
WE MAKE THE CITY BETTER

LOCATION & SURROUNDING USES

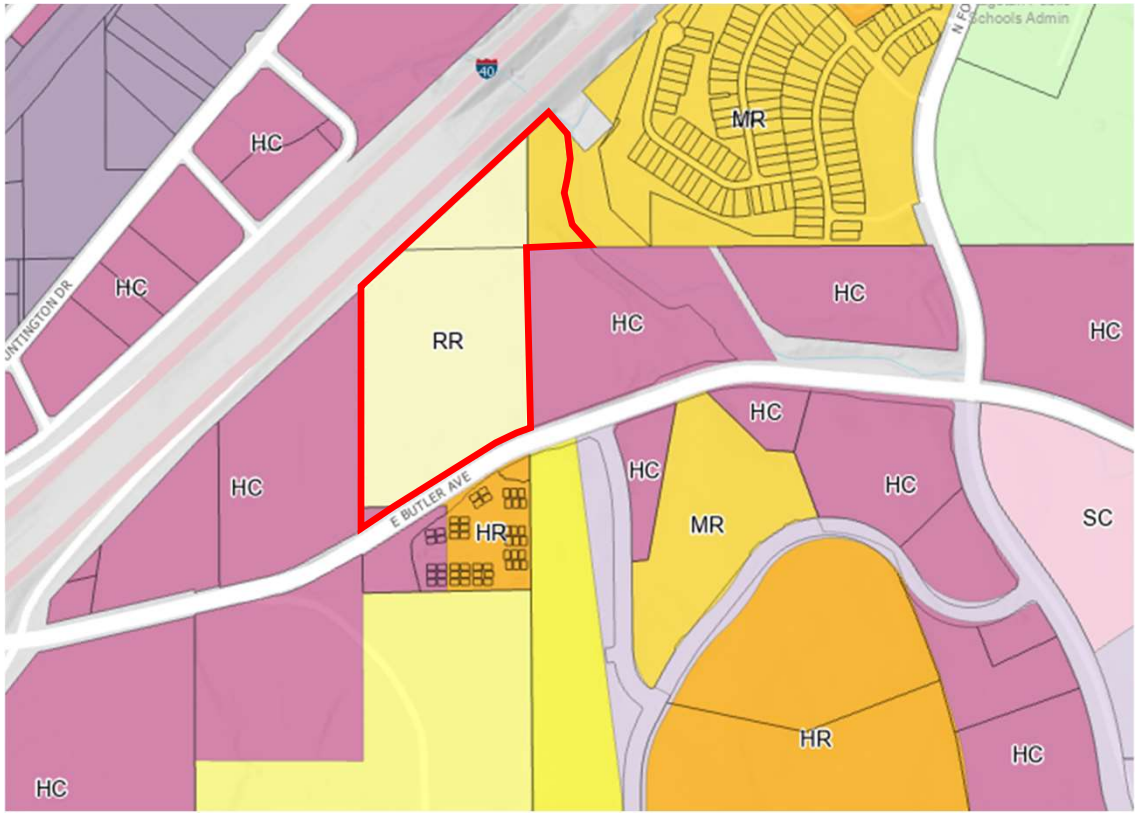


NORTH

Butler Ave Lofts

- Approx. 17-acres undeveloped land
- The Bluffs
- Woodshire
- Black Bart's
- Butler Ave, I-40, Route 66 and N Fourth St. access

Request: Zoning Map Amendment



Request:

Rezone parcels

APN 106-04-006B, 107-11-001B, and 107-44-062

from

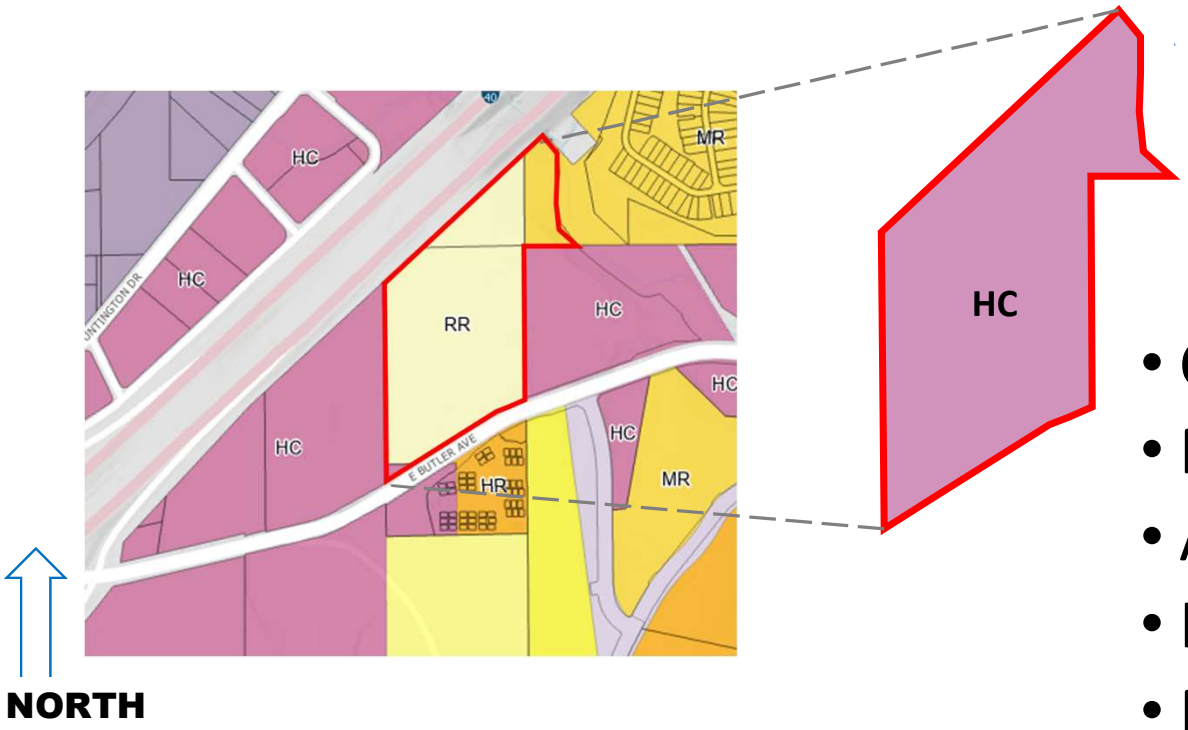
- Medium Density Residential (MR) and Rural Residential (RR)

to

- Highway Commercial (HC)

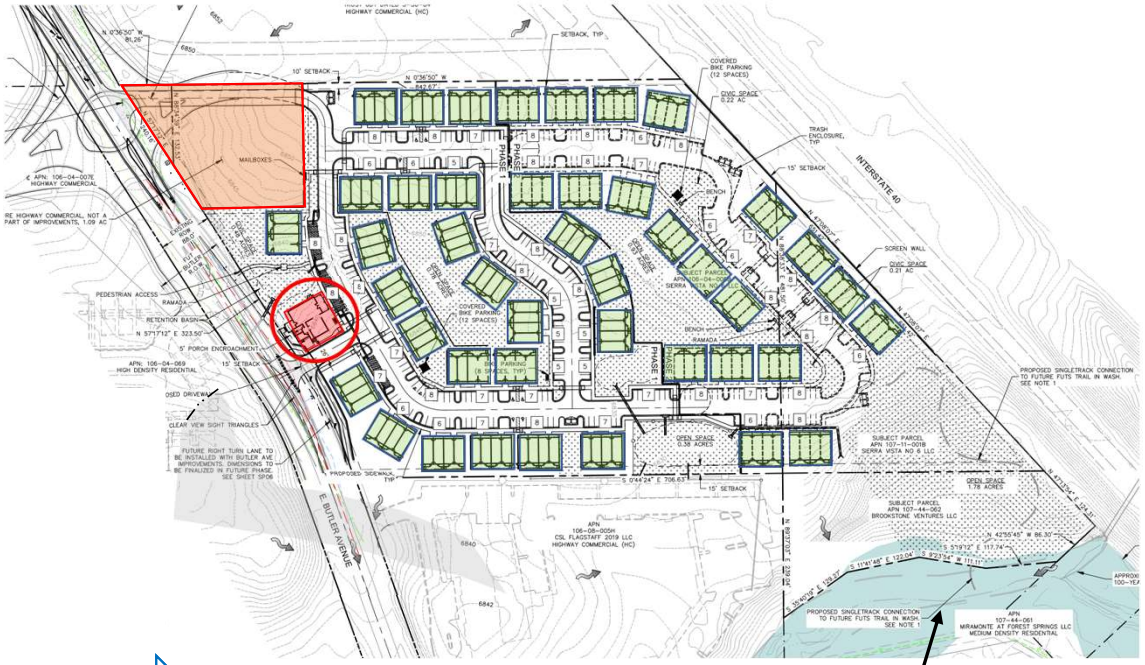
Request: Zoning Map Amendment

Highway Commercial Zone:



- Commercial corridor
- Mixed-use development
- Alike adjacent zone
- Increased Density
- New Commercial

Development Proposal:

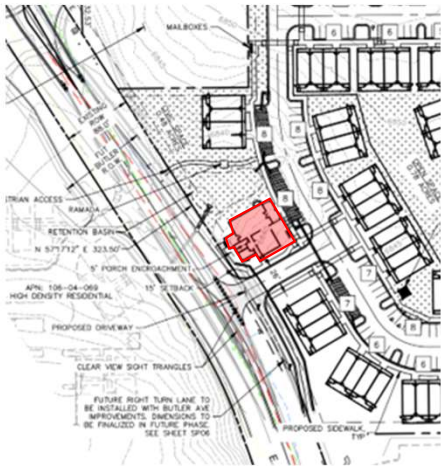


Mixed-use Development :

- (1) 5,000 SF Clubhouse and Commercial Office building
- (1) approximately 1.09 Acre future Commercial Development Pad
- (4) 4-plex Residential structures

Commercial/Clubhouse Building:





NORTH

Two story building:

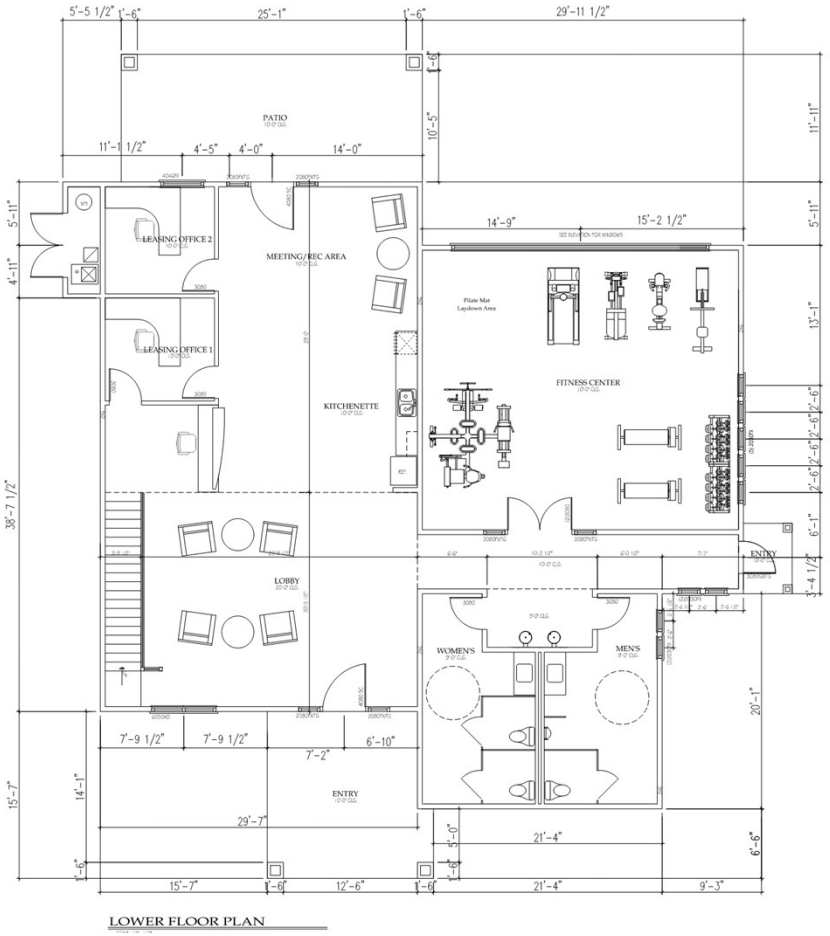
- First floor leasing office and clubhouse
- Second floor commercial office space
- Provides development presence along Butler Ave

Floor Plan – Commercial Bldg.

Proposed 1st Floor:

Clubhouse/Leasing Offices

- Fitness Center
- Leasing offices
- Lobby
- Kitchenette
- Restrooms

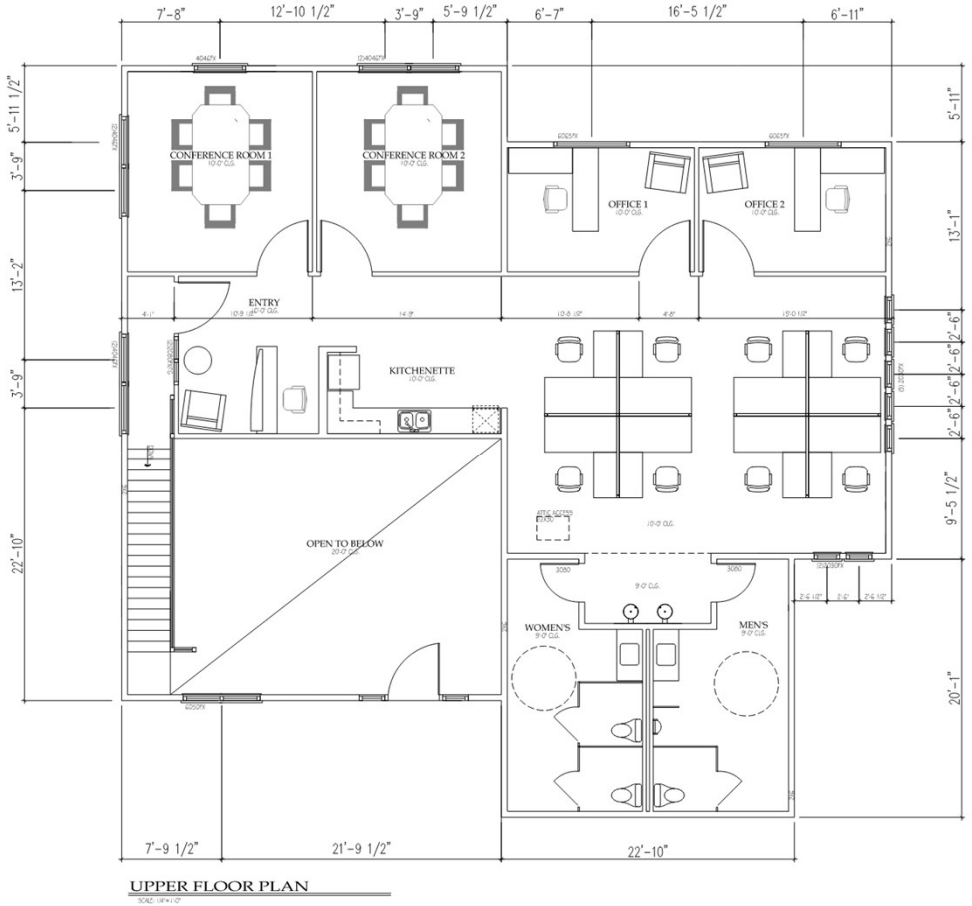


Floor Plan – Commercial Bldg.

Proposed 2nd Floor:

Commercial Office Space

- Entry lobby
- Conference rooms
- Enclosed offices
- Open office space
- Restrooms
- Kitchenette



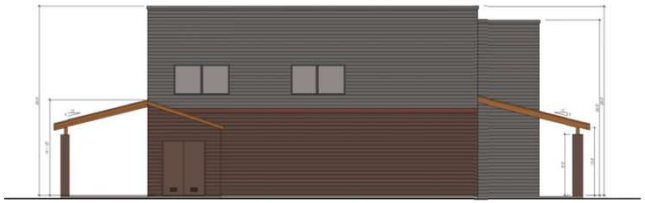
UPPER FLOOR PLAN

Commercial Building Elevations



FRONT ELEVATION


RIGHT SIDE ELEVATION

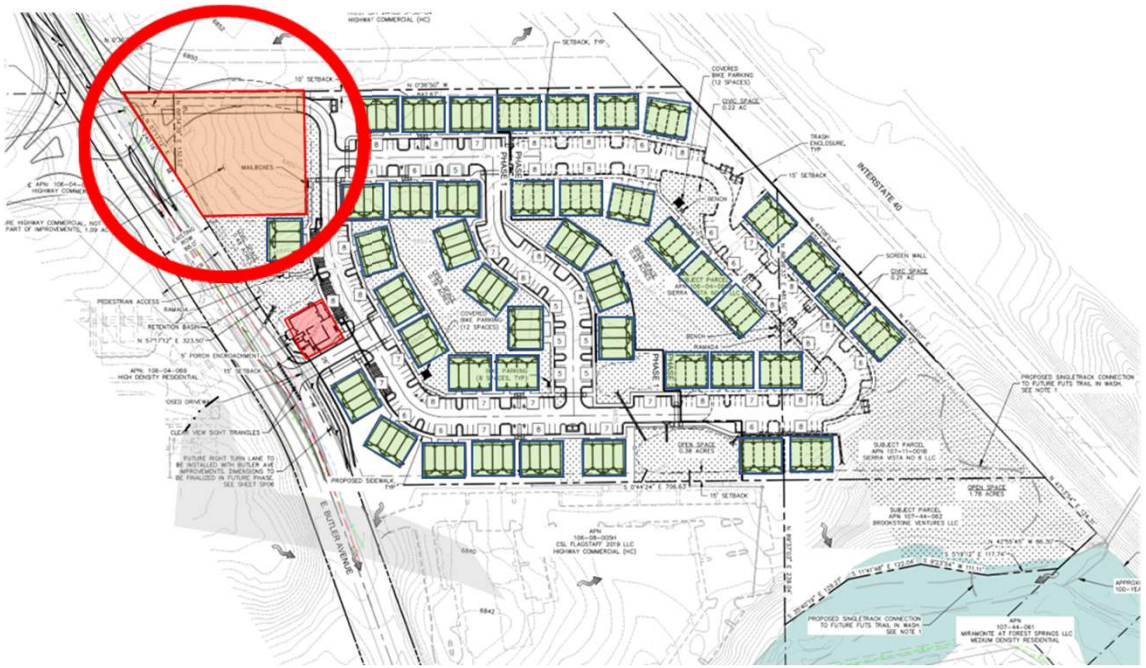

LEFT SIDE ELEVATION



REAR ELEVATION



Development Proposal:

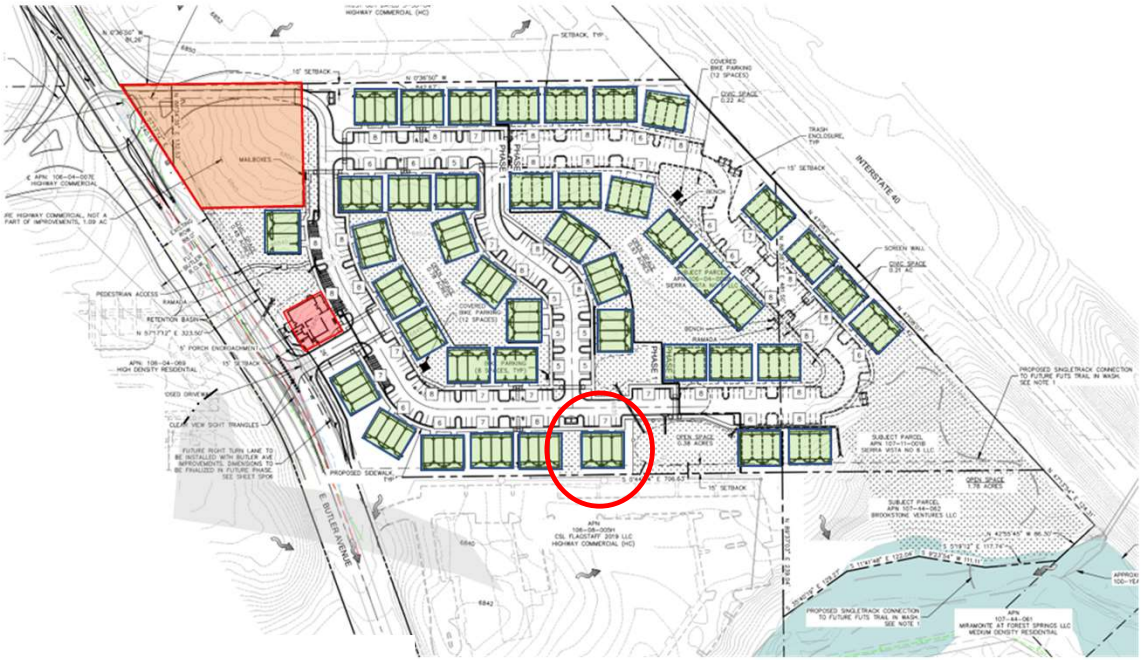


NORTH

Mixed-use Development:

- (1) 5,000 SF Clubhouse and Commercial Office Building
- (1) approximately 1.9-acre future Commercial Development Pad
- (43) 4-plex Residential Buildings

Development Proposal:

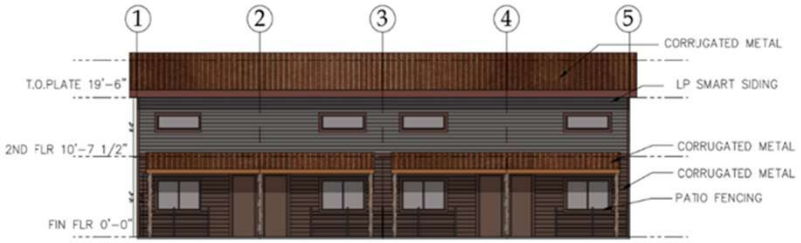


NORTH

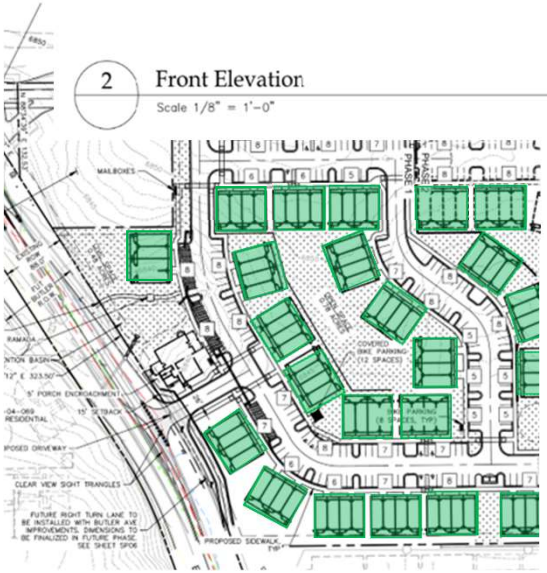
Mixed-use Development:

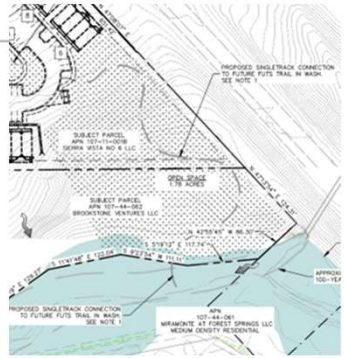
- (1) 5,000 SF Clubhouse and Commercial Office building
- (1) approximately 1.9-acre future Commercial Development Pad
- (43) 4-plex Residential Buildings

Residential Buildings:



2 Front Elevation
Scale 1/8" = 1'-0"







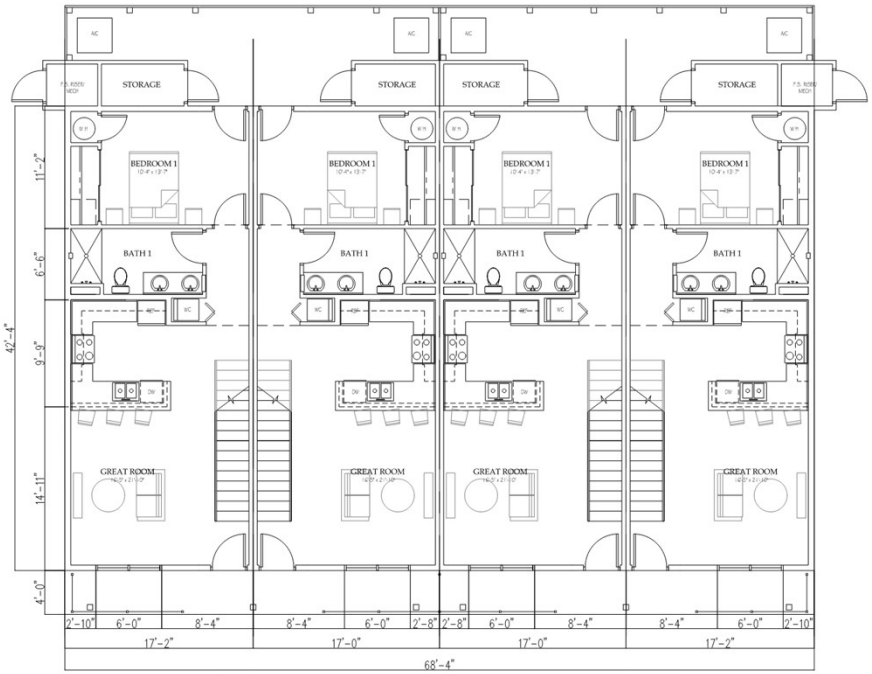
Mixed-use Development:

- (43) two-story multi-family 4-plex structures
- As feasible, removed from Butler Ave commercial corridor adjacent the development
- Pedestrian and bicycle connections to the commercial uses and multimodal transportation networks

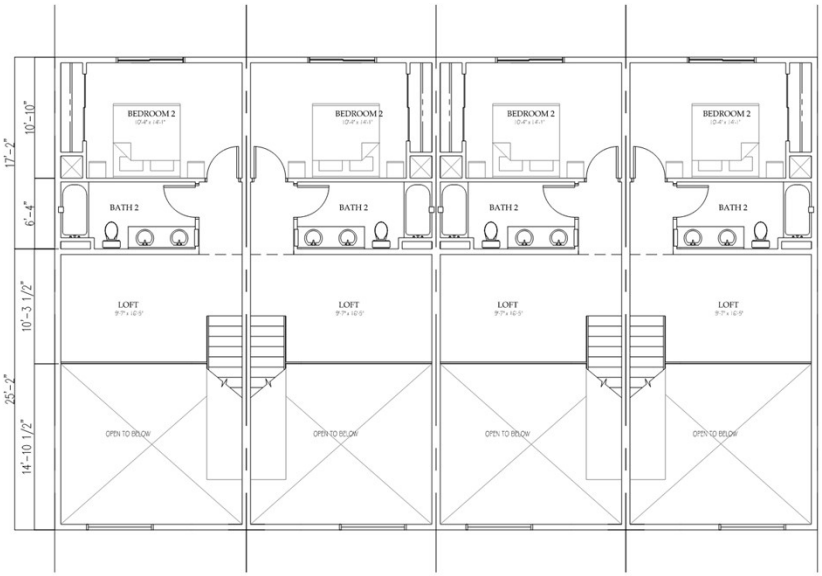
Floor Plans – Residential 4-plex

Proposed

- Front porch
- Screened rear yard
- Unit integration

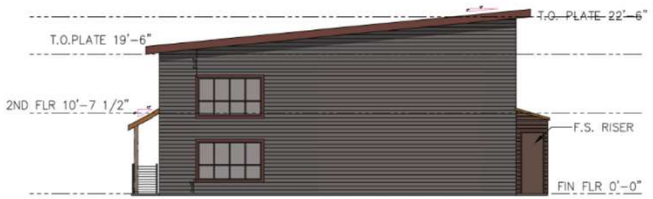


1 Main Level Floor Plan
Scale 1/4" = 1'-0"

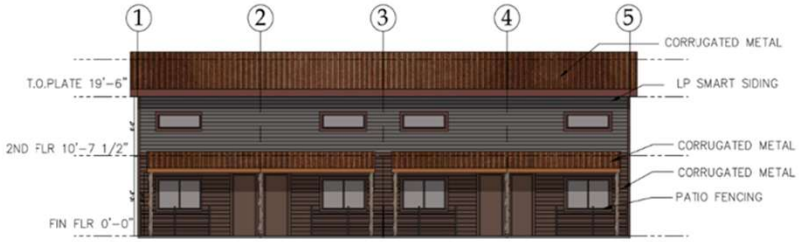


2 Upper Level Floor Plan
Scale 1/4" = 1'-0"

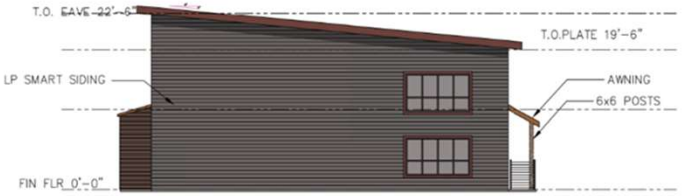
Residential 4-plex Elevations



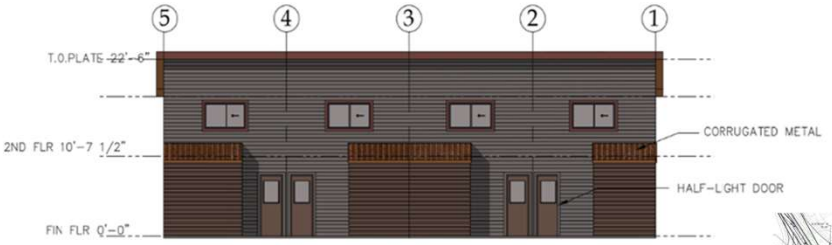
1 Right Elevation
Scale 1/8" = 1'-0"



2 Front Elevation
Scale 1/8" = 1'-0"



3 Left Elevation
Scale 1/8" = 1'-0"



4 Back Elevation
Scale 1/8" = 1'-0"



Proposed Residential Unit Mix

Unit Type	Total Units	Total Bedrooms
1 Bed/1 Bath	**26**	26
2 Bed/2 Bath	**120**	240
3 Bed/2 Bath	**26**	78
Total	**172***	344

* 5% of the units will be Affordable Housing units

172 units X 5% = 8.6, or **9** units

Mixed-Use Development

Design Standards

Staff has found the project meets the following objectives:

- Compatibility between uses on site.
- Reduce potential glare, noise, odors, traffic, and nuisance conditions
- Minimize impacts to existing uses on adjacent properties.
- Residential units - residential character and appropriate privacy.
- Pedestrian access from streets, courtyards, plazas, and walkways.
- Compatible with /enhance surrounding residential neighborhoods

Site Plan Review

Application for Site Plan Review

- Approved on February 2, 2023
- Subject to Direct to Ordinance Zoning Map Amendment
  - Planning and Zoning Commission recommendation
  - City Council approval

Resource Protection

Flood Plain Resources

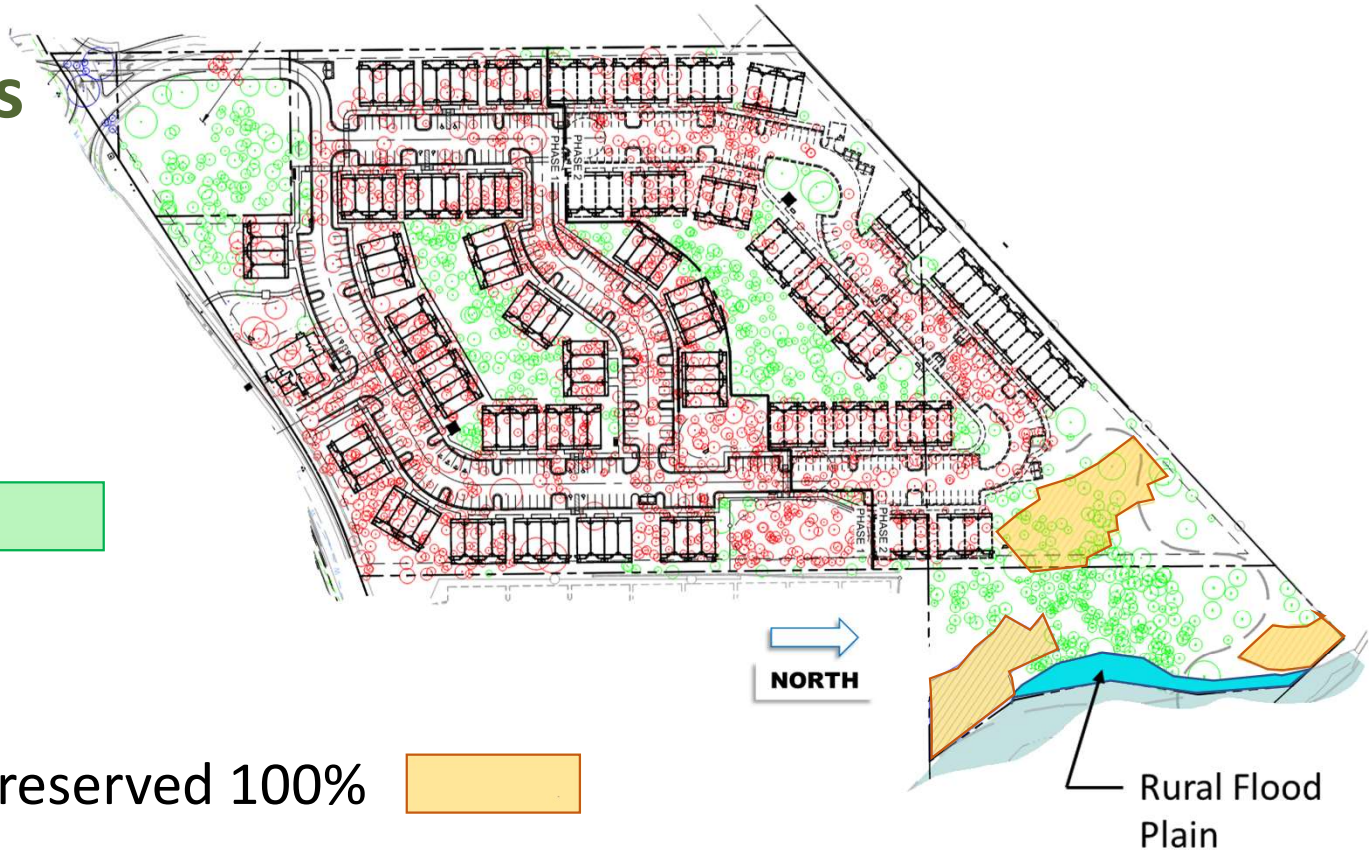
- Rural Floodplain
- No disturbance proposed

Tree Resources

- Proposed 35% forest resource retention

Slope Resources

- All slopes over 17% are preserved 100%



Civic/Open Space and Circulation

Civic Space

- 5.7% of site

Open Space

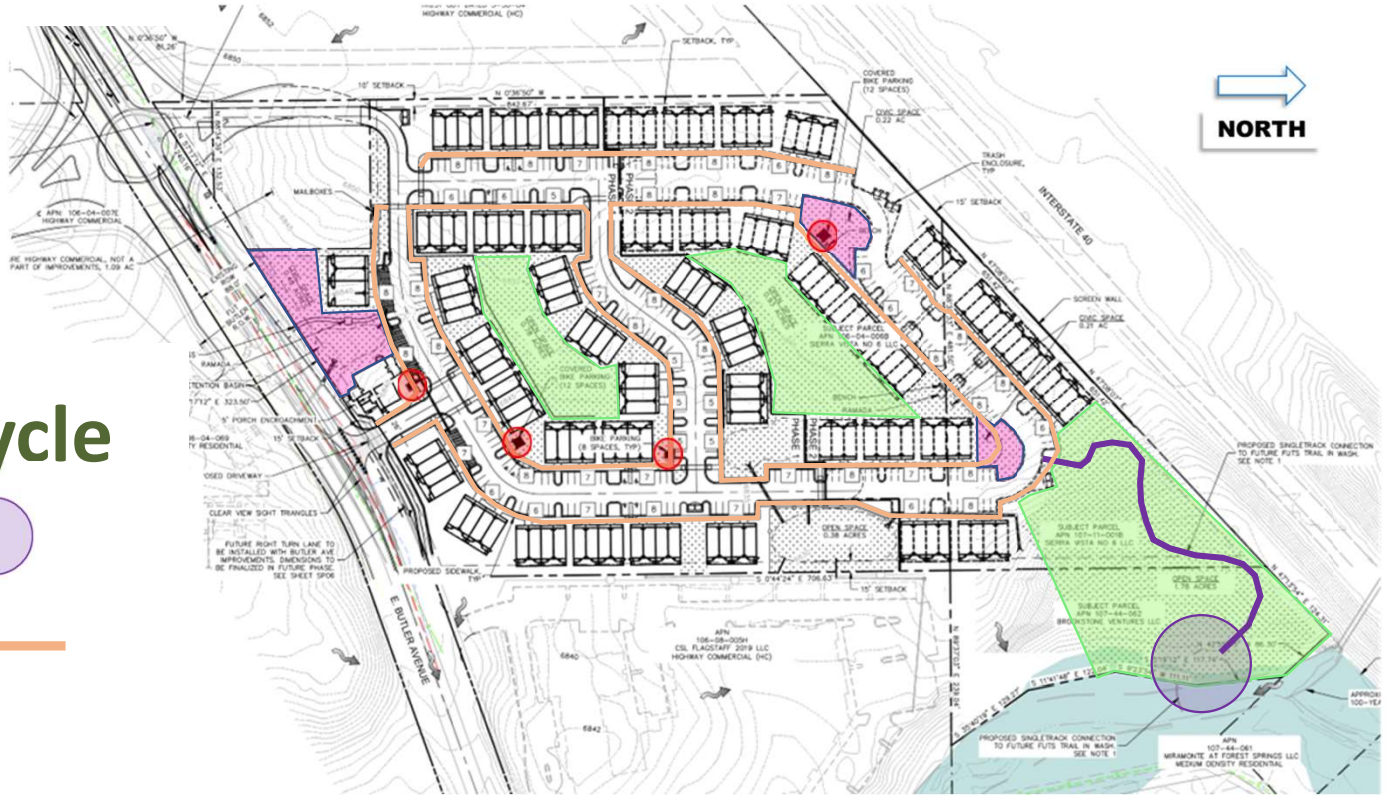
- 20% of site

Pedestrian and Bicycle

FUTS Connection

Sidewalks

Bicycle Racks



Landscaping

Concept Landscape Plan

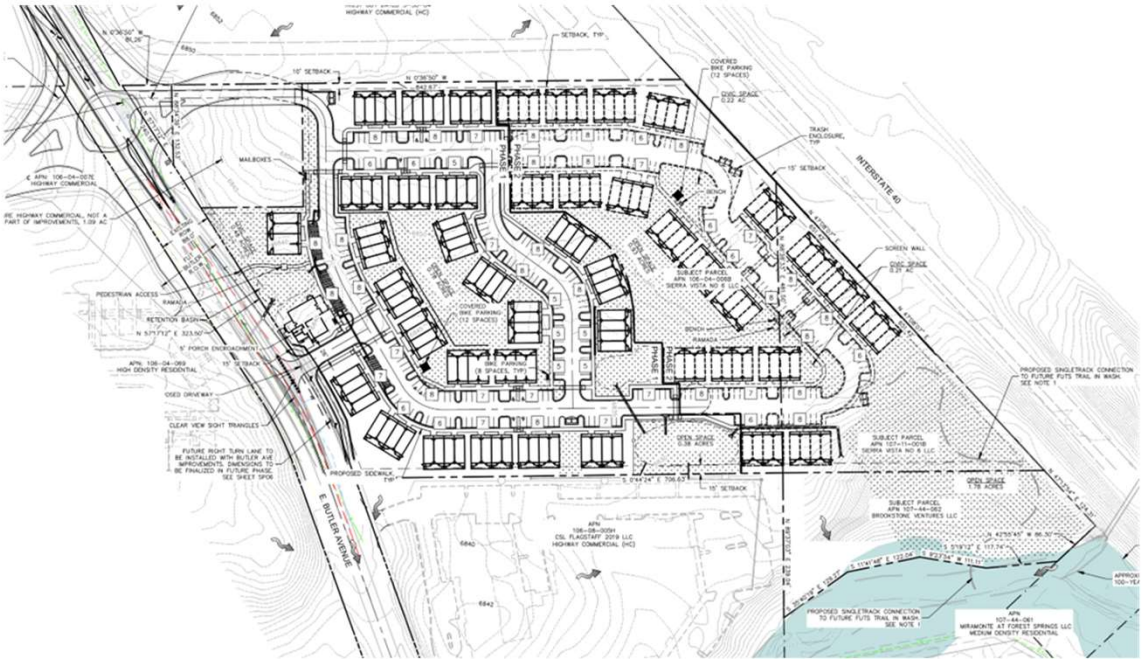
- Meets requirements for
  - Street Buffer
  - Parking Lot
  - Peripheral Buffer
  - Building Foundation
- Final landscaping will be reviewed at Civil Plan Submittal



Outdoor Lighting

Outdoor Lighting Plan

- Final plan to be reviewed at Building Permit Review



Parking

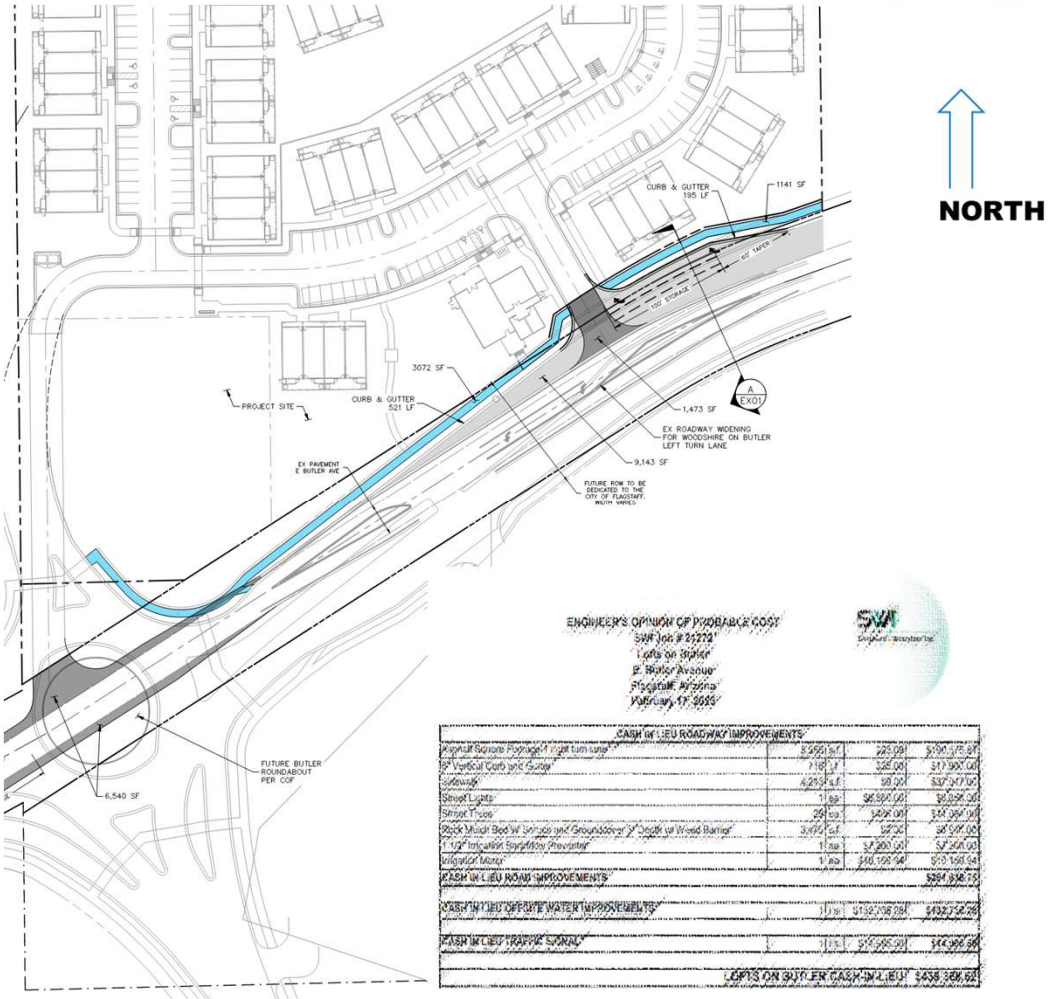
On-site Parking

- Required parking per use – Commercial retail and Market rate multi-family housing = **375 required spaces**
  - Transit and bike parking reduction – 12.7% reduction
- 327 required spaces after reductions
- 352 spaces proposed
- Bicycle parking – 40 total; 16 uncovered and 24 covered

Public Systems Impact Analysis

Traffic:

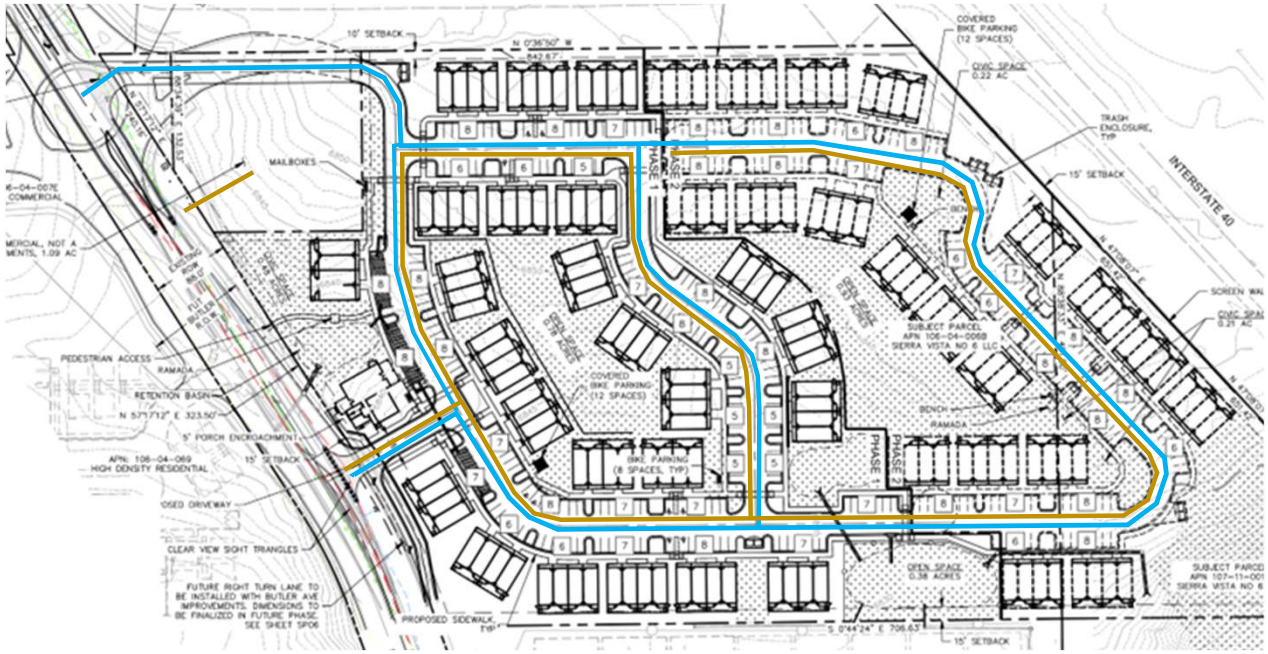
- A Traffic Impact Analysis was performed for this project and completed November 21, 2022.
- Combination of construction and cash in-lieu contributions to City's Butler/Fourth Improvements project; addressed in the Development Agreement
- In-lieu for the requirements of the Right turn lane at Eastern driveway including ROW dedication for the lane
- Construct a left hand turn lane into western most drive way



Public Systems Impact Analysis

Public Utilities: Water and Waste Water Impact

- Water Sewer Impact Analysis August 31,2022
- Loop 8” water lines in common easement with 8” sewer lines under proposed drive aisles
- Existing 24” water main in Butler Ave
- Existing 8” sewer main in Butler Ave



Public Systems Impact Analysis

Stormwater Analysis and System

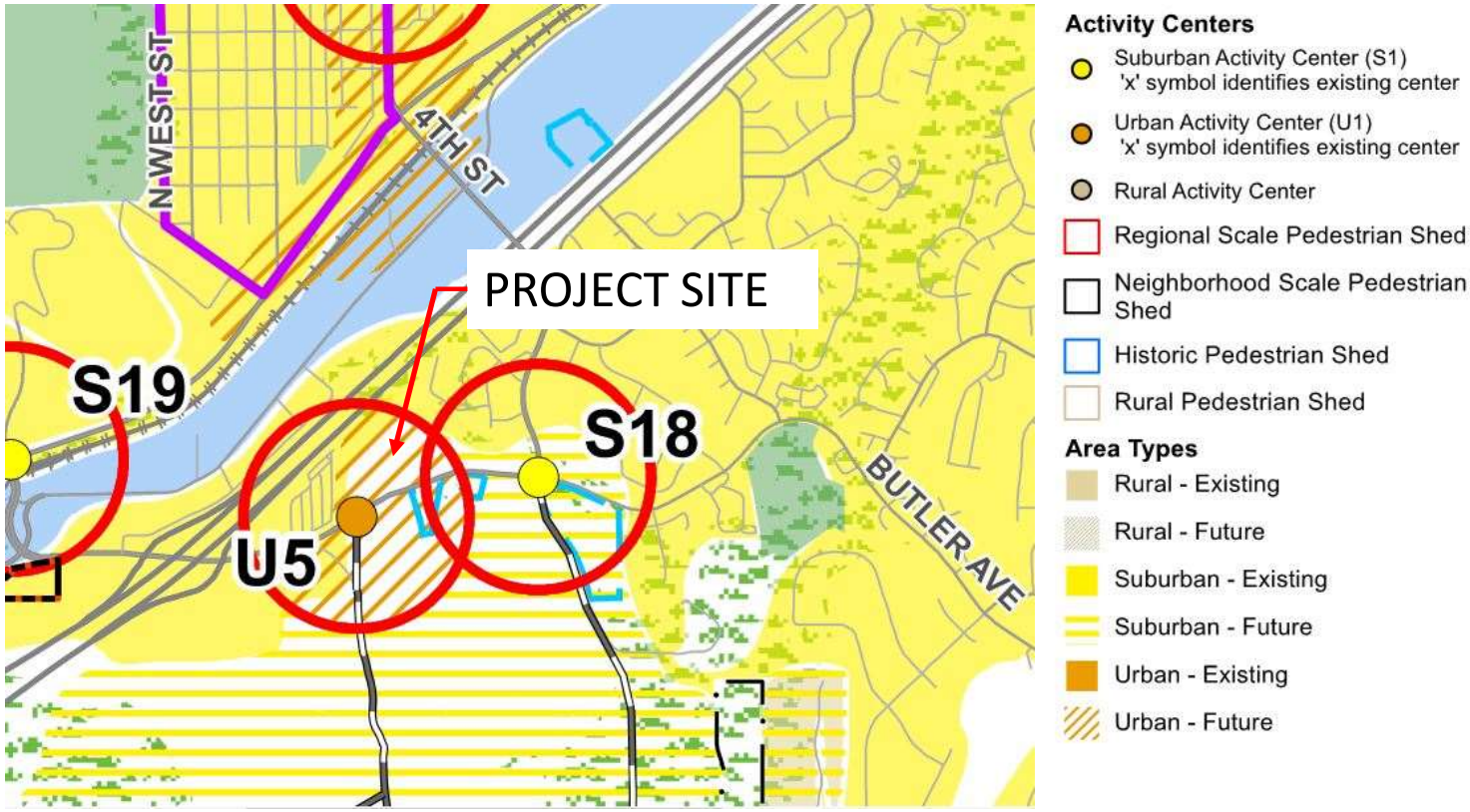
- Site includes 3 surface basins and 3 underground storage basins
- Will retain and meter out Runoff Capture Volume (ROCV) and retention volume



Regional Plan Analysis

Area and Place type

- Area Type
  - Future Urban
- Place Type
  - Regional Urban Activity Center (U5)



Regional Plan Analysis

Regional Urban Activity Center

- Mixed-use projects in an activity center
- Professional Office and Commercial space development along transit corridor
- Residential land uses with increased density and a variety of housing choices
- Unique development within established neighborhoods
- Pedestrian, bicycle, and transit oriented design

Regional Plan Analysis

Comprehensive Planning, Current Planning staff and the Applicant analyzed the following goal and policy topics:

- Environmental Planning and Conservation
- Open Space
- Water Resources
- Efficient use of Energy
- Community Character
- Growth areas and Land Use
- Transportation
- Neighborhoods, Housing & Urban Conservation
- Economic Development

Regional Plan Analysis

Policy Analysis – Key points and community benefits supporting the proposed amendment are listed below:

- Increased density with mixed uses in Urban Activity Center
- All electric development
- Financial contribution to new water and traffic infrastructure
- Preserves floodplain and forest resources on-site
- Supports multi-modal transportation
- Invest in existing neighborhoods and activity centers for purposes of developing complete and connected places.

Findings

Finding #1: Conformance with the General Plan

- Regional Urban Activity Center character
- Mutual benefit of new commercial activity
- Civic Spaces
- Increases residential choices and density in activity center
- Connections to alternate modes of transportation
- Enhance quality of existing neighborhoods

Findings

Finding #2: Community Benefits and Public Good

- Infill underutilized property in town
- Affordable Housing
- Supports traffic and water infrastructure upgrades
- Efficient use of commercial and transportation corridors
- Sustainable all electric development
- Increases stability of adjacent neighborhoods

Findings

Finding #3: Site is Physically Suitable

- Meets applicable codes and requirements
- Mitigates any impacts determined by impact analyses

Development Agreement

Purpose of the agreement:

- Administration of the permanent Affordable Housing units
- Land uses allowed on the future commercial pad
- In-lieu frontage improvements
- Proportional share cost of the permanent stop light or round-about at Butler Ave and N Fourth St
- Soliere transmission main proportional share

Citizen Participation

Neighborhood Meetings

- October 3, 2022, held virtually via Zoom meeting
  - 1 individual attended
- October 6, 2023, virtually via Zoom meeting
  - 2 individuals attended
- General Topics discussed
  - Impact of development on existing traffic
  - Units intended to be for rent
  - Location of commercial uses

Recommendation

Staff recommends the Commission, in accordance with the findings presented, forward the Direct to Ordinance Zoning Map Amendment request to the City Council with a recommendation for approval of case PZ-21-00284-03, subject to the following five conditions, which will be included into the zoning map amendment ordinance:

1. The subject property must be developed in accordance with the approved Site Plan and the conditions of approval dated February 2, 2023. Modifications (other than minor modifications) to the approved site plan will require an amendment to this Direct to Ordinance Zoning Map Amendment request.

2. All other requirements of the Zoning Code and other City codes, ordinances, and regulations, shall be met by the proposed development.

3. All terms, conditions, and restrictions detailed within the "Development Agreement between the City of Flagstaff and Miramonte Acquisitions, LLC for the Lofts on Butler" must be fully satisfied.

4. The Developer's failure to obtain certificate of occupancy for the entirety of the Project within five (5) years of the effective date of the rezoning ordinance shall entitle the City, in its sole discretion, to conduct a public hearing for the purpose of reverting the Highway Commercial (HC) zoning on the Property to its former zoning classification of Medium Density Residential (MR) and Rural Residential (RR), in accordance with Arizona Revised Statutes § 9-462.01.

5. All parcel reconfigurations must be completed prior to the issuance of the first Building Permit.

The End

- Questions / Comments
- Applicant Presentation

Return to:

City Clerk
City of Flagstaff
211 W. Aspen Ave.
Flagstaff, AZ 86001

DEVELOPMENT AGREEMENT
between
THE CITY OF FLAGSTAFF
and
MICM BUTLER LOFTS PROJECT LP/SIERRA VISTA NO 6 L.L.C./BROOKSTONE VENTURES L.C.
for
THE LOFTS ON BUTLER

THIS DEVELOPMENT AGREEMENT ("**Agreement**") is entered into on this _____ day of _____, 2023, by and between the CITY OF FLAGSTAFF, an Arizona municipal corporation ("**City**"), and MICM BUTLER LOFTS PROJECT LP, a Delaware limited liability company ("**Developer**") and SIERRA VISTA NO 6 L.L.C. and BROOKSTONE VENTURES L.C. (collectively "**Owner**"). City and Developer are referred to in this Agreement collectively as the "**Parties**" or individually as a "**Party**."

RECITALS

A. A.R.S. § 9-500.05 authorizes the City to enter into development agreements with landowners and persons having an interest in real property in order to facilitate development of property.

B. Owner is the owner of and Developer is in contract to acquire from Owner that certain real property located at 2950 E. Butler Avenue, in Flagstaff, Arizona, 86004, consisting of four undeveloped parcels, totaling approximately 17.24 acres. These parcels are identified as Coconino County Assessor Parcel Numbers 106-04-006B, 106-04-007C, 107-11-001B, and 107-44-062. Parcels 106-04-006B and 107-11-001B are currently zoned Rural Residential (RR), parcel 106-04-007C is currently zoned Highway Commercial (HC), and Parcel 107-44-062 is currently zoned Medium Density Residential (MR). All parcels currently have a Resource Protection Overlay (RPO) and are legally described in **Exhibit A** and depicted in **Exhibit B** (the "**Property**").

B. Developer intends to construct a mixed-use development consisting of 172 multi-family residential units and approximately 2,154 square feet of commercial office space, and to set aside an approximately 1.09-acre area for future commercial development (the **"Project"**). Developer concurrently is requesting a zoning map amendment to change the City of Flagstaff's RR and MR zoning designations on part of the Property to HC, with the RPO.

C. The Parties desire to enter into this Agreement in order, among other things, to facilitate the development of the Property by providing for and establishing the community character of the Property, the type of land uses and the location, density, and intensity of such land uses, as depicted in the site plan for the Project (the **"Site Plan"),** a copy of which is attached as **Exhibit C**, and as set forth in this Agreement and as conditioned by Ordinance No. 2023-06.

DRAFT

D This Agreement and the Project, described and conditioned as set forth in this Agreement, are consistent with the Flagstaff Regional Plan 2030 in effect on the Effective Date of this Agreement, as set forth below.

E. The Developer desires to comply with the strategies and goals of the City's Carbon Neutrality Plan.

F. The Developer desires to respond to the City's "Housing Crisis Emergency Declaration" (Resolution No. 2020-66) by providing 172 new housing units, 5 % of which will be affordable housing units, to create safe, decent, and affordable housing opportunities for all members of the City.

G. The City has an interest in ensuring that the development of the Property complies with City standards for development and engineering improvements, and the City believes that development of the Property pursuant to this Agreement will result in planning, safety, and other benefits to the City and its residents.

H. The Developer acknowledges that development of the Property pursuant to this Agreement will be beneficial and advantageous to the Developer because it provides assurances to the Developer that it will have the ability to develop the Property in accordance with the Site Plan as set forth herein.

I. The City believes that the development of the Property under this Agreement will result in planning, safety, and other benefits to the city of Flagstaff and its residents.

J. The City and Developer acknowledge that this Agreement is a development agreement pursuant to the provision of A.R.S. § 9-500.05.

AGREEMENT

1. NOW, THEREFORE, in consideration of the foregoing recitals and the mutual promises and agreements set forth herein, and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, and in order to fulfill the foregoing objectives, the parties agree as follows:

2. Incorporation of Recitals and Exhibits.

1.1 Recitals and Exhibits. The recitals above, and any exhibit referenced or attached hereto, are incorporated into this Agreement.

3. Entitlements

3.1 Requested Zoning. Developer intends to develop the Property as a mixed-use development consisting of a multifamily residential community with a maximum of 172 dwelling units and approximately 2,154 square feet of commercial office space, and an approximately 1.09-acre area for future development. The Property is currently zoned HC, MR, and RR with the RPO. Concurrent with this Agreement, Developer is requesting to rezone the Property to HC with the RPO through direct to ordinance zoning map amendment application No. PZ-21-00284-03.

3.2 Conditions of Zoning Map Amendment. Developer agrees to be subject to all the terms, conditions, and stipulations of the rezoning ordinance for PZ-21-00283-03 (Ordinance No. 2023-06) and approved Site Plan (PZ-21-00284-02), including any approved development standards, engineering, or other modification(s). In addition to the provisions for reversion outlined in Ordinance No. 2023-06 and the Flagstaff City Code, the

Developer's failure to obtain a building permit for the entirety of the Project within five (5) years of the effective date of the rezoning ordinance shall entitle City, in its sole discretion, to conduct a public hearing to revert zoning on the Property to its former zoning classifications, by Arizona Revised Statutes § 9-462.01.

3.3 Development Standards. For a period of five (5) years from the Effective Date, the development of the mixed-use (residential and office) portion of the Property, as well as the requirements for Improvements, will be governed by the Flagstaff Zoning Code, ordinances, regulations, rules, guidelines, and standards in effect on the Effective Date. For any development application(s) made after five years from the Effective Date, the codes, ordinances, regulations, rules, guidelines, and standards in effect at the time of application shall apply. Regardless of the time of development, current City Engineering Standards, Building Code, Fire Code, and other Code provisions, regulations, rules, and guidelines shall apply to the Project. The commercial development on the Property will be evaluated using current codes at the time of site plan application completeness.

4. Development Plan.

4.1 Scope of Development. The City and Developer hereby acknowledge that the City of Flagstaff Inter-Division Staff (IDS) approved on February 2, 2023, subject to conditions, the Site Plan attached hereto as **Exhibit C** (City of Flagstaff project number PZ-21-00284-02) depicting a mixed-use development consisting of a maximum of 172 multi-family residential dwelling units (10.88 dwelling units per acre), a clubhouse, and approximately 2,154 square feet of commercial office space. Minor modifications to the Site Plan, as determined by the City Planning Director, will be permitted.

4.1.1 Residential Unit Mix. There will be 43 residential buildings, with four units per building. The Project will include 26 one-bedroom units, 120 two-bedroom units, and 26 three-bedroom units. Two-bedroom/two-bedroom combination units may be replaced with a three-bedroom/one-bedroom combination and not affect minimum parking requirements. Nine of the rental units will be permanently affordable for thirty years, in accordance with Division 10-30.20 of the Flagstaff Zoning Code, and subject to the Affordability Plan, described in **Section 5.4** and in **Exhibit D**. Developer may modify the unit mix within the Project.

4.1.2 Commercial Office Space. The commercial office located on the second floor of the residential clubhouse building must be constructed as part of Phase 1 of this development as shown on the approved Site Plan.

4.2 Conceptual Commercial Site Plan Requirements. The approximately 1.09-acre commercial phase of this project, as shown in **Exhibit C** as a future separate parcel, is conceptual in nature but must meet the following requirements in order to comply with the Urban Activity Center as defined in the Regional Plan. Allowed primary uses shall be all uses allowed in the HC zone with the following exceptions: Industrial, Manufacturing, Processing and Wholesaling uses, Residential Uses, Equipment Rental Yard use, Cemeteries, Telecommunication Facilities, Transportation and Infrastructure, and Vehicle Sales and Services. The minimum height of buildings on the commercial parcel shall be two stories or have appearance of a two-story building, which may be accomplished through taller architectural feature(s). No more than one building may have a drive-through lane. No more than two drive-through lanes are allowed for the building.

4.3 Other Project Requirements.

DRAFT

4.3.1 Project Amenities: Ramadas, pedestrian pathways, and benches will be installed in the civic space and open space areas throughout the development site for residents to enjoy. The Project will provide a clubhouse for the residents which will include a meeting/recreation area, kitchen, and fitness center.

4.3.2 Open Space/Civic Space. The Project shall provide approximately 3.87 acres of Common Open Space, and 0.91 acres of Civic Space. Zoning Code Table 10-40.30.040.C. requires a minimum of 2.39 acres of Common Open Space for the Project. Zoning Code section 10-30.60.090 requires a minimum of 0.80 acres Civic Space for the Project.

5. Developer Obligations

5.1 Construction of Public, Private, and Other Related Improvements. Prior to issuance of public improvement permits for any phase or component of the Project, Developer shall provide security, in a form satisfactory to the City as outlined in the City's Zoning Code, that public and other related improvements will be constructed in accordance with approved plans. Developer shall, at its own expense, construct or cause to be constructed all public and private improvements as required by City's code or ordinances and this Agreement, and in accordance with approved specifications. Following construction of the described public improvements, and dedication of the same to City, City shall assume, at its expense, and in accordance with City policies, the maintenance, and repair of all public improvements to be constructed. Developer agrees that the construction of the public and other related improvements will coincide with the development of the Project, and be completed and accepted by the City prior to certificate of occupancy.

Specifically, the scope and nature of the on-site and off-site improvements to be constructed in connection with the Project are as follows:

5.1.1 Traffic and Street Frontage Improvements. In accordance with the Project's Transportation Impact Analysis (TIA) prepared by Y2K on November 21, 2022 and approved by the City of Flagstaff on January 5, 2023, and the City of Flagstaff Zoning Code10-30.50, traffic mitigation from the completed project is necessary. The parties agree that the Developer's traffic mitigation shall be accomplished through the following combination of construction and cash-in-lieu contributions: 1) Developer shall be solely responsible for the design and construction of one (1) new left turn lane on Butler Avenue to access the western driveway on the Property per City of Flagstaff Engineering and Design and Construction Standards as shown in **Exhibit E**, 2) Developer shall make a cash-in-lieu contribution of $14,995.50 prior to the issuance of any permit (including at-risk permits) commensurate with the Project's proportional share for a future traffic signal or roundabout at the intersection of Butler Avenue and Fourth Street, and 3) Developer will make a cash-in-lieu contribution of two hundred ninety-one thousand six-hundred thirty-six dollars and seventy five cents ($291,636.75) as set forth in **Exhibit E** prior to the issuance of any permit (including any at-risk permit) or by September 30, 2023, whichever is earlier, to the City for the Butler Avenue frontage improvements. In the event that Developer does not timely remit payment for the in-lieu payment for the frontage improvements, the City will construct typical edge improvements and Developer will be solely responsible for constructing all edge improvements required for the development of the Project when development of the Project moves forward. Developer shall dedicate public right of way for the right turn lane, match-up pavement, and roundabout as generally shown on **Exhibit E**, however, Developer acknowledges that additional dedications may be required as the design of the Butler-Fourth Improvements Project is completed. Developer shall also dedicate any easements necessary for the City of Flagstaff construction of the Butler-Fourth Improvements Project, to the City of Flagstaff. All dedications of right-of-way and easements must be dedicated prior to the issuance of certificate of occupancy, or when the City of Flagstaff Butler-Fourth Improvements project reaches 60% design, whichever comes first, to accommodate required traffic and street frontage improvements. Due to the complexity of timing the development of this Project and the City's Butler Avenue-Fourth Avenue improvement project, the City Engineer has the authority to modify the timing of these

requirements and to accept construction of improvements in place of cash in lieu payments and vice versa as appropriate. Prior to dedication of public right of way, all Phase 1 Environmental Site Assessments ("ESA") and Phase 2 ESA recommendations, if any, must be completed by the Developer and accepted by the City. If the development has not received construction permits within two (2) years of the Effective Date of this Agreement, a revised TIA may be required. Additional off-site improvements may be required as part of the review and approval of the new TIA.

5.1.2 On-Site Water and Sewer Improvements. Developer shall construct all water and sewer improvements required to support the project as shown in the Water and Sewer Impact Analysis for the Project dated August 31, 2022 (the "WSIA"). Developer shall design and install water and sewer mains and services within the project site per City of Flagstaff Engineering and Design and Construction Standards and Arizona Department of Environmental Quality ("ADEQ") requirements. The water and sewer improvements must be completed and accepted by the City prior to the issuance of the first Certificate of Occupancy for the Project. In accordance with the approved WSIA, if the development has not received construction permits within two (2) years for the approval date of the WSIA, a revised WSIA may be required. Additional off-site improvements may be required as part of the review and approval of the new WSIA.

5.1.3. Off-Site Water and Sewer Improvements. The Project has previously been identified to need a secondary water source to meet city code requirements outlined in sections 5-02-001-0005 and 13-09-003-0002 that require a secondary source of water for dead end mains over 1000' or any main with over 3 fire hydrants. Prior to the issuance of any Building or Engineering permit on the subject property, Developer will satisfy its obligation for a proportional share of the secondary water source through payment of a cash in lieu of construction payment to the City in the amount of $132,736.28 as set forth in **Exhibit F**. The City will design, permit, construct and maintain the secondary water source infrastructure. As long as the required cash in lieu of construction payment is made, the Lofts at Butler project will have no restriction on Building or Engineering permits due to secondary water source existence or connections.

In order to accommodate the construction of the City's Butler-Fourth Improvements project. Developer shall construct water and sewer stub outs as shown in the WSIA prior to September 30, 2023, unless an extension of time is approved by the City Engineer. If Developer does not timely construct the water and sewer stub outs, then the City will construct them as part of the Butler-Fourth Improvements project and Developer will be responsible for reimbursing the City for the actual cost of the design (if Developer has not provided designs to the City) and construction of the water and sewer stub outs prior to the issuance of any permit (including any at-risk permit).

5.1.4 Stormwater Improvements. Developer shall meet all pre versus post retention requirements per the Drainage Impact Analysis & Preliminary Drainage Report for Lofts on Butler dated October 13, 2022, the Site Plan, and the requirements of the City of Flagstaff Stormwater Management Design Manual, including but not limited to peak flow mitigation, Low Impact Development, and rainwater harvesting requirements. A Drainage Maintenance Easement (DME) will be provided for areas of Rural Floodplain within the property. Boundaries of the DME will be finalized and dedicated prior to Civil Plan approval.

5.2. Adjacent Right-of-Way Landscaping Maintenance. In accordance with City Code, all landscaping and irrigation in adjacent right-of-way areas, including parkways, shall be maintained by the Developer or assignee(s) in perpetuity. Developer shall request and pay for the water meter and set up the water account associated with irrigation for required right-of-way landscaping.

5.3 Dedication of Public Easements. Water, sewer, drainage, public utility, and other easements necessary to accommodate required infrastructure improvements must be identified on the construction plans and dedicated before the approval of civil plans. Dimensions for these easements must be in accordance with City requirements.

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5.4 Affordable Housing. The Developer shall provide 5% of the overall unit count (based on the Site Plan, 9 of 172 units) (the "**Affordable Units**") as income-restricted rental units for households earning, on average, up to 80% of the Area Median Income ("**AMI**"), as defined by the United States Department of Housing and Urban Development ("**HUD**"), or its successors. Additional eligibility criteria and other requirements for this affordability program are outlined in the Affordability Plan attached as **Exhibit D**. The Affordability Plan may be modified by and between the City's Housing Director and Owner without further City Council action or need to formally amend this Agreement. Affordable Units must remain affordable as described above and subject to the Affordability Plan for thirty years following the Project's Certificate of Occupancy.

5.5 Recycling. The Developer will provide recycling collection facilities at all solid waste enclosures within the Project, which will include signage on City approved recycling materials. The recycling and solid waste collection facilities will be made available for all tenants including the residents and the tenants of the commercial office space. All residential units will include double heavy-duty hidden waste baskets in the kitchen cabinets to promote recycling. Property managers for the residential units and the commercial office space will provide educational materials to tenants on what is recyclable in the city of Flagstaff and allowed in the receptacles. Tenants will also be provided with information on local valet services for recycling and composting and how they can learn more about ways to recycle by contacting the City of Flagstaff Sustainability Program at 928-213-2152 or sustainability@flagstaffaz.gov. The future commercial parcel will include recycling and solid waste collection facilities with signage on City approved recycling materials.

5.6 Bicycle Storage and Amenities. The Developer will provide bicycle parking facilities for 40 bicycles, 16 uncovered and 24 covered. Zoning Code section 10-50.80.050 requires a minimum of 18 bicycle parking spaces for this Project.

5.7 Sustainable Construction. The development will be all electric, including all electric appliances; natural gas will not be used in this development. Low- VOC and formaldehyde-free materials will be used for the carpet, cabinets, and paint. The HVAC unit and all appliances installed in the residential units will be Energy Star Certified. This development is not using the Sustainable Residential Building Incentives.

5.8 Materials Management. The Developer agrees to incorporate infrastructure to support recycling activities on-site, including the provision of adequate space to locate recycling receptacles next to receptacles dedicated for trash and double heavy-duty hidden waste baskets in the kitchen cabinets in all residential units to promote recycling. During construction for the multi-family development and future commercial development, the Developer will have a written solid waste program approved by the City of Flagstaff Sustainability Section that includes a plan for recycling or reuse of paper, cardboard, plastics, and metals; recycling or reuse of lumber scraps; and diversion of masonry, cementitious, and possibly gypsum material from the landfill. To the extent feasible, the Developer will reuse native materials on-site. To ensure compliance with this section the Developer agrees to work with the City and allow the City access to the Project site as needed (including during construction).

5.9 Rental and Management Policies. Developer will adhere to the following policies in the rental and management of the rental units:

- No lease or rental agreement, direct or indirect sublease, assignment, or transfer of obligations of a tenant shall be for a period of fewer than 60 days.
- All lease or rental agreements shall include an eviction addendum prohibiting illegal, nuisance, and dangerous conditions and activity.
- Property owner agrees to accept emergency rental assistance funds intended to prevent eviction for qualifying households. Such funds may be provided to property management through state or non-profit agencies, or by tenants.

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- Developer agrees to participate in the City of Flagstaff Crime-Free Multi-Housing Program and agrees that a final safety plan that addresses events, parties, general safety requirements, staff, operations.
- Developer will provide annual training to property management for managing, operating, and maintaining the Project by the provisions of this Section.

5.10 Permits and Building Fees. Developer agrees and understands that upon the submittal date of any application or permit, the current fees in effect at the time of submittal shall apply to the Project.

6. Default and Remedies.

6.1 Events Constituting Default. A Party is in default if such Party breaches an obligation required of the Party under this Agreement and such breach continues for a period of thirty days after written notice thereof from the Party not in default; provided, however, that if the nature of the default is such that it cannot reasonably be cured within the 30 days following written notice, then, in that case, the default may be cured if the Party failing to perform commences a cure within the such 30-day period and thereafter diligently and expeditiously pursues such cure to completion within 60 days of the written notice.

6.2 Developer's Remedies. In the event that City is in default under this Agreement and fails to cure any such default within the period required therefore as outlined in **Section 6.1**, then, in that event, in addition to all other legal and equitable remedies which Developer may have, Developer may terminate this Agreement by written notice delivered to City.

6.3 City's Remedies. In the event that Developer is in default under this Agreement, and Developer thereafter fails to cure any such default within the period described in this **Section 6.1**, then, in that event, in addition to all other legal and equitable remedies which City may have, City may terminate this Agreement by written notice delivered to Developer.

6.4 Dispute Resolution. In the event there is a dispute hereunder that the Parties cannot resolve between themselves, the Parties agree that there shall be a forty-five-day moratorium on litigation during which time the Parties agree to attempt to settle the dispute by nonbinding mediation before the commencement of litigation. The mediation shall be held under the commercial mediation rules of the American Arbitration Association. The mediator selected shall have at least five years' experience in mediating or arbitrating disputes relating to commercial property development. Each Party agrees to bear its own costs in the mediation. The Parties will not be obligated to mediate if an indispensable party is unwilling to join the mediation. This section does not constitute a waiver of a Party's right to initiate legal action if a dispute is not resolved through good faith negotiation or mediation, or if provisional relief is sought under the Arizona Rules of Civil Procedure.

6.5 Development Rights in the Event of Termination. Upon the termination of this Agreement as provided herein, the Developer shall have no further rights to develop the Property under this Agreement.

6.6 No Personal Liability. No current or former member, manager, officer, director, agent, representative, official, employee, or another natural person of City or Developer when acting within the scope of their official capacity shall be personally liable (a) in the event of any default or breach by City or Developer, as applicable; (b) for any amount which may become due to the non-breaching party or its successor or assign; or (c) under any obligation of City or Developer, as applicable, under the terms of this Agreement.

6.7 Liability and Indemnification. The Developer shall indemnify, protect, defend and hold harmless the City, its Council members, officers, employees, and agents for, from, and against any claims, demands, losses, damages, liabilities, fines, charges, penalties, administrative and judicial proceedings and orders, judgments, remedial actions of any kind, including, without limitation, reasonable attorney's fees and costs of defense arising,

directly or indirectly, in whole or in part, out of the performance of this Agreement by City or Developer, or nonperformance of this Agreement by Developer.

7. General Provisions.

7.1 Effective Date and Term. This Agreement shall be effective (the "**Effective Date**") upon execution by the Parties hereto and recordation by A.R.S. § 9-500.05 (as amended). The term of this Agreement shall extend from the Effective Date of this Agreement and shall automatically terminate thirty years from such date. The affordable housing provisions in Section 5.4 survive the termination of this Agreement.

7.2 Amendments. This Agreement may be amended or canceled in whole or in part at any time by a written amendment executed by the Parties or by their successors in interest. All amendments to this Agreement must be recorded in the Official Records of Coconino County, Arizona, within ten days following execution, as required by A.R.S. § 9- 500.05(D).

7.3 Assignment and Successors. The provisions of this Agreement shall inure to the benefit and be binding upon any successors and assigns of the Parties hereto. Notwithstanding anything contained in the foregoing to the contrary, until completion of construction of the Project, the right of the Developer to assign its rights, duties, and obligations under this Agreement shall be limited to the following:

a) Assignment by the Developer in connection with obtaining financing and the exercise of lender remedies with respect thereto;

b) Assignment of all rights and obligations of the Developer under this Agreement to a real estate developer reasonably acceptable to and approved by City; however, if the Developer or a current principal of the Developer retains an ownership interest and management control in such real estate developer, then, in that event, City's prior approval shall not be required; or

c) Assignment by the Developer of its rights under this Agreement to a corporation, partnership, joint venture, limited liability company, trust, or other legal entity, which is controlled by, under common control with, or which controls the Developer, or which is owned or controlled by a principal of the Developer.

With the exceptions noted above, the Developer shall not transfer or assign any part of its rights and/or obligations arising under this Agreement without the prior written approval of the City, which approval shall not be unreasonably withheld, conditioned, or delayed. After the completion of construction of the Project, the Developer may assign this Agreement to any purchaser without the City's consent (provided that the City is timely notified of such assignment). Notwithstanding anything contained in the foregoing to the contrary, no assignment of this Agreement or any specific rights, obligation, or duties of the Developer under this Agreement shall release the Developer, its successors, or assigns, from its obligations hereunder, unless specifically agreed to by City.

7.4 Attorney's Fees and Costs. If legal action by any Party is brought because of a breach of this Agreement or to enforce a provision of this Agreement, the prevailing Party shall be entitled to reasonable attorneys' fees and court costs.

7.5 Authority to Sign. The person executing this Agreement on behalf of the Developer warrants and represents that they have the authority to execute this Agreement on behalf of the Developer, that the execution of this Agreement has been approved by all required actions on the part of such Parties, and that this Agreement is fully binding on such Parties.

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7.6 Choice of Law. This Agreement shall be construed under and by the laws of the State of Arizona.

7.7 Compliance with All Laws. The Developer will comply with all applicable Federal, State, County, and City laws, ordinances, and regulations.

7.8 Conflict of Interest. Under Arizona law, rules, and regulations, no member, official, or employee of the City shall have a personal interest, direct or indirect, in this Agreement, nor shall any such member, official, or employee participate in any decision relating to this Agreement which affects his or her personal interest or the interest of any corporation, partnership or association in which he or she is, directly or indirectly, interested. This Agreement is subject to the cancellation provisions of A.R.S. § 38-511.

7.9 Counterparts. This Agreement may be executed in any number of counterparts, each of which will constitute an original, but all of which will constitute the same agreement.

7.10 Covenants Run with the Land. The covenants and agreements contained in this Agreement are mutual covenants and also constitute conditions to the subsequent or concurrent performance of the Party benefitted thereby. All covenants shall be covenants running with the land and shall bind and inure to the benefit of the Parties and their respective successors and permitted assigns.

7.11 Entire Agreement. This Agreement, including the following exhibits which are incorporated in this Agreement by reference, constitutes the entire agreement between the parties and supersedes any prior written or oral understandings or agreements between the parties. This provision applies only to the entirety of this Agreement; additional and separate zoning stipulations and agreements with the City may apply to the Property, and this provision does not affect them.

Exhibit A- Legal Description of the Property
Exhibit B- ALTA Survey Map
Exhibit C- Site Plan
Exhibit D- Affordability Plan
Exhibit E- Offsite Traffic and Street Frontage Improvements and Cash in Lieu
Exhibit F- Offsite Water Improvements Cash in Lieu

7.12 No Obligation to Develop. Except as specifically outlined in this Agreement, there shall be no obligation for the Developer to construct the Project.

7.13 No Partnership, No Agency. It is specifically understood and agreed by and among the Parties that the development of the Project on the Property is a private development, that no Party is acting as the agent of any other Party in any respect, and that each Party is an independent contracting entity concerning the terms, covenants, and conditions contained in this Agreement. The Parties acknowledge and agree that this Agreement does not create a partnership, joint venture, or similar entity and that no such partnership, joint venture, or similar entity has been created by City and Developer.

7.14 No Third-Party Beneficiaries. No person or entity other than a Party to this Agreement or legal representative, successor in interest, or assign of such party shall be entitled to rely on this Agreement or the performance of any Party. This Agreement is not made for the benefit of any person or entity, not a Party.

7.15 Notices. All notices and communications provided for herein, or given in connection herewith, shall be validly made if in writing and delivered personally or sent by registered or certified United States Postal Service mail, return receipt requested, postage prepaid to:

To City:	To Developer:
City Manager City of Flagstaff 211 W. Aspen Avenue Flagstaff, AZ 86001	Miramonte Acquisitions, LLC 2502 E. River Road Tucson, AZ. 85718
Copy to:	
City Attorney City of Flagstaff 211 W. Aspen Avenue Flagstaff, AZ 86001	Aspey, Watkins & Diesel, PLLC Whitney Cunningham 123 N. San Francisco St., Suite 300 Flagstaff, AZ 86001

or to such other addresses as either party may from time to time designate in writing and deliver in a like manner. Any such change of address notice shall be given at least ten (10) days before the date on which the change is to become effective. Notices given by mail shall be deemed delivered 72 hours following deposit in the United States Postal Service in the manner set forth above.

7.16 Recording of Agreement. By A.R.S. § 9-500.05(D), this Agreement shall be recorded in its entirety in the Official Records of Coconino County no later than ten days from the date of its execution.

7.17 Section Headings. All section headings and subheadings are inserted for convenience only and shall not affect the construction or interpretation of this Agreement.

7.18 Severability. If any provision of this Agreement is declared void or unenforceable, such provision shall be severed from this Agreement, which shall otherwise remain in full force and effect.

7.19 Time is of the Essence. To enforce the provisions of this Agreement, time is of the essence.

7.20 Waiver. No delay in exercising any right or remedy shall constitute a waiver thereof, and no waiver by the parties of the breach of any provision of this Agreement shall be construed as a waiver of any preceding or succeeding breach of the same or of any other provision of this Agreement.

8. Waiver of Claim for Diminution in Value.

The Developer hereby waives and fully releases any financial loss, injury, claims, and causes of action that the Developer may have, now or in the future, for any "diminution in value" and for any "just compensation" under the Private Property Rights Protection Act, codified in A.R.S §§ 12-1131 through 12-1138 (the "**Act**"), in connection with the application of City's existing land use laws and including Ordinance No. 2023-06 regarding the Property. This waiver constitutes a complete release of any claims and causes of action that may arise or may be asserted under the Act about the subject Property. The Developer agrees to indemnify, hold harmless, and defend the City, its officers, employees, and agents, from any claims, causes of actions, demands, losses, and expenses, including attorney's fees and litigation costs, that may be asserted by or may result from any of the present or future owners of any interest in the Property seeking potential compensation, damages, attorney's fees, or costs under the Act that they may have, as a result of the application of City's existing land use laws, including Ordinance No. 2023-06, upon the Property.

[SIGNATURES APPEAR ON THE FOLLOWING PAGE]

DRAFT

IN WITNESS WHEREOF, Developer has executed this Agreement, and City has caused this Agreement to be executed by its duly authorized representatives.

City of Flagstaff

_____
Becky Daggett, Mayor

Date_____

Attest:

_____
City Clerk

Approved as to form and authority:

_____
City Attorney

Developer

MICM BUTLER LOFTS PROJECT LP, a Delaware limited partnership
By: MICM BULTER LOFTS PROJECT GP LLC, a Delaware limited liability company, its General Partner
By: MICM HOLDING, LP a Delaware limited partnership, its Manager
By: Miramonte RCM GP, LLC, an Arizona limited liability company, its General Partner

By: _____
Name: Christopher Kemmerly
Title: Manager

Date_____

THE STATE OF ARIZONA)
) ss.
County of Coconino)

On this _____ day of _____, 2022, before me, the undersigned Notary Public, personally appeared Chris Kemmerly, personally known to me or shown by satisfactory evidence to be the person whose signature appears above and acknowledged to me that he signed the foregoing document for the purposes therein contained. IN WITNESS WHEREOF, I have set my hand and official seal.

DRAFT

_____
Notary Public

Seal:

Owner

SIERRA VISTA NO 6, L.L.C.

By: _____
Name:
Title:

Date_____

BROOKSTONE VENTURES, L.C.

By: _____
Name:
Title:

Date_____

For Sierra Vista No 6, L.L.C.:

THE STATE OF ARIZONA)
) ss.
County of Coconino)

On this _____ day of _____, 2022, before me, the undersigned Notary Public, personally appeared _____ , personally known to me or shown by satisfactory evidence to be the person whose signature appears above and acknowledged to me that he signed the foregoing document for the purposes therein contained. IN WITNESS WHEREOF, I have set my hand and official seal.

_____
Notary Public

Seal:

For Brookstone Ventures, L.C.:

THE STATE OF ARIZONA)
) ss.
County of Coconino)

DRAFT

On this _____ day of _____, 2022, before me, the undersigned Notary Public, personally appeared _____ , personally known to me or shown by satisfactory evidence to be the person whose signature appears above and acknowledged to me that he signed the foregoing document for the purposes therein contained. IN WITNESS WHEREOF, I have set my hand and official seal.

_____
Notary Public

Seal:

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Exhibit A

Legal Description

Legal Description

The Land referred to herein below is situated in the County of Coconino, State of Arizona, and is described as follows:

PARCEL NO. 1:

The East half of the Northeast quarter of the Northeast quarter of Section 23, Township 21 North, Range 7 East of the Gila and Salt River Base and Meridian, Coconino County, Arizona;

EXCEPT the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter;

AND EXCEPT a strip of land 88.00 feet in width, the centerline of which is described as follows: BEGINNING at a point from which the Northeast corner of said Section 23 bears North 00° 44' 59" West, a distance of 753.26 feet;

THENCE South 70° 09' 11" West, a distance of 32.67 feet to a point of curvature of a curve to the left having a radius of 600.00 feet and a central angle of 12° 48' 25";

THENCE along said curve, a distance of 134.11 feet to a point of tangency;

THENCE South 57° 20' 46" West, a distance of 340.23 feet to the North line of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23 and the POINT OF TERMINUS;

AND EXCEPT a portion said Section 23 more particularly described as follows:

COMMENCING at the Northeast corner of said Section 23;

THENCE South 00° 46' 03" East, along the East line of said Section 23, a distance of 706.73 feet to the TRUE POINT OF BEGINNING, being on the Northerly right-of-way of Butler Avenue, as described in Docket 918, Page 572, records of Coconino County, Arizona;

THENCE continuing South 00° 46' 03" East, a distance of 616.61 feet to the North 1/16th corner of Sections 23 and 24;

THENCE South 88° 39' 50" West, along the South line of the Southeast quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23, a distance of 326.90 feet to the Southeast corner of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23;

THENCE North 00° 42' 07" West, along the East line of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, a distance of 330.79 feet to the Northeast corner of said Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23;

THENCE South 88° 38' 54" West, along the North line of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23, a distance of 191.13 feet to the Northerly right-of-wayline of said Butler Avenue;

THENCE North 57° 19' 47" East (North 57° 19' 47" West, record), along said Northerly right-of-way line, a

distance of 403.84 feet to a point of curvature;

THENCE along a curve to the right, concave to the Southeast, having a central angle of 12° 46' 01" (12° 48' 25" record), and a radius of 645.31 feet (644.00 feet, record), an arc distance of 143.79 feet to a point of tangency;

THENCE continuing along said Northerly right-of-way line of Butler Avenue, North 70° 05' 48" East, a distance of 47.97 feet back to the TRUE POINT OF BEGINNING.

PARCEL NO. 2:

That part of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of Section 23, Township 21 North, Range 7 East of the Gila and Salt River Base and Meridian, Coconino County, Arizona, more particularly described as follows:

COMMENCING for reference at the Northeast corner of said Section 23;

THENCE South 00° 44' 59" East, along the East line of said Section 23, a distance of 1323.33 feet to the Southeast corner of the Northeast quarter of the Northeast quarter of said Section 23;

THENCE South 88° 39' 50" West, along the South line of said Northeast quarter of the Northeast quarter of said Section 23, a distance of 653.80 feet to the Southwest corner of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, being also that parcel described in Instrument recorded in Docket 376, Page 654, records of Coconino County, Arizona;

THENCE North 00° 12' 45" West, along the West line of said Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, a distance of 249.28 feet to the Northerly line of said Butler Avenue, as described in Docket 934, Page 44, records of Coconino County, Arizona and the TRUE POINT OF BEGINNING;

THENCE continuing North 00° 12' 45" West, along the West line of said Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, a distance of 81.26 feet to the Northwesterly corner thereof;

THENCE North 88° 38' 08" East, along the North line of said Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, a distance of 132.05 feet to the Northerly right-of-way line of said Butler Avenue;

THENCE South 57° 20' 46" West, along the Northerly right-of-way line of said Butler Avenue, a distance of 156.44 feet back to the TRUE POINT OF BEGINNING.

PARCEL NO. 3:

That part of the Southeast quarter of the Southeast quarter of Section 14, Township 21 North, Range 7 East of the Gila and Salt River Base and Meridian, Coconino County, Arizona, lying Southerly of the Southerly right-of-way line of Interstate Highway 40, as described in Instrument recorded in Docket 296, Page 515, records of Coconino County, Arizona.

PARCEL NO. 4:

Tract J, FOREST SPRINGS TOWNHOMES, UNIT 1, as shown on the plat thereof, recorded in Case 9, Maps 92-92B, inclusive, records of Coconino County, Arizona.

Exhibit B

ALTA Survey Map

PLOTTED: Jan 19, 2022 - 10:10am

ALTA/NSPS LAND TITLE SURVEY

A PORTION OF THE NORTHEAST QUARTER OF SECTION 23, THE SOUTHEAST QUARTER OF SECTION 14, AND THE SOUTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 7 EAST, GILA AND SALT RIVER MERIDIAN, COCONINO COUNTY, ARIZONA

LEGAL DESCRIPTION

The Land referred to herein below is situated in the County of Coconino, State of Arizona, and is described as follows:

PARCEL NO. 1:
The East half of the Northeast quarter of the Northeast quarter of Section 23, Township 21 North, Range 7 East of the Gila and Salt River Base and Meridian, Coconino County, Arizona;
EXCEPT the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter;

AND EXCEPT a strip of land 88.00 feet in width, the centerline of which is described as follows:
BEGINNING at a point from which the Northeast corner of said Section 23 bears North 00° 44' 59" West, a distance of 753.26 feet;

THENCE South 70° 09' 11" West, a distance of 32.67 feet to a point of curvature of a curve to the left having a radius of 600.00 feet and a central angle of 12° 48' 25";

THENCE along said curve, a distance of 134.11 feet to a point of tangency;

THENCE South 57° 20' 46" West, a distance of 340.23 feet to the North line of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23 and the POINT OF TERMINUS;

AND EXCEPT a portion said Section 23 more particularly described as follows:
COMMENCING at the Northeast corner of said Section 23;

THENCE South 00° 46' 03" East, along the East line of said Section 23, a distance of 706.73 feet to the TRUE POINT OF BEGINNING, being on the Northerly right-of-way of Butler Avenue, as described in Docket 918, Page 572, records of Coconino County, Arizona;

THENCE continuing South 00° 46' 03" East, a distance of 616.61 feet to the North 1/16th corner of Sections 23 and 24;

THENCE South 88° 39' 50" West, along the South line of the Southeast quarter of the Southeast quarter of the Northeast quarter of said Section 23, a distance of 326.90 feet to the Southeast corner of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23;

THENCE North 00° 42' 07" West, along the East line of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, a distance of 330.79 feet to the Northeast corner of said Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23;

THENCE South 88° 38' 54" West, along the North line of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of said Section 23, a distance of 191.13 feet to the Northerly right-of-way line of said Butler Avenue;

THENCE North 57° 19' 47" East (North 57° 19' 47" West, record), along said Northerly right-of-way line, a distance of 403.84 feet to a point of curvature;

THENCE along a curve to the right, concave to the Southeast, having a central angle of 12° 46' 01" (12° 48' 25" record), and a radius of 645.31 feet (644.00 feet, record), an arc distance of 143.79 feet to a point of tangency;

THENCE continuing along said Northerly right-of-way line of Butler Avenue, North 70° 05' 48" East, a distance of 47.97 feet back to the TRUE POINT OF BEGINNING.

PARCEL NO. 2:
That part of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter of Section 23, Township 21 North, Range 7 East of the Gila and Salt River Base and Meridian, Coconino County, Arizona, more particularly described as follows:
COMMENCING for reference at the Northeast corner of said Section 23;

THENCE South 00° 44' 59" East, along the East line of said Section 23, a distance of 1323.33 feet to the Southeast corner of the Northeast quarter of the Northeast quarter of said Section 23;

THENCE South 88° 39' 50" West, along the South line of said Northeast quarter of the Northeast quarter of said Section 23, a distance of 653.80 feet to the Southwest corner of the Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, being also that parcel described in Instrument recorded in Docket 376, Page 654, records of Coconino County, Arizona;

THENCE North 00° 12' 45" West, along the West line of said Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, a distance of 249.28 feet to the Northerly line of said Butler Avenue, as described in Docket 934, Page 44, records of Coconino County, Arizona and the TRUE POINT OF BEGINNING;

THENCE continuing North 00° 12' 45" West, along the West line of said Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, a distance of 81.26 feet to the Northwesterly corner thereof;

THENCE North 88° 38' 08" East, along the North line of said Southwest quarter of the Southeast quarter of the Northeast quarter of the Northeast quarter, a distance of 132.05 feet to the Northerly right-of-way line of said Butler Avenue;

THENCE South 57° 20' 46" West, along the Northerly right-of-way line of said Butler Avenue, a distance of 156.44 feet back to the TRUE POINT OF BEGINNING.

PARCEL NO. 3:
That part of the Southeast quarter of the Southeast quarter of Section 14, Township 21 North, Range 7 East of the Gila and Salt River Base and Meridian, Coconino County, Arizona, lying Southerly of the Southerly right-of-way line of Interstate Highway 40, as described in Instrument recorded in Docket 296, Page 515, records of Coconino County, Arizona.

PARCEL NO. 4:
Tract J, FOREST SPRINGS TOWNHOMES, UNIT 1, as shown on the plat thereof, recorded in Case 9, Maps 92-92B, inclusive, records of Coconino County, Arizona.



VICINITY MAP
NOT TO SCALE

SCHEDULE "B" EXCEPTIONS:

ITEM NO.	DOCKET/PAGE (OR INST.#)	DESCRIPTION	LOCATION
1	---	MATTERS OF PUBLIC RECORD	NOT PLOTTABLE
2	---	TAXES AND ASSESSMENTS	NOT PLOTTABLE
3	---	MATTERS OF PUBLIC RECORD	NOT PLOTTABLE
4	---	MATTERS OF PUBLIC RECORD	NOT PLOTTABLE
5	---	MATTERS OF PUBLIC RECORD	NOT PLOTTABLE
6	---	PATENTS AND CLAIMS	NOT PLOTTABLE
7	---	MATTERS OF PUBLIC RECORD	NOT PLOTTABLE
8	---	TAXES AND ASSESSMENTS	NOT PLOTTABLE
9	---	WATER RIGHTS AND CLAIMS	NOT PLOTTABLE
10	---	OBLIGATIONS PURSUANT TO TITLE 48	NOT PLOTTABLE
11	---	RESERVATIONS AND PATENTS	NOT PLOTTABLE
12	296/515	EASEMENT-HIGHWAY AND INCIDENTAL PURPOSES	AS SHOWN
13	366/248	EASEMENT-HIGHWAY AND INCIDENTAL PURPOSES	AS SHOWN
14	376/369	EASEMENT-ROADWAY, UTILITIES, AND INCIDENTAL PURPOSES	AS SHOWN
15	393/406 466/161	EASEMENT-ROADWAY, UTILITIES, AND INCIDENTAL PURPOSES	EXTINGUISHED EASEMENT
16	918/572	EASEMENT-ROADWAY AND INCIDENTAL PURPOSES	AS SHOWN
17	2060/978	AIRPORT INFLUENCE AREA	BLANKET EASEMENT
18	169/142	BLANKET EASEMENT GRANT	BLANKET EASEMENT
19	10/37	MATTERS OF SURVEY	AS SHOWN
20	3329643	EASEMENT-PUBLIC UTILITY AND INCIDENTAL PURPOSES	DOES NOT AFFECT SUBJECT PARCEL
21	9/92	EASEMENTS AND CONDITIONS PER PLAT	DOES NOT AFFECT SUBJECT PARCEL
22	3356459	TERMS AND CONDITIONS	NOT PLOTTABLE
23	3356460, 3384493, 3475065 3647329, 3898558	RESTRICTIONS AND COVENANTS	NOT PLOTTABLE
24	3668066	RESTRICTIONS AND COVENANTS	NOT PLOTTABLE
25	---	LOCATION OF IMPROVEMENTS	AS SHOWN
26	---	RIGHTS OF LESSEES	NOT PLOTTABLE

ZONING CLASSIFICATION:

PARCEL NO. 1 AND NO. 3 – RURAL RESIDENTIAL (RR)

PARCEL NO. 2 – HIGHWAY COMMERCIAL (HC)

PARCEL NO. 4 – MEDIUM DENSITY RESIDENTIAL (MR)

PER CITY OF FLAGSTAFF LAND DEVELOPMENT CODE SEC. 10-40.30.040

FLOOD ZONE CLASSIFICATION:

A PORTION OF SUBJECT PARCEL NO. 4 LIES WITHIN ZONE 'AE' – AREAS DETERMINED TO BE WITHIN THE 0.2% AUNNUAL CHANCE FLOOD PLAIN.

THE REMAINDER OF PARCEL NO. 4 AND ALL OF PARCEL NO. 1, 2, AND 3 LIES WITHIN ZONE 'X' – AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

(PER FEMA FLOOD INSURANCE RATE MAP NUMBER 04005C6809G, EFFECTIVE DATE SEPTEMBER 2, 2010).

SURVEYOR'S NOTES:

1. AS TO THE TITLE MATTERS SHOWN HEREON, SHEPHARD-WESNITZER, INC. HAS RELIED SOLELY ON THE COMMITMENT FOR TITLE INSURANCE PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, FILE NO: 70515804-005-SLC, EFFECTIVE DATE OCTOBER 25, 2021 AT 7:30 A.M. SHEPHARD-WESNITZER, INC. AND AARON D. BORLING, RLS MAKE NO STATEMENT AS TO THE ACCURACY OR COMPLETENESS OF THE SUBJECT COMMITMENT FOR TITLE INSURANCE.

2. AT THE TIME OF THIS SURVEY, THERE WAS NO VISIBLE EVIDENCE THAT ANY PART OF THIS SITE WAS USED AS A SOLID WASTE DUMP, SUMP OR SANITARY LAND FILL.

3. ALL DIMENSIONS SHOWN HEREON ARE MEASURED UNLESS NOTED OTHERWISE

4. THIS DOCUMENT MAY NOT SHOW ALL EASEMENTS OR RIGHTS OF WAY THAT AFFECT THE SUBJECT PARCEL. ONLY EASEMENTS AS LISTED IN THE SCHEDULE B EXCEPTIONS OF THE AFOREMENTIONED TITLE REPORT ARE SHOWN.

5. THE UNDERGROUND UTILITY LOCATIONS SHOWN HEREON WERE PROVIDED BY THE CITY OF FLAGSTAFF AND ARE OF GIS QUALITY AND ARE CONSIDERED TO BE APPROXIMATE. ABOVE GROUND UTILITY APPURTENANCES WERE MEASURED DURING THE FIELD FIELD SURVEY.

6. THE ZONING FOR THE SUBJECT PARCEL IS HIGHWAY COMMERCIAL (HC) PER CITY OF FLAGSTAFF ZONING MAPS. NO ZONING REPORT WAS PROVIDED AS PART OF THIS SURVEY, AS SUCH, BUILDING SETBACKS HAVE NOT BEEN SHOWN ON THE SURVEY.

7. TOPOGRAPHIC INFORMATION SHOWN HEREON PER TOPOGRAPHIC AND RESOURCE SURVEY PREPARED BY MOGOLLON ENGINEERING, INC. DATED 4/7/2009.

RECORD INFORMATION

(R1) EXHIBIT A, LEGAL DESCRIPTION, PER COMMITMENT FOR TITLE INSURANCE PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, FILE NO: 70515804-005-SLC, EFFECTIVE DATE OCTOBER 25, 2021 AT 7:30 A.M.

CERTIFICATE OF LAND SURVEYOR

To: Miramonte Acquisitions, LLC, an Arizona Limited Liability Company, and First American Title Insurance Company:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 8, 11, 13, 16, and 18 of Table A thereof. The fieldwork was completed in January 2022.
Date of Plat or Map: January 19, 2022

Aaron D. Borling, RLS 48756

REGISTERED LAND SURVEYOR
48756
AARON D. BORLING
Date Signed... 1/19/22
ARIZONA, USA
Expires 12/31/23

CALL TWO WORKING DAYS BEFORE YOU DIG
1-800-STAKE-IT

NO.	DESCRIPTION	DATE	BY

Shephard Wesnitzer, Inc.
110 West Dale Ave
Flagstaff, Az 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

JOB NO:	21272
DATE:	JAN 2022
SCALE:	AS SHOWN
DRAWN:	RPR
DESIGN:	
CHECKED:	ADB

BUTLER COMMERCE CENTER
FLAGSTAFF
ARIZONA

ALTA/NSPS LAND TITLE SURVEY
APN: 106-04-006B, 107-11-001B,
106-04-007C, 107-44-062

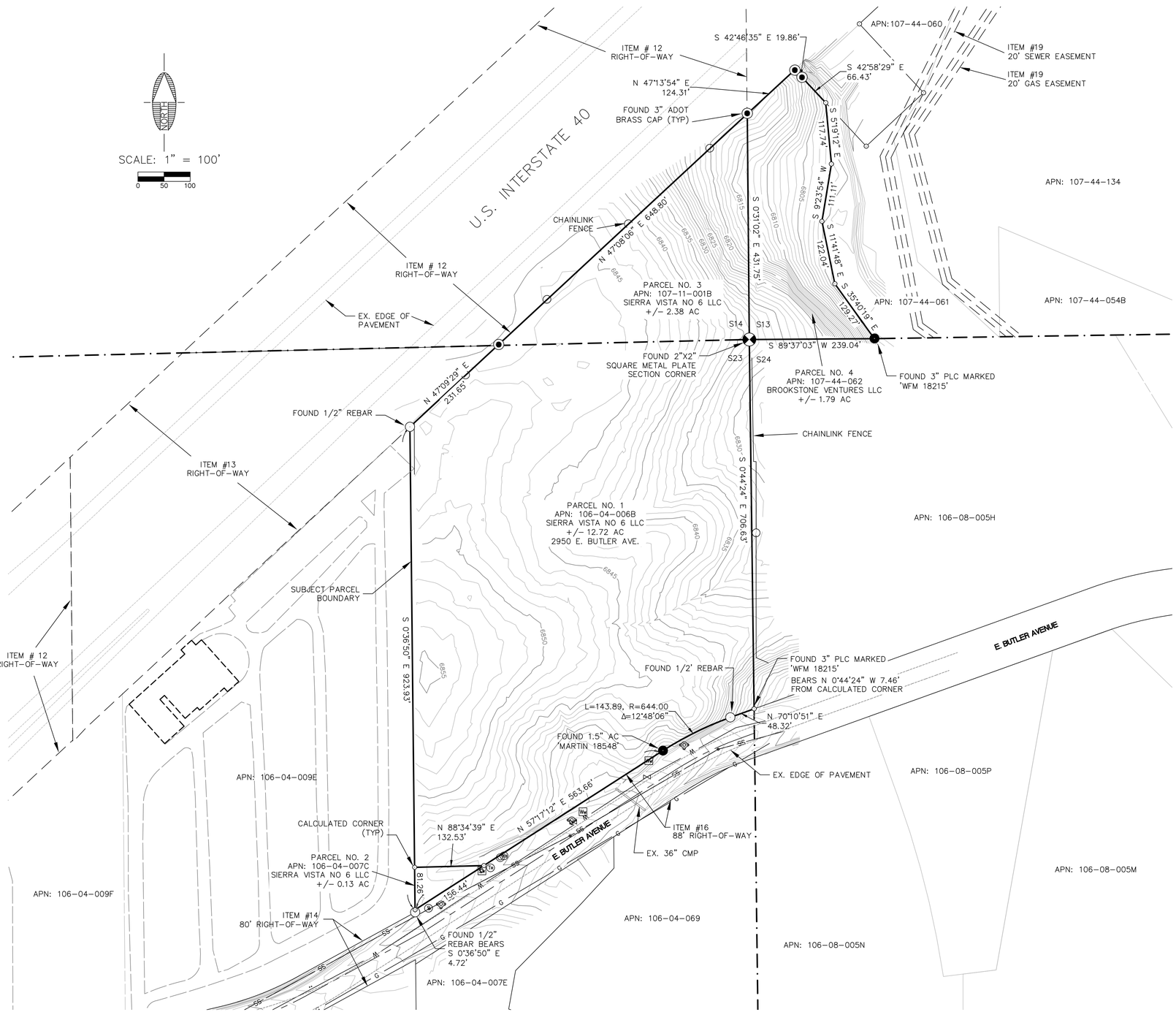
DRAWING NO. A1
SHT NO. 1 OF 2

FILE: P:\2021\21272\Survey\Drawings\ALTA\21272_BCC_ALTA.DWG SWI-C3D-2021

PLOTTED: Jan 19, 2022-10:23am

ALTA/NSPS LAND TITLE SURVEY

A PORTION OF THE NORTHEAST QUARTER OF SECTION 23,
THE SOUTHEAST QUARTER OF SECTION 14,
AND THE SOUTHWEST QUARTER OF SECTION 13,
TOWNSHIP 21 NORTH, RANGE 7 EAST, GILA AND SALT RIVER MERIDIAN,
COCONINO COUNTY, ARIZONA



LEGEND

- SUBJECT BOUNDARY LINE
- ADJACENT BOUNDARY LINE
- EASEMENT LINE
- EDGE OF ASPHALT
- EDGE OF CURB/GUTTER
- EDGE OF CONCRETE
- PAINT STRIPE
- EDGE OF RIP-RAP
- CENTERLINE
- EDGE OF BUILDING
- CHAIN LINK FENCE
- WALL (TYPE AS NOTED)
- UGE — UNDERGROUND ELECTRIC LINE
- G — UNDERGROUND GAS LINE
- OHE — OVERHEAD ELECTRIC LINE
- SS — SANITARY SEWER LINE
- W — WATER LINE

- BOLLARD
- CATCH BASIN/GRATE
- DOWN GUY
- FIRE HYDRANT
- IV IRRIGATION VALVE
- LIGHT POLE
- SIGN
- UTILITY POLE
- T TELEPHONE MANHOLE
- TR TELEPHONE RISER
- WM WATER METER
- WR WATER RISER/SPIGOT
- WATER VALVE
- TV CABLE TV RISER
- PB ELECTRIC PULLBOX
- ER ELECTRIC RISER
- SW ELECTRIC SWITCH CABINET
- TX ELECTRIC TRANSFORMER
- GR GAS RISER
- GM GAS METER
- GAS VALVE
- CO SEWER CLEANOUT
- S SEWER MANHOLE TOP
- SEWER VALVE
- ST STORM SEWER MANHOLE

CERTIFICATE OF LAND SURVEYOR

I HEREBY STATE THAT THE SURVEY SHOWN HEREON WAS DONE UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

AARON D. BORLING, RLS 48756

REGISTERED LAND SURVEYOR — 48756 — AARON D. BORLING — Date Signed 1/19/22 — ARIZONA, U.S.A. — Expires 12/31/23

CALL TWO WORKING DAYS BEFORE YOU DIG
1-800-STAKE-IT

NO.	DESCRIPTION	DATE	BY

Shephard Wesnitzer, Inc.
110 West Dale Ave
Flagstaff, Az 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

JOB NO:	21272
DATE:	JAN 2022
SCALE:	AS SHOWN
DRAWN:	RPR
DESIGN:	
CHECKED:	ADB

BUTLER COMMERCE CENTER — FLAGSTAFF ARIZONA

ALTA/NSPS LAND TITLE SURVEY
APN: 106-04-006B, 107-11-001B, 106-04-007C, 107-44-062

DRAWING NO. A2

SHT NO. 2 OF 2

FILE: P:\2021\21272\Survey\Drawings\ALTA\21272_BCC_ALTA.DWG SWI-C3D-2021

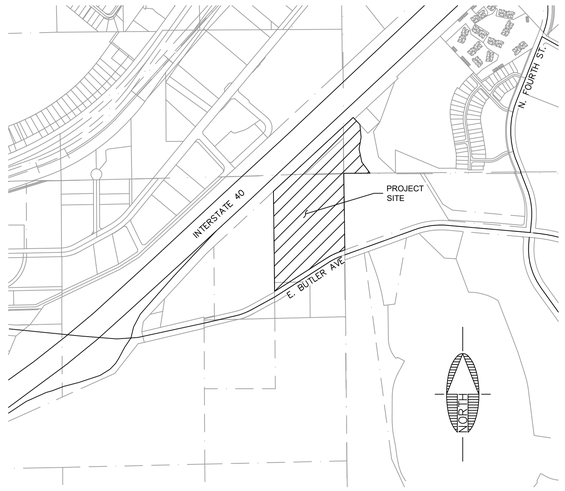
Exhibit C

Site Plan

PLOTTED: Feb 13, 2023 - 3:52pm

CIVIL SITE PLAN
FOR
LOFTS ON BUTLER
2950 E. BUTLER AVE
FLAGSTAFF, ARIZONA

LOCATED IN NE QUARTER OF SECTION OF 23, SE QUARTER OF SECTION 14 AND SW QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 7 EAST GILA AND SALT RIVER MERIDIAN, COCONINO COUNTY, ARIZONA



VICINITY MAP
N.T.S.

GROSS FLOOR AREA RATIO CALCULATION			
Building Type	**Building Size, sf**	**Qty**	**Total Area, sf**
(1) Bedroom	813	26	21,138
(2) Bedroom	1071	120	128,520
(3) Bedroom	1340	26	34,840
Residential Clubhouse	2806	1	2,806
Commercial	2154	1	2,154
Total Floor Area, sf			189,458
Total Floor Area, acres			4.35
Total Site Area, acres			15.93
Floor Area Ratio (FAR)			0.3
Max Allowed FAR			3.0

PARKING CALCULATIONS		1 Bed	2 Bed	3 Bed
Type	**No. of Bldgs**	*1.5*	*2*	*2*
4-2 bed	30	0	120	0
2-1 bed, 2-3 bed	13	26	0	26
Parking Required		*39*	*240*	*52*
Guest Spaces Required		*0*	*30*	*6.5*
Club House Commercial Required (1 per 300 sf - 2,154 sf of rental office space)			**7**	
ADA Parking Required			**9**	
Bike Parking Required (5% of total)			**18**	
Bike Parking Provided (conceptual)			**40**	
Transit Reduction (10% of Total Required)			**37**	
Total Residential Parking Required			**375**	
Total Required After Reduction			**327**	
Total Residential Parking Provided			**352**	

SHEET LIST TABLE		
SHEET NUMBER	DRAWING NUMBER	SHEET TITLE
1	SP01	COVER & VICINITY
2	SP02	GRADING & DRAINAGE PLAN (1)
3	SP03	GRADING & DRAINAGE PLAN (2)
4	SP04	UTILITY PLAN (1)
5	SP05	UTILITY PLAN (2)
6	SP06	ROADWAY IMPROVEMENTS
7	SP07	NATURAL RESOURCE PROTECTION PLAN

PROJECT INFORMATION

SITE ADDRESS: 2950 E. BUTLER AVE
FLAGSTAFF, AZ 86001

APN	CURRENT ZONING	PROPOSED ZONING	ACREAGE
106-04-006B	RURAL RESIDENTIAL	HIGHWAY COMMERCIAL	±12.72 AC
106-04-007C	HIGHWAY COMMERCIAL	–	±0.13 AC
107-11-001B	RURAL RESIDENTIAL	HIGHWAY COMMERCIAL	±2.38 AC
107-44-062	MEDIUM DENSITY RESIDENTIAL	HIGHWAY COMMERCIAL	±1.79 AC

FUTURE COMMERCIAL PARCEL: 1.09 AC
GROSS MIXED USE PARCEL: 17.02 AC
NET MIXED USE PARCEL (AFTER FUTURE COMMERCIAL PARCEL REMOVED): 15.93 AC

PROPOSED UNITS = 43 BLDGS @ 4 UNITS/BLDG
BLDG FOOTPRINT: 152,173 SF (21.93% COVERAGE, NET PARCEL)

PROPOSED DWELLING UNITS PER ACRE: 172 / 15.93 = 10.79
ALLOWED DWELLING UNITS PER ACRE: 29/AC * 15.93 = 462

APPROXIMATE FUTURE ROW DEDICATION = 0.12 AC (NET PARCEL ACREAGE = 15.81 AC)
APPROXIMATE NET DWELLING UNITS PER ACRE: 172 / 15.81 = 10.88
APPROXIMATE ALLOWED DWELLING UNITS PER ACRE: 29/AC * 15.81 = 458

BUILDING TYPE INFORMATION

OCCUPANCY – CLUBHOUSE: A-3 DWELLING: R-2

CONSTRUCTION – CLUBHOUSE: V-B DWELLING: V-A

UNIT TYPES AND QUANTITY:
(26) ONE-BEDROOM UNITS
(26) THREE-BEDROOM UNITS
(120) TWO-BEDROOM UNITS

OWNER

APN	OWNER	ADDRESS
106-04-006B	SIERRA VISTA NO 6 LLC	2950 E BUTLER AVE FLAGSTAFF, AZ 86004
106-04-007C	SIERRA VISTA NO 6 LLC	FLAGSTAFF, AZ 86004
107-11-001B	SIERRA VISTA NO 6 LLC	FLAGSTAFF, AZ 86004
107-44-062	BROOKSTONE VENTURES LLC	FLAGSTAFF, AZ 86004

CIVIL ENGINEER:
SHEPHARD-WESNITZER INC.
110 WEST DALE AVE
FLAGSTAFF, AZ 86001
CONTACT: STEPHEN IRWIN
(928) 773-0354

DEVELOPER:
MIRAMONTE ACQUISITIONS, LLC
102 S. MIKES PIKE
FLAGSTAFF, AZ 86001
CONTACT: CHARITY LEE
clee@miramontehomes.com
(928) 600-3594

IMPERVIOUS AREA SUMMARY

PRE-DEVELOPMENT IMPERVIOUS AREA = 0 SF
POST DEVELOPMENT IMPERVIOUS AREA = 317,876 SF = 7.30 AC

LID VOLUME REQUIRED = 26,490 CF

PRELIMINARY EARTHWORK QUANTITIES

CUT = 15,000 CY
FILL = 15,500 CY

NET = -500 CY

FLOOD ZONE CLASSIFICATION:

A PORTION OF SUBJECT PARCEL 107-44-062 LIES WITHIN ZONE 'AE' – AREAS DETERMINED TO BE WITHIN THE 0.2% AUNNUAL CHANCE FLOOD PLAIN.

THE REMAINDER OF PARCEL 107-44-062 AND ALL OF PARCEL 106-04-006B, 106-04-007C, AND 107-11-001B LIES WITHIN ZONE 'X' – AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

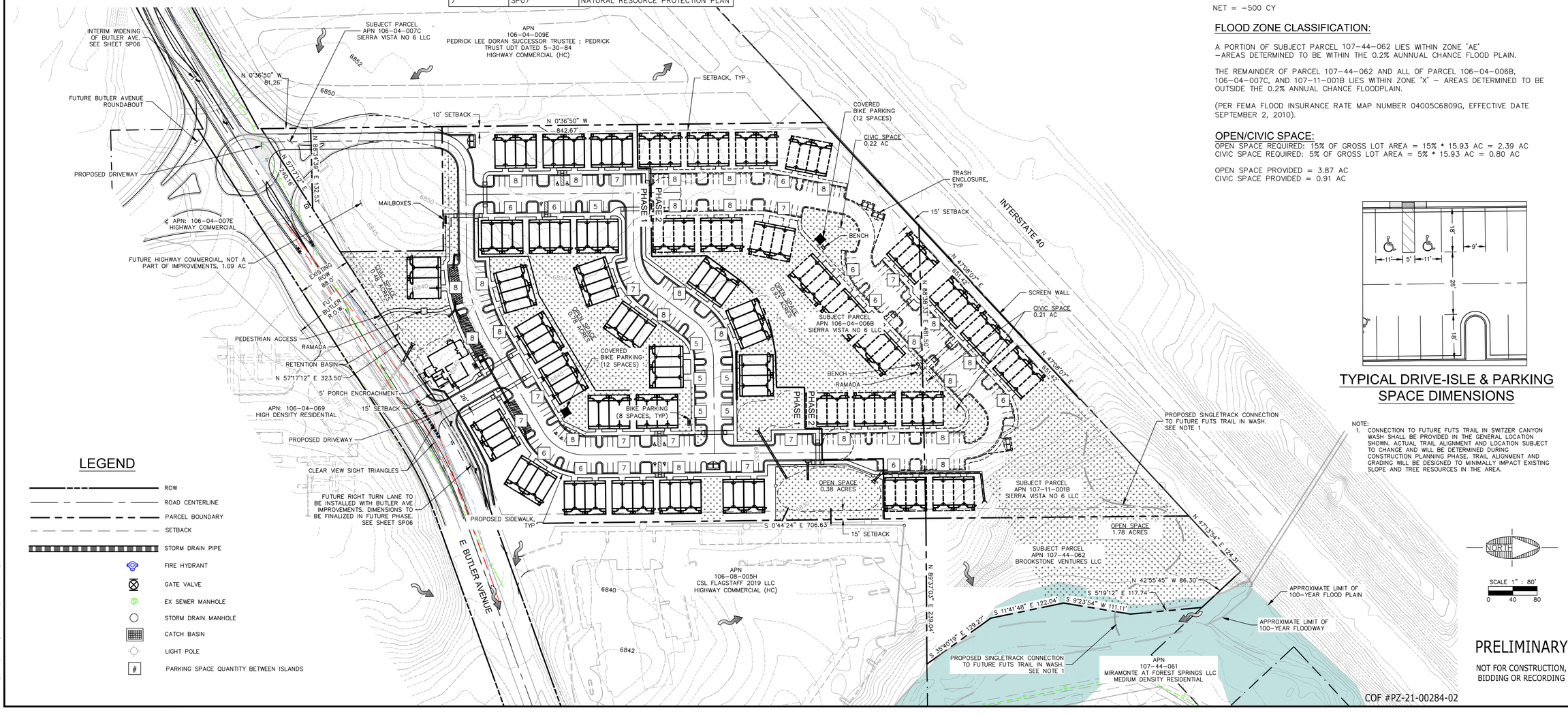
(PER FEMA FLOOD INSURANCE RATE MAP NUMBER 04005C6809G, EFFECTIVE DATE SEPTEMBER 2, 2010).

OPEN/CIVIC SPACE:

OPEN SPACE REQUIRED: 15% OF GROSS LOT AREA = 15% * 15.93 AC = 2.39 AC
CIVIC SPACE REQUIRED: 5% OF GROSS LOT AREA = 5% * 15.93 AC = 0.80 AC

OPEN SPACE PROVIDED = 3.87 AC
CIVIC SPACE PROVIDED = 0.91 AC

TYPICAL DRIVE-ISLE & PARKING SPACE DIMENSIONS



NOTE:
1. CONNECTION TO FUTURE FUTS TRAIL IN SWITZER CANYON WASH SHALL BE PROVIDED IN THE GENERAL LOCATION SHOWN. ACTUAL TRAIL ALIGNMENT AND LOCATION SUBJECT TO CHANGE AND WILL BE DETERMINED DURING CONSTRUCTION PLANNING PHASE. TRAIL ALIGNMENT AND GRADING WILL BE DESIGNED TO MINIMALLY IMPACT EXISTING SLOPE AND TREE RESOURCES IN THE AREA.

NORTH
SCALE 1" : 80'
0 40 80

LEGEND

- ROW
- ROAD CENTERLINE
- PARCEL BOUNDARY
- SETBACK
- STORM DRAIN PIPE
- FIRE HYDRANT
- GATE VALVE
- EX SEWER MANHOLE
- STORM DRAIN MANHOLE
- CATCH BASIN
- LIGHT POLE
- # PARKING SPACE QUANTITY BETWEEN ISLANDS

PRELIMINARY
NOT FOR CONSTRUCTION, BIDDING OR RECORDING

COF #PZ-21-00284-02

FILE: P:\2021\21272\DRAWINGS\SITE PLANS\COVER & VICINITY-21272.DWG SVOSSLER

FLAGSTAFF ARIZONA
BUTLER AVE. MULTI FAMILY
COVER & VICINITY

JOB NO: 21272
DATE: FEB 23
SCALE: AS SHOWN
DRAWN: ELK/SJW
DESIGN: ELK/SJW
CHECKED: SCI

REVISIONS

NO.	DESCRIPTION	DATE	BY

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com
Shephard Wesnitzer, Inc.

Call at least two full working days before you dig, it's the law!
Arizona Blue Stake, Inc.
ARIZONA811
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

DRAWING NO.
SP01
SHT NO. 1 OF 7

PLOTTED: Nov 23, 2022–8:03am

APN
106–04–009E
PEDRICK LEE DORAN SUCCESSOR
TRUSTEE ; PEDRICK TRUST UDT
DATED 5–30–84
HIGHWAY COMMERCIAL (HC)

LOFT UNITS

PHASE 2
PHASE 1

PROPOSED OPEN SPACE, TYP

RETAINING WALL, 5' MAX HEIGHT

PROPOSED UNDERGROUND RETENTION FACILITIES

FFE=6850.00
FFE=6847.50
FFE=6849.00
FFE=6852.00
FFE=6853.00
FFE=6851.50
FFE=6854.00
FFE=6852.00
FFE=6851.50
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FFE=6836.50
FFE=6838.00
FFE=6837.00
FFE=6838.50
FFE=6839.00
FFE=6839.00

6850
6845
6840
6835
6825

EXISTING CATCH BASIN, TYP

APN
106–08–005H
CSL FLAGSTAFF 2019 LLC
HIGHWAY COMMERCIAL (HC)

EXISTING OUTLET ABANDONED, TO AVOID DISCHARGING ONTO ADJACENT RETAINING WALL

THE BLUFFS DRIVEWAY

WALKWAY, TYP

BUTLER R.O.W.

PROPOSED DRIVEWAY TYP

CLUB HOUSE AND COMMERCIAL OFFICE BUILDING

FFE=6843.00

PROPOSED LID & RETENTION POND
BTM=6835.00
TOP=6838.00

FUTURE COMMERCIAL PARCEL, NOT A PART OF IMPROVEMENTS.

EXISTING 36" CMP STORM DRAIN OUTLET TO REMAIN

WOODSHIRE DRIVEWAY

FUTURE ROUNDABOUT AND WIDENING OF E. BUTLER AVE. SHOWN FOR REFERENCE ONLY.

PROPOSED DRIVEWAY TYP

IMPERVIOUS AREA SUMMARY

PRE–DEVELOPMENT IMPERVIOUS AREA = 0 SF
POST–DEVELOPMENT IMPERVIOUS AREA = 314,102 SF
NEW IMPERVIOUS AREA = 314,102 SF

1" LID VOLUME = 26,175 CF

LEGEND

- ROW
- ROAD CENTERLINE
- PARCEL BOUNDARY
- SETBACK
- STORM DRAIN PIPE
- FIRE HYDRANT
- GATE VALVE
- EX SEWER MANHOLE
- STORM DRAIN MANHOLE
- CATCH BASIN
- LIGHT POLE

NORTH

SCALE 1" : 40'
0 20 40

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING OR RECORDING

COF #PZ-21-00284-02

FLAGSTAFF
ARIZONA

LOFTS ON BUTLER AVENUE

GRADING & DRAINAGE PLAN (1)

JOB NO:	21272
DATE:	NOV 22
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK, SJV
CHECKED:	SJV, SDJ

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0334
928.774.8934 fax
www.swoz.com

Shephard Wesnitzer, Inc.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

Call at least two full working days before you begin excavation.
ARIZONA811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

DRAWING NO.
SP02

SHT NO.	OF
2	7

FILE: P:\2021\21272\DRAWINGS\SITE PLANS\GRADING&DRAINAGE–21272.DWG EXEDSER

PLOTTED: Nov 23, 2022--8:04am

INTERSTATE 40

400' R.O.W.

15'

SINGLE TRACK CONNECTION

APPROXIMATE LIMIT OF 100-YEAR FLOOD PLAIN

APPROXIMATE LIMIT OF 100-YEAR FLOODWAY

SCREEN WALL

TURN BLOCK WALL OPENING

PROPOSED SOLID WASTE, TYP

PROPOSED MAINTENANCE BUILDING

RAMADA

BENCH

BENCH

PROPOSED OPEN SPACE, TYP

PROPOSED LID & RETENTION POND BTM=6834.00 TOP=6837.00

PROPOSED POND OUTLET

EXISTING STORM DRAIN OUTLET

18" STORM DRAIN

POND OUTLET, AND OVERSIZED EMERGENCY OVERFLOW STORM DRAIN

FENCE/RAILING AROUND LOWER BASIN

EXISTING 24" DOME GRATE

PROPOSED LID & RETENTION POND BTM=6831.00 TOP=6835.00

EXISTING 24" DOME GRATE

PROPOSED POND OUTLET STRUCTURE

PHASE 2

PHASE 1

APN
106-08-009E
PEDRICK LEE DORAN SUCCESSOR TRUSTEE - PEDRICK TRUST UDT
PEDRICK LEE DORAN SUCCESSOR TRUSTEE - PEDRICK TRUST UDT
ET AL
HIGHWAY COMMERCIAL (HC)

APN
106-08-005H
CSL FLAGSTAFF 2019 LLC
HIGHWAY COMMERCIAL (HC)

FFE=6845.00
FFE=6846.00
FFE=6847.50
FFE=6844.00
FFE=6836.00
FFE=6846.50
FFE=6847.00
FFE=6848.00
FFE=6843.00
FFE=6844.00
FFE=6836.50

6815
6820
6825
6830
6835
6840
6845
6800

LEGEND

- ROW
- ROAD CENTERLINE
- PARCEL BOUNDARY
- SETBACK
- STORM DRAIN PIPE
- FIRE HYDRANT
- GATE VALVE
- EX SEWER MANHOLE
- STORM DRAIN MANHOLE
- CATCH BASIN
- LIGHT POLE

NORTH

SCALE 1" : 40'
0 20 40

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING OR RECORDING

COF #PZ-21-00284-02

LOFTS ON BUTLER AVENUE

FLAGSTAFF ARIZONA

GRADING & DRAINAGE PLAN (2)

JOB NO:	21272
DATE:	NOV 22
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK, SJV
CHECKED:	SJV, SDI

REVISIONS

NO.	DESCRIPTION	DATE	BY

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

Shephard Wesnitzer, Inc.

Call at least two full working days before you dig, it's the law and it's free.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

ARIZONA811
Arizona Blue Stake, Inc.

DRAWING NO.
SP03

SHT NO. 3 OF 7

FILE: P:\2021\21272\DRAWINGS\SITE PLANS\GRADING&DRAINAGE-21272.DWG EKEISER

PLOTTED: Nov 23, 2022–8:04am

FILE: P:\2021\21272\DRAWINGS\SITE PLANS\UTILITY PLAN–21272.DWG EXEISER

FIRE HYDRANT, TYP

PHASE 2

PHASE 1

APN
106–04–009E

APN
106–08–005H

PROPOSED PUBLIC 8" SEWER MAIN

PROPOSED PUBLIC 8" WATER MAIN

20'
P.U.E.

FUTURE HIGHWAY
COMMERCIAL, 1.09 AC

E. BUTLER AVENUE

PROPOSED SEWER SERVICE
FOR COMMERCIAL PARCEL

PROPOSED WATER
SERVICE AND FIRE
WATER STUBOUT.

PROPOSED PUBLIC WATER
MAIN CONNECTION

26' PUE, TYP

26'
P.U.E.

EXISTING 24" DUCTILE IRON
WATER MAIN

EXISTING 8" VC SEWER MAIN

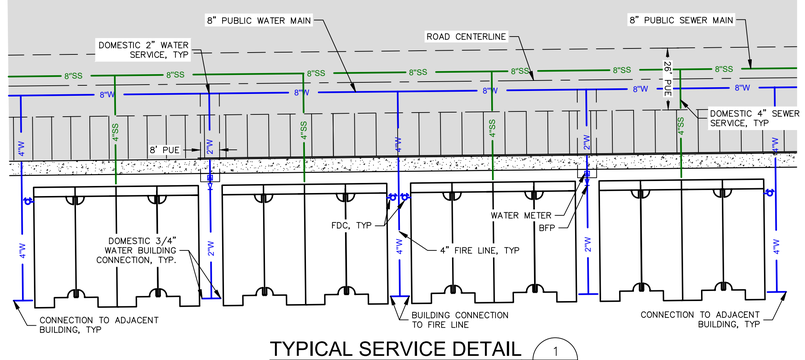
PROPOSED PUBLIC WATER
MAIN CONNECTION

PROPOSED PUBLIC SEWER
MAIN CONNECTION

EXISTING 36" CMP
STORM DRAIN

LEGEND

- ROW
- ROAD CENTERLINE
- PARCEL BOUNDARY
- SETBACK
- STORM DRAIN PIPE
- FIRE HYDRANT
- GATE VALVE
- EX SEWER MANHOLE
- STORM DRAIN MANHOLE
- CATCH BASIN
- LIGHT POLE



TYPICAL SERVICE DETAIL (1 / UT01)
NO SCALE

PRELIMINARY

NOT FOR CONSTRUCTION,
BIDDING OR RECORDING

COF #PZ-21-00284-02

FLAGSTAFF
ARIZONA

LOFTS ON BUTLER AVENUE

UTILITY PLAN (1)

JOB NO:	21272
DATE:	NOV 22
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK, SJV
CHECKED:	SJV, SDJ

REVISIONS

NO.	DESCRIPTION	DATE	BY

Shephard Wesnitzer, Inc.
110 W. Dale Avenue
Flagstaff, AZ 86001
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928.774.8934 fax
www.swiaz.com

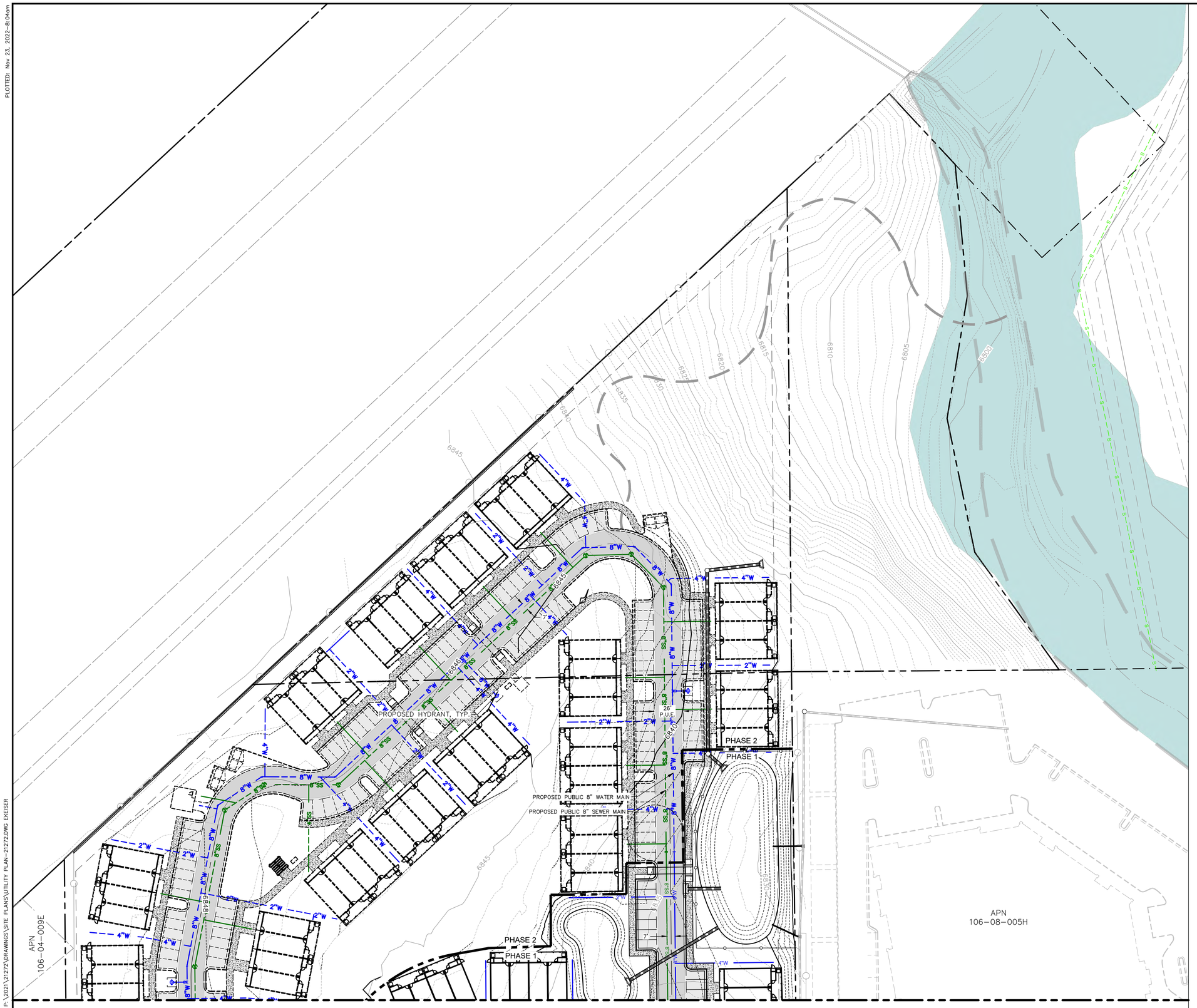
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DRAWING NO.
SP04

SHT NO. 4 OF 7

PLOTTED: Nov 23, 2022–8:04am

FILE: P:\2021\21272\DRAWINGS\SITE PLANS\UTILITY PLAN-21272.DWG EKEISER



LEGEND

- ROW
- ROAD CENTERLINE
- PARCEL BOUNDARY
- SETBACK
- STORM DRAIN PIPE
- FIRE HYDRANT
- GATE VALVE
- EX SEWER MANHOLE
- STORM DRAIN MANHOLE
- CATCH BASIN
- LIGHT POLE

SCALE 1" : 40'
0 20 40

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING OR RECORDING

COF #PZ-21-00284-02

UTILITY PLAN (2)

LOFTS ON BUTLER AVENUE

FLAGSTAFF
ARIZONA

JOB NO:	21272
DATE:	NOV 22
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK, SJV
CHECKED:	SJV, SDJ

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0334
928.774.8934 fax
www.swiaz.com

Shephard Wesnitzer, Inc.

NO.	DESCRIPTION	DATE	BY
	REVISIONS		

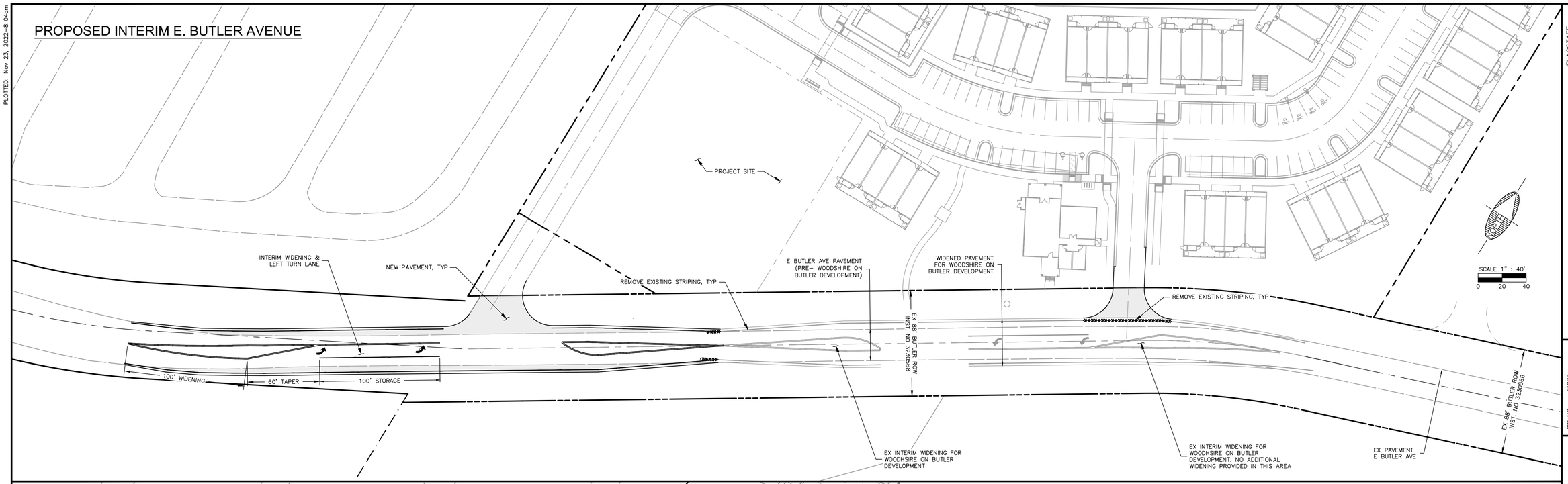
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ARIZONA811
Arizona Blue Stake, Inc.

DRAWING NO.
SP05

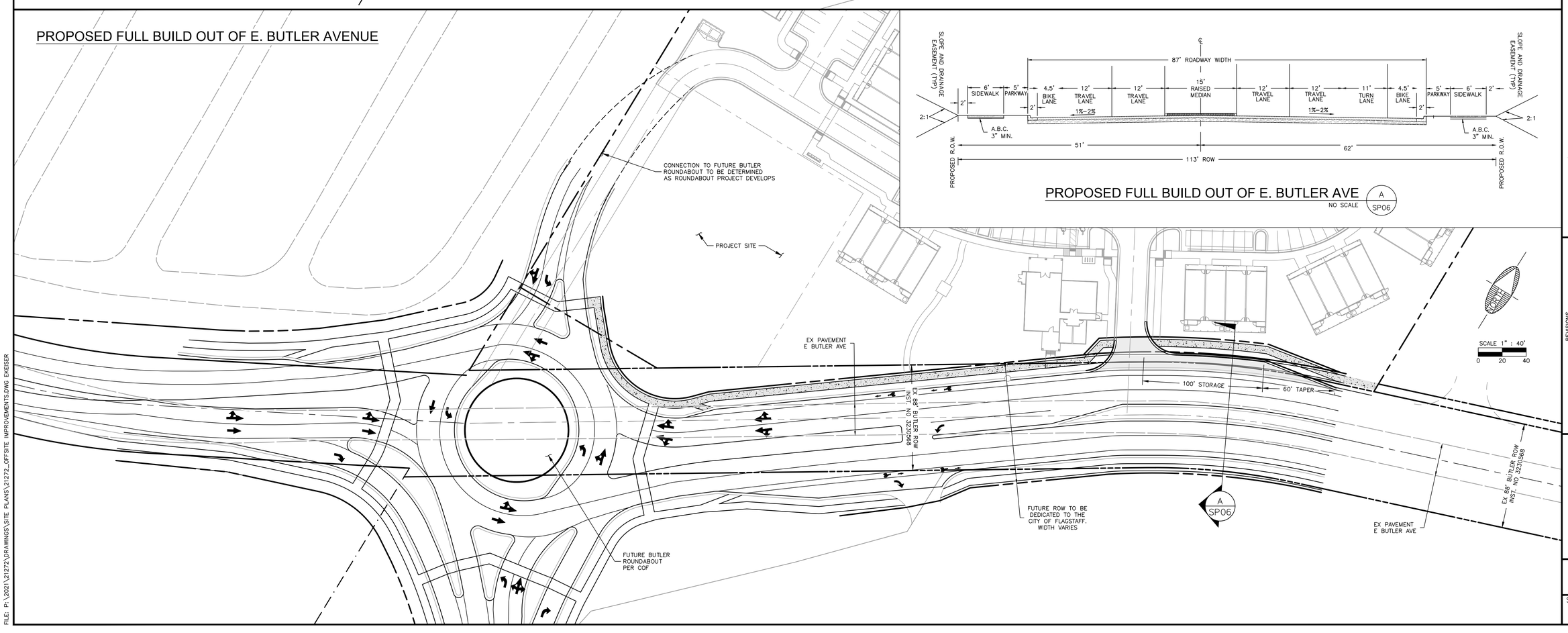
SHT NO. 5 OF 7

PLOTTED: Nov 23, 2022--8:04am

PROPOSED INTERIM E. BUTLER AVENUE



PROPOSED FULL BUILD OUT OF E. BUTLER AVENUE



PROPOSED FULL BUILD OUT OF E. BUTLER AVE
NO SCALE
A SP06

FILE: P:\2021\21272\DRAWINGS\SITE PLANS\21272_OFFSITE IMPROVEMENTS.DWG EXEISER

FLAGSTAFF ARIZONA

LOFTS ON BUTLER AVENUE

ROADWAY IMPROVEMENTS

JOB NO:	21272
DATE:	NOV 22
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK/SJV
CHECKED:	SJV/SD

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0334
928.774.8934 fax
www.swoz.com

SWI
Shephard Wesnitzer, Inc.

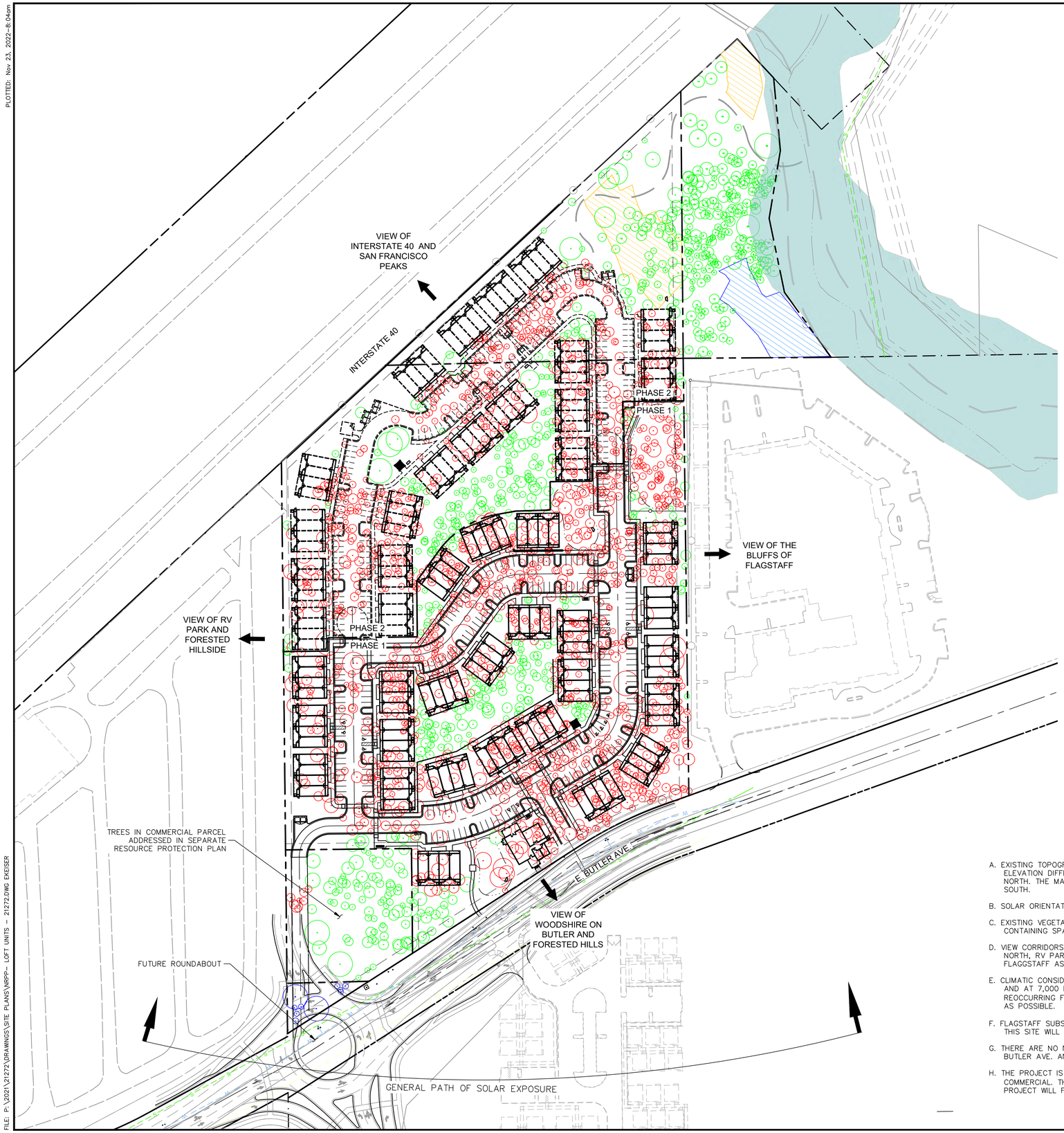
REVISIONS			
NO.	DESCRIPTION	DATE	BY

Call at least two full working days before you plan to excavate
ARIZONA811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

DRAWING NO.
SP06

SHT NO.	OF
6	7

PLOTTED: Nov 23, 2022–8:04am



COMMERCIAL PARCEL TREES (NOT COUNTED IN THIS NRPP)					
TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER EXISTING	40	35	16	1	4
NUMBER REMOVED	11	4	1	0	2
NUMBER EXEMPT	8	0	0	0	2
POINTS PER TREE	1	2	4	8	20
EXISTING POINTS	40	70	64	8	80
REMOVED POINTS	11	8	4	0	40
TREE POINTS REMOVED =					63
EXEMPT TREE POINTS FOR FUTURE BUTLER ROW =					48
TOTAL TREE RESOURCE POINTS =					214
TREE POINTS PRESERVED =					199
SUMMARY					
REQUIRED TREE POINTS TO BE PRESERVED - COMMERCIAL (30%)=					64
TOTAL PRESERVATION RATE =					**93.0%**

NOTE:
1. PER CITY OF FLAGSTAFF ZONING CODE SECTION 10-50.90.060, COMMERCIAL ZONES PRESERVATION RATE IS 30%.

TREE RESOURCES - EXISTING

TREE POINTS					
TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER EXISTING	1268	812	186	25	17
POINTS	1	2	4	8	20
SUM OF POINTS	1268	1624	744	200	340
TREE POINTS OUTSIDE OF SLOPE RESOURCE AREAS=					**4176**
TREE POINTS WITHIN SLOPE RESOURCE					
TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER EXISTING	11	21	3	1	2
POINTS	1	2	4	8	20
SUM OF POINTS	11	42	12	8	40
TREE POINTS LOCATED WITHIN SLOPE RESOURCE AREAS=					*113*
25% OF TREE POINTS WITHIN SLOPE RESOURCES=					*28*
MAXIMUM ALLOWED TREE POINTS IN SLOPES TO BE USED (AT A RATIO OF 1 CREDIT POINT PER 50 SQUARE FEET OF TOTAL SLOPE AREA)=					*170*
ACTUAL TREE POINTS IN SLOPE COUNTED TOWARDS REQUIREMENT=					**28**

SLOPE RESOURCES - RESIDENTIAL				
SLOPES	0-16.99%	17-24.99%	25-34.99%	>35%
EXISTING (SF)	-	21921	12116	0
PROTECTED (SF)	-	21921	12116	0
% REQUIRED PROTECTION	-	60%	80%	100%
% PROTECTED	-	100%	100%	NA
SF REQUIRED PROTECTION		13153	9693	NA
PROTECTED ABOVE REQUIREMENT(SF)	-	8768	2423	NA
POINTS PER 50 SF OF EXCESS STEEP		175	48	0
RESOURCE POINTS FROM EXCESS PRESERVED SLOPE AREAS=				**224**

NOTES:
1. Per City Zoning Code Section 10-50.90.050.C.4, for every 50 sf of additional slope area that is determined to be protected over and above the minimum required in this section, then 1 tree point will be credited toward the minimum required forest resources.
2. Per City Zoning Code Section 10-50.90.060.B.4(b), up to 25% of the forest resources in the steep slope area may be counted towards the required amount of forest resources for the entire site at a ratio of 1 tree point to 50 sf of slope area.

POST-DEVELOPMENT TREES					
TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER REMOVED	985	584	129	17	8
POINTS	1	2	4	8	20
SUM OF POINTS	985	1168	516	136	160
TREE POINTS REMOVED =					2965
TOTAL TREE RESOURCE POINTS =					4176
TREE POINTS PRESERVED =					1211
EXCESS SLOPE RESOURCE POINTS COUNTED TOWARDS REQUIREMENT =					28
TREE POINTS FROM SLOPE AREA =					224
TOTAL PRESERVED TREE POINTS =					1463
SUMMARY					
REQUIRED TREE POINTS TO BE PRESERVED - COMMERCIAL (30%)=					1253
TOTAL PRESERVATION RATE =					**35.0%**

NOTE:
1. PER CITY OF FLAGSTAFF ZONING CODE SECTION 10-50.90.060, COMMERCIAL ZONES PRESERVATION RATE IS 30%.

SITE ANALYSIS:

A. EXISTING TOPOGRAPHY OF PROJECT SITE AS SHOWN. SITE SLOPES DO NOT EXCEED 35% FOR GREATER THAN 10' IN ELEVATION DIFFERENCE. TOPOGRAPHY IS DEFINED BY SLOPE RESOURCES TO THE NORTH SLOPING DOWNHILL TO THE NORTH. THE MAJORITY OF THE PARCEL DOES NOT EXCEED 16.99% SLOPE AND HAS A GENERAL SLOPE TOWARDS THE SOUTH.

B. SOLAR ORIENTATION AS SHOWN ON BOTTOM OF SHEET.

C. EXISTING VEGETATION CONTAINS MEDIUM TO DENSE PONDEROSA PINE. THE SITE INCLUDES SCATTERED OPENINGS CONTAINING SPARSE NATIVE GRASSES AND WEEDS.

D. VIEW CORRIDORS NOTICEABLE FROM THE SITE INCLUDE THE INTERSTATE 40 AND SAN FRANCISCO PEAKS TO THE NORTH, RV PARK TO THE WEST, FORESTED HILLS AND BUTLER AVENUE TO THE SOUTH AND THE BLUFFS OF FLAGGSTAFF ASSISTED LIVING TO THE EAST.

E. CLIMATIC CONSIDERATIONS FOR THE PROJECT SITE: THE PREVAILING WINDS ARE GENERALLY FROM THE SOUTHWEST AND AT 7,000 FEET FLAGSTAFF EXPERIENCES SNOW AND LARGE TEMPERATURE SWINGS. AS A RESULT OF REOCCURRING FREEZE/THAW CYCLES, PEDESTRIAN WALKWAYS WILL AVOID THE NORTH SIDE OF BUILDINGS AS MUCH AS POSSIBLE.

F. FLAGSTAFF SUBSURFACE CONDITIONS GENERALLY CONSIST OF ROCK AND/OR CLAY MATERIAL, IT IS EXPECTED THAT THIS SITE WILL BE THE SAME. ALL DESIGN WILL BE PER THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.

G. THERE ARE NO NATURAL STREAMS ON SITE. RUNOFF GENERALLY HEADS SOUTH TO AN EXISTING CULVERT UNDER E. BUTLER AVE. AND EAST ALONG THE EAST SIDE OF THE PARCEL.

H. THE PROJECT IS GENERALLY AN INFILL PROJECT, WITH ALL ADJACENT LOTS ALREADY DEVELOPED AS HOUSING OR COMMERCIAL. THE CITY OF FLAGSTAFF'S MASTER PLAN DEFINES THIS AS AN ACTIVITY CENTER AREA AND SO THIS PROJECT WILL FIT WELL WITH THE SURROUNDING AND ANY FUTURE DEVELOPMENTS.

LEGEND

- PROPERTY BOUNDARY
- SLOPE RESOURCES 17–24.99%
- SLOPE RESOURCES 25–34.99%
- SLOPE RESOURCES >35%
- DISTURBED SLOPE RESOURCES 17–24.99%
- EXISTING TREES
- TREES TO BE DEMOLISHED
- EXEMPT TREES FOR FUTURE BUTLER ROW
- FOREST SPRINGS TOWNHOMES NRPP TREES

SCALE 1" : 80'
0 40 80

PRELIMINARY
NOT FOR CONSTRUCTION, BIDDING OR RECORDING

COF #PZ-21-00284-02

FLAGSTAFF ARIZONA

BUTLER AVE. MULTI FAMILY

NATURAL RESOURCE PROTECTION PLAN

JOB NO: 21272
DATE: NOV 22
SCALE: AS SHOWN
DRAWN: ELK/SJV
DESIGN: ELK/SJV
CHECKED: SCI

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.6934 fax
www.swiaz.com

Shephard Wesnitzer, Inc.

REVISIONS

NO.	DESCRIPTION	DATE	BY

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Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

DRAWING NO.
SP07

SHT NO. 7 OF 7

FILE: P:\2021\21272\DRAWINGS\SITE PLANS\NRPP- LOFT UNITS - 21272.DWG EXESER

LOFTS ON BUTLER
LANDSCAPE PLAN

LOCATED IN NE QUARTER OF SECTION OF 23, SE QUARTER OF SECTION 14 AND SW QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 7 EAST GILA TOWNSHIP 21 NORTH, RANGE 7 EAST GILA AND SALT RIVER MERIDIAN, COCONINO COUNTY, ARIZONA

RAINWATER HARVESTING REQUIREMENTS

USE ALL NATIVE/DROUGHT TOLERANT PLANTS IN COMPLIANCE WITH

COF LANDSCAPING STANDARDS & UTILIZE PASSIVE RAINWATER HARVESTING.

NOTES:

1. ROOF RUNOFF COLLECTED IN GUTTERS/DOWNSPOUTS

WILL PASSIVELY IRRIGATE AT-GRADE LANDSCAPING

2. ALL LANDSCAPING INSTALLED PER CITY OF FLAGSTAFF

LANDSCAPE STANDARDS SECTION 10-50.60

PROJECT INFORMATION

PROJECT NAME:	LOFTS ON BUTLER
PROJECT LOCATION:	2950 E. BUTLER AVENUE
APNs:	APN NUMBER: 106-04-006B
	APN NUMBER: 106-04-006B APN NUMBER: 107-11-001B APN NUMBER: 107-44-062
TOTAL SQUARE FOOTAGE:	839,167 SF
TOTAL ACREAGE:	15.93 ACRES
ZONING DISTRICT:	HIGHWAY COMMERCIAL
BUILDING AREA	126,560 SF
DENSITY:	12.38 UNITS / ACRE
PROPOSED USE:	MIXED USE
CURRENT USE:	VACANT
DEVELOPER:	MIRAMONTE ACQUISITIONS
	2502 E. RIVER ROAD
	TUCSON, AZ. 85718
	520-615-8900

LANDSCAPE NOTES

1. ALL MAINTENANCE SHALL BE PERFORMED PER FLAGSTAFF CITY CODE SECTION #910.12.
2. MAINTENANCE SHALL BE PERFORMED ON A MONTHLY BASIS AS FOLLOWS:
   A. PRUNING AND CLIPPING FOR PEDESTRIAN VEHICULAR ACCESS.
   B. REPLACEMENT OF DEAD AND UNHEALTHY PLANTS WITH PLANTS OF THE SAME SIZE AND TYPE.
   C. REPLACEMENT OF ERODED OR WASHEDOUT D.G. WITH SAME.
   D. MAINTENANCE OF IRRIGATION SYSTEM.
3. DECOMPOSED GRANITE (D.G.) SHALL BE INSTALLED TO A 2" DEPTH OVER ALL PLANTERS AND DISTURBED AREAS INCLUDING ADJACENT RIGHTS OF WAY .
4. MATERIALS WITHIN SITE VISIBILITY TRIANGLES SHALL BE PLACED AND MAINTAINED SO AS NOT TO INTERFERE WITH A VISIBILTY PLANE DESCRIBED BY 2 HORIZONTAL LINES 30 INCHES AND 72 INCHES ABOVE FINISHED GRADE OF THE ROADWAY SURFACE.

IRRIGATION NOTES

1. MAINLINE & VALVE LOCATIONS SHOWN FOR CLARITY LOCATE IN PLANTER AREAS AND WITHIN PROJECT BOUNDARY.
2. ALL MAINLINE SHOWN IS CL200 PVC., ALL POLY SHOWN IS 1/2". INSTALL TRACER WIRE AT ALL MAINLINES.
3. INSTALL ALL PIPE BENEATH WALKS AND PAVING WITHIN A SCH 40 PVC SLEEVE 2 SIZES LARGER THAN IRRIGATION PIPE (PVC AND POLYETHYLENE (PE)).
4. SEE CIVIL DWG. FOR WATER SOURCE SIZE & LOCATION PROVIDE METER PER WATER CO. REQ'S.
5. IRRIGATION DESIGN PRESSURE 30 PSI FOR SYSTEM. CONTRACTOR SHALL VERIFY EXIST. WATER PRESSURE AT VALVE & NOTIFY LANDSCAPE ARCHITECT OF DISCREPANCIES, BETWEEN EXISTING & DESIGN PRESSURE PRIOR TO CONTINUING WORK.
6. ELECTRIC POWER TO THE CONTROLLER IS SUPPLIED BY ELECTRICAL CONTRACTOR IN LOCATIONS SHOWN.
7. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER SOURCE.
8. EACH CONTROLLER TO BE EQUIPPED WITH RAIN SHUT OFF SENSOR AND MOISTURE SENSOR.

TABULATIONS

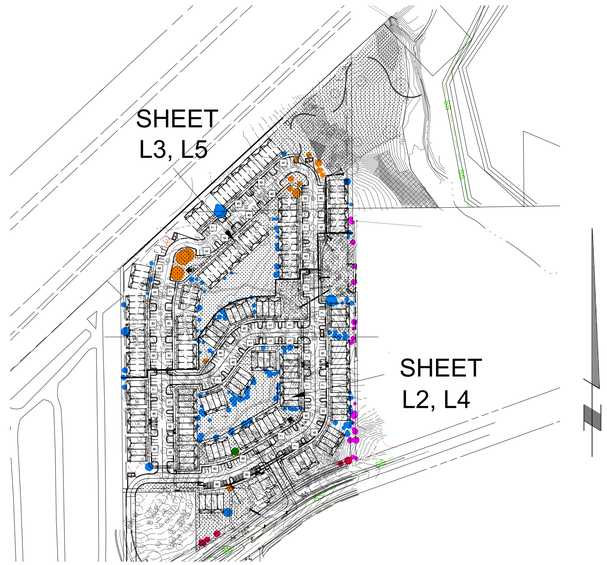
STREET BUFFER:	516 LF/25 = 21 TREES 42 SHRUBS 42 GROUND COVERS REQUIRED
PERIPHERAL BUFFER:	692 LF/25 = 28 TREES 56 SHRUBS 56 GROUND COVERS REQUIRED
PARKING AREAS:	375 / 8 * 2 = 94 TREES 188 SHRUBS 188 GROUND COVERS
BUILDING FOUNDATIONS (4 PLEX):	
TOTAL FOR 43 BUILDINGS:	10277 LF/25 = 411 TREES 822 SHRUBS 822 GROUND COVERS REQUIRED
TOTAL PER BUILDING	239 LF/25 = 9.5 TREES 19 SHRUBS 19 GROUND COVERS REQUIRED
CLUBHOUSE:	230 LF/25 = 9 TREES 18 SHRUBS 18 GROUND COVERS REQUIRED
FACILITY BUILDING	80 LF/25 = 3 TREES 6 SHRUBS 6 GROUND COVERS REQUIRED
EXISTING TREES CREDITS:	194 TREES 388 SHRUBS 388 GROUND COVERS
TOTAL PLANTS REQUIRED WITHOUT CREDITS	566 TREES 1132 SHRUBS 1132 GROUND COVERS REQUIRED
TOTAL PLANTS REQUIRED: WITH CREDITS	
NEW TREES PROVIDED:	372
NEW SHRUBS PROVIDED:	744 (2 PLANTED @ EACH TREE)
NEW GROUNDCOVER PROVIDED:	744 (2 PLANTED @ EACH TREE)

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	REMARKS	SIZE	QTY.
TREES					
	ACER FREEMANII	AUTUMN BLAZE MAPLE		6' HT.	3
	CERCIS OCCIDENTALIS	WESTERN REDBUD		6' HT.	121
	FRAXINUS VELUTINA	ARIZONA ASH	NATIVE	15 G.C.	12
	GLEDITSIA TRIACANTHUS 'INERMIS'	HONEY LOCUST		6' HT	71
	MALUS SPECIES	FLOWERING CRAB APPLE		6' HT	53
	PICEA PUNGENS	COLORADO BLUE SPRUCE		6' HT	108
	PINUS EDULIS	PINYON PINE	NATIVE	15 G.C.	4
SHRUBS					
	ARCTOSTAPHYLOS PUNGENS	MANZANITA	NATIVE	1 G.C.	253
	BERBERIS FREMONTII	FREMONT BARBERRY	NATIVE	1 G.C.	330
	FALLUGIA PARADOXA	APACHE PLUME	NATIVE	1 G.C.	19
	JUNIPERUS CHINENSIS	SEA GREEN JUNIPER		5 G.C.	68
	MAHONIA AQUIFOLIUM	OREGON GRAPE		5 G.C.	74
GROUND COVERS AND ACCENTS					
	ARABIS CAUCASICA	WALL ROCKCRESS		1 G.C.	373
	CALYLOPHUS HARTWEGII	SIERRA SUNDROP		1 G.C.	249
	JUNIPERUS HORIZONTALIS	PROSTRATE JUNIPER		1 G.C.	122

IRRIGATION EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	SPECIFICATION	QUANTITY
C	CONTROLLER	RAINBIRD ESP-SMT – WALL MOUNT 6 STA.	5
	BACKFLOW PREVEVTER	FEBCO 825Y 3/4"	1
	DRIP VALVE ASSEMBLY	RAINBIRD XCZ-075-PRF	29
	TREE EMITTER	RAINBIRD XB-10-6	372
	SHRUB EMITTER	RAINBIRD XB-10-6	1488



KEY PLAN

SCALE 1" = 200'

Two working days before you dig
CALL FOR THE BLUE STAKES
792 2211
Blue Stake Center
CALL COLLECT

COF #PZ-21-00284-02

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
12666
STEVE
ACUNA
DATE SIGNED 11-21-22
Expires 3/31/23

LOFTS ON BUTLER

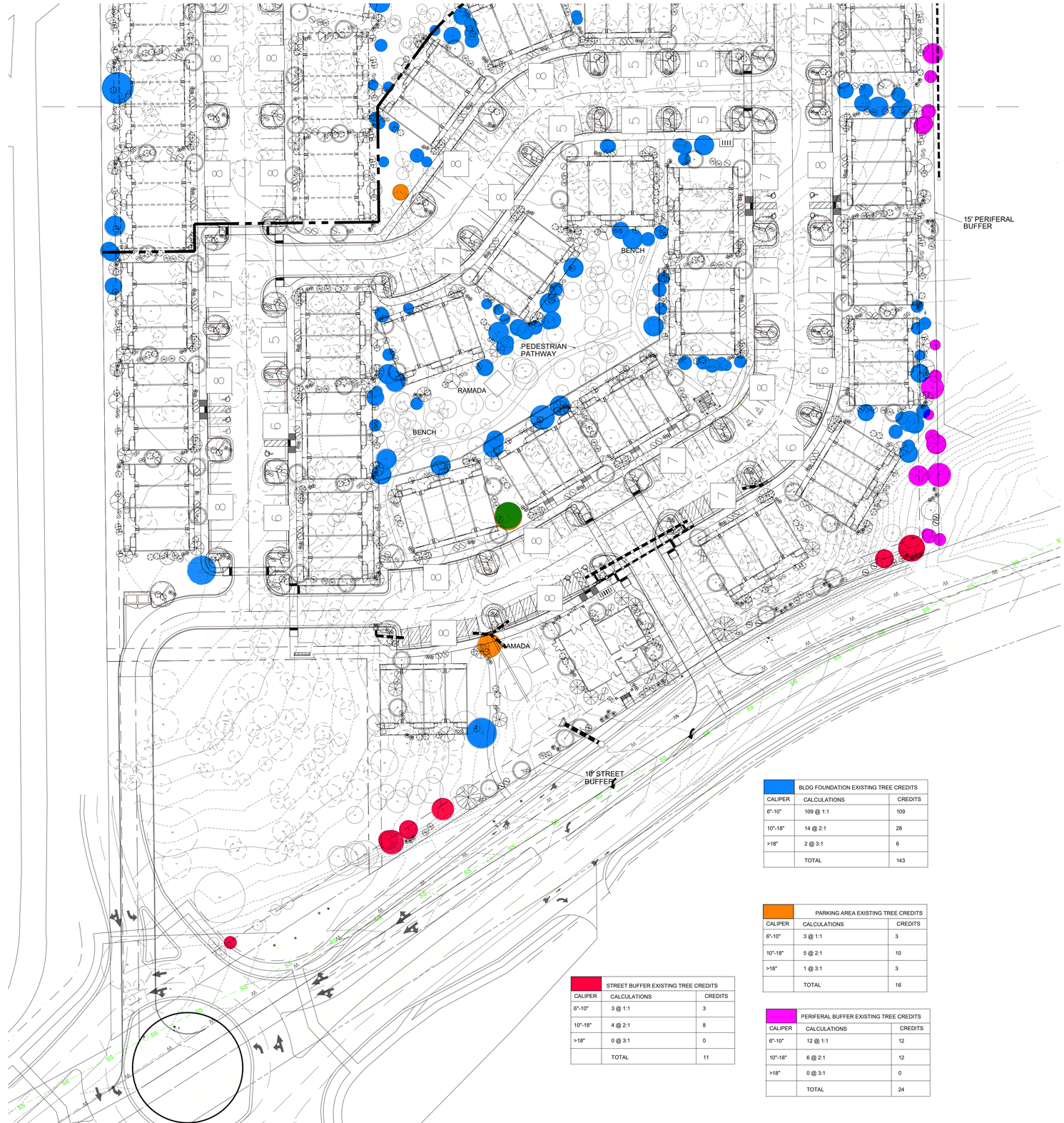
LANDSCAPE PLAN COVER SHEET

HORIZ.
VERT.
F.B.
DESIGN SA
DRAWN SA
CHKD. SA
JOB NO.

Acuña Coffeen
Landscape Architects
3532 N. Avenida Albor Tucson, Arizona 85745
(520) 441-2754

L1 OF 3

11-22



LANDSCAPE PLAN

North
1"=40'

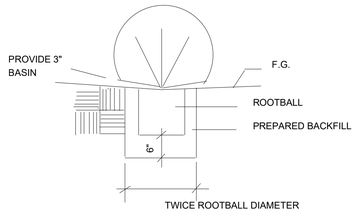
EXISTING TREE LEGEND	
SYMBOL	DESCRIPTION
6	EXISTING TREE TO BE REMOVED NUMBER WITHIN DENOTES CALIPER
6	EXISTING TREE TO BE PRESERVED IN PLACE NUMBER WITHIN DENOTES CALIPER

BLDG FOUNDATION EXISTING TREE CREDITS		
CALIPER	CALCULATIONS	CREDITS
6"-10"	109 @ 1:1	109
10"-18"	14 @ 2:1	28
>18"	2 @ 3:1	6
	TOTAL	143

PARKING AREA EXISTING TREE CREDITS		
CALIPER	CALCULATIONS	CREDITS
6"-10"	3 @ 1:1	3
10"-18"	5 @ 2:1	10
>18"	1 @ 3:1	3
	TOTAL	16

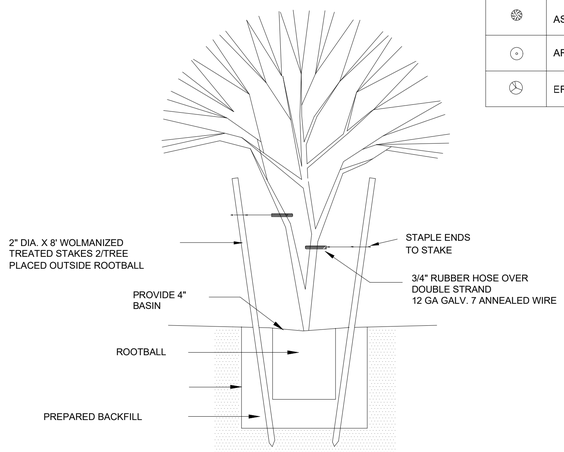
STREET BUFFER EXISTING TREE CREDITS		
CALIPER	CALCULATIONS	CREDITS
6"-10"	3 @ 1:1	3
10"-18"	4 @ 2:1	8
>18"	0 @ 3:1	0
	TOTAL	11

PERIFERAL BUFFER EXISTING TREE CREDITS		
CALIPER	CALCULATIONS	CREDITS
6"-10"	12 @ 1:1	12
10"-18"	6 @ 2:1	12
>18"	0 @ 3:1	0
	TOTAL	24



1 SHRUB PLANTING DETAIL

NTS



* NO STAKES FOR BOXED TREES SIZES

2 TREE PLANTING DETAIL

NTS

PLANT LIST		
KEY	BOTANICAL NAME	COMMON NAME
TREES		
	ACER FREEMANII	AUTUMN BLAZE MAPLE
	CERCIS OCCIDENTALIS	WESTERN REDBUD
	FRAXINUS VELUTINA	ARIZONA ASH
	GLEDITSIA TRIACANTHUS 'INERMIS'	HONEY LOCUST
	MALUS SPECIES	FLOWERING CRAB APPLE
	PICEA PUNGENS	COLORADO BLUE SPRUCE
	PINUS EDULIS	PINYON PINE
SHRUBS		
	ARCTOSTAPHYLOS PUNGENS	MANZANITA
	BERBERIS FREMONTII	FREMONT BARBERRY
	FALLUGIA PARADOXA	APACHE PLUME
	JUNIPERUS CHINENSIS	SEA GREEN JUNIPER
	MAHONIA AQUIFOLIUM	OREGON GRAPE
GROUND COVERS AND ACCENTS		
	ARABIS CAUCASICA	WALL ROCKCRESS
	CALYLOPHUS HARTWEGII	SIERRA SUNDROP
	JUNIPERUS HORIZONTALIS	PROSTRATE JUNIPER
BUTTERFLY NECTAR PLANT		
	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED
	ARTEMISIA LUDOVICIANA	WHITE SAGEBRUSH
	ERICAMERIA NAUSEOSA	RABBITBRUSH

Two working days before you dig
CALL FOR THE BLUE STAKES
792 2211
Blue Stake Center
CALL COLLECT

COF #PZ-21-00284-02

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
12666
STEVE ACUNA
DATE SIGNED 11-21-22
Expires 9/31/23

THE LOFTS ON BUTLER

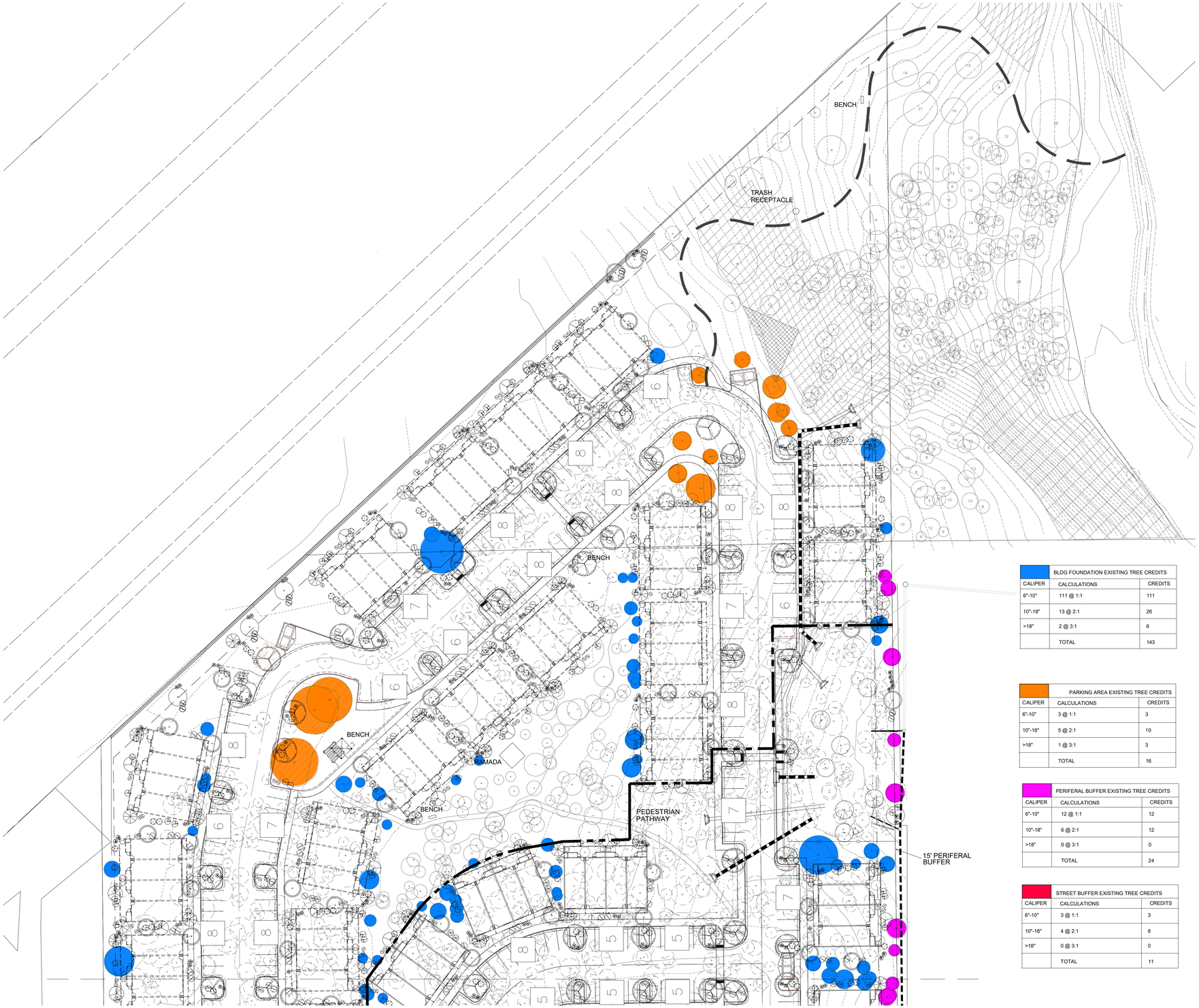
LANDSCAPE PLAN

Acuña Coffeen
Landscape Architects
3532 N. Avenida Albor Tucson, Arizona 85745
(520) 441-2754

L2 OF 3

HORIZ.	
VERT.	
F.B.	
DESIGN	SA
DRAWN	SA
CHKD.	SA
JOB NO.	

11-22



PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME
TREES		
	ACER FREEMANII	AUTUMN BLAZE MAPLE
	CERCIS OCCIDENTALIS	WESTERN REDBUD
	FRAXINUS VELUTINA	ARIZONA ASH
	GLEDITSIA TRIACANTHUS 'INERMIS'	HONEY LOCUST
	MALUS SPECIES	FLOWERING CRAB APPLE
	PICEA PUNGENS	COLORADO BLUE SPRUCE
	PINUS EDULIS	PINYON PINE
SHRUBS		
	ARCTOSTAPHYLOS PUNGENS	MANZANITA
	BERBERIS FREMONTII	FREMONT BARBERRY
	FALLUGIA PARADOXA	APACHE PLUME
	JUNIPERUS CHINENSIS	SEA GREEN JUNIPER
	MAHONIA AQUIFOLIUM	OREGON GRAPE
GROUND COVERS AND ACCENTS		
	ARABIS CAUCASICA	WALL ROCKCRESS
	CALYLOPHUS HARTWEGII	SIERRA SUNDROP
	JUNIPERUS HORIZONTALIS	PROSTRATE JUNIPER
BUTTERFLY NECTAR PLANT		
	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED
	ARTEMISIA LUDOVICIANA	WHITE SAGEBRUSH
	ERICAMERIA NAUSEOSA	RABBITBRUSH

BLDG FOUNDATION EXISTING TREE CREDITS

CALIPER	CALCULATIONS	CREDITS
6"-10"	111 @ 1:1	111
10"-18"	13 @ 2:1	26
>18"	2 @ 3:1	6
	TOTAL	143

PARKING AREA EXISTING TREE CREDITS

CALIPER	CALCULATIONS	CREDITS
6"-10"	3 @ 1:1	3
10"-18"	5 @ 2:1	10
>18"	1 @ 3:1	3
	TOTAL	16

PERIFERAL BUFFER EXISTING TREE CREDITS

CALIPER	CALCULATIONS	CREDITS
6"-10"	12 @ 1:1	12
10"-18"	6 @ 2:1	12
>18"	0 @ 3:1	0
	TOTAL	24

STREET BUFFER EXISTING TREE CREDITS

CALIPER	CALCULATIONS	CREDITS
6"-10"	3 @ 1:1	3
10"-18"	4 @ 2:1	8
>18"	0 @ 3:1	0
	TOTAL	11

EXISTING TREE LEGEND

SYMBOL	DESCRIPTION
6	EXISTING TREE TO BE REMOVED NUMBER WITHIN DENOTES CALIPER
6	EXISTING TREE TO BE PRESERVED IN PLACE NUMBER WITHIN DENOTES CALIPER

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LANDSCAPE PLAN

North
1" = 40'

COF #PZ-21-00284-02

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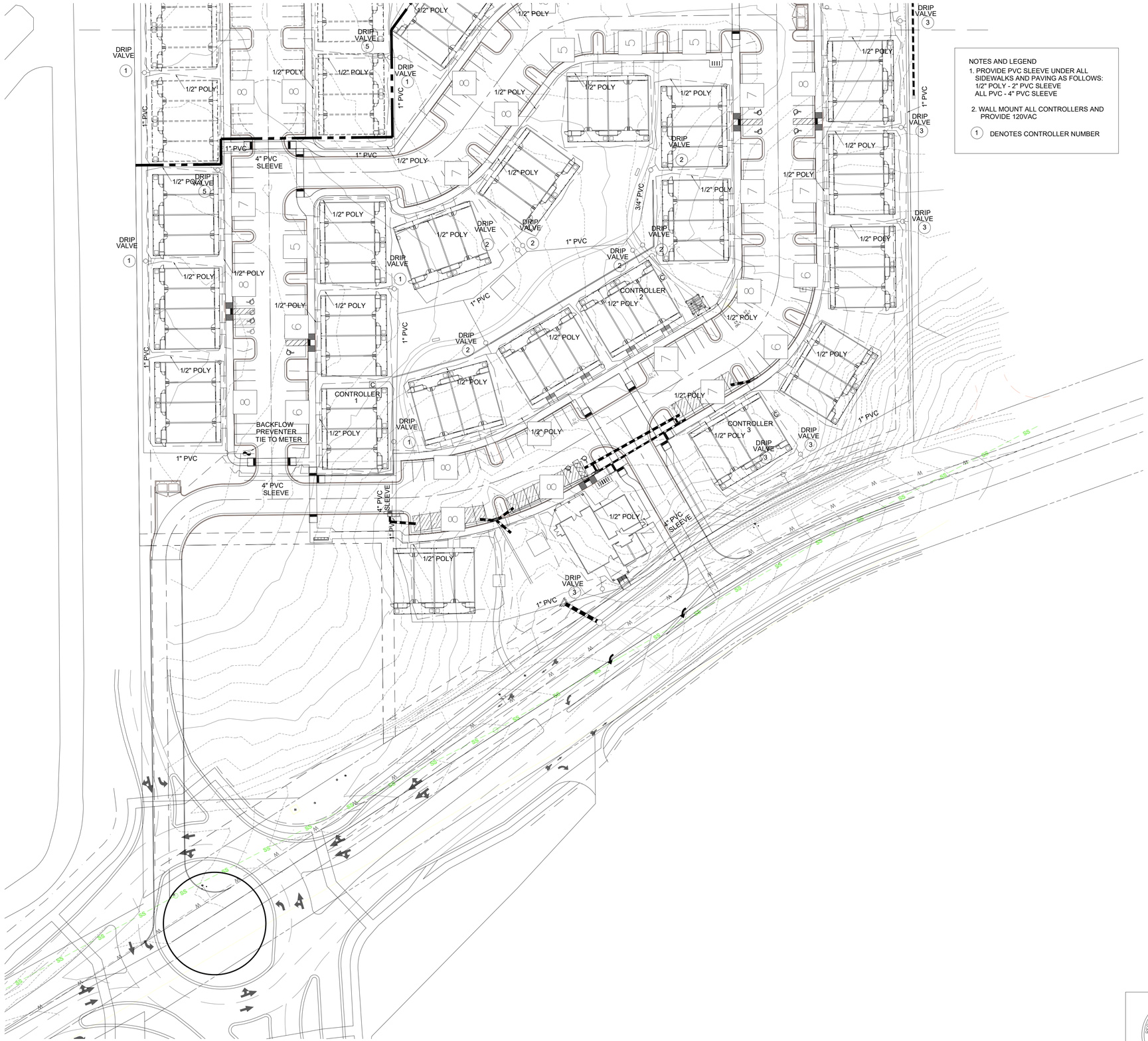
LANDSCAPE PLAN

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L3 OF 3

HORIZ.	
VERT.	
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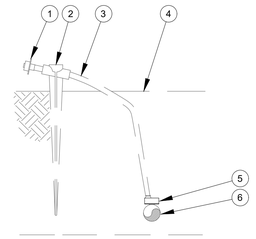


IRRIGATION PLAN

North
1"=40'

NOTES AND LEGEND
1. PROVIDE PVC SLEEVE UNDER ALL SIDEWALKS AND PAVING AS FOLLOWS:
   1/2" POLY - 2" PVC SLEEVE
   ALL PVC - 4" PVC SLEEVE
2. WALL MOUNT ALL CONTROLLERS AND PROVIDE 120VAC

(1) DENOTES CONTROLLER NUMBER

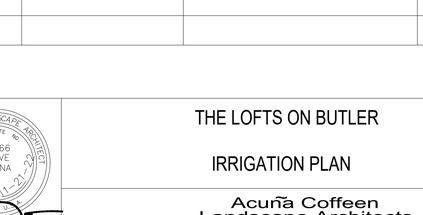


1 DIFFUSER BUG CAP: RAIN BIRD DBC-025
2 UNIVERSAL ¼" TUBING STAKE: RAIN BIRD TS-025
3 ¼" DISTRIBUTION TUBING: RAIN BIRD XQ TUBING (LENGTH AS REQUIRED)
4 FINISH GRADE
5 SINGLE-OUTLET BARB INLET X BARB OUTLET EMITTER: RAIN BIRD XERI-BUG EMITTER
6 ½" POLYETHYLENE TUBING: RAIN BIRD XF SERIES TUBING OR RAIN BIRD XT-700 XERI-TUBE OR RAIN BIRD XBS BLACK STRIPE TUBING

1 SINGLE OUTLET EMITTER DETAIL

NTS

NOTES:
1. USE RAIN BIRD XERIMAN TOOL XM-TOOL TO INSERT EMITTER DIRECTLY INTO ½" POLYETHYLENE TUBING.



1A MULTI OUTLET EMITTER DETAIL

NTS

IRRIGATION EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	SPECIFICATION	QUANTITY
C	CONTROLLER	RAINBIRD ESP–SMT – WALL MOUNT 6 STA.	5
	BACKFLOW PREVEVTER	FEBCO 825Y 3/4"	1
	DRIP VALVE ASSEMBLY	RAINBIRD XCZ-075-PRF	29
	TREE EMITTER	RAINBIRD XB-10-6	372
	SHRUB EMITTER	RAINBIRD XB-10-6	1488

Two working days before you dig
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REGISTERED LANDSCAPE ARCHITECT
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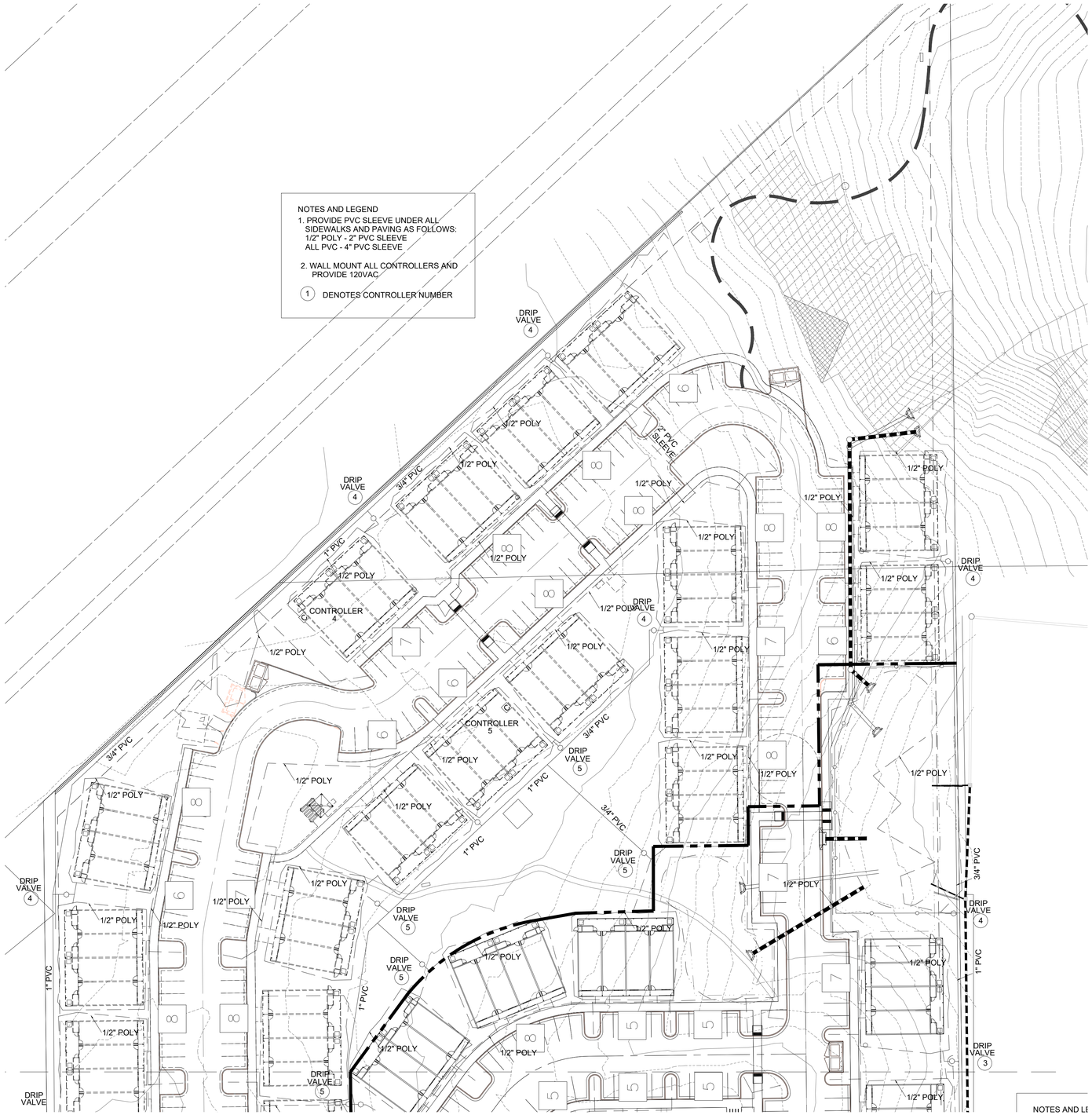
IRRIGATION PLAN

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L4 OF 5

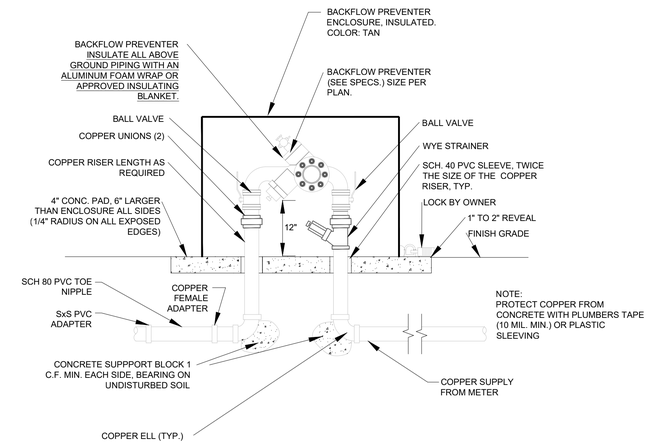
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VERT.	
F.B.	
DESIGN	SA
DRAWN	SA
CHKD.	SA
JOB NO.	

11-22



IRRIGATION PLAN

North
1" = 40'

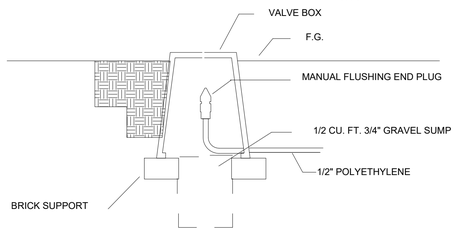


1 BACKFLOW PREVENTER DETAIL

NTS

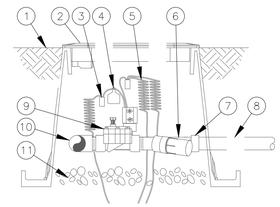
IRRIGATION EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	SPECIFICATION	QUANTITY
C	CONTROLLER	RAINBIRD ESP–SMT – WALL MOUNT 6 STA.	5
	BACKFLOW PREVEVTER	FEBCO 825Y 3/4"	1
	DRIP VALVE ASSEMBLY	RAINBIRD XCZ-075-PRF	29
	TREE EMITTER	RAINBIRD XB-10-6	372
	SHRUB EMITTER	RAINBIRD XB-10-6	1488



2 HOSE END CAP DETAIL

NTS

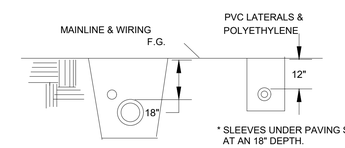


1. FINISH GRADE
2. STANDARD VALVE BOX WITH COVER: RAIN BIRD VB–STD
3. WATERPROOF CONNECTION: RAIN BIRD DB SERIES
4. VALVE ID TAG
5. 30–INCH LINEAR LENGTH OF WIRE, COILED
6. PRESSURE REGULATING FILTER: RAIN BIRD PRF–075–RBY (INCLUDED IN XCZ–075–PRF KIT)
7. PVC SCH 40 FEMALE ADAPTOR
8. LATERAL PIPE
9. REMOTE CONTROL VALVE: RAIN BIRD LVF–075 (INCLUDED IN XCZ–075–PRF KIT)
10. PVC SCH 40 TEE OR ELL TO MANIFOLD
11. 3–INCH MINIMUM DEPTH OF 3/4–INCH WASHED GRAVEL
12. MANIFOLD PIPE AND FITTINGS

3 DRIP VALVE ASSEMBLY

NTS

USE NON PRESSURE REGULATING FILTER WHERE REMOTE PRESSURE REGULATORS ARE USED.



* SLEEVES UNDER PAVING SHALL BE AT AN 18" DEPTH.

4 TRENCHING DETAIL

NTS

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REGISTERED LANDSCAPE ARCHITECT
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STEVE ACUNA
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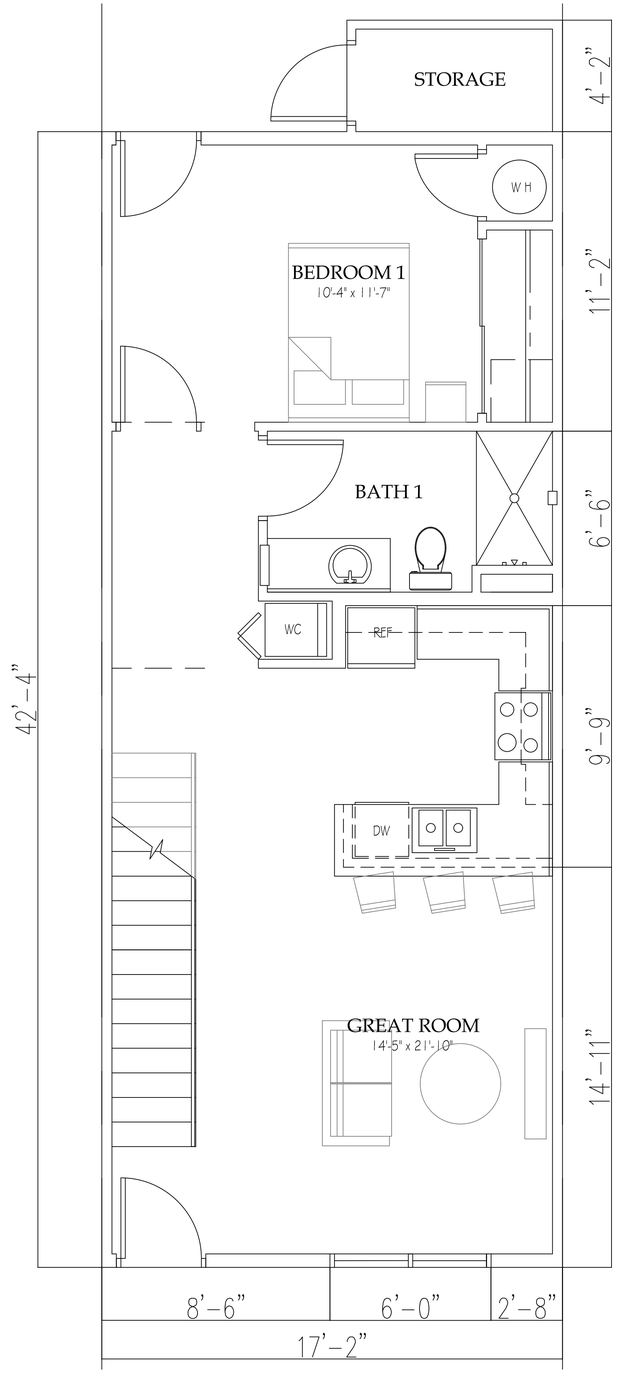
IRRIGATION PLAN

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L5 OF 5

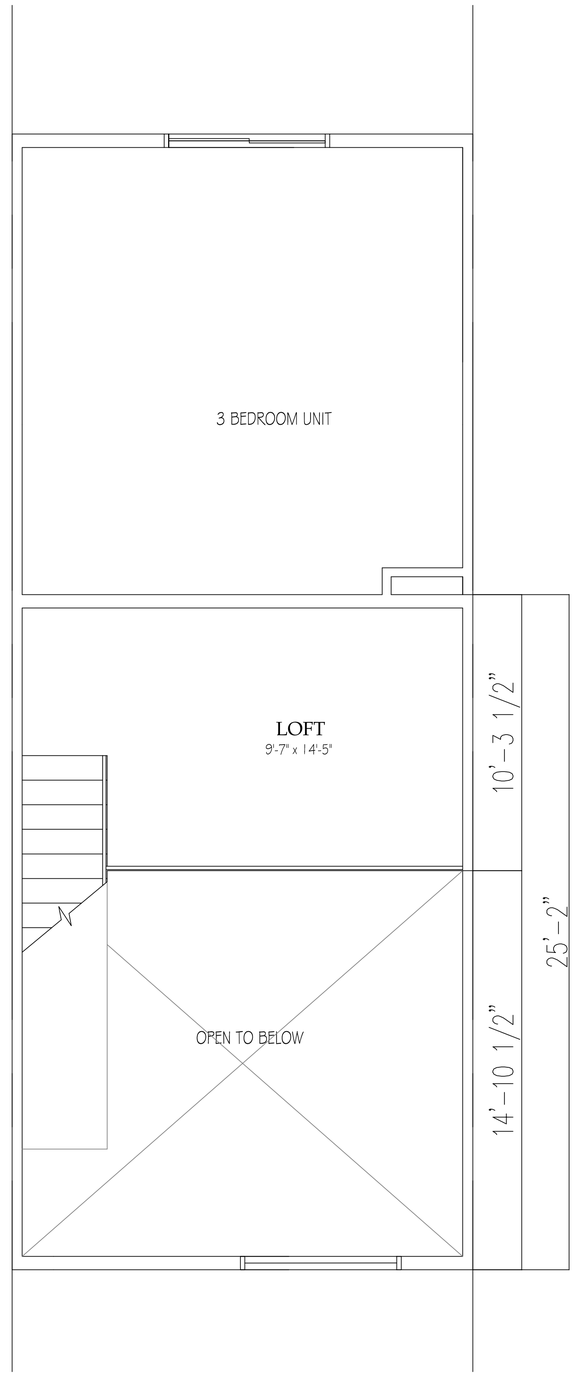
HORIZ.	
VERT.	
F.B.	
DESIGN	SA
DRAWN	SA
CHKD.	SA
JOB NO.	

11-22



1 A1.0 Main Level Floor Plan

Scale 3/8" = 1'-0"



2 A1.0 Upper Level Floor Plan

Scale 3/8" = 1'-0"

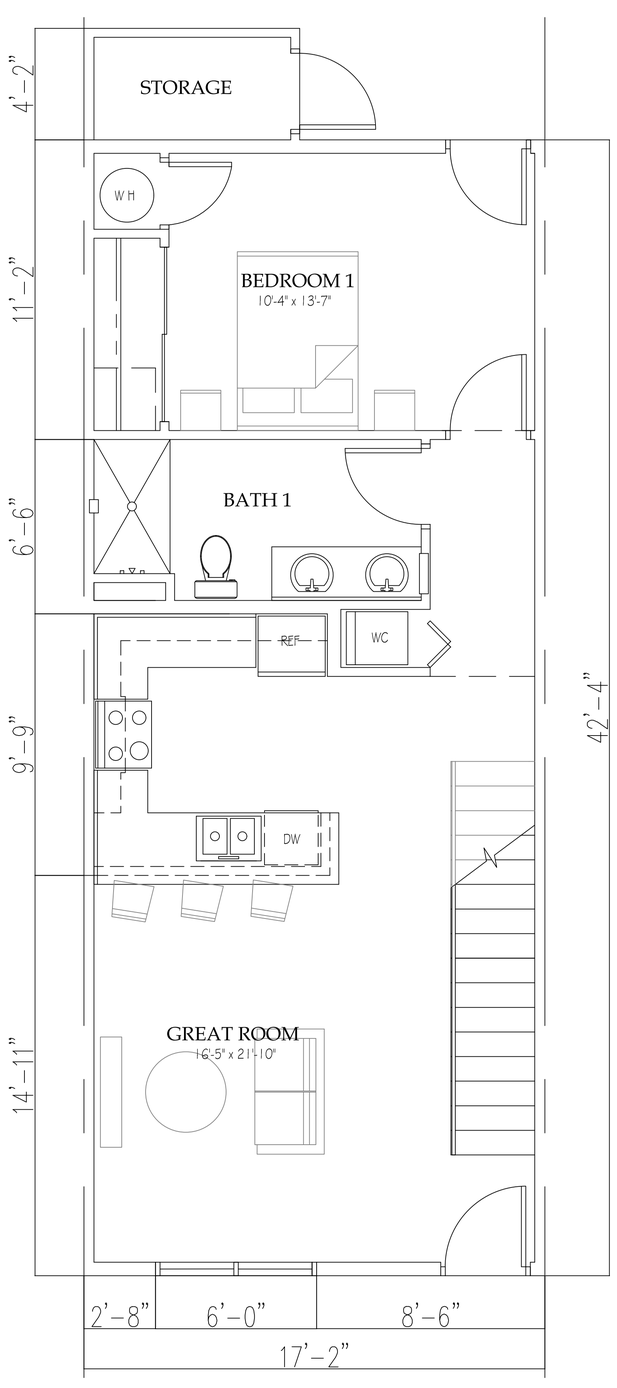
MIRAMONTE HOMES
2492 E. RIVER ROAD S-100 TUCSON, AZ 85718 (520) 615-8900

1 BEDROOM UNIT

TOTAL SQ. FT. 1414

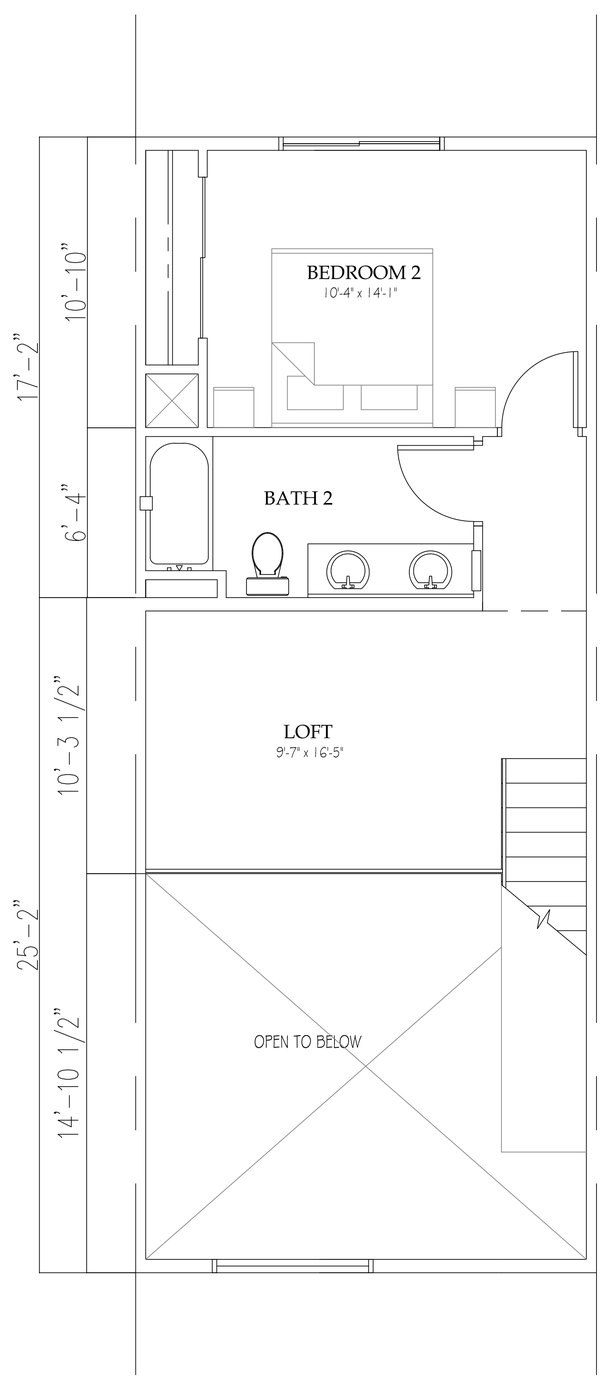
Butler Lofts
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1 A1.1 Main Level Floor Plan

Scale 3/8" = 1'-0"



2 A1.1 Upper Level Floor Plan

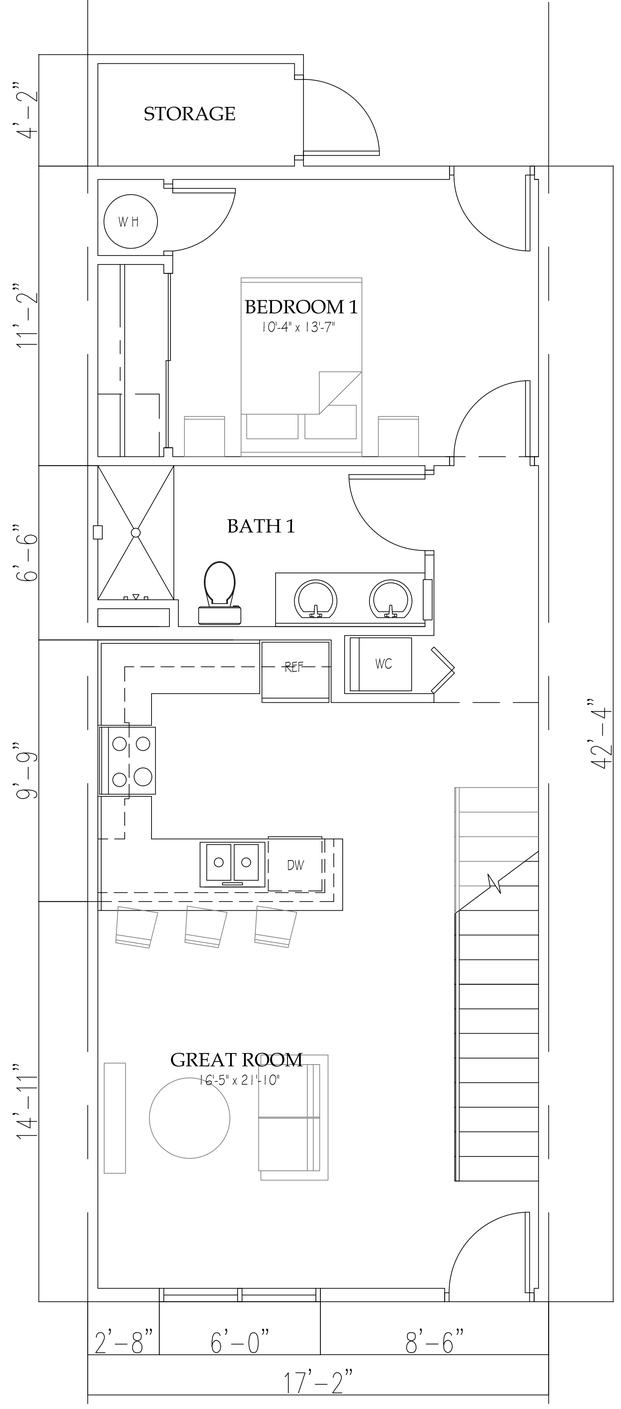
Scale 3/8" = 1'-0"

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2 BEDROOM UNIT

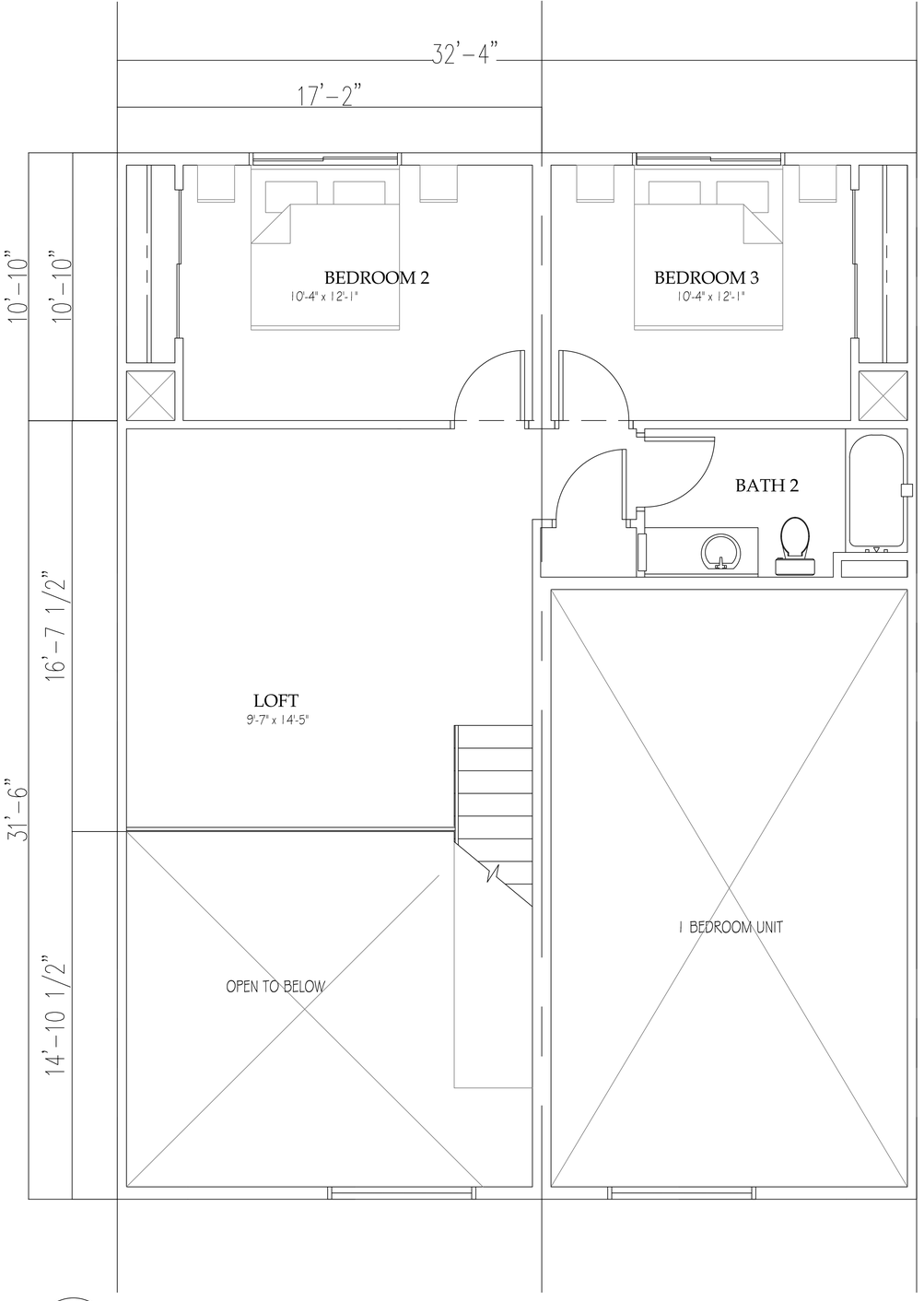
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Flagstaff, AZ

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1 A1.2 Main Level Floor Plan

Scale 3/8" = 1'-0"



2 A1.2 Upper Level Floor Plan

Scale 3/8" = 1'-0"

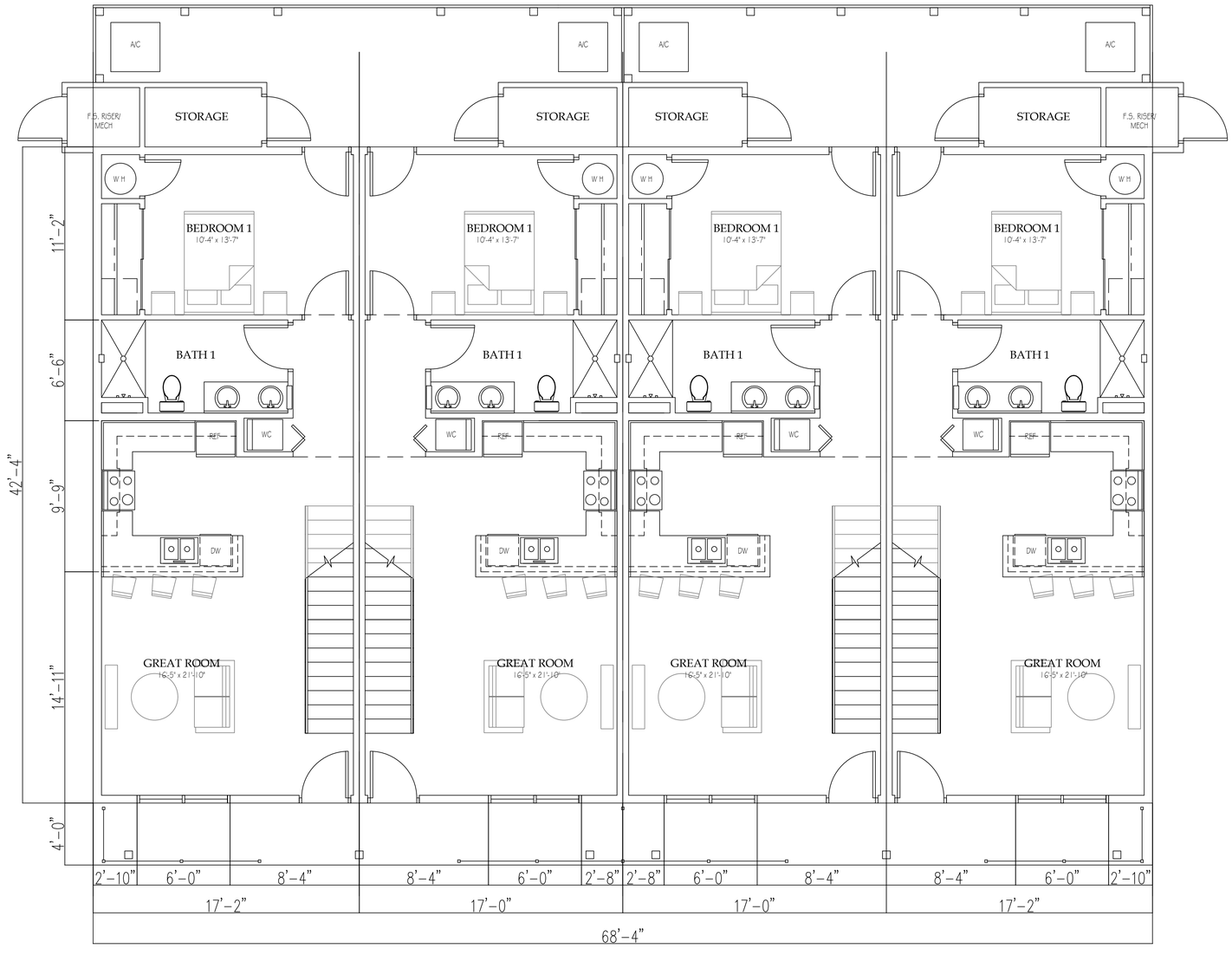
MIRAMONTE HOMES
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3 BEDROOM UNIT

TOTAL SQ. FT. 1414

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1 Main Level Floor Plan

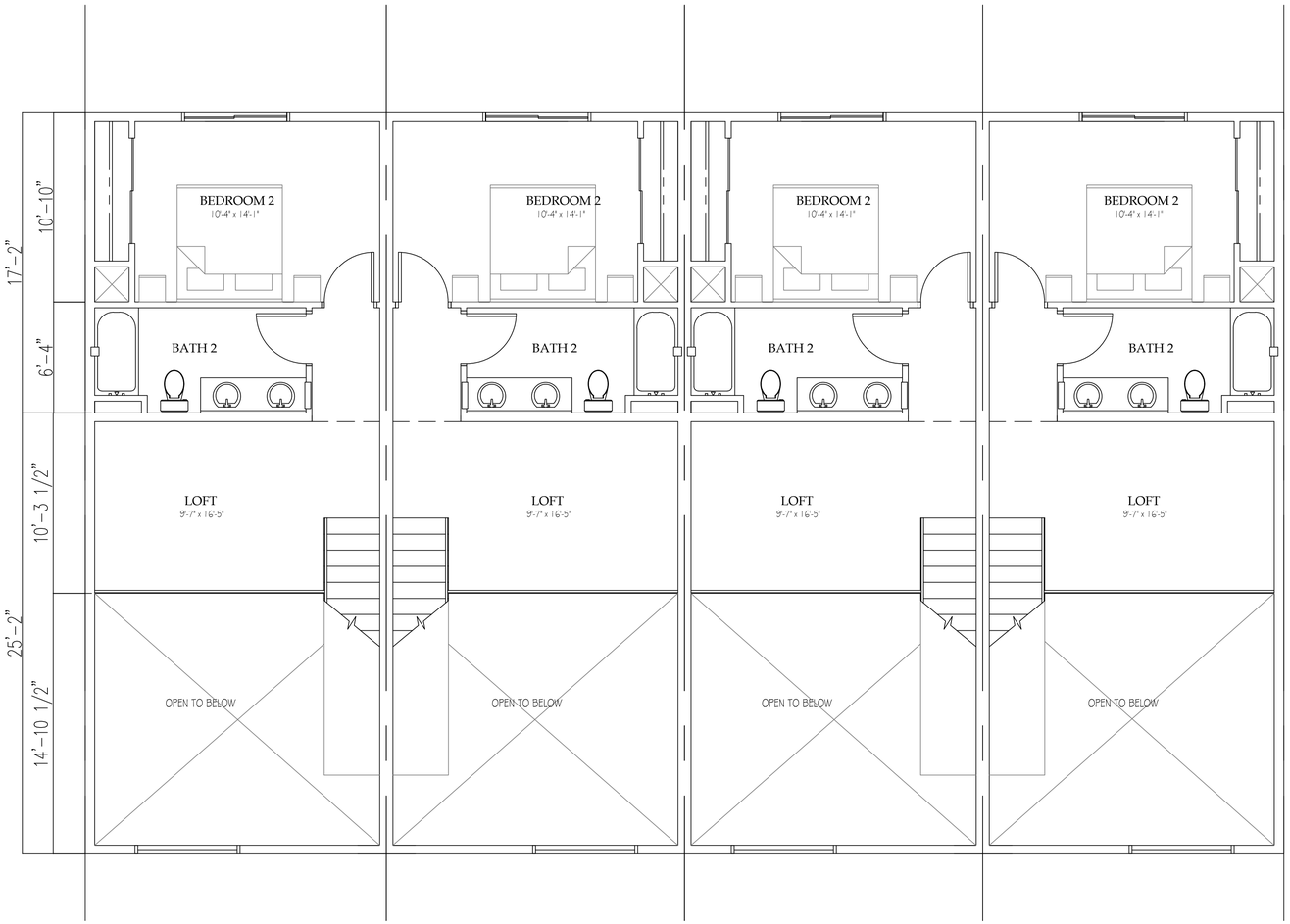
Scale 1/4" = 1'-0"

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4 PLEX FLOOR PLANS

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2 Upper Level Floor Plan

Scale 1/4" = 1'-0"

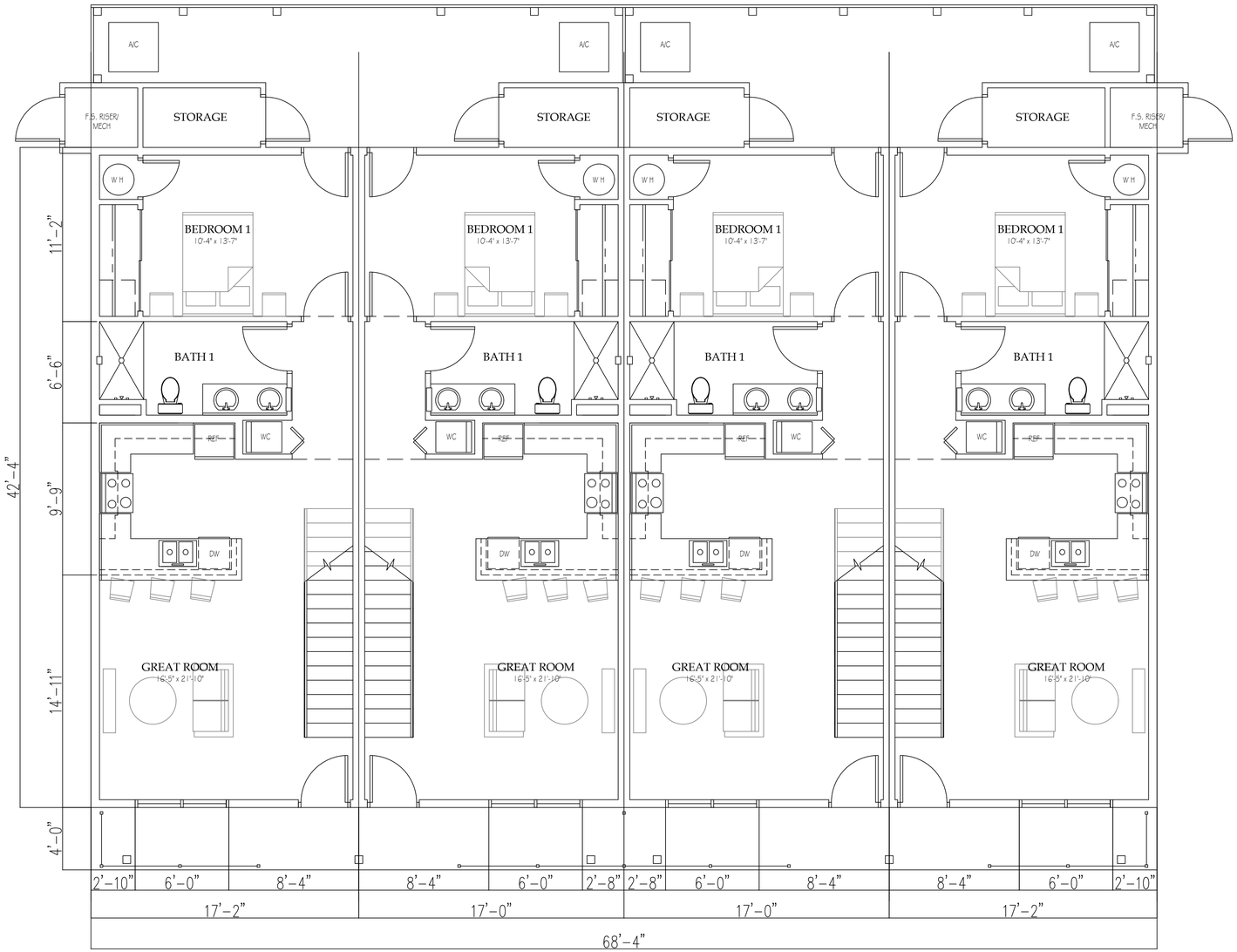
MIRAMONTE HOMES

2502 E [illegible] 3-9128

4 PLEX FLOOR PLANS

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1 Main Level Floor Plan

Scale 1/4" = 1'-0"

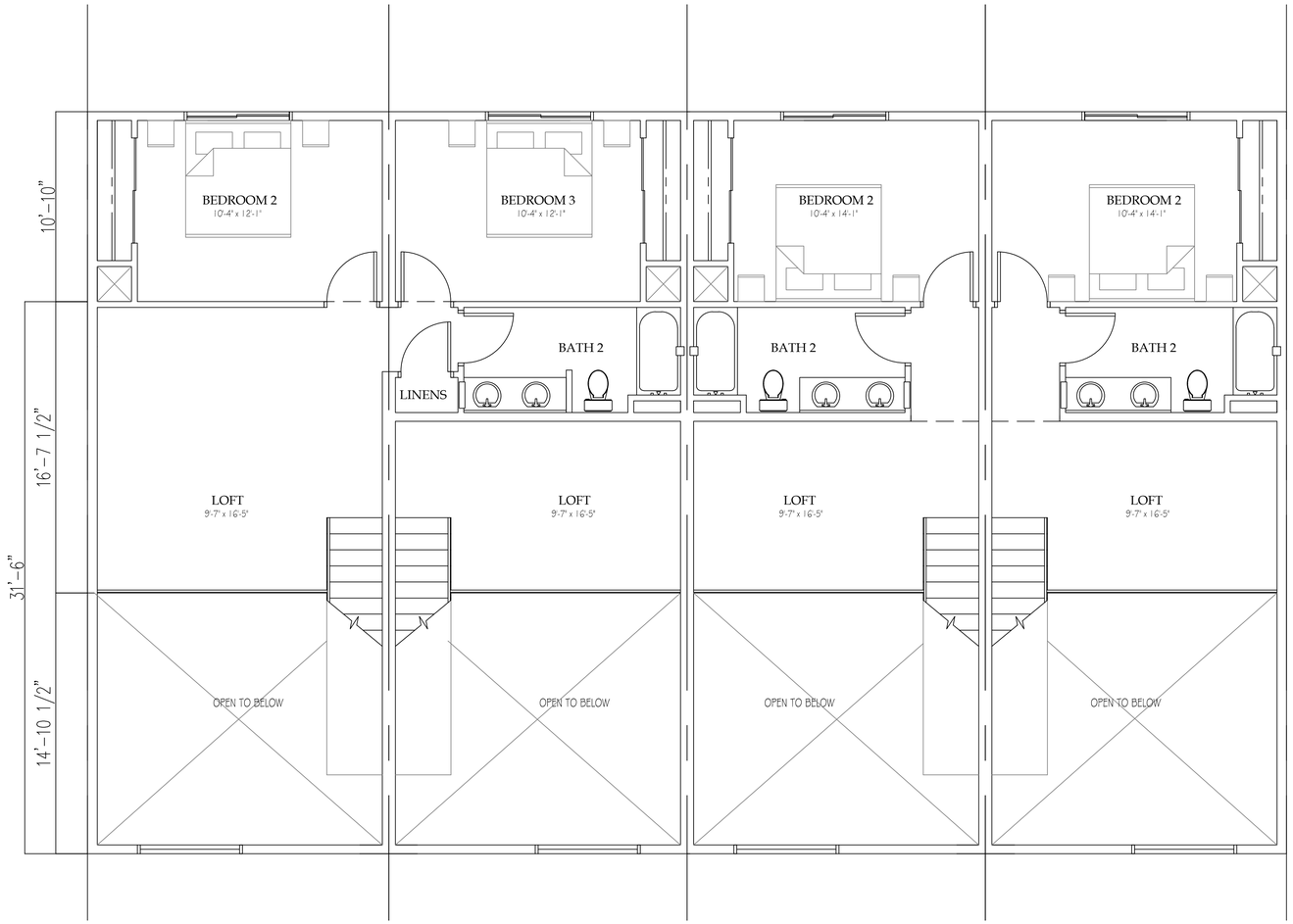
MIRAMONTE HOMES

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4 PLEX FLOORPLAN

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2 Upper Level Floor Plan

Scale 1/8" = 1'-0"

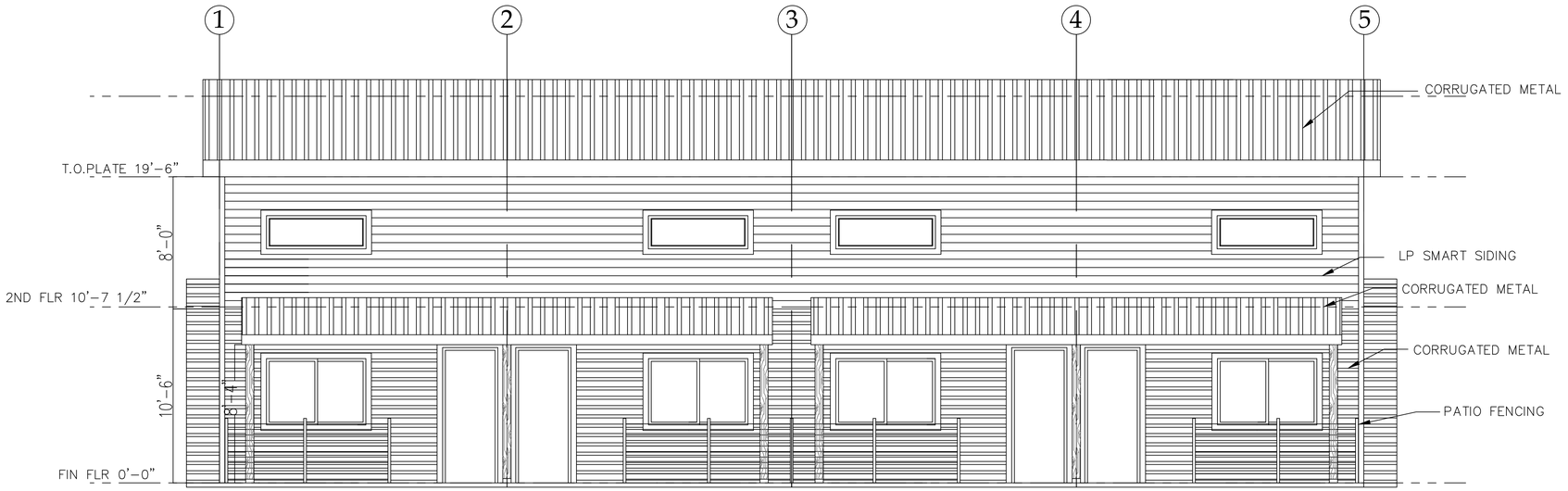
MIRAMONTE HOMES

2492 E) 615-8900

4 PLEX FLOORPLAN

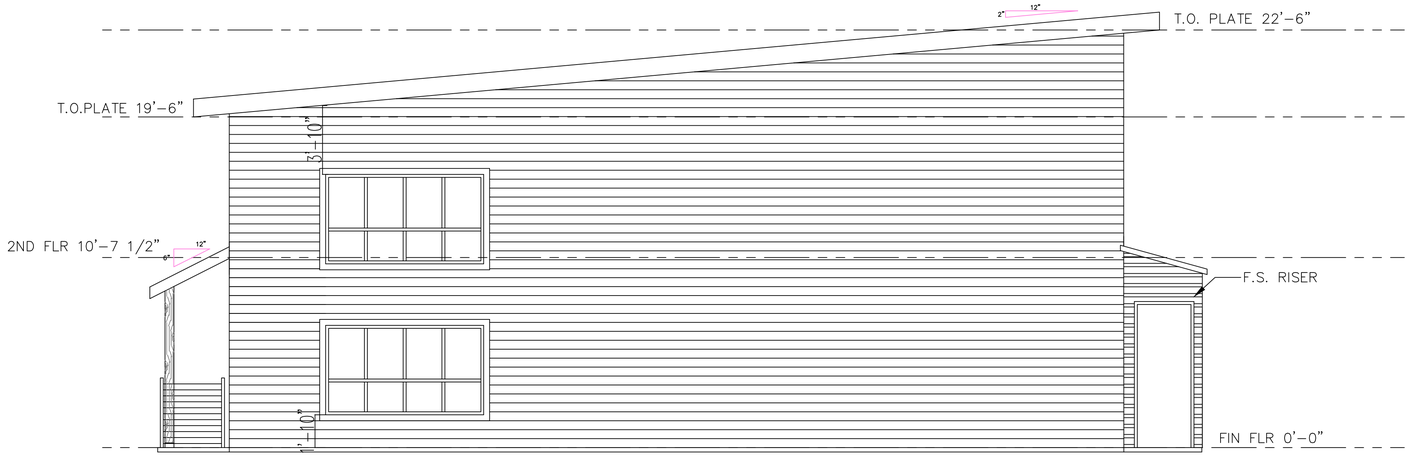
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2 Front Elevation

Scale 1/4" = 1'-0"



1 Right Elevation

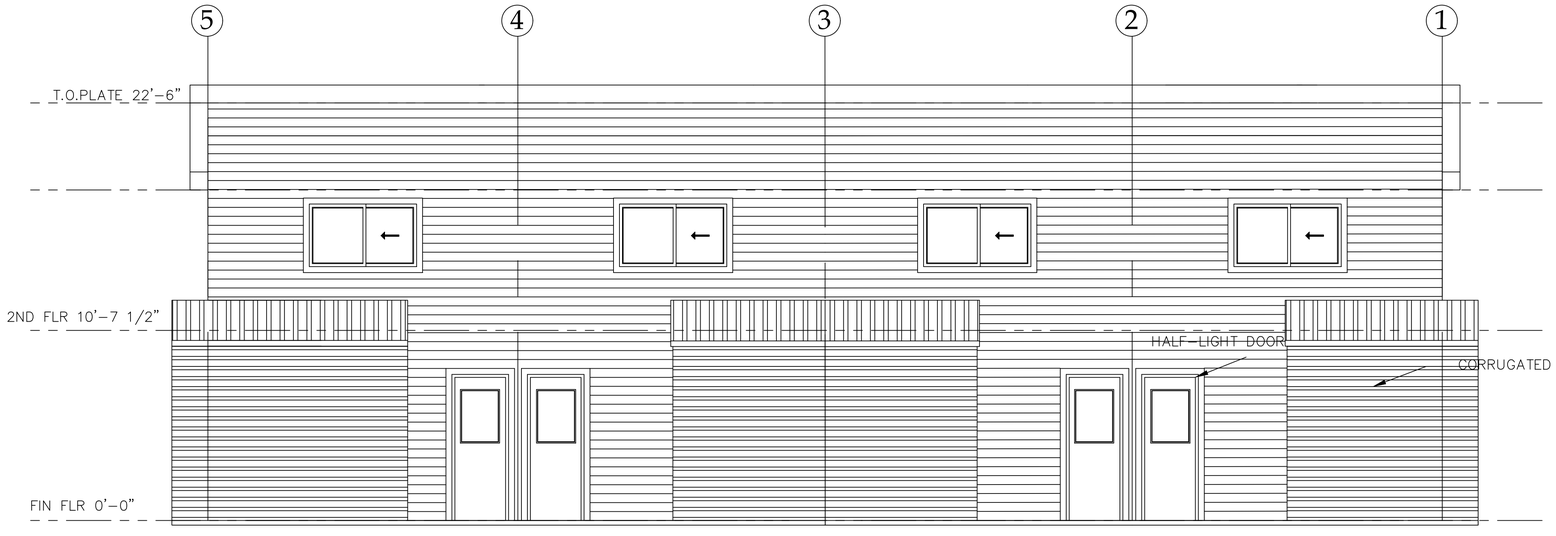
Scale 1/4" = 1'-0"

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4 PLEX ELEVATIONS

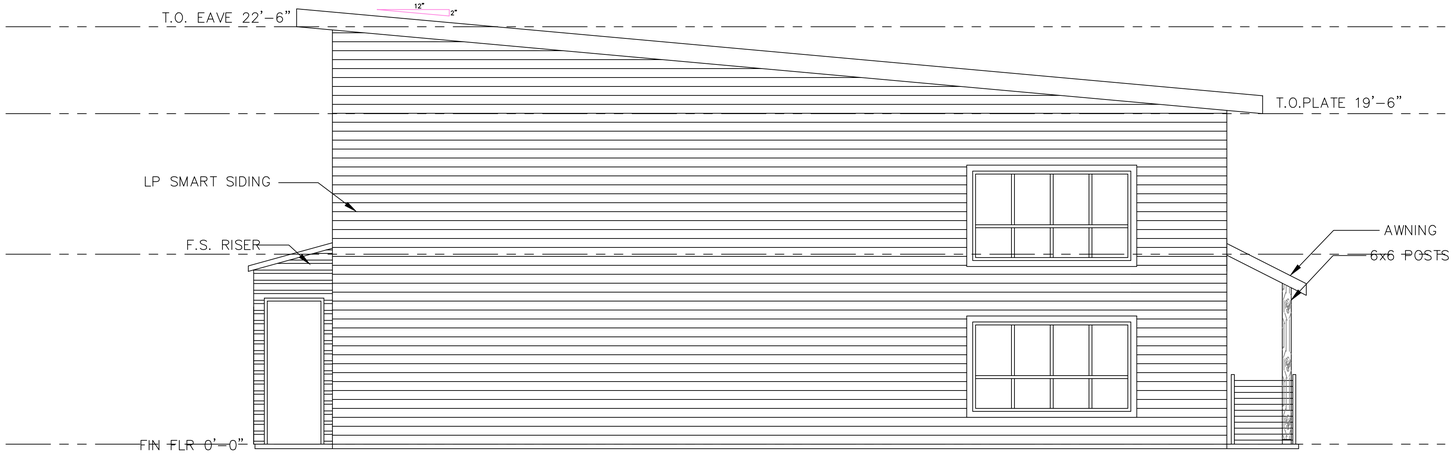
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3 Back Elevation

Scale 1/8" = 1'-0"



4 Left Elevation

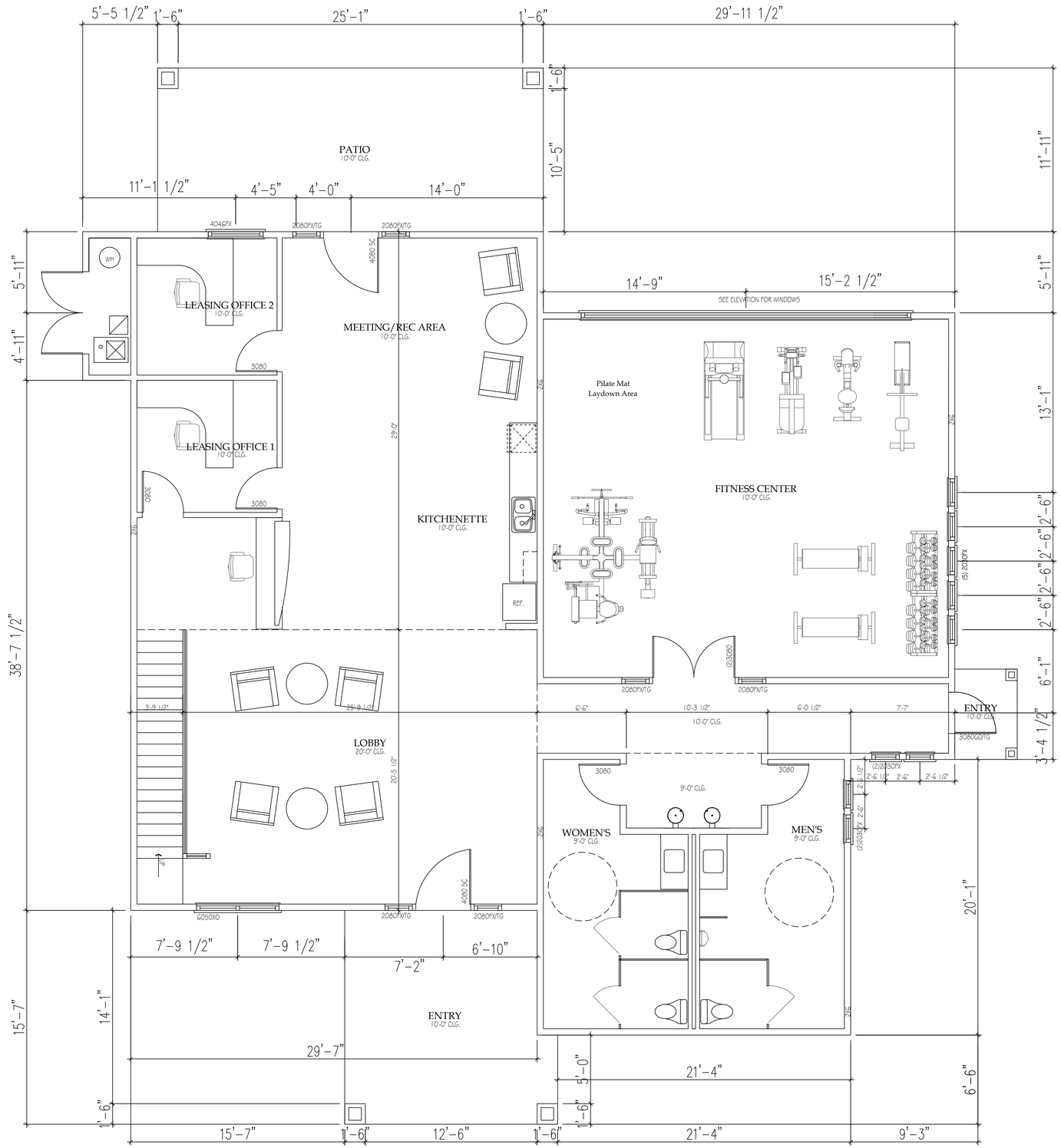
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4 PLEX ELEVATIONS

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LOWER FLOOR PLAN

SCALE: 1/4"=1'-0"

TUCSON

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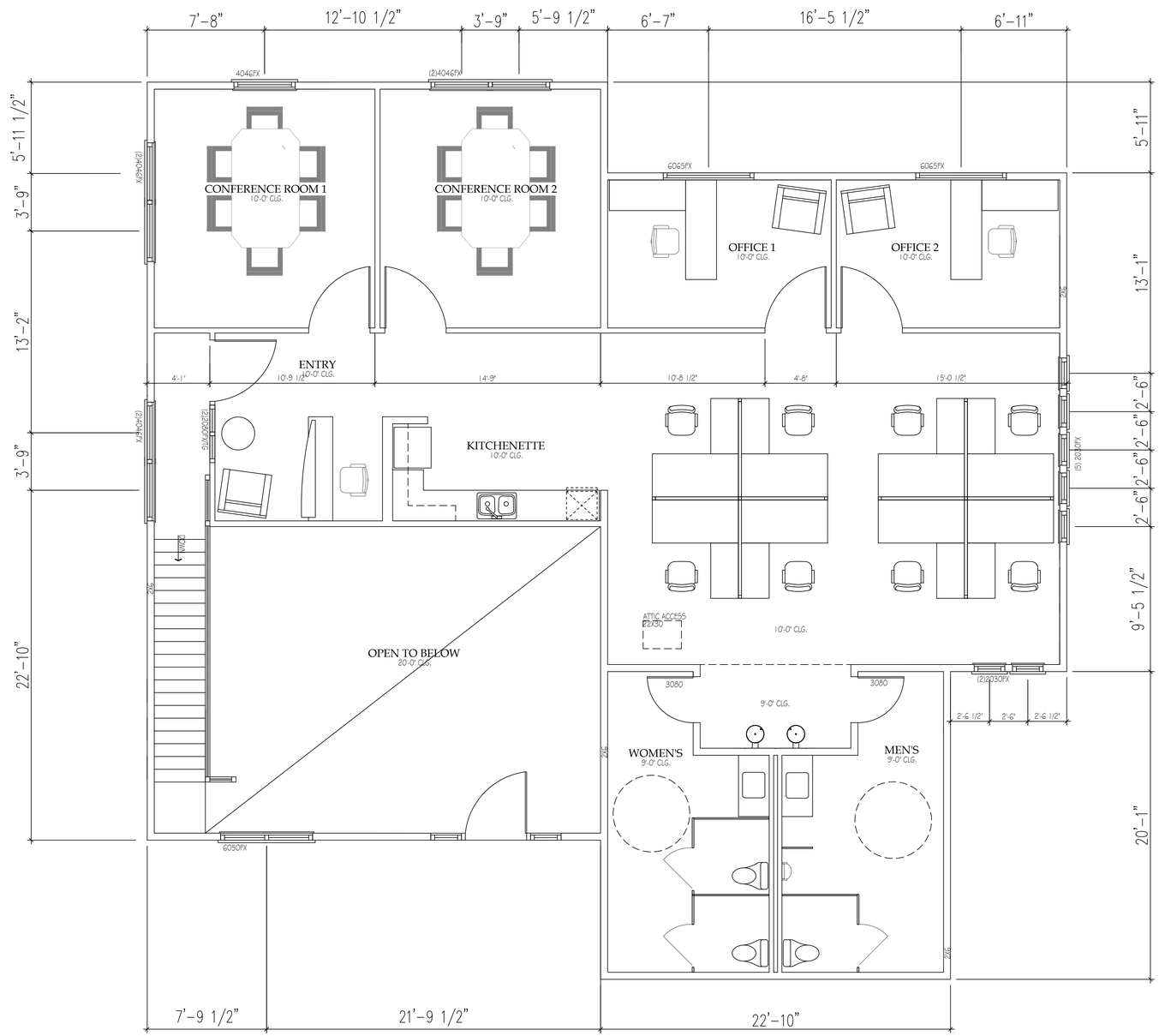
CLUB HOUSE
LOWER FLOOR PLAN

REVISION
1
2
3
4
5
6
7

MIRAMONTE
HOMES
2502 E. RIVER ROAD
TUCSON, AZ 85718
(520) 615-8900

PARK PLACE
SEDONA

A1.0



UPPER FLOOR PLAN

SCALE: 1/4"= 1'-0"

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HOMES, L.L.C.
2492 E. RIVER SUITE 100 TUCSON, AZ 85718 (520) 615-8900

CLUB HOUSE
UPPER FLOOR PLAN

REVISION
1
2
3
4
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6
7

MIRAMONTE HOMES
4578 N. 1st AVENUE, SUITE 160
TUCSON, AZ 85718
(520) 615-8900

PARK PLACE
SEDONA

A1.1

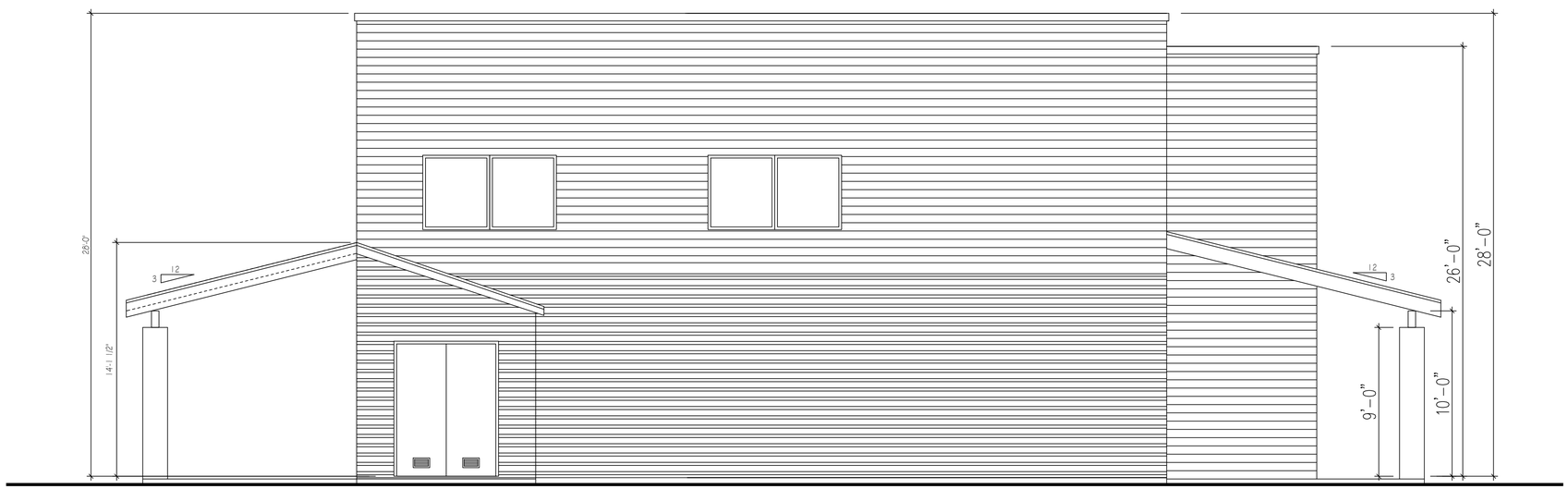
TUCSON

© COPYRIGHT 2010 Miramonte Homes, L.L.C.



FRONT ELEVATION

SCALE: 1/4"=1'-0"



LEFT SIDE ELEVATION

MIRAMONTE
HOMES, L.L.C.
2492 E. RIVER SUITE 100 TUCSON, AZ 85718 (520) 615-8900

CLUB HOUSE
EXTERIOR ELEVATIONS

REVISION
1
2
3
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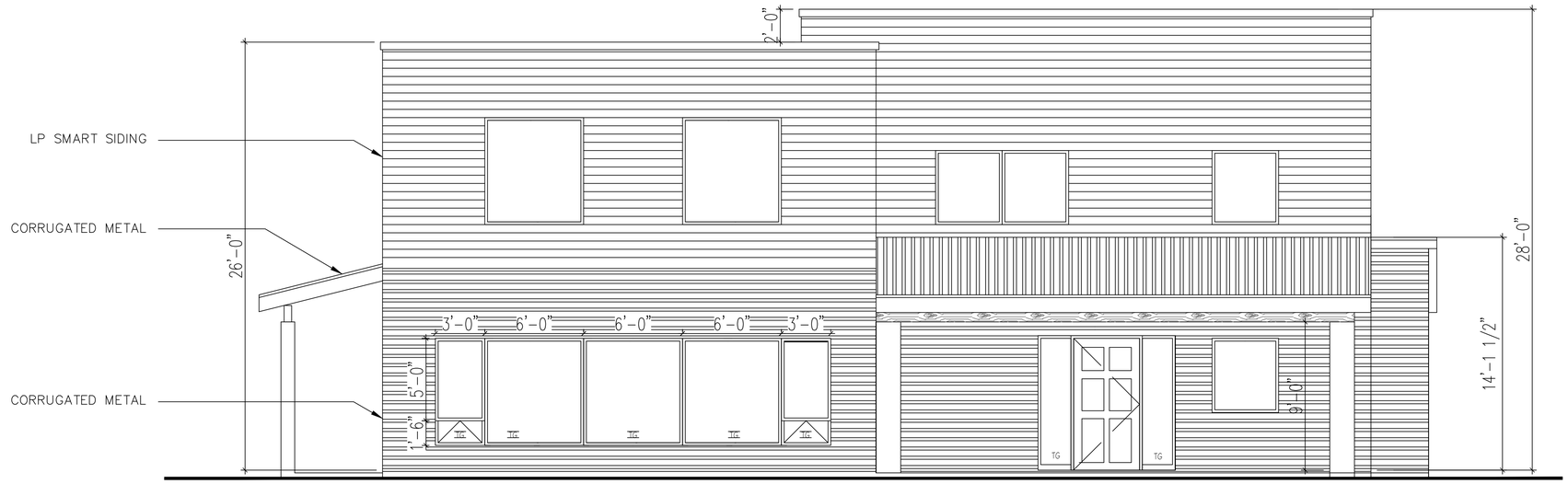
MIRAMONTE
HOMES
4578 N. 1st AVENUE SUITE 160
TUCSON, AZ 85718
TUCSON (520) 615-8900

PARK PLACE
SEDONA

A2.0

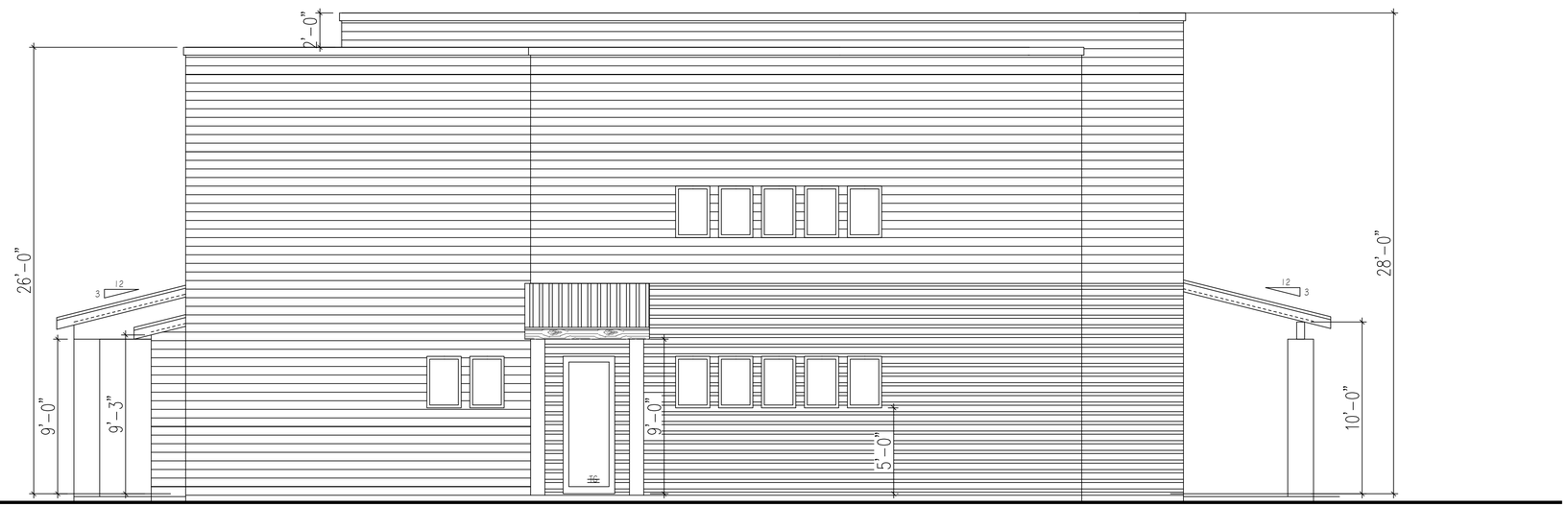
TUCSON

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REAR ELEVATION

SCALE: 1/4"=1'-0"



RIGHT SIDE ELEVATION

SCALE: 1/4"=1'-0"

MIRAMONTE
HOMES, L.L.C.
2492 E. RIVER SUITE 100 TUCSON, AZ 85718 (520) 615-8900

CLUB HOUSE
EXTERIOR ELEVATIONS

REVISION
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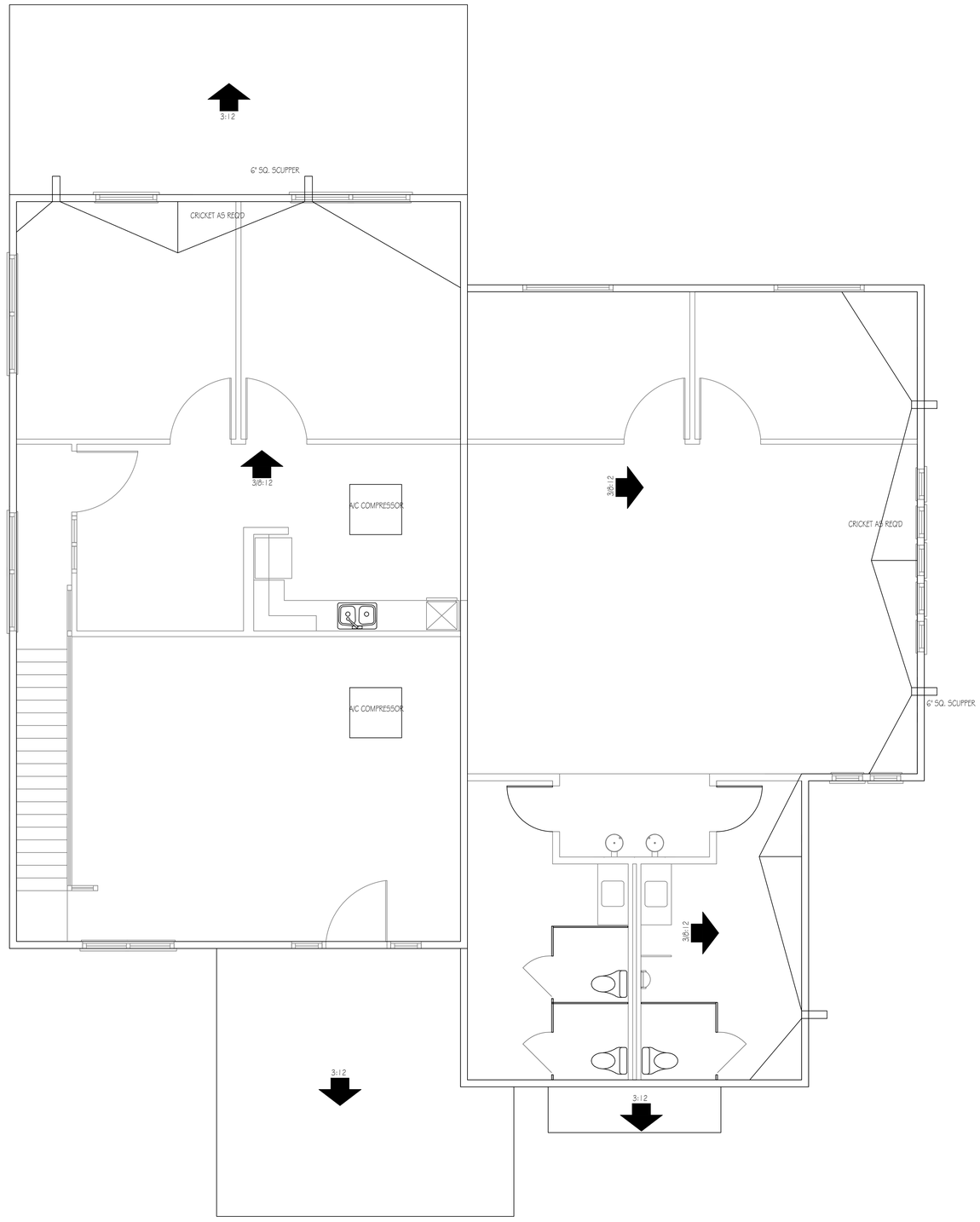
MIRAMONTE
HOMES
4578 N. 1st AVENUE SUITE 160
TUCSON, AZ 85718
TUCSON (520) 615-8900
(520) 615-8900

PARK PLACE
SEDONA

A2.1

TUCSON

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ROOF PLAN

SCALE: 1/4"=1'-0"

TUCSON

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MIRAMONTE
HOMES, L.L.C.
2492 E. RIVER SUITE 100 TUCSON, AZ 85718 (520) 615-8900

CLUB HOUSE
ROOF LAYOUT

REVISION

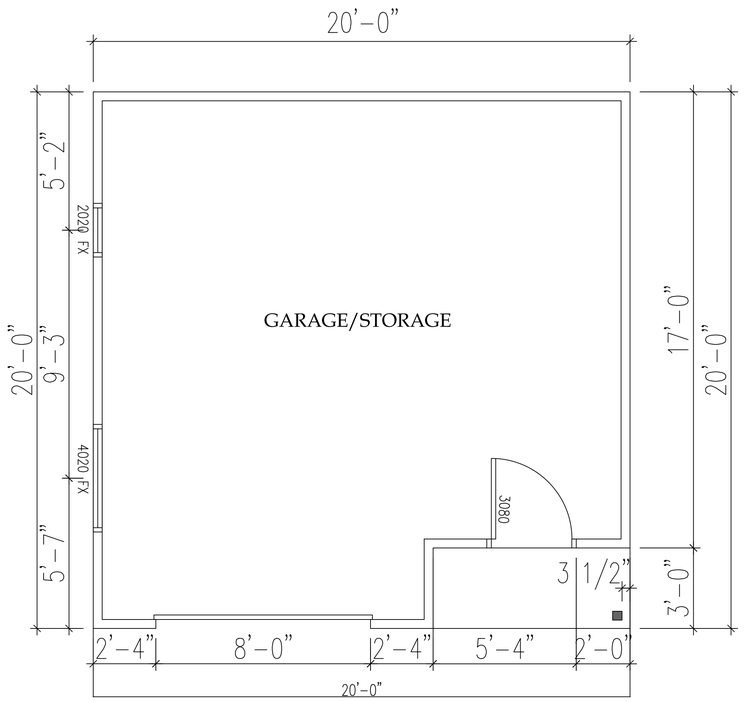
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MIRAMONTE
HOMES
4578 N. 1st AVENUE, SUITE 160
TUCSON, AZ 85718
(520) 615-8900

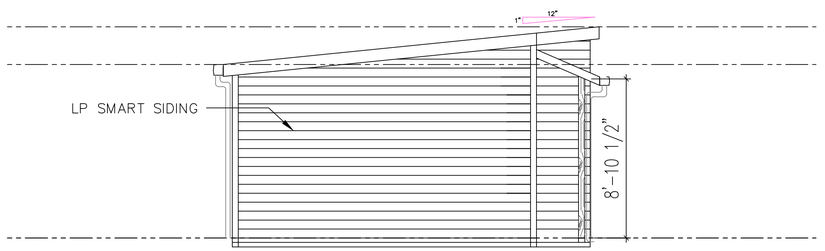
PARK PLACE
SEDONA

R1.0



PLAN

Scale 3/8" = 1'-0"



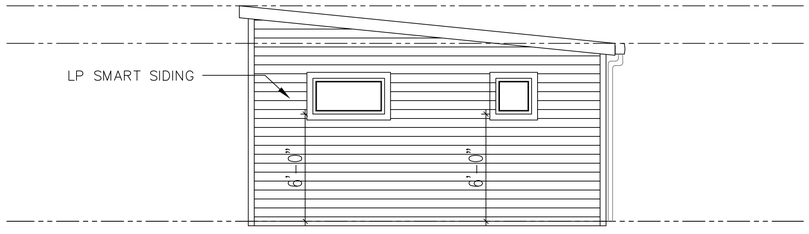
1 RIGHT ELEVATION

Scale 1/4" = 1'-0"



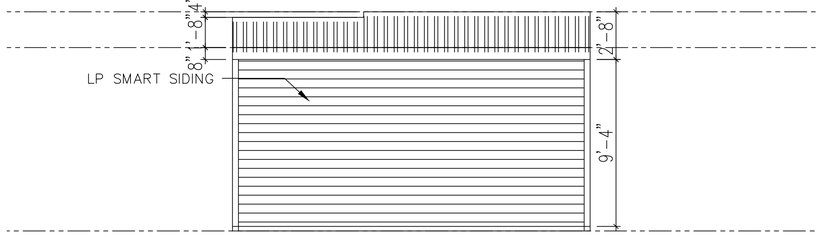
2 FRONT ELEVATION

Scale 1/4" = 1'-0"



3 LEFT ELEVATION

Scale 1/4" = 1'-0"



4 BACK ELEVATION

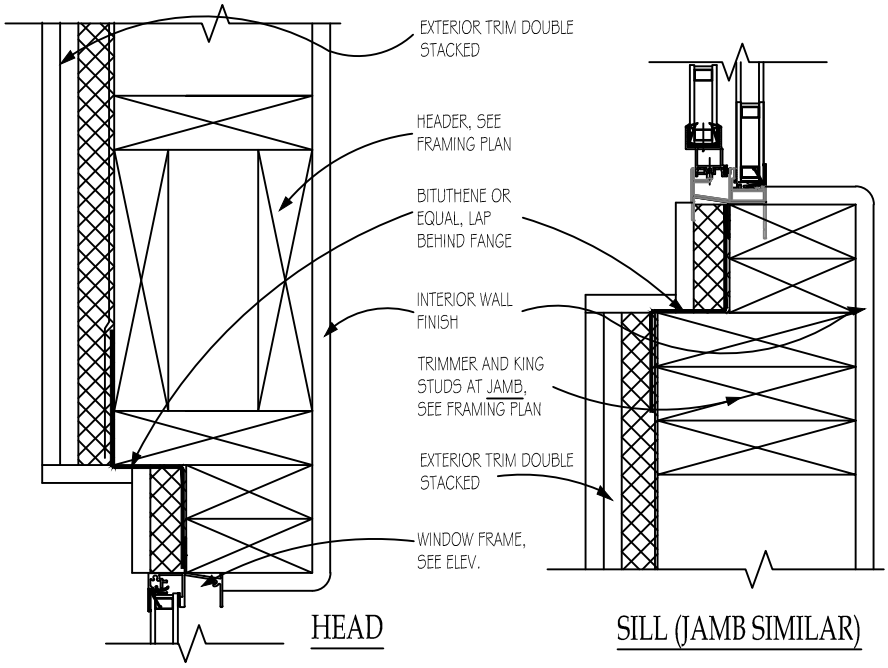
Scale 1/4" = 1'-0"

MIRAMONTE HOMES
2502 E. RIVER ROAD TUCSON, AZ 85718 (520) 268-9128

Maintenance Building

Butler Ave.
Flagstaff, AZ

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D1.0 RECESSED WINDOW DETAIL

SCALE: N.T.S.

FILE: P:\2021\21272\DRAWINGS\EXHIBITS\21272 PHASING PLAN.DWG EKEISER

PLOTTED: Nov 23, 2022–8:42am

LEGEND

- PHASE LIMITS
- PHASE 1 WATER
- PHASE 2 WATER
- PHASE 1 SEWER
- PHASE 2 SEWER
- PHASE 1 AREA
- PHASE 2 AREA
- NOT A PART

INTERSTATE-40

STORM OUTLET
PHASE 1

PHASE 2
PHASE 1

PHASE 2
PHASE 1

POND 1

POND 2

POND 3

FUTURE
COMMERCIAL
PARCEL
1.09 AC

E BUTLER AVE

NORTH

SCALE 1" : 150'

0 75 150

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

Shephard Wesnitzer, Inc.
110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

JOB NO:	21272
DATE:	SEP 22
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK
CHECKED:	SJV/SCI

BUTLER MULTI-FAMILY

FLAGSTAFF
ARIZONA

PHASING PLAN

SHEET 1 OF 1

Exhibit D

Affordability Plan

Exhibit D
Affordability Plan

This Affordability Plan is referenced in the Development Agreement between the Developer and the City of Flagstaff, approved by the Council through Ordinance No. _____. This document may be modified by and between the City's Housing Director and property Owner without further council action or need to amend the Development Agreement. The Development is comprised of up to 172 multi-family units, of which 5% (i.e., 9 units) will be designated as rent restricted for the Affordable Housing Program (the "**Program**"). This document serves to detail the requirements outlined in the Development Agreement and is referred to as **Exhibit C**.

Program Details

- 9 of the 172 units will be designated as affordable
- The affordable unit mix is as follows:

Unit Mix		
Unit Size	Designated Affordable	Total in Project
One-bedroom	2	26
Two bedroom	6	120
Three bedroom	1	26

- Applicants who initially qualify for an affordable unit shall earn an income no greater than 80% of the Area Median Income (AMI), refer to Attachment A for the 2022 Flagstaff Income Limits.
- The maximum monthly rental price will be implemented according to the affordable rent limits in Attachment B. The rent limits are provided by City staff annually and account for different unit sizes and varying income levels (30% - 80% AMI). The developer will use rent limits provided by the City for leases commencing thirty (30) days after receipt. If market-rate rents are lower than the rent limits provided, the tenant shall be charged market-rate rent. Developer agrees at all times to maintain 9 affordable units.
- Basic utilities are to be included in the affordable rent payment. Management shall refer to the local utility allowances provided in Attachment C and deduct the allowance from the base rent. City staff will work with the property management company before certificates of occupancy are issued to calculate the utility allowance based on unit size and utility services onsite.

- Affordable units will be managed by the property management company and overseen by the City of Flagstaff Housing Section. Biannual reports must be submitted to Housing staff, refer to Reporting Requirements below.
- Lease terms shall be no less than 12 months. (A 60-day lease could be burdensome for the management staff, who must recertify household income at time of lease renewal. I would stick with a 12-month lease for the affordable units. See Recertification below.)

Eligibility Requirements

Applicants who qualify for an affordable unit shall earn an income no greater than 80% AMI. The Developer will collect reasonable financial information from tenants to confirm eligibility. When a question arises about a tenant's eligibility, management shall reference the "Qualifying Residents" section of the Arizona Department of Housing's Section 42 Low-Income Housing

Tax Credit (LIHTC) Compliance Manual for further eligibility criteria. Typically, full-time students who are claimed as dependents on a guardian's taxes do not qualify for affordable units, however, management shall refer to the Compliance Manual for exceptions. Management shall refer to the procedures below for recertification and screening procedures, which differ from the LIHTC Compliance Manual. The parties acknowledge this Project is not a LIHTC project subject to the rules and regulations of that program. The LIHTC manual and forms referred to in this Agreement are for the convenience of the parties. Neither Developer nor Owner is subject to LIHTC reporting requirements or other requirements of the LIHTC program.

Recertification. Annual income recertification shall occur at lease renewal. Notice of recertification for affordable units will be required at least 90 days prior to lease expiration. Any changes to household size and income shall be reported at lease renewal. Appropriate changes to the unit size will be determined by management by building codes and based on unit availability. At lease renewal, if the household income of an existing tenant exceeds 100% AMI, the tenant no longer qualifies for the unit and will be required to sign a new lease at market rate pricing or may choose to vacate the unit. Allowing long-time tenants the opportunity to earn more over time while remaining in the affordable units shall be offset with lower incomes on new leases.

Screening Process. Program applicants will be subject to the same background screening process as all other applicants at the property. Unsatisfactory results from the screening process may lead to denial. Screening criteria shall comply with all state and federal laws.

Location of Units

Commencing at issuance of a Certificate of Occupancy the affordable units shall be scattered throughout the development to the extent feasible, however, the location of each unit does not have to be fixed. "Floating" units are permitted based on applicant requests and unit availability. Additionally, it is acceptable if the initial unit mix identified in this document shifts slightly over time based on demand and availability.

Reporting Requirements

A property management company will determine applicant eligibility and oversee the administration of the affordable units. The City of Flagstaff Housing Section will monitor the performance of the property management company through a reporting process bi-annually and onsite file monitoring. Reporting on the affordable units will commence either July 1 or January 1 after the first affordable leases are signed. The affordable unit report shall include the following information:

- Provide the unit number and size of all required affordable units (based on the unit mix table)
- Name and household size of each affordable unit tenant
- Gross annual household income of all tenants over 18 years of age
- Monthly rental payment amount, including utility allowance deduction

Include relevant notes about the status of lease renewals or any other issues being reviewed by property management

Indicate which units are vacant

    - Provide an up-to-date waiting list for affordable units and unit size requested
- Provide proof of active marketing of the affordable units (See Advertising below)

Advertising

If affordable units are available, and there are no applicants on the waitlist, property management shall post information about available units on https://www.myhousingsearch.com. Additionally, property management may advertise affordable units on the property's website, rental listing websites, social media platforms, or may contact City of Flagstaff Housing Section about additional advertising methods. This applies only when the property manager has first contacted all applicants that may be on a waiting list. If afterward affordable units remain, then the advertising requirements in this section shall apply.

Attachment A: Area Median Income Limits

2022 Area Median Income Limits for Flagstaff, AZ

Household size	30%	50%	60%	80%	100%	125%	150%
1	$18,050	$30,100	$36,120	$48,100	$60,200	$75,250	$90,300
2	$20,600	$34,400	$41,280	$55,000	$68,800	$86,000	$103,200
3	$23,200	$38,700	$46,440	$61,850	$77,400	$96,750	$116,100
4	$27,750	$42,950	$51,540	$68,700	$85,200	$106,500	$127,800
5	$32,470	$46,400	$55,680	$74,200	$92,800	$116,000	$139,200
6	$37,190	$49,850	$59,820	$79,700	$99,700	$124,625	$149,550
7	$41,910	$53,300	$63,960	$85,200	$106,600	$133,250	$159,900
8	$46,630	$56,700	$68,040	$90,700	$113,400	$141,750	$170,100

Source: 2022 Income Limits Documentation System;
https://www.huduser.gov/portal/datasets/il/il2022/2022summary.odn
60% AMI limit: 2022 Multifamily Tax Subsidy Project Income Limits, US Department of Housing and Urban Development (HUD); https://www.huduser.gov/portal/datasets/il/il2022/2022sum_mtsp.odn

Income limits for all federal housing programs are determined by the US Department of Housing & Urban Development (HUD). The 30%, 50%, 80%, and 100% AMI categories are provided annually by HUD. The 60% income category is provided by the Arizona Department of Housing (ADOH). The City of Flagstaff will provide new income limits annually as they are made available.

Attachment B: Rent Limits

Rent Limits for 2022
(Based on 2022 AMI Income Limits)

Bedrooms (People)	Charts	60.00%	30.00%	40.00%	50.00%	70.00%	80.00%	90.00%	FMR
Efficiency (1.0)		895	447	597	746	1,044	1,194	1,343	1,138
1 Bedroom (2.0)		1,023	511	682	852	1,193	1,364	1,534	1,166
2 Bedrooms (3.0)		1,150	575	767	958	1,342	1,534	1,725	1,474
3 Bedrooms (4.0)		1,278	639	852	1,065	1,491	1,704	1,917	1,868
4 Bedrooms (5.0)		1,381	690	921	1,151	1,611	1,842	2,072	2,245

Rent limits are available annually after the release of HUD's AMI limits. The City of Flagstaff will provide updated rent limits as they are available. The rent limits shown are considered the total rent payment, inclusive of the cost of utilities. If utilities are not included in the rental rate offered to tenants, then the established utility allowance must be deducted from the rent limits shown above to determine the affordable rent charged to tenants. Tenants will then be responsible for paying separately for their utilities.

Attachment C: Utility Allowance Schedule

DRAFT

Utility Allowance Schedule
See Public Reporting and Instructions on back.

U.S Department of Housing and Urban Development
Office of Public and Indian Housing

OMB Approval No. 2577-0169
exp. 7/31/2022

The following allowances are used to determine the total cost of tenant-furnished utilities and appliances.

City of Flagstaff Housing Authority		**Apartment**					
Utility or Service	**Fuel Type**	**0 BR**	**1 BR**	**2 BR**	**3 BR**	**4 BR**	**5 BR**
Heating	Natural Gas	$19	$21	$26	$35	$42	$49
	Bottled Gas	$29	$32	$39	$50	$59	$69
	Electric	$39	$48	$87	$116	$155	$194
	Electric – Heat Pump						
	Fuel Oil						
	Other						
Cooking	Natural Gas	$2	$3	$5	$6	$10	$13
	Bottled Gas	$8	$9	$12	$13	$18	$22
	Electric	$5	$6	$10	$15	$20	$25
	Other						
Other Electric		$24	$27	$37	$51	$64	$78
Air Conditioning							
Water Heating	Natural Gas	$5	$6	$10	$13	$20	$25
	Bottled Gas	$12	$13	$18	$22	$31	$38
	Electric	$9	$15	$23	$35	$46	$58
	Fuel Oil						
Water & Sewer		$43	$54	$69	$105	$144	$179
Trash Collection		$20	$20	$20	$20	$20	$20
Other – specify							

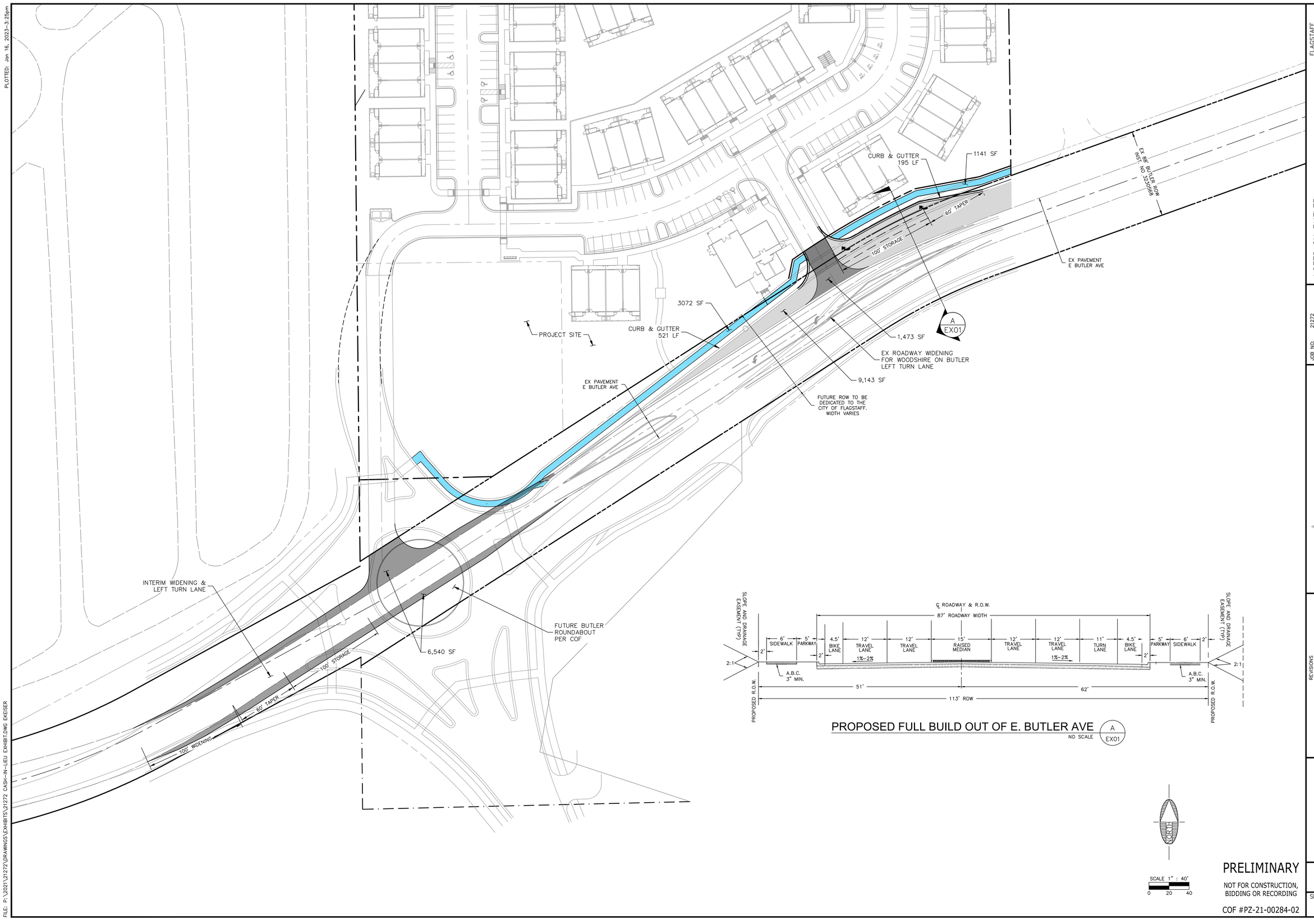
Actual Family Allowances – May be used by the family to compute allowance while searching for a unit.	**Utility/Service/Appliance**	**Allowance**
	Heating	
Head of Household Name	Cooking	
	Other Electric	
	Air Conditioning	
Unit Address	Water Heating	
	Water	
	Sewer	
	Trash Collection	
	Other	
Number of Bedrooms		
	Total	

The City of Flagstaff will provide updated utility allowances as they are available. Staff will work with the property management company before certificates of occupancy are issued to calculate the utility allowance for each unit size based on utility services onsite.

Exhibit E

Offsite Traffic and Street Frontage Improvements and Cash in Lieu

PLOTTED: Jan 16, 2023 - 3:25pm



PROPOSED FULL BUILD OUT OF E. BUTLER AVE (A / EX01)
NO SCALE

SCALE 1" : 40'
0 20 40

PRELIMINARY
NOT FOR CONSTRUCTION, BIDDING OR RECORDING

COF #PZ-21-00284-02

FLAGSTAFF
ARIZONA

LOFTS ON BUTLER

CASH-IN-LIEU EXHIBIT

JOB NO:	21272
DATE:	JAN 23
SCALE:	AS SHOWN
DRAWN:	ELK
DESIGN:	ELK
CHECKED:	SJV/SD

NO.	DESCRIPTION	DATE	BY
	REVISIONS		

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

Shephard Wesnitzer, Inc.

Call at least two full working days before you begin excavation
ARIZONA811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

DRAWING NO.
EX01

SHT NO. 1 OF 1

FILE: P:\2021\21272\DRAWINGS\EXHIBITS\21272 CASH-IN-LIEU EXHIBIT.DWG EXEISER

EXHIBIT E

ENGINEER'S OPINION OF PROBABLE COST
SWI Job # 21272
Lofts on Butler
E. Butler Avenue
Flagstaff, Arizona
February 17, 2023

CASH IN LIEU ROADWAY IMPROVEMENTS				
Asphalt Square Footage-1 right turn lane[1, 2]	8,255	s.f.	$23.09	$190,575.81
6" Vertical Curb and Gutter	716	l.f.	$25.00	$17,900.00
Sidewalk	4,213	s.f.	$9.00	$37,917.00
Street Lights	1	ea.	$6,850.00	$6,850.00
Street Trees	29	ea.	$486.00	$14,094.00
Rock Mulch Bed W Shrubs and Groundcover 3" Depth w/ Weed Barrier	3,470	s.f.	$2.00	$6,940.00
1 1/2" Irrigation Backfrlow Preventer	1	ea.	$7,200.00	$7,200.00
Irrigation Meter	1	ea.	$10,159.94	$10,159.94
CASH IN LIEU ROAD IMPROVEMENTS				**$291,636.75**
CASH IN LIEU OFFSITE WATER IMPROVEMENTS[3]	1	l.s.	$132,736.28	**$132,736.28**
CASH IN LIEU TRAFFIC SIGNAL[4]	1	l.s.	$14,995.50	**$14,995.50**
			LOFTS ON BUTLER CASH-IN-LIEU	**$439,368.52**
Roadway Total				
Existing Edge of Pavement to New Edge of Pavement[5]	9,143	s.f.		
Interim Paving Deducted	888	s.f.		

1. Roadway Cost per Square Foot was taken from Canyon Del Rio. The September 2018 unit price of $15.58/sf was updated using the Guaranteed Maximum Price from the Beulah Boulevard Extension & University Avenue Realignment project, dated 11-9-2022. Unit prices not found in the GMP were increased by 18% based on the Consumer Price Index from September 2018 to December 2022.

2. Quantity was calculated by subtracting the "Interim Paving Deducted" from the "Existing Edge of Pavement to New Edge of Pavement".

3. Per exhibit titled "Proportional Share for Soliere Transmission Main", provided by the City of Flagstaff on 1-25-2023, this site accounts for 17.24 acres of the total 277.76 acres served by the new offsite water line. Per this exhibit, the anticipated cost of the water line is $2,138,563.12. This site accounts for 6.21% (17.24 / 277.76) of the parcels servced buy this water line. The 6.21% was applied to the total costs for the offsite water line.

4. Per the approved TIA, this site will contribute 3.39% of the traffic to the overall traffic at the Butler/Fourth intersection. Per the Beulah/University GMP, the Milton/University traffic signal will cost $442,345. The same signal cost was applied to this estimate.

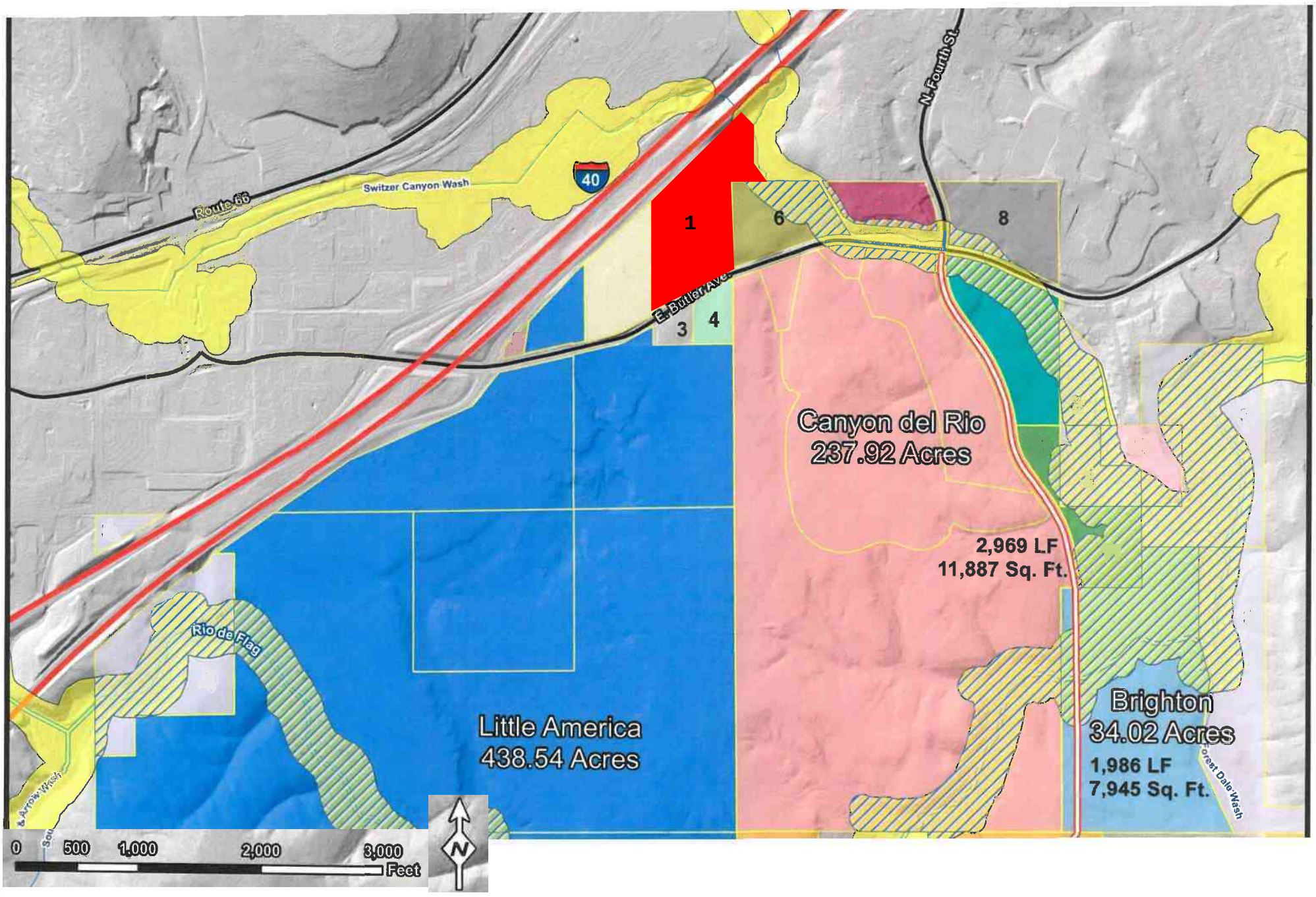
5. Includes future right turn lane.

DRAFT

Exhibit F

Offsite Water Improvements Cash in Lieu

Proportional Share for Soliere Transmission Main



Parcel	Acres	Proportional Share
Butler Ave Multi Family (1)	**17.24**	**$132,736.28**
3	1.08	$8,315.27
4	3.31	$25,484.75
6	5.87	$45,195.01
8	12.34	$95,009.61
Canyon del Rio	237.92	$1,831,822.21
Total	277.76	$2,138,563.12

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Jennifer Mikelson, Housing Analyst
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration and Adoption of Resolution No. 2023-13: A resolution authorizing the City of Flagstaff to loan one-hundred thousand dollars ($100,000) to Foundation for Senior Living, or its successor, as gap financing for a Low-Income Housing Tax Credit application under the Arizona Department of Housing's 2022-2023 Qualified Allocation Plan

STAFF RECOMMENDED ACTION:

1) Read Resolution No. 2023-13 by title only
2) City Clerk reads Resolution No. 2023-13 by title only (if approved above)
3) Adopt Resolution No. 2023-13

Executive Summary:

Consideration of a standby loan request from Foundation for Senior Living (FSL) of one-hundred thousand dollars ($100,000) to be used as local gap financing for its 2023 Low-Income Housing Tax Credit (LIHTC) application for a 100% affordable multi-family development known as San Francisco Square Apartments, in the event that FSL does not receive gap financing from the Federal Home Loan Bank.

Financial Impact:

This loan would be funded with American Rescue Plan Act (ARPA) revenue replacement dollars allocated for purposes of addressing the Emergency Housing. There are no bond funds being utilized for this loan.
Loan terms:

- $100,000 loan
- 30-year term
- 3% interest
- Annual interest-only payment on a cash flow basis
- Balloon payment of principal (and any deferred interest) at the end of 30 years

Policy Impact:

There is no policy impact.

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

Priority Based Budget Key Community Priorities and Objectives

Livable Community: Actively support attainable & affordable housing through City projects & opportunities with developers.

10-Year Housing Plan

Create housing options for households at all income levels and family sizes occupied by local residents.
Create 1: Incentivize the creation of affordable units through various programs and mechanisms.
Protect people from housing discrimination and remove housing barriers.
Protect 2: Ensure affordable housing is a part of every Flagstaff neighborhood and work to address disparate impact as part of any development or redevelopment.

Carbon Neutrality Plan

HA-1: Create housing options for households at all income levels and family sizes occupied by local residents.
HA-2: Connect people to equitable housing solutions.
HA-4: Protect people from housing discrimination and remove housing barriers.

Regional Plan

Goal LU.9. Focus reinvestment, partnerships, regulations, and incentives on developing or redeveloping urban areas.
Policy LU.1.3. Promote reinvestment at the neighborhood scale to include infill of vacant parcels, redevelopment of underutilized properties, aesthetic improvements to public spaces, remodeling of existing buildings and streetscapes, maintaining selected appropriate open space, and programs for the benefit and improvement of the local residents.
Goal NH.3. Make available a variety of housing types at different price points, to provide housing opportunity for all economic sectors.
Policy NH.3.1. Provide a variety of housing types throughout the City and region, including purchase and rental options, to expand the choices available to meet the financial and lifestyle needs of our diverse population.
Policy NH.3.3. Increase the availability of affordable housing for very low-income persons, through innovative and effective funding mechanisms.
Policy NH.3.4. Reuse former brownfields, vacant buildings, and commercial buildings to provide new mixed-use and/or housing options.
Policy NH.3.5. Encourage and incentivize affordable housing.

Has There Been Previous Council Decision on This:

While there is no previous decision on this loan request, City Council approved a site plan for the San Francisco Square Apartments on April 5, 2022. The 100% affordable project qualified for several modifications to development standards, per the Flagstaff Zoning Code, Section 10-30.20.040.B.4 (Affordable Housing Incentives).

Background/History:

LIHTC Program Information: The LIHTC Program, based on Section 42 of the Internal Revenue Code, was enacted by Congress in 1986 to provide the private market with an incentive to invest in affordable rental housing. Federal housing tax credits are allocated to states who then award the credits to developers of qualified projects. Developers then sell these credits to investors to raise capital (or equity) for their projects, this reduces the debt that the developer would otherwise have to borrow. Because the debt is lower, a tax credit property is required to offer lower, more affordable rents. Provided the property maintains compliance with the program requirements, investors receive a dollar-for-dollar credit against their federal tax liability each year over a period of 10 years. Since the program's creation during the Reagan administration, LIHTC has proven to be the most successful rental housing production program nationally.

Loan Request: FSL is applying for tax credits for the 2023 round. Applications are due to ADOH April 3, 2023. If awarded tax credits, FSL will be notified by the Department by June 2023.

Given the highly competitive nature of the LIHTC Program, the developer is attempting to secure the highest number of points possible; the higher the score, the more likely the award of tax credits. Specifically, FSL is pursuing points under the Local Gap Financing category, worth a total of 10 points. Per the 2022-2023 QAP, to receive points in this category a minimum of a $100,000 loan is required of communities located outside of Maricopa and Pima. FSL has requested this loan as a standby commitment. It is in the process of seeking gap financing from the Federal Home Loan Bank which, if finalized, the loan from the City of Flagstaff will not be necessary.

Project Information: San Francisco Square Apartments is a 70-unit development for seniors and is the first phase of a larger 146-unit affordable multi-family project located on an entire city block in downtown Flagstaff at 320 N Humphreys Street. All of the units will serve residents with an Area Median Income (AMI) of 60% or less. The first phase will provide:

- 60 one-bedrooms
- 10 two-bedrooms

A subsequent phase includes a 76-unit multi-family development and parking garage.

Developer's mission statement: "FSL is a registered 501(c)(3) organization whose mission is to provide home and community-based services and develop energy-efficient, affordable housing to promote health, independence and dignity for all."

Key Considerations:

- The LIHTC Program is a highly competitive application process based on a point system detailed in the Qualified Allocation Plan.
- This loan is being requested as a standby to funding from the Federal Home Loan Bank. If that funding is secured, there will be no need to issue this loan.
- This loan is also contingent upon FSL receiving a LIHTC award from ADOH in the 2023 round.
- Staff from ADOH confirmed that FSL is the only LIHTC developer they are aware of pursuing tax credits in Flagstaff in 2023.

Community Benefits and Considerations:

As documented in the 10-Year Housing Plan, the need for increased affordable housing options remains high. Nearly half (47%) of Flagstaff residents are low-income, earning no more than $55,350 annually. In Flagstaff's current housing market, 65% of households that fall within or below the moderate-income level could benefit from some form of subsidy to achieve housing that is considered affordable.

Once all phases are built, this development would add 146 new affordable units to the community, bringing the city closer to its stated goal of creating or preserving 7,976 housing units by 2031, with a minimum of 10% of them being affordable.

Attachments: Res. 2023-13
Presentation

RESOLUTION NO. 2023-13

A RESOLUTION OF THE FLAGSTAFF CITY COUNCIL, AUTHORIZING THE CITY OF FLAGSTAFF TO PROVIDE ONE HUNDRED THOUSAND DOLLARS ($100,000.00) TO FOUNDATION FOR SENIOR LIVING AS STANDBY LOCAL GAP FINANCING FOR A LOW-INCOME HOUSING TAX CREDIT PROJECT UNDER THE ARIZONA DEPARTMENT OF HOUSING'S ("ADOH") 2023 QUALIFIED ALLOCATION PLAN (QAP)

RECITALS:

WHEREAS, the City of Flagstaff declared a Housing Emergency in 2020 and adopted a 10-Year Housing Plan in 2022; and

WHEREAS, the 10-Year Housing Plan has an overarching goal of reducing the current affordable housing need in Flagstaff by half over the next ten years, to be achieved by impacting at least 6,000 low-to-moderate income Flagstaff residents through a combination of unit creation or subsidy provision, and creating or preserving 7,976 housing units by 2031 with a minimum of 10% of them being affordable; and

WHEREAS, the City of Flagstaff is committed to the implementation of the 10-Year Housing Plan; and

WHEREAS, Section 42 of the Internal Revenue Code provides the private market with an incentive to invest in affordable rental housing under the Low-Income Housing Tax Credit Program (LIHTC) administered by ADOH; and

WHEREAS, Foundation for Senior Living is applying for a 2023 LIHTC allocation; and

WHEREAS, ADOH's 2022-2023 QAP awards points to any project in which a local government provides a minimum of $100,000 in local gap financing; and

WHEREAS, Foundation for Senior Living is requesting this loan from the City as a standby to funding from the Federal Home Loan Bank, and if that funding is secured, there will be no need to issue the loan; and

WHEREAS, if Foundation for Senior Living is awarded a LIHTC allocation and does not secure funding from the Federal Home Loan Bank, it wishes to: 1) execute a deed of trust and promissory note for a cash-flow loan with the City in the amount of $100,000, with interest at the rate of 3% annually for the 30-year term of the new loan.

ENACTMENTS:

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF FLAGSTAFF AS FOLLOWS:

SECTION 1. That the City will loan One Hundred Thousand ($100,000) to the Developer or its qualified successor as local gap financing under ADOH's 2022-2023 Qualified Allocation Plan by

means of a promissory note and deed of trust which provide for repayment of the loan in 2053 and require the Developer or its qualified successor to provide low-income housing at the San Francisco Square Apartments for the term of the loan. The interest rate on the thirty-year cash-flow loan shall be 3% annually, with other terms to be negotiated by City of Flagstaff Staff. City of Flagstaff Staff has authority to determine whether any successor to the Developer is qualified to replace the Developer under the terms of this Resolution.

SECTION 2. The loan will be contingent upon the inability of the Developer to secure funding from the Federal Home Loan Bank, in addition to an award of tax credits by ADOH to the Developer.

SECTION 3. That the City Manager be and hereby is authorized to execute any documents necessary to implement the loan option in connection with the Developer or its qualified successor's application for tax credits under ADOH's 2023 Qualified Allocation Plan.

SECTION 4. This resolution shall be effective thirty (30) days following adoption by the City Council.

PASSED AND ADOPTED by the City Council of the City of Flagstaff this 21st day of March, 2023.

_____
MAYOR

ATTEST:

_____
CITY CLERK

APPROVED AS TO FORM:

_____
CITY ATTORNEY



Foundation for Senior Living

Loan Request

Jennifer Mikelson, Housing Analyst

March 21, 2023

CITY OF FLAGSTAFF · ARIZONA · ESTABLISHED 1882 ·

TEAM FLAGSTAFF

WE MAKE THE CITY BETTER

Low Income Housing Tax Credit Program

LIHTC Program Background

- IRS program administered by states
  - Arizona Department of Housing
- Annual application process via Qualified Application Plan
  - Competitive points-based process
- Successful applications are awarded tax credits
  - Tax credits sold to investors in exchange for funding to build affordable housing

Foundation for Senior Living

Mission Statement:

To provide home and community-based services and develop energy-efficient, affordable housing to promote health, independence and dignity for all.

TEAM FLAGSTAFF
WE MAKE THE CITY BETTER

- LIHTC Developer
- 501 (c)(3) non-profit
- Requesting $100K standby loan to support 2023 LIHTC application
  - Points awarded to projects with additional gap financing sources
- If other funding is secured, no loan from the city is necessary

Loan Terms

- Contingent upon award of tax credits
- $100,000 loan
- 30 year term
- 3% interest
- Annual interest-only payment on a cash flow basis
- Balloon payment of principal (and any deferred interest) at the end of 30 years

Thank You

Jennifer Mikelson, Housing Analyst
jmikelson@flagstaffaz.gov

11. B.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Dan Folke, Community Development Director
Date:	03/13/2023
Meeting Date:	03/21/2023

TITLE:

Consideration and Adoption of Resolution No. 2023-15: A resolution approving the First Amendment to the Intergovernmental Agreement between the Northern Arizona Intergovernmental Public Transportation Authority (Mountain Line) and the City of Flagstaff for the Downtown Connection Center (DCC).

STAFF RECOMMENDED ACTION:

1) Read Resolution No. 2023-15 by title only
2) City Clerk reads Resolution No. 2023-15 by title only (if approved above)
3) Adopt Resolution No. 2023-15

Executive Summary:

City Council approved an Intergovernmental Agreement (IGA) with Mountain Line on June 21, 2022 to allow for the construction and operation of the new Downtown Connection Center (DCC) on City property located on Phoenix Avenue at the site of the existing downtown hub.

Funding for the DCC is in part from the Federal Transit Administration (FTA) who recently completed a review of the IGA and has requested minor amendments clarifying that the DCC will not interfere with the Rio de Flag Project, and the Rio de Flag Project will not interfere with the DCC. The First Amendment to the IGA makes those clarifications.

Financial Impact:

There is no financial impact from the proposed amendment.

Policy Impact:

None.

Connection to PBB Priorities/Objectives, Carbon Neutrality Plan & Regional Plan:

PBB Priorities

Sustainable, Innovative Infrastructure
Identify smart traffic management, multi-modal transportation, and alternative energy opportunities.

Environmental Stewardship
Implement sustainable building practices and alternative energy and transportation options for traffic management, multi-modal transportation, and alternative energy opportunities.

Implement, maintain and further the Climate Action and Adaptation Plan (CAAP).

Carbon Neutrality Plan
Decreased Dependence on Cars
DD-1: Encourage vibrancy, appropriate density, and attainability in existing neighborhoods, so that more residents live within walking distance of their daily needs.
DD-2: Create inclusive networks for walking and biking that are continuous, attractive, safe, comprehensive, and convenient for people of all ages.
DD-3: Encourage Flagstaff residents and visitors to walk, bike, roll and take the bus.
DD-4: Transform transportation policies and planning to incorporate greenhouse gas emissions analysis and reduce dependence on driving.
DD-5: Invest in comprehensive and equitable transit.
DD-6: Proactively invest to protect Flagstaff's clean air status.

Regional Plan
Goal T.7. Provide a high-quality, safe, convenient, accessible public transportation system, where feasible, to serve as an attractive alternative to single-occupant vehicle
Policy T.7.1. Cooperate with NAIPTA in developing and implementing the five-year transit master planning goals and objectives to continuously improve service, awareness, and ridership.
Policy T.7.2. Provide public transit centers and options that are effectively distributed throughout the region to increase access to public transit.
Policy T.7.3. Support a public transit system design that encourages frequent and convenient access points, for various transportation modes and providers, such as private bus and shuttle systems, park-and-ride lots for cars and bicycles, and well-placed access to bus, railroad, and airline terminal facilities.
Policy T.7.4. Support mobility services for seniors and persons with mobility needs.
Policy T.7.5. Incorporate adopted plans and policies for non-motorized and public transportation in the permitting process for all development or land use proposals, including provisions for efficient access and mobility, and convenient links between pedestrian, bicycle, and transit facilities.
Policy T.7.6. Coordinate with NAIPTA to establish rural transit service within the region that is consistent with County land use plans, based on funding availability, cost effectiveness, location of major trip generators, distance between generators, and the needs of transit-dependent individuals.

Has There Been Previous Council Decision on This:

The IGA was approved on June 21, 2022 by City Council.

Background/History:

A new Downtown Connection Center (DCC) is identified in Mountain Line's 2020 Strategic Plan as the highest priority capital project in order to support public transit service within the community. Since 2009, Mountain Line has operated the existing DCC under an Intergovernmental Agreement (IGA) and licensing agreement with the City of Flagstaff for use of City owned parcels on Phoenix Avenue. This transit hub serves approximately 52,000 riders monthly and has upwards of 300 buses accessing the site daily at our current level of service.

The existing DCC has capacity for nine buses at two curb islands and two on-street loading zones developed for 30' buses, that were in operation in 2009. Mountain Line currently operates 40' and 60' buses and has made minor accommodations and upgrades to fit our new fleet into the existing DCC. The existing loading zones have no additional capacity for transit service expansion and presents significant operational challenges for existing service levels. Under our current conditions, Mountain Line has to get creative about connection schedules and bus dwell locations.

The existing DCC has minimal amenities for riders and drivers. A portion of the existing City warehouse

is used for a driver comfort station with restrooms and a breakroom for staff. Aside from two bus shelters, there are no customer service or amenities for patrons.

Due to these limitations, in FY2018, NAIPTA applied for and received a $6,777,938 Federal Transit Administration (FTA) Section 5307/5339 grant (80% federal/20% local) awarded through ADOT for acquisition, design and construction of a new connection center. Then, in 2019, NAIPTA applied for and received a second FTA Section 5339 grant bringing an additional $15,675,000 in federal funds to the project.

Key Considerations:

The approved Intergovernmental Agreement (IGA) authorizes Mountain Line to construct, operate and maintain the Downtown Connection Center (DCC) located on City property at 116 and 216 W. Phoenix Avenue. The site currently includes Mountain Line's downtown transfer station, a comfort station for bus drivers, a City warehouse used for storage and Park Flag's off-street parking inventory. Terms of the IGA include:

- 50 year term with automatic renewal for additional 50 years under specific conditions
- Allowed improvements and operations
- DCC is constructed in 2 phases
    - Phase 1: Construction of DCC building
    - Phase 2: New bus bays, parking reconfiguration and civic space
- Includes a $4,200 fee in lieu for each lost and relocated public parking space
- Allows for the construction of the Rio de Flag flood control project without delay
- Approved site plan accommodates future parking structure
- Maintenance responsibilities of the improvements

Expanded Financial Considerations:

None

Attachments: Res. 2023-15
First Amendment to the IGA

RESOLUTION NO. 2023-15

A RESOLUTION OF THE FLAGSTAFF CITY COUNCIL, APPROVING THE FIRST AMENDMENT TO THE INTERGOVERNMENTAL AGREEMENT BETWEEN THE NORTHERN ARIZONA INTERGOVERNMENTAL PUBLIC TRANSPORTATION AUTHORITY (MOUNTAIN LINE) AND THE CITY OF FLAGSTAFF (CITY) FOR THE DOWNTOWN CONNECTION CENTER

RECITALS:

WHEREAS, on June 21, 2022 Mountain Line and the City entered into an Intergovernmental Agreement (IGA) for the Downtown Connection Center (DCC); and

WHEREAS, Mountain Line and the City now desire to clarify certain portions of that IGA; and

WHEREAS, Mountain Line and the City continue to desire to provide for the development and operation of a public transportation center to be known as the Downtown Connection Center ("DCC") located within the municipal boundaries of the City; and

WHEREAS, Mountain Line desires to construct and operate such a facility for the benefit of public transportation needs of the authority, and

WHEREAS, Mountain Line plans to fund its obligations under this IGA through funding provided by the Federal Transit Administration's ("FTA") federal assistance programs, the administration of which and liability therefore will be the sole responsibility of Mountain Line ("FTA Funding"), and,

WHEREAS, The Parties desire to enter into this First Amendment of the IGA for the purpose of providing for the use of the City's real property (whether owned or otherwise controlled by the City) for centralized services for public transportation, civic space and public parking.

ENACTMENTS:

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF FLAGSTAFF AS FOLLOWS:

SECTION 1. In General.

The Flagstaff City Council hereby authorizes the Mayor to execute the First Amendment to the Intergovernmental Agreement between Mountain Line and the City of Flagstaff, Arizona, attached hereto as Exhibit A.

SECTION 2. Effective Date.

This resolution shall be immediately effective upon adoption.

PASSED AND ADOPTED by the City Council of the City of Flagstaff this 21st day of March, 2023.

MAYOR

ATTEST:

CITY CLERK

APPROVED AS TO FORM:

CITY ATTORNEY

Exhibits:
First Amendment to the IGA

FIRST AMENDMENT TO THE INTERGOVERNMENTAL AGREEMENT BETWEEN THE CITY OF FLAGSTAFF AND THE NORTHERN ARIZONA INTERGOVERNMENTALPUBLIC TRANSPORTATION AUTHORITY ("MOUNTAIN LINE")

This First Amendment to Intergovernmental Agreement (this "First Amendment") is entered into on the "Effective Date" (which is the date last signed by the executing parties) by and between the Northern Arizona Intergovernmental Transportation Authority, a corporate body and political subdivision of the State of Arizona ("Mountain Line") and the City of Flagstaff, a body politic and corporate of the State of Arizona (the "City"). Mountain Line and the City may be referred to in this First Amendment each individually as a "Party" and collectively as the "Parties."

RECITALS

A. The City and Mountain Line negotiated an Intergovernmental Agreement ("IGA") to provide for the development and operation of a public transportation center to be known as the Downtown Connection Center ("DCC") located within the municipal boundaries of the City.

B. The Parties desire to clarify the terms of the IGA through this amendment.

C. The Recitals and definitions in the IGA are incorporated herein by this reference.

COVENANTS

NOW, THEREFORE, in consideration for the promises and the mutual covenants set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

I. <u>Amendments</u>:

The Parties agree to amend the IGA Recitals Q and R, by adding the following clarifying language:

> Q. The development, CONSTRUCTION, and use of the DCC Property as contemplated pursuant to the Plan of Development shall not interfere with and shall be compatible with the City's development, USE, MAINTEANCE AND FUNCTION of the Rio de Flag.
>
> R. The eventual development, ~~and~~ construction AND USE of the Rio de Flag shall not interfere with and be compatible with the development, USE, MAINTEANCE AND FUNCTION ~~and use~~ of the DCC Property. And,

The Parties agree to further amend the IGA Section II(4) <u>Excluded Improvements</u>, by correcting referenced Recitals as follows:

4. The Rio De Flag, as noted in ~~Recital N~~ RECTIALS O, Q AND R above, and Section VII(2) below, and the improvements to be made by the City on the Reserved Property as noticed in ~~Recital R~~ RECITAL S above are not part of the Improvements under this Agreement.

The Parties agree to further amend the IGA Section VII **Uses of the Property,** by adding the following clarifying subsection 10:

10. ANY NON-TRANSIT INCIDENTAL USE OF THE DCC PROPERTY SHALL REQUIRE APPROVAL BY THE FTA. THE DCC PROPERTY IS THE PROPERTY BEING UTILIZED FOR AS THE LOCAL MATCH FOR THE FTA FUNDING.

II. <u>Reaffirmation of the IGA</u>:

The Parties reaffirm the terms of the IGA.

[Signatures on following page]

IN WITNESS WHEREOF, the City and Mountain Line have executed this First Amendment as of the Effective Date:

FOR THE CITY OF FLAGSTAFF:

ATTEST:

_____ _____

By: By:
Name: Name:
Its: Its:
Date:

FOR THE NORTHERN ARIZONA INTERGOVERNMENTAL PUBLIC TRANSPORTATION AUTHORITY:

ATTEST:

_____ _____

By: By:
Name: Name:
Its: Its:
Date:

PROPER FORM AND AUTHORITY:

This First Amendment has, prior to its execution, been submitted to the attorney for each Party, who has determined that the agreement is in the proper form and is within the powers of and authority granted under the laws of this state to such Party.

Dated this ___ of _____, 20__. Dated this ___ of _____, 20__.

By: _____ By: _____
Sterling T. Solomon Scott A. Holcomb
City of Flagstaff Attorney Mountain Line General Counsel