CITY COUNCIL REGULAR MEETING AGENDA
A M E N D E D

REGULAR COUNCIL MEETING
TUESDAY
OCTOBER 3, 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 discussion and consultation 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. 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.

5. PROCLAMATIONS AND RECOGNITIONS

A. **Proclamation:** Indigenous Peoples' Day

6. COUNCIL LIAISON REPORTS

7. CONSENT AGENDA

All matters under Consent Agenda are considered by the City Council to be routine. Unless a member of City Council expresses a desire at the meeting to remove an item from the Consent Agenda for discussion, the Consent Agenda will be enacted by one motion approving the recommendations listed on the agenda. Unless otherwise indicated, expenditures approved by Council are budgeted items.

STAFF RECOMMENDED ACTION

Approve the Consent Agenda as posted.

A. **Consideration and Approval of Cooperative Purchase Contract:** Purchase of All-Risk Velocity Fire Engine from Hughes Fire Equipment, Inc. in the amount of $1,017,125.67.

STAFF RECOMMENDED ACTION:

1. Approve the Cooperative Purchase Contract of a new Pierce Manufacturing, Inc. All-Risk Velocity Fire Engine in the amount of $1,017,125.67 from Hughes Fire Equipment, Inc. through Sourcewell utilizing cooperative purchase Contract No. 113021-OKC-1; and
2. Authorize the City Manager to execute the necessary documents.

B. **Consideration and Approval of Contract:** A Cooperative Purchase Contract with Hughes Fire Equipment, Inc. in the amount of $1,132,683.10 for two new Pierce Wildfire Type 3 Fire Engines.

STAFF RECOMMENDED ACTION:

1. Approve the Cooperative Purchase Contract with Hughes Fire Equipment, Inc. for two new Pierce Wildfire Type 3 Fire Engines in the amount of $1,132,683.10 utilizing a cooperative agreement with Sourcewell (Contract No. 113021-OKC-1); and
2. Authorize the City Manager to execute the necessary documents.

C. **Consideration and Approval of Contract:** This agreement is between the City of Flagstaff and the Flagstaff Youth Hockey Association (FYHA). The Agreement outlines the responsibilities for both parties including the rental of ice time at the City of Flagstaff Jay Lively Activity Center.

STAFF RECOMMENDED ACTION:

1. Approve the license agreement between the City of Flagstaff and the Flagstaff Youth Hockey Association with anticipated revenue of approximately $60,000.
2. Authorize the City Manager to execute the necessary documents.

D. **Consideration and Approval of Contract:** First Amendment to the Employee Staffing Agreement with Educational Services, LLC for a phased retirement program through a Mohave Cooperative Purchase Contract 21N-ESI3-0318 in an amount not to exceed $400,000 annually, plus applicable taxes.

STAFF RECOMMENDED ACTION:

1. Approve the First Amendment to the Employee Staffing Agreement with Educational Services, LLC and grant the City Manager authority to renew the agreement on annual basis for up to five years in an annual amount not to exceed $400,000, plus applicable taxes; and
2. Authorize the City Manager to execute all necessary documents.

8. REGULAR AGENDA

A. **Consideration and Approval of Budget Adjustment:** Fiscal Year 2023-24 Budget Adjustment for Housing Incentive Program Funds with possible allocation of incentive funds for affordable housing within Block 1 of the Timber Sky Final Block Plat.

STAFF RECOMMENDED ACTION:

1. Approve the transfer of budget appropriations from the General Fund Contingency account to the Housing and Community Services Fund's Affordable Housing Incentives program in the amount of $1,100,000.
2. Direct City Manager and staff to approve the allocation of incentive funds (waiver and/or reimbursement of applicable fees as set forth in the Incentive Policy for Affordable Housing) for affordable housing to be constructed in Block 1 of the Timber Sky Final Block Plat.

B. **Consideration and Adoption of Ordinance No. 2023-21:** An Ordinance of the City Council of the City of Flagstaff, extending and increasing the corporate limits of the City pursuant to the provisions of Title 9, Chapter 4, Arizona Revised Statutes, by annexing approximately 1.82 acres of land located at 2445 S. Woody Mountain Road, which certain land is contiguous to the existing corporate limits of the City of Flagstaff, and establishing city zoning for said land as Rural Residential (RR); providing for severability, authority for clerical corrections, and establishing an effective date.

STAFF RECOMMENDED ACTION:

1) Read Ordinance No. 2023-21 by title only for the final time
2) City Clerk reads Ordinance No. 2023-21 by title only (if approved above)
3) Adopt Ordinance No. 2023-21

C. **Consideration and Adoption of Ordinance No. 2023-22:** An ordinance of the City Council of the City of Flagstaff, amending the Flagstaff Zoning Map to rezone approximately 13.01 acres of real property generally located at 2445 S Woody Mountain Road from the Rural Residential (RR) zone within the Resource Protection Overlay (RPO) zone to the High Density Residential (HR) zone within the RPO zone, providing for severability, authority for clerical corrections, and establishing and effective date.

STAFF RECOMMENDED ACTION:

1) Read Ordinance No. 2023-22 by title only for the final time
2) City Clerk reads Ordinance No. 2023-22 by title only (if approved above)
3) Adopt Ordinance No. 2023-22

D. **Consideration and Adoption of Resolution No. 2023-50:** A resolution authorizing the execution of the Development Agreement between City of Flagstaff and VP 66 & Woody Mountain, LLC for Liv Timber Sky, related to the development of approximately 13.01 acres of real property generally located at 2445 S Woody Mountain Road.

STAFF RECOMMENDED ACTION:

1) Read Resolution No. 2023-50 by title only
2) City Clerk reads Resolution No. 2023-50 by title only (if approved above)
3) Adopt Resolution No. 2023-50

9. DISCUSSION ITEMS

A. ~~**Discussion of the Wildland Fire Mitigation and Management Commission Report**~~

~~**STAFF RECOMMENDED ACTION:**~~
~~Discussion Only~~

ITEM POSTPONED TO OCTOBER 17, 2023 COUNCIL MEETING

B. **Discussion and Direction regarding possible Joint Council/Water Commission Meeting**

10. 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 Councilmember House to place on a future agenda a discussion about the Walk Friendly Community Designation, the levels within the designation, and working toward the next level.

STAFF RECOMMENDED ACTION:

Council direction.

11. PUBLIC PARTICIPATION

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

13. 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

THE CITY OF FLAGSTAFF ENDEAVORS TO MAKE ALL PUBLIC MEETINGS ACCESSIBLE TO PERSONS WITH DISABILITIES. With 48-hour advance notice, reasonable accommodations will be made upon request for persons with disabilities or non-English speaking residents. Please call the City Clerk (928) 213-2076 or email at stacy.saltzburg@flagstaffaz.gov to request an accommodation to participate in this public meeting.

NOTICE TO PARENTS AND LEGAL GUARDIANS: Parents and legal guardians have the right to consent before the City of Flagstaff makes a video or voice recording of a minor child, pursuant to A.R.S. § 1-602(A)(9). The Flagstaff City Council meetings are live-streamed and recorded and may be viewed on the City of Flagstaff's website. If you permit your child to attend/participate in a televised Council meeting, a recording will be made. You may exercise your right not to consent by not allowing your child to attend/participate in the meeting.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Mark Wilson, Deputy Fire Chief
Date:	09/26/2023
Meeting Date:	10/03/2023

TITLE:

Consideration and Approval of Cooperative Purchase Contract: Purchase of All-Risk Velocity Fire Engine from Hughes Fire Equipment, Inc. in the amount of $1,017,125.67.

STAFF RECOMMENDED ACTION:

1. Approve the Cooperative Purchase Contract of a new Pierce Manufacturing, Inc. All-Risk Velocity Fire Engine in the amount of $1,017,125.67 from Hughes Fire Equipment, Inc. through Sourcewell utilizing cooperative purchase Contract No. 113021-OKC-1; and
2. Authorize the City Manager to execute the necessary documents.

Executive Summary:

Hughes Fire Equipment, Inc., is a fully authorized dealer of Pierce Manufacturing, Inc. products such as the All-Risk Velocity Fire Engine. This purchase of an All-Risk Velocity Fire Engine would replace a twenty (22) year old All-Risk fire engine and move it into a reserve status. This also puts a current twenty-four (24) year old reserve fire engine out of service and up for auction. This unit is part of the FLEET adopted apparatus replacement plan. This new All-Risk Velocity Fire Engine would go into one of the three (3) heaviest call volume districts in the City's central corridor. This also keeps with our fleet rotation program to ensure demand and age are being balanced with replacement units.

Financial Impact:

The replacement of this specific All-Risk Velocity Fire Engine was approved by the Fleet committee, Budget Team, City Manager and City Council as part of the current fiscal year budget. The approved total amount would be broken into separate payments over two fiscal years to keep within budget. The first up front approved payment is for $425,000 upon completion of this contract. A final payment is then due upon receipt of the unit in FY25-26 for the remaining balance of $592,125.67.

Policy Impact:

By purchasing this All-Risk Velocity Engine, it will put us back into a normal replacement rotation for our fire engines that we were several behind on since the great recession. This also puts us back in step with the adopted FLEET replacement schedule of all front line engines being under 20-years of age. Finally, it will assist with the future funding and balance of all replacement needs in a calculated manner within the City.

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

PBB

Safe & Healthy Community

- Provide public safety with the resources, staff and training to respond to community needs

High Performing Governance

- Serve the public by providing high quality internal and external service

Regional Plan:

Goal PF.3. Provide high-quality emergency response and public safety services including law enforcement, fire, medical, and ambulance transport service. Policy PF.3.1. Maintain high-quality effectiveness and efficiency in law enforcement, fire, and emergency services to the extent that is consistent with governmental operations, plans, public policies, population served, and monies available.

Carbon Neutrality Plan

There are no current All-Risk fire engines that meet our elevation, temperature and response requirements available in EV models at this time.

Has There Been Previous Council Decision on This:

Funding and replacement was approved as part of the annual FY 2023-24 budget.

Options and Alternatives:

1. Approve the Cooperative Purchase Contract for the new Pierce All-Risk Velocity Fire Engine; or
2. Reject the Cooperative Purchase Contract and direct staff to conduct a new procurement process; or
3. Reject approval of the purchase of the new engine and continue response in a twenty-two-year-old All-Risk fire engine.

Background/History:

The national standard for fire engine replacement from front-line service ranges between 10-20 years base on use and typical geographical response. During the recession, the City moved the replacement of engines up to twenty-five (25) years to reduce capital expenses. Currently, Fleet has moved this back to twenty (20) years due to significant maintenance costs and downtime seen by these older units. The Fleet Committee, City Manager's office and Budget Team has voiced a preference to replace our aging engines to get us back on pace for normal twenty 20-year replacement of front line Engines and 25-year replacement of reserves. We have chosen to stay with Pierce as our only fire engine manufacturer due to longevity, quality, maintenance, and overall fleet consistency.

The Purchasing section has reviewed the competitively solicited cooperative purchase options available and confirmed that the Sourcewell Purchasing Cooperative conducted a competitive and open procurement process through Request for Proposal Solicitation No. 113021 that resulted in Contract No. 113021-OKC with Hughes Fire Equipment, Inc. is valid and within the scope of the materials and services requested.

Key Considerations:

The FFD apparatus replacement schedule anticipated saving capital expenses by refurbishing every other engine. We replaced an older fire engine with a new-refurbished engine in FY18. This engine has needed $50k worth or work in the first three (3) years of its life at FFD. In addition, the next two (2) engines identified as possible refurbishment options are both nineteen (19)-years old and Fleet has determined the frames have significant rust damage from the over the road chemicals and are not candidates for refurbishment. Based on these findings, future new engines are recommended to be purchased new.

This represents the final Engine in the five (5)-year plan to get our replacement schedule back on track. We currently utilize smaller rescue units for the highest call volume districts to reduce to wear and tear on larger fire engines. We also have implemented the co-staffing model to reduce the wear and tear on our most expensive apparatus, known as Quints. This unit continues to be a model down from our normal Pierce fire engine to reduce overall costs, but still maintains consistency in function and maintenance and matches our most recent replacement engines.

Expanded Financial Considerations:

Funds for this purchase are available in account # 001-03-051-0203-2-4401 (Rolling Stock-Fleet) and are spread out with $425,000 allocated this FY.

Community Benefits and Considerations:

Purchasing a new All-Risk Velocity Fire Engine allows our response efforts to be consistent in meeting our mission and the community expectations for public safety response. This purchase will also reduce the amount of time we have to put crews responding to emergency incidents in older reserve apparatus due to aging front line units going out of service for mechanical issues.

Attachments:

Cooperative Agreement
Type 1 Quote
Detail Scope 1
Detail of Options-Spec
Type I pic

COOPERATIVE PURCHASE CONTRACT
Contract No. 2024-48

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 Hughes Fire Equipment, Inc., an Oregon "S" Corporation ("Contractor").

RECITALS:

A. Contractor is a dealer as described in the Agency Contract; and

B. The Sourcewell Purchasing Cooperative conducted a competitive and open procurement process through Request for Proposal Solicitation No. 113021 that resulted in Contract No. 113021-OKC with Contractor ("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 the City the materials and or services, as specified in the Scope of Work attached as *Exhibit A*, and in accordance with the Agency Contract. A general description of materials and/or services being purchased is:

Velocity Pumper EM764

2. Specific Requirements of City: Contractor shall comply with all specific purchase and delivery requirements and/or options of City, as specified in the Scope of Work attached as *Exhibit A* and incorporated by reference.

3. Payment: Payment to the Contractor for the materials and/or services provided is **one million, seventeen thousand, one hundred twenty-five dollars and sixty-seven cents ($1,017,125.67),** plus other fees and taxes; made in accordance with the price list and terms set forth in the Agency Contract.

4. Terms and Conditions of Agency Contract Apply: All provisions of the Agency Contract documents attached as *Exhibit B*, including any amendments, are incorporated in and shall apply to this Contract as though fully set forth herein. Contractor is responsible for promptly notifying City in writing of any changes to the Agency Contract, including, specifically changes in price for materials and/or services.

5. 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.

6. 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.

7. 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.

Hughes Fire Equipment, Inc.:

By:_____

Title:_____

CITY OF FLAGSTAFF

By:_____

Title:_____

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney's Office

Last Updated July 20,2023

EXHIBIT A

Scope of Work - Quote from Hughes Fire Equipment, Inc.

(attached)

September 18, 2023

Flagstaff Fire Department, AZ
One (1) Velocity Pumper EM764
Build Location: Appleton, WI

Proposal Price	$1,031,302.00	
Arizona State Sales Tax @ 5.60%		57,752.91
Phoenix Sales Tax @ 2.70%		27,845.15
PHX Transportation Plan Tax @ 0.3% of $11,631.00		34.89
Total Bid Price Including Sales Tax		*$1,116,934.95*
Less chassis progress payment discount	(12,750.00)	
Less payment upon completion @ factory discount	(10,347.00)	
Pre-payment of $425,000.00 due at Contract Execution	(69,063.00)	
Subtotal including all pre-pay discounts	$939,142.00	
Arizona State Sales Tax @ 5.60%		52,591.95
Phoenix Sales Tax @ 2.70%		25,356.83
PHX Transportation Plan Tax @ 0.3% of $11,631.00		34.89
Total Bid Price Including Pre-Pay Discounts & Sales Tax		*$1,017,125.67*

Terms:

Price Expiration: The above pricing is valid until October 27, 2023.

Future Changes: Various state or federal regulatory agencies (e.g. NFPA, DOT, EPA) may require changes to the Specifications and in any such event any resulting cost increases incurred to comply will be added to the Purchase Price to be paid by the Customer and documented on a Change Order.

Component Price Volatility: Company shall not be responsible for any unforeseen price increase enacted by the suppliers of major components of the Product (including but not limited to engine, transmission, and fire pump) after the execution of contract or purchase order. Any price increase major components of the product will be passed through to the Customer and will be documented on a Change Order.

Delivery: Based on Pierce's current delivery schedule the apparatus would be ready for delivery from factory within 43 to 48 months after contract execution or purchase order. Delivery is subject to change pending Pierce's delivery schedule at time of order. This time does not include any possible delays that may be caused by national disasters or pandemic.

Payment Terms:

a. If pre-payment discount options are elected, the following terms will apply:

i. Chassis Progress Payment Discount: The chassis progress payment in the amount of **$537,994.00** will be due three (3) months prior to the ready for pick up from the factory date. If elected, an invoice will be provided 30 days prior to the chassis payment due date. If payment is not made when due the discount total will be added back to the final invoice.

ii. Payment Upon Completion at Factory Discount: If elected final payment is due prior to apparatus leaving the factory for delivery. If payment is not processed upon receipt of invoice the discount total will be required in addition to the invoice amount.

iii.Pre-Payment of $425,000.00 due at Contract Execution Discount: If elected, an invoice will be provided upon order processing for the pre-payment in the amount of **$425,000.00**. Upon receipt of invoice, payment must be made within thirty (30) days. If payment is not made when due, the above mentioned pre-payment discounts or a portion thereof, will be added back to the final invoice. The pre-payment discount is valid for 90 days from quote unless interest rates change; at which time a notification of change will be given and a new quote will be issued.

b. If pre-payment discount options are not elected standard payment terms will apply: Final payment will be due 30 days after the apparatus leaves the factory for delivery. If payment is not made at that time a late fee will be applicable.

c. Payments made for apparatus using a credit card will be applicable to a credit card convenience fee.

Consortium Purchase: The proposal is based on the apparatus being purchased through Sourcewell utilizing Contract No. 113021-OKC-1 valid until 2/10/2026. It is the purchaser's responsibility to determine if the use of consortiums meets their purchasing requirements.

Performance Bond: A performance bond is included in the above price and will be provided after order placement. If customer elects to remove the performance bond **$3,091.00** may be deducted from the purchase price. All purchase orders must include the following verbiage if a performance bond is elected, "**Due to global supply chain constraints, any delivery date contained herein is a good faith estimate as of the date of this order/contract, and merely an approximation based on current information. Delivery updates will be made available, and a final firm delivery date will be provided as soon as possible.**"

Transportation: Transportation of the apparatus to be driven from the factory to the customers location is included in the above pricing. However, if permits are not obtainable, due to the weight of the apparatus, and the apparatus must be transported on a flat bed, additional Transportation charges will be the responsibility of the customer. We will provide pricing at that time if necessary. If customer elects to drive the apparatus from the factory, **$5,500.00** may be deducted from the purchase price. if this option is elected payment in full and proof of insurance must be provided prior to leaving the factory and the customer is responsible for compliance with all state, local and federal DOT requirements including the driver possessing a valid CDL license.

Inspection Trips: Two (2) factory inspection trips for **four (4)** customer representatives is included in the above pricing. The inspection trips will be scheduled at times mutually agreed upon between the manufacture's representative and the customer, during the window provided by the manufacturer. Airfare, lodging and meals while at the factory are included. In the event the customer is unable to travel to the factory or the factory is unable to accept customers due to the restrictions caused by a national disaster or pandemic then the Dealership reserves the right to use forms of electronic media to accomplish the intention of the inspection trips. Every effort will be made to make the digital media as thorough as possible to satisfy the expectations of the of the customer. If the customer elects to forgo an inspection trip $2,400.00 per traveler (per trip) will be deducted from the final invoice.

Persistent Inflationary Environment: Effective September 1, 2023, verbiage concerning the Persistent Inflationary Environment must be present on customer purchase document. Please speak with your sales representative for the specific terms that are a requisite for acceptance of order.

Acceptance of Proposal: If the customer wishes to purchase the proposed apparatus Hughes Fire Equipment will provide the Customer its form of Purchase Agreement for the Customer's review and signature. If the Customer desires to use its standard form of purchase order as the Purchase Agreement, the purchase order is subject to review for any required revisions prior to acceptance. **All purchase orders shall be made out to Hughes Fire Equipment, Inc., reference proposal EM764 component list dated 9/18/2023, and must be signed and dated.**

EXHIBIT B
AGENCY CONTRACT
(attached)

1. Agency **Contract # 113021-OKC** Award Request for Proposal Solicitation No. **RFP 113021**
2. Sourcewell Pricing for contract #113021-OKC

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

Sourcewell

Solicitation Number: RFP #113021

CONTRACT

This Contract is between Sourcewell, 202 12th Street Northeast, P.O. Box 219, Staples, MN 56479 (Sourcewell) and Oshkosh Corporation, 1917 Four Wheel Dr., Oshkosh, WI 54902 (Supplier), and Supplier's consolidated subsidiaries as defined in the Proposal.

Sourcewell is a State of Minnesota local government unit and service cooperative created under the laws of the State of Minnesota (Minnesota Statutes Section 123A.21) that offers cooperative procurement solutions to government entities. Participation is open to eligible federal, state/province, and municipal governmental entities, higher education, K-12 education, nonprofit, tribal government, and other public entities located in the United States and Canada. Sourcewell issued a public solicitation for Firefighting Apparatus and Fire Service Vehicles from which Supplier was awarded a contract.

Supplier desires to contract with Sourcewell to provide equipment, products, or services to Sourcewell and the entities that access Sourcewell's cooperative purchasing contracts (Participating Entities).

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 February 10, 2026, unless it is cancelled sooner pursuant to Article 22. This Contract may be extended one additional year upon the request of Sourcewell and written agreement by Supplier.

C. SURVIVAL OF TERMS. Notwithstanding any expiration or termination of this Contract, all payment obligations incurred prior to expiration or termination will survive, as will the following: Articles 11 through 14 survive the expiration or cancellation of this Contract. All other rights will cease upon expiration or termination of this Contract.

2. EQUIPMENT, PRODUCTS, OR SERVICES

A. EQUIPMENT, PRODUCTS, OR SERVICES. Supplier will provide the Equipment, Products, or Services as stated in its Proposal submitted under the Solicitation Number listed above.

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Supplier'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 and the current model. Supplier may offer close-out, refurbished, or remounted Equipment or Products if they are clearly indicated in Supplier's product and pricing list. Unless agreed to by the Participating Entities in advance, Equipment or Products must be delivered as operational to the Participating Entity's site.

This Contract offers an indefinite quantity of sales, and while substantial volume is anticipated, sales and sales volume are not guaranteed.

B. WARRANTY. Supplier 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, Supplier warrants the Equipment, Products, and Services are suitable for and will perform in accordance with the ordinary use for which they are intended. Supplier's dealers and distributors must agree to assist the Participating Entity in reaching a resolution in any dispute over warranty terms with the manufacturer. Any manufacturer's warranty that extends beyond the expiration of the Supplier's warranty will be passed on to the Participating Entity.

C. DEALERS, DISTRIBUTORS, AND/OR RESELLERS. Upon Contract execution and throughout the Contract term, Supplier must provide to Sourcewell a current means to validate or authenticate Supplier's authorized dealers, distributors, or resellers relative to the Equipment, Products, and Services offered under this Contract, which will be incorporated into this Contract by reference. It is the Supplier's responsibility to ensure Sourcewell receives the most current information.

3. PRICING

All Equipment, Products, or Services under this Contract will be priced at or below the price stated in Supplier's Proposal.

When providing pricing quotes to Participating Entities, all pricing quoted must reflect a Participating Entity'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 Participating Entity's requested delivery location.

Regardless of the payment method chosen by the Participating Entity, 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 Participating Entity at the time of purchase.

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

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

apparent at the time of delivery, Supplier must permit the Equipment and Products to be returned within a reasonable time at no cost to Sourcewell or its Participating Entities. Participating Entities 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. In the event of the delivery of nonconforming Equipment and Products, the Participating Entity will notify the Supplier as soon as possible and the Supplier will replace nonconforming Equipment and Products with conforming Equipment and Products that are acceptable to the Participating Entity.

Supplier must arrange for and pay for the return shipment on Equipment and Products that arrive in a defective or inoperable condition.

Sourcewell may declare the Supplier in breach of this Contract if the Supplier intentionally delivers substandard or inferior Equipment or Products.

B. SALES TAX. Each Participating Entity is responsible for supplying the Supplier with valid tax-exemption certification(s). When ordering, a Participating Entity must indicate if it is a tax-exempt entity.

C. HOT LIST PRICING. At any time during this Contract, Supplier may offer a specific selection of Equipment, Products, or Services at discounts greater than those listed in the Contract. When Supplier 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 Participating Entities.

4. PRODUCT AND PRICING CHANGE REQUESTS

Supplier 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 Supplier Development Administrator. This approved form is available from the assigned Sourcewell Supplier Development 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;

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

- Individually list all Equipment, Products, or Services affected by the requested change, along with the requested change (e.g., addition, deletion, price change); and
- 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 Change Request Form will become an amendment to this Contract and will be incorporated by reference.

5. PARTICIPATION, CONTRACT ACCESS, AND PARTICIPATING ENTITY REQUIREMENTS

A. PARTICIPATION. Sourcewell's cooperative contracts are available and open to public and nonprofit entities across the United States and Canada; such as federal, state/province, municipal, K-12 and higher education, tribal government, and other public entities.

The benefits of this Contract should be available to all Participating Entities that can legally access the Equipment, Products, or Services under this Contract. A Participating Entity'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. Supplier understands that a Participating Entity's use of this Contract is at the Participating Entity's sole convenience and Participating Entities reserve the right to obtain like Equipment, Products, or Services from any other source.

Supplier is responsible for familiarizing its sales and service forces with Sourcewell contract use eligibility requirements and documentation and will encourage potential participating entities to join Sourcewell. Sourcewell reserves the right to add and remove Participating Entities to its roster during the term of this Contract.

B. PUBLIC FACILITIES. Supplier's employees may be required to perform work at government-owned facilities, including schools. Supplier's employees and agents must conduct themselves in a professional manner while on the premises, and in accordance with Participating Entity policies and procedures, and all applicable laws.

6. PARTICIPATING ENTITY USE AND PURCHASING

A. ORDERS AND PAYMENT. To access the contracted Equipment, Products, or Services under this Contract, a Participating Entity must clearly indicate to Supplier that it intends to access this Contract; however, order flow and procedure will be developed jointly between Sourcewell and Supplier. Typically, a Participating Entity will issue an order directly to Supplier or its authorized subsidiary, distributor, dealer, or reseller. If a Participating Entity issues a purchase order, it may use its own forms, but the purchase order should clearly note the applicable Sourcewell

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

contract number. All Participating Entity orders under this Contract must be issued prior to expiration or cancellation of this Contract; however, Supplier performance, Participating Entity payment obligations, and any applicable warranty periods or other Supplier or Participating Entity obligations may extend beyond the term of this Contract.

Supplier's acceptable forms of payment are included in its attached Proposal. Participating Entities will be solely responsible for payment and Sourcewell will have no liability for any unpaid invoice of any Participating Entity.

B. ADDITIONAL TERMS AND CONDITIONS/PARTICIPATING ADDENDUM. Additional terms and conditions to a purchase order, or other required transaction documentation, may be negotiated between a Participating Entity and Supplier, such as job or industry-specific requirements, legal requirements (e.g., affirmative action or immigration status requirements), or specific local policy requirements. Some Participating Entities may require the use of a Participating Addendum; the terms of which will be negotiated directly between the Participating Entity and the Supplier. Any negotiated additional terms and conditions must never be less favorable to the Participating Entity than what is contained in this Contract.

C. SPECIALIZED SERVICE REQUIREMENTS. In the event that the Participating Entity requires service or specialized performance requirements not addressed in this Contract (such as e-commerce specifications, specialized delivery requirements, or other specifications and requirements), the Participating Entity and the Supplier 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.

D. TERMINATION OF ORDERS. Participating Entities may terminate an order, in whole or in part, immediately upon notice to Supplier in the event of any of the following events:

1. The Participating Entity fails to receive funding or appropriation from its governing body at levels sufficient to pay for the equipment, products, or services to be purchased; or
2. Federal, state, or provincial laws or regulations prohibit the purchase or change the Participating Entity's requirements.

E. GOVERNING LAW AND VENUE. The governing law and venue for any action related to a Participating Entity's order will be determined by the Participating Entity making the purchase.

7. CUSTOMER SERVICE

A. PRIMARY ACCOUNT REPRESENTATIVE. Supplier 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:

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

- Maintenance and management of this Contract;
- Timely response to all Sourcewell and Participating Entity inquiries; and
- Business reviews to Sourcewell and Participating Entities, if applicable.

B. BUSINESS REVIEWS. Supplier must perform a minimum of one business review with Sourcewell per contract year. The business review will cover sales to Participating Entities, pricing and contract terms, administrative fees, sales data reports, 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, Supplier must provide a contract sales activity report (Report) to the Sourcewell Supplier Development Administrator assigned to this Contract. Reports are due no later than 45 days after the end of each calendar quarter. A Report must be provided regardless of the number or amount of sales during that quarter (i.e., if there are no sales, Supplier must submit a report indicating no sales were made).

The Report must contain the following fields:

- Participating Entity Name (e.g., City of Staples Highway Department);
- Participating Entity Physical Street Address;
- Participating Entity City;
- Participating Entity State/Province;
- Participating Entity Zip/Postal Code;
- Participating Entity Contact Name;
- Participating Entity Contact Email Address;
- Participating Entity Contact Telephone Number;
- Sourcewell Assigned Entity/Participating Entity Number;
- Item Purchased Description;
- Item Purchased Price;
- Sourcewell Administrative Fee Applied; and
- Date Purchase was invoiced/sale was recognized as revenue by Supplier.

B. ADMINISTRATIVE FEE. In consideration for the support and services provided by Sourcewell, the Supplier will pay an administrative fee to Sourcewell on all Equipment, Products, and Services provided to Participating Entities. The Administrative Fee must be included in, and not added to, the pricing. Supplier may not charge Participating Entities more than the contracted price to offset the Administrative Fee.

The Supplier will submit payment to Sourcewell for the percentage of administrative fee stated in the Proposal multiplied by the total sales of all Equipment, Products, and Services purchased

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

by Participating Entities under this Contract during each calendar quarter. Payments should note the Supplier's name and Sourcewell-assigned contract number in the memo; and must be mailed to the address above "Attn: Accounts Receivable" or remitted electronically to Sourcewell's banking institution per Sourcewell's Finance department instructions. Payments must be received no later than 45 calendar days after the end of each calendar quarter.

Supplier 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 Supplier is delinquent in any undisputed administrative fees, Sourcewell reserves the right to cancel this Contract and reject any proposal submitted by the Supplier 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 30 days from the cancellation date.

9. AUTHORIZED REPRESENTATIVE

Sourcewell's Authorized Representative is its Chief Procurement Officer.

Supplier's Authorized Representative is the person named in the Supplier's Proposal. If Supplier's Authorized Representative changes at any time during this Contract, Supplier must promptly notify Sourcewell in writing.

10. AUDIT, ASSIGNMENT, AMENDMENTS, WAIVER, AND CONTRACT COMPLETE

A. AUDIT. Pursuant to Minnesota Statutes Section 16C.05, subdivision 5, the books, records, documents, and accounting procedures and practices relevant to this Agreement are subject to examination by Sourcewell or the Minnesota State Auditor for a minimum of six years from the end of this Contract. This clause extends to Participating Entities as it relates to business conducted by that Participating Entity under this Contract.

B. ASSIGNMENT. Neither party may assign or otherwise transfer its rights or obligations under this Contract without the prior written consent of the other party and a fully executed assignment agreement. Such consent will not be unreasonably withheld. Any prohibited assignment will be invalid.

C. AMENDMENTS. Any amendment to this Contract must be in writing and will not be effective until it has been duly executed by the parties.

D. WAIVER. Failure by either party to take action or assert any right under this Contract will not be deemed a waiver of such right in the event of the continuation or repetition of the circumstances giving rise to such right. Any such waiver must be in writing and signed by the parties.

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

E. CONTRACT COMPLETE. This Contract represents the complete agreement between the parties. No other understanding regarding this Contract, whether written or oral, may be used to bind either party.For any conflict between the attached Proposal and the terms set out in Articles 1-22 of this Contract, the terms of Articles 1-22 will govern.

F. 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, or any other relationship such as master-servant, or principal-agent.

11. INDEMNITY AND HOLD HARMLESS

Supplier must indemnify, defend, save, and hold Sourcewell and its Participating Entities, including their agents and employees, harmless from any claims or causes of action, including attorneys' fees incurred by Sourcewell or its Participating Entities, arising out of any act or omission in the performance of this Contract by the Supplier 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. Sourcewell's responsibility will be governed by the State of Minnesota's Tort Liability Act (Minnesota Statutes Chapter 466) and other applicable law.

12. GOVERNMENT DATA PRACTICES

Supplier 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 Supplier under this Contract.

13. INTELLECTUAL PROPERTY, PUBLICITY, MARKETING, AND ENDORSEMENT

A. INTELLECTUAL PROPERTY

1. *Grant of License.* During the term of this Contract:
   a. Sourcewell grants to Supplier a royalty-free, worldwide, non-exclusive right and license to use thetrademark(s) provided to Supplier by Sourcewell in advertising and promotional materials for the purpose of marketing Sourcewell's relationship with Supplier.
   b. Supplier grants to Sourcewell a royalty-free, worldwide, non-exclusive right and license to use Supplier's trademarks in advertising and promotional materials for the purpose of marketing Supplier's relationship with Sourcewell.
2. *Limited Right of Sublicense*. The right and license granted herein includes a limited right of each party to grant sublicenses to their respective subsidiaries, distributors, dealers,

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

resellers, marketing representatives, and agents (collectively "Permitted Sublicensees") in advertising and promotional materials for the purpose of marketing the Parties' relationship to Participating Entities. Any sublicense granted will be subject to the terms and conditions of this Article. Each party will be responsible for any breach of this Article by any of their respective sublicensees.

3. *Use; Quality Control.*

a. Neither party may alter the other party's trademarks from the form provided and must comply with removal requests as to specific uses of its trademarks or logos.

b. Each party agrees to use, and to cause its Permitted Sublicensees to use, the other party's trademarks only in good faith and in a dignified manner consistent with such party's use of the trademarks. Upon written notice to the breaching party, the breaching party has 30 days of the date of the written notice to cure the breach or the license will be terminated.

4. As applicable, Supplier agrees to indemnify and hold harmless Sourcewell and its Participating Entities against any and all suits, claims, judgments, and costs instituted or recovered against Sourcewell or Participating Entities by any person on account of the use of any Equipment or Products by Sourcewell or its Participating Entities supplied by Supplier in violation of applicable patent or copyright laws.

5. Termination. Upon the termination of this Contract for any reason, each party, including Permitted Sublicensees, will have 30 days to remove all Trademarks from signage, websites, and the like bearing the other party's name or logo (excepting Sourcewell's pre-printed catalog of suppliers which may be used until the next printing). Supplier must return all marketing and promotional materials, including signage, provided by Sourcewell, or dispose of it according to Sourcewell's written directions.

B. 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 Supplier individually or jointly with others, or any subcontractors, with respect to the program, publications, or services provided resulting from this Contract.

C. MARKETING. Any direct advertising, marketing, or offers with Participating Entities must be approved by Sourcewell. Send all approval requests to the Sourcewell Supplier Development Administrator assigned to this Contract.

D. ENDORSEMENT. The Supplier must not claim that Sourcewell endorses its Equipment, Products, or Services.

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

14. GOVERNING LAW, JURISDICTION, AND VENUE

The substantive and procedural laws of the State of Minnesota will govern this Contract. Venue for all legal proceedings arising out of this Contract, or its breach, must be in the appropriate state court in Todd County, Minnesota or federal court in Fergus Falls, Minnesota.

15. 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.

16. SEVERABILITY

If any provision of this Contract is found by a court of competent jurisdiction to be illegal, unenforceable, or void then both parties will be relieved from all obligations arising from that provision. If the remainder of this Contract is capable of being performed, it will not be affected by such determination or finding and must be fully performed.

17. 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 Supplier 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 Supplier may escalate the resolution of the issue to a higher level of management. The Supplier will have 30 calendar days to cure an outstanding issue.
3. *Performance while Dispute is Pending*. Notwithstanding the existence of a dispute, the Supplier must continue without delay to carry out all of its responsibilities under the Contract that are not affected by the dispute. If the Supplier fails to continue without delay to perform its responsibilities under the Contract, in the accomplishment of all undisputed work, the Supplier will bear any additional costs incurred by Sourcewell and/or its Participating Entities as a result of such failure to proceed.

B. DEFAULT AND REMEDIES. Either of the following constitutes cause to declare this Contract, or any Participating Entity order under this Contract, in default:

1. Nonperformance of contractual requirements, or
2. A material breach of any term or condition of this Contract.

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

The party claiming default must provide written notice of the default, with 30 calendar days to cure the 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:

- Exercise any remedy provided by law or equity, or
- Terminate the Contract or any portion thereof, including any orders issued against the Contract.

18. INSURANCE

A. REQUIREMENTS. At its own expense, Supplier 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.* Supplier 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), or equivalent. 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, Supplier 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

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

no less broad than ISO Business Auto Coverage Form CA 0001 (2010 edition or newer), or equivalent.

Minimum Limits:
$1,000,000 each accident, combined single limit

4. *Umbrella Insurance*. During the term of this Contract, Supplier will maintain umbrella coverage over Employer's Liability, Commercial General Liability, and Commercial Automobile.

Minimum Limits:
$2,000,000

Failure of Supplier 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, Supplier 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 Supplier Development Administrator assigned to this Contract. The certificates must be signed by a person authorized by the insurer(s) to bind coverage on their behalf.

Failure to request certificates of insurance by Sourcewell, or failure of Supplier to provide certificates of insurance, in no way limits or relieves Supplier of its duties and responsibilities in this Contract.

C. ADDITIONAL INSURED ENDORSEMENT. Supplier agrees to list Sourcewell and its Participating Entities, including their officers, agents, and employees, as an additional insured under the Supplier's commercial general liability insurance policy with respect to liability arising out of activities, "operations," or "work" performed by or on behalf of Supplier, and products and completed operations of Supplier.

D. WAIVER OF SUBROGATION. Omitted.

E. UMBRELLA/EXCESS LIABILITY/SELF-INSURED RETENTION. The limits required by this Contract can be met by either providing a primary policy or in combination with umbrella/excess liability policy(ies), or self-insured retention.

19. 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.

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

B. LICENSES. Supplier must maintain a valid and current status on all required federal, state/provincial, and local licenses, bonds, and permits required for the operation of the business that the Supplier conducts with Sourcewell and Participating Entities.

20. BANKRUPTCY, DEBARMENT, OR SUSPENSION CERTIFICATION

Supplier 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 Supplier declares bankruptcy, Supplier must immediately notify Sourcewell in writing.

Supplier 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 the Canadian government, as applicable; or any Participating Entity. Supplier certifies and warrants that neither it nor its principals have been convicted of a criminal offense related to the subject matter of this Contract. Supplier further warrants that it will provide immediate written notice to Sourcewell if this certification changes at any time.

21. PROVISIONS FOR NON-UNITED STATES FEDERAL ENTITY PROCUREMENTS UNDER UNITED STATES FEDERAL AWARDS OR OTHER AWARDS

Participating Entities 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. Participating Entities may have additional requirements based on specific funding source terms or conditions. Within this Article, all references to “federal” should be interpreted to mean the United States federal government. The following list only applies when a Participating Entity accesses Supplier’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.

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

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. Supplier 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 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. Supplier certifies that during the term of an award for all contracts by Sourcewell resulting from this procurement process, Supplier 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,

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

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. Supplier certifies that during the term of an award for all contracts by Sourcewell resulting from this procurement process, Supplier 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). Supplier 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. Supplier 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). Suppliers must file any required certifications. Suppliers 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 covered by 31 U.S.C. § 1352. Suppliers 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. Suppliers 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, Supplier must comply with the record retention requirements detailed in 2 C.F.R. § 200.333. The Supplier further certifies that it will retain all records as required by 2 C.F.R. § 200.333 for a period of 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.

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

I. ENERGY POLICY AND CONSERVATION ACT COMPLIANCE. To the extent applicable, Supplier 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, Supplier 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). Supplier agrees that duly authorized representatives of a federal agency must have access to any books, documents, papers and records of Supplier that are directly pertinent to Supplier'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 Supplier'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.

M. FEDERAL SEAL(S), LOGOS, AND FLAGS. The Supplier not use the seal(s), logos, crests, or reproductions of flags or likenesses of Federal agency officials without specific pre-approval.

N. NO OBLIGATION BY FEDERAL GOVERNMENT. The U.S. federal government is not a party to this Contract or any purchase by an Participating Entity and is not subject to any obligations or liabilities to the Participating Entity, Supplier, or any other party pertaining to any matter resulting from the Contract or any purchase by an authorized user.

O. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS. The Contractor acknowledges that 31 U.S.C. 38 (Administrative Remedies for False Claims and Statements) applies to the Supplier's actions pertaining to this Contract or any purchase by a Participating Entity.

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P. FEDERAL DEBT. The Supplier certifies that it is non-delinquent in its repayment of any federal debt. Examples of relevant debt include delinquent payroll and other taxes, audit disallowance, and benefit overpayments.

Q. CONFLICTS OF INTEREST. The Supplier must notify the U.S. Office of General Services, Sourcewell, and Participating Entity as soon as possible if this Contract or any aspect related to the anticipated work under this Contract raises an actual or potential conflict of interest (as described in 2 C.F.R. Part 200). The Supplier must explain the actual or potential conflict in writing in sufficient detail so that the U.S. Office of General Services, Sourcewell, and Participating Entity are able to assess the actual or potential conflict; and provide any additional information as necessary or requested.

R. U.S. EXECUTIVE ORDER 13224. The Supplier, and its subcontractors, must comply with U.S. Executive Order 13224 and U.S. Laws that prohibit transactions with and provision of resources and support to individuals and organizations associated with terrorism.

S. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT. To the extent applicable, Supplier certifies that during the term of this Contract it will comply with applicable requirements of 2 C.F.R. § 200.216.

T. DOMESTIC PREFERENCES FOR PROCUREMENTS. To the extent applicable, Supplier certifies that during the term of this Contract will comply with applicable requirements of 2 C.F.R. § 200.322.

22. CANCELLATION

Sourcewell or Supplier may cancel this Contract at any time, with or without cause, upon 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 Supplier's Proposal. Cancellation of this Contract does not relieve either party of financial, product, or service obligations incurred or accrued prior to cancellation.

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Sourcewell

DocuSigned by:
By: Jeremy Schwartz
C0FD2A139D06489...
Jeremy Schwartz
Title: Chief Procurement Officer

4/5/2022 | 4:53 PM CDT
Date: _____

Oshkosh Corporation

By: _____
James W. Johnson
Title: Executive Vice President and President
Fire & Emergency Segment

Date: APRIL 5 '22

Approved:

DocuSigned by:
By: Chad Coauette
7E42B8F817A64CC...
Chad Coauette
Title: Executive Director/CEO

4/5/2022 | 4:54 PM CDT
Date: _____

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RFP 113021 - Firefighting Apparatus and Fire Service Vehicles

Vendor Details

Company Name:	Pierce Manufacturing
Does your company conduct business under any other name? If yes, please state:	WISCONSIN
Address:	2600 American Drive Appleton , WI 54914
Contact:	Michelle Swokowski
Email:	mswokowski@piercemfg.com
Phone:	920-832-3272
Fax:	920-740-6252
HST#:	

Submission Details

Created On:	Monday October 18, 2021 12:41:15
Submitted On:	Tuesday November 30, 2021 16:18:31
Submitted By:	Michelle Swokowski
Email:	mswokowski@piercemfg.com
Transaction #:	724f061f-10fb-4d93-bd02-b5afd9c2b906
Submitter's IP Address:	198.190.231.15

Specifications

Table 1: Proposer Identity & Authorized Representatives

General Instructions (applies to all Tables) Sourcewell prefers a brief but thorough response to each question. Do not merely attach additional documents to your response without also providing a substantive response. Do not leave answers blank; respond "N/A" if the question does not apply to you (preferably with an explanation).

Line Item	Question	Response *
1	Proposer Legal Name (one legal entity only): (In the event of award, will execute the resulting contract as "Supplier")	Oshkosh Corporation
2	Identify all subsidiary entities of the Proposer whose equipment, products, or services are included in the Proposal.	Pierce Manufacturing Inc. Oshkosh Airport Products, LLC
3	Identify all applicable assumed names or DBA names of the Proposer or Proposer's subsidiaries in Line 1 or Line 2 above.	As used herein, the "Company," "we," "us" and "our" refers to Oshkosh Corporation and its consolidated subsidiaries. "Oshkosh" refers to Oshkosh Corporation, subsidiaries, Pratt & Miller Engineering & Fabrications, LLC (Pratt Miller), Pierce Manufacturing Inc. (Pierce), McNeilus Companies, Inc. (McNeilus) and its wholly owned subsidiaries, Oshkosh Airport Products, LLC (Airport Products), Kewaunee Fabrications, LLC (Kewaunee (IMT) or any other subsidiaries. Other assume names herein are often identified to be Frontline Communications, ARFF, Airport , Pierce.
4	Proposer Physical Address:	Oshkosh Corporation 1917 Four Wheel Dr. Oshkosh WI, 54902 Pierce Manufacturing Inc. 2600 American Dr. Appleton WI, 54914 Oshkosh Airport Products, LLC. 1515 County Rd. O Neenah WI, 54956
5	Proposer website address (or addresses):	www.oshkoshcorp.com www.Piercemfg.com, www.frontlinecomm.com, www.oshkoshairport.com,
6	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 and, in the event of award, will be expected to execute the resulting contract):	James W. Johnson Executive Vice President and President, Fire & Emergency Segment Pierce Manufacturing Inc. 2600 American Drive Appleton, WI 54914 Email: jjohnson@piercemfg.com Phone: 920-832-3000 Refer to authorized signers for Oshkosh Corporation, Pierce Manufacturing and Oshkosh Airport Products in additional documents.
7	Proposer's primary contact for this proposal (name, title, address, email address & phone):	Michelle Swokowski Sales Operations Manager, Pierce Manufacturing Inc. 2600 American Drive Appleton WI 54914 Email: mswokowski@piercemfg.com Phone: 920-832-3272
8	Proposer's other contacts for this proposal, if any (name, title, address, email address & phone):	Brianna Propson, Sales Representative, Oshkosh Airport Products, LLC. 1515 County RD O Neenah WI, 54956 Email: bpropson@airport.oshkoshcorp.com Phone: 920-215-5135

Table 2: Company Information and Financial Strength

Line Item	Question	Response *

9	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.	Oshkosh Corporation Overview Oshkosh Corporation was founded in 1917, driven by a breakthrough four-wheel drive system that gave people the courage and confidence to go places they never thought they would. Today, more than 14,000 Oshkosh team members are putting over 850 active patented technologies to work serving, developing, and connecting communities around the world. Oshkosh Corporation is a leading manufacturer and marketer of access equipment, specialty vehicles and truck bodies for the primary markets of access equipment, defense, fire & emergency and municipal, refuse hauling, concrete placement as well as airport services. s. Oshkosh products can be found in more than 150 countries under the brands of JLG®, Pierce®, Oshkosh® Defense, McNeilus®, IMT®, Jerr-Dan®, Frontline™, Oshkosh® Airport Products, and London™ and Pratt Miller. Pierce and Airport Products are subsidiaries of Oshkosh and are part of the Fire & Emergency Segment of Oshkosh. We believe in advancing the world around us through building, serving, and protecting people and communities. We are united by a common purpose: to make a difference in people's lives. Our values are the belief system that helps us ensure our behaviors are aligned with our purpose and drive us to do great work for great people. Oshkosh Core Values: WE PUT PEOPLE FIRST • We treat people how they need to be treated. • We keep people safe, within our walls and those using our products. • We care for the emotional, physical, and financial wellbeing of our people. • We celebrate what makes each of us unique. • We value other's words and ideas. • We respect the impact we have on each other; on the people we serve and in communities around the world. WE DO THE RIGHT THING • We do the right thing, the right way, for the right reasons. • We take responsibility for our actions. • We speak up and share our thoughts and concerns. • We keep our promises. • We respect our environment: both where we work and the planet we rely on. WE PERSEVERE • We push the bounds of technology and engineering to bring value to our customers and those who count on us. • We challenge the impossible to make a difference every day. • We are courageous and steadfast. • We strive to overcome obstacles and achieve our goals. WE ARE BETTER TOGETHER • We welcome ideas different from our own. • We rely on diversity to drive innovation. • We create an inclusive, empowering environment for all. • We work together across geographies, platforms, business units and functions to help our company reach its fullest potential. Business Philosophy: Our strategy is "Innovate. Serve. Advance." We innovate customer solutions by combining leading technology and operational strength to empower and protect the everyday hero. We serve and support those who rely on us with a relentless focus throughout the product lifecycle. We advance by expanding into new markets and geographies to make a difference around the world. As a corporation, our culture is one committed to conducting business with integrity, in accordance with the highest ethical standards and in compliance with applicable laws and regulations. The guidelines, laws, regulations, policies, and procedures that govern our conduct as employees and contractors of Oshkosh Corporation are embodied in our Code of Ethics & Standards of Conduct - The Oshkosh Way. Business Longevity: Pierce was founded in 1913 and is the leading domestic designer and manufacturer of fire apparatus assembled on custom chassis, designed, and manufactured to meet the special needs of firefighters. Pierce also designs and manufactures fire apparatus assembled on commercially available chassis, which are produced for multiple end-customer applications. Pierce's engineering expertise allows it to design its vehicles to meet stringent industry guidelines and government regulations for safety and effectiveness. Pierce primarily serves domestic municipal customers, but also sells fire apparatus to the DoD, airports, universities, and large industrial companies, and in international markets. Pierce's history of innovation, research and development in consultation with firefighters has resulted in a broad product line that features a wide range of innovative, high-quality custom and commercial firefighting equipment with advanced fire suppression capabilities. In an effort to be a single-source supplier for its customers, Pierce offers a full line of custom and commercial fire apparatus and emergency vehicles, including pumpers, aerial platform, ladder and tiller trucks, tankers, light-, medium- and heavy-duty rescue vehicles, wildland	*

		rough terrain response vehicles, mobile command and control centers, bomb squad vehicles, hazardous materials control vehicles and other emergency response vehicles. Refer to "Pierce Timeline.pdf" in Financial Strength and Stability folder. Oshkosh Airport Products is a leader in the design and sale of ARFF vehicles to domestic and international airports. These highly specialized vehicles are required to be in service at most airports worldwide to support commercial airlines in the event of an emergency. Our first Aircraft Rescue and Fire Fighting (ARFF) vehicle was delivered to the U.S. Navy in 1968. We are able to attract and retain new customers because we take pride in a quality product we build and provide second to none in service and support nationwide. We are the leading manufacturer of fire apparatus because of this – our loyal customers! Refer to "9. Oshkosh Corporation 2020 Annual Report.pdf", "9. Oshkosh Strategy Innovate Serve Advance Strategy.pdf", "9. The_Oshkosh_Way_English.pdf", "9. 2020_Sustainability_Report.pdf", and "9. Equal Employment Opportunity.pdf" in Financial Strength and Stability folder for more information.	
10	What are your company's expectations in the event of an award?	The Sourcewell consortium program will extend another avenue for the fire industry customer base to purchase a fire apparatus efficiently and effectively through a proven program. The Sourcewell consortium will be a nationwide including Canada avenue that is promoted across the Pierce sales force that consists of 23 authorized Pierce Dealers and their respective team members. The fundamental expectation is around education and promotion. The Pierce Dealer network and Airport Products sales team is expected to understand our product and the tools available to the customer to achieve what is in the best interest of the customer.	*
11	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.	Pierce Manufacturing Inc. and Oshkosh Airport Products, LLC are subsidiaries of Oshkosh Corporation, which is a publicly traded company. We have attached our annual report, SEC Filings along with the Dunn & Bradstreet report often used by lenders and investors to determine a company's eligibility for credit. This report along with any of the financial statements demonstrate Oshkosh Corporation and its subsidiaries to be financially sound. For additional information please refer to the below path. http://investor.oshkoshcorporation.com/investors/overview/ Oshkosh Corporation maintains an investment grade credit rating. The rating agencies periodically update the Company's credit ratings as events or changes in economic conditions occur. As of September 30, 2021, the long-term credit ratings assigned to the Company's senior debt securities by the credit rating agencies engaged by the Company were as follows: Fitch Ratings BBB-; Moody's Investor Services, Inc. Baaa3; Standards & Poor's BBB. Refer to "11. Oshkosh Corp Q4 and-Full-Year-Results-2021.pdf", "11. Oshkosh Corporation Form 10-K.pdf", "11. D&B Finance Analytics Report.pdf", "11. Bank of America. Oshkosh Reference.pdf", "11. Pierce Manufacturing Certificate of Status 062021.pdf", and "11. Oshkosh Airport Products Certificate of Status July 2021.pdf" in Financial Strength and Stability folder for more information.	*

12	What is your US market share for the solutions that you are proposing?	Pierce is the leader in domestic market share of fire apparatus. Oshkosh Corporation is traded on the New York Stock Exchange since 2002. Financial information can be obtained by visiting the below link. http://investor.oshkoshcorporation.com/investors/financial-information/annual-and-quarterly-reports/default.aspx Fire & Emergency segment. Through Pierce, the Company is the leading domestic designer and manufacturer of fire apparatus assembled on custom chassis, designed and manufactured to meet the special needs of firefighters. Pierce also designs and manufactures fire apparatus assembled on commercially available chassis, which are produced for multiple end-customer applications. Pierce's engineering expertise allows it to design its vehicles to meet stringent industry guidelines and government regulations for safety and effectiveness. Pierce primarily serves domestic municipal customers, but also sells fire apparatus to the DoD, airports, universities and large industrial companies, and in international markets. Pierce's history of innovation, research and development in consultation with firefighters has resulted in a broad product line that features a wide range of innovative, high-quality custom and commercial firefighting equipment with advanced fire suppression capabilities. In an effort to be a single-source supplier for its customers, Pierce offers a full line of custom and commercial fire apparatus and emergency vehicles, including pumpers, aerial platform, ladder and tiller trucks, tankers, light-, medium- and heavy-duty rescue vehicles, wildland rough terrain response vehicles, mobile command and control centers, bomb squad vehicles, hazardous materials control vehicles and other emergency response vehicles. The Company, through Airport Products, is a leader in the design and sale of ARFF vehicles to domestic and international airports. These highly specialized vehicles are required to be in service at most airports worldwide to support commercial airlines in the event of an emergency. Many of the largest airports in the United States, including LaGuardia International Airport, John F. Kennedy International Airport, O'Hare International Airport, Denver International Airport, Baltimore-Washington International Airport, Dallas/Fort Worth International Airport, Tampa International Airport, Philadelphia International Airport and San Francisco International Airport, are served by the Company's ARFF vehicles. The U.S. government also maintains a fleet of ARFF vehicles that are used to support military operations throughout the world. Internationally, the Company's vehicles serve, among others, Beijing, China and more than fifty other airports in China; Singapore; Indonesia; Quebec, Canada; Abu Dhabi, UAE; and Birmingham, Cardiff, Manchester and Liverpool, United Kingdom. In addition, the Company has recently delivered ARFF vehicles to airports in Mexico, Japan, Egypt, Nepal, Iraq and the British Virgin Islands. The Company believes that the performance and reliability of its ARFF vehicles contribute to the Company's strong position in this market. The Company, through its Frontline brand, is a leading manufacturer, system designer and integrator of broadcast vehicles, including electronic field production trailers, satellite news gathering and electronic news gathering vehicles for broadcasters and command trucks for local and federal governments along with being a leading supplier of military simulator shelters and trailers under the Oshkosh Specialty Vehicles (OSV) brand. The Company's vehicles have been used worldwide to broadcast the NFL Super Bowl, the FIFA World Cup and the Olympics.	*
13	What is your Canadian market share for the solutions that you are proposing?	Pierce along with their strong dealer sales and service network that has driven increase Canadian market share. The Pierce Canadian dealer consist of 3 dealers that lead multiple service locations. We also partner with MAXI-METAL Inc leveraging the MAXI Saber program since 2016 and US Contender since 2017. Each Dealer has a signed dealer agreement to sell Pierce fire apparatus in the designated territory awarded to them. They are Prime on contracts and are supported by the 2500+ Pierce employees.	*
14	Has your business ever petitioned for bankruptcy protection? If so, explain in detail.	No	*

15	How is your organization best described: is it a manufacturer, a distributor/dealer/reseller, or a service provider? Answer whichever question (either a) or b) just below) best applies to your organization. a) If your company is best described as a distributor/dealer/reseller (or similar entity), provide your written authorization to act as a distributor/dealer/reseller for the manufacturer of the products proposed in this RFP. If applicable, is your dealer network independent or company owned? b) If your company is best described as a manufacturer or service provider, describe your relationship with your sales and service force and with your dealer network in delivering the products and services proposed in this RFP. Are these individuals your employees, or the employees of a third party?	Pierce and Airport Products are best described as manufacturers. Pierce and Airport Products are best described as manufacturers. The Pierce Dealer network consists of 20 US based Dealers and 3 Canadian based Dealers. Each Dealer has a signed dealer agreement to sell Pierce fire apparatus in the designated territory awarded to them. They are Prime on contracts and are supported by the 2500+ Pierce employees. The Company believes the geographic breadth, size and quality of its Pierce fire apparatus sales and service organization are competitive advantages in a market characterized by a few large manufacturers and numerous small, regional competitors. Pierce's fire apparatus is sold through an extensive network of independent sales and service organizations with over 300 hundred sales representatives in the U.S. and Canada, which combine broad geographical reach with high frequency of contact with fire departments and municipal government officials. These sales and service organizations are supported by product and marketing support professionals and contract administrators at Pierce. The Company believes high frequency of contact and local presence are important to cultivate major, and typically infrequent, purchases involving the city or town council, fire department, purchasing, finance and mayoral offices, among others, that may participate in a fire apparatus bid and selection process. After the sale, Pierce's nationwide local parts and service capability is available to help municipalities maintain peak readiness for this vital municipal service. Oshkosh Airport Products The Company markets its Oshkosh-branded ARFF vehicles through a combination of direct sales representatives domestically and an extensive network of representatives and distributors in international markets, including Canada. Certain of these international representatives and distributors also handle Pierce products and will follow the same process as noted above. For service, we support both with internal service support which is available 24/7/365 via our support line at 1-800-222-6635 and external sales representatives. Refer to "15. Pierce. Airport Manufacturer. Products.pdf" in Company Information and Financial Strength folder for an overview of our manufacturing capabilities and product offerings.	*

16	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.	Pierce Manufacturing Inc. holds state licensing for Sales, Manufacturing, Motor Vehicles, and dealer license used accordance to the state laws. The Pierce Dealer network licenses independently holds as required by law in the state in which they sell. Airport Products holds manufacturer's license, where required. We also hold our Vendors accountable to the utmost standards. Beyond ISO certifications and compliance, we require our supply chain of major components to obtain a score of 80% or above on a supplier quality audit performed by Oshkosh Corporation supplier quality. ISO 9001:2015 Certification: Pierce Manufacturing Inc. was the first single-source manufacturer of custom fire apparatus in North America to achieve ISO 9001 certification. Pierce has achieved ISO 9001:2015 certification which covers all aspects of our business life cycle, from engineering and manufacturing to customer service. ISO 9001 certification demonstrates a company's commitment to quality. To keep their ISO 9001 registered status, companies are re-audited twice per year through third-party verification to prove they are maintaining good practices. ISO 9001 certification further assures customers that a fundamental quality system is in place. It's a solid foundation for continuous improvement always striving to get even better. An ISO-certified manufacturer, like Pierce, accepts nothing but the best from its suppliers. Pierce asks its suppliers to meet many of the same stringent quality requirements and works with them to improve their quality systems as well. Refer to "16. ISO 9001.2015 Pierce Mfg and entities.pdf" in Financial Strength and Stability folder for certificate. UL/ULC: Pierce is the first fire apparatus manufacturer to be both third party certified to NFPA 1901-2013 edition and ULC listed to Canada ULC-S515-04 standard. Third Party Vehicle Inspection Program by Underwriters Laboratories to ensure our products are 100% N.F.P.A. compliant to 1901 standards. The certification includes all design, production, operational and performance testing of the complete apparatus. All products must pass all tests before a truck is released into Canada. This commitment to quality applies to trucks sold in the U.S. as well. Refer to "16. Sample UL Certs 35796 Pump Line Voltage Aerial Cert.pdf" in Financial Strength and Stability folder for sample certificate. ISO 14001:2015 Certification: Our Neenah facility is also ISO 14001:2015 certified for our Environmental Management System. Various Pierce and Airport Products vehicles are manufactured in this space. Refer to "16. ISO 14001 Oshkosh Airport Products.pdf" in Financial Strength and Stability folder for certificate.	*
17	Provide all "Suspension or Debarment" information that has applied to your organization during the past ten years.	Neither Oshkosh Corporation or subsidiary such as Pierce Manufacturing and Airport Products have suspension or debarment that applies within the past 10 years.	*

Table 3: 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	Oshkosh Corporation is honored to be named and recognized for the following awards and recognitions. World's Most Ethical Companies in 2016, 2017, 2018, 2019, 2020 and 2021. Oshkosh is one of only 124 companies, representing 52 industry sectors in 19 countries on five continents named to this prestigious list. We were the only company selected in the "Trucks and Other Vehicles" category, underscoring our commitment to leading ethical business standards and practices. This achievement is only possible with a commitment to sustainability, connecting with our communities and strong ethical culture and team members who believe in doing the right thing. Link: https://investors.oshkoshcorp.com/news/news-details/2021/Oshkosh-Corporation-named-one-of-the-Worlds-Most-Ethical-Companies-for-sixth-consecutive-year/default.aspx FORTUNE's World's Most Admired Companies in 2019 and 2020. Oshkosh Corporation is one of 330 companies to achieve this honor, as ranked by industry peers, highlighting some of the most respected and successful companies from around the world. https://investors.oshkoshcorp.com/news/news-details/2021/Oshkosh-Corporation-named-one-of-the-Worlds-Most-Admired-Companies-by-FORTUNE/default.aspx	

In 2020 and 2021, the company was awarded one of America's Most Responsible Companies by Newsweek. Oshkosh has earned this award for two consecutive years and is ranked #159 out of 399 companies on the list. America's Most Responsible Companies were defined based on key performance indicators around environmental, social and corporate governance areas. For more info please refer to the link below: https://www.oshkoshcorp.com/en/news/12-23-20-most-responsible-newsweek

Oshkosh Corporation was named a Military Friendly Company in 2017, 2018, 2019, 2020 and 2021. Being named a Military Friendly Company highlights our commitment to caring for our team member and having a culture where veterans can thrive. . Please reference the link for additional detail: https://www.oshkoshcorp.com/en/news

Oshkosh Corporation has been listed on the Dow Jones Sustainability World Index in 2019, 2020 and 2021. Please review the link below for additional info. https://investors.oshkoshcorp.com/news/news-details/2020/Oshkosh-Corporation-Named-to-the-Dow-Jones-Sustainability-World-Index-for-Second-Consecutive-Year/default.aspx

Oshkosh Corporation is honored to be named and recognized for the following awards and recognitions.
World's Most Ethical Companies in 2016, 2017, 2018, 2019, 2020 and 2021. Oshkosh is one of only 124 companies, representing 52 industry sectors in 19 countries on five continents named to this prestigious list. We were the only company selected in the "Trucks and Other Vehicles" category, underscoring our commitment to leading ethical business standards and practices. This achievement is only possible with a commitment to sustainability, connecting with our communities and strong ethical culture and team members who believe in doing the right thing.
Link: https://investors.oshkoshcorp.com/news/news-details/2021/Oshkosh-Corporation-named-one-of-the-Worlds-Most-Ethical-Companies-for-sixth-consecutive-year/default.aspx

FORTUNE's World's Most Admired Companies in 2019 and 2020. Oshkosh Corporation is one of 330 companies to achieve this honor, as ranked by industry peers, highlighting some of the most respected and successful companies from around the world. https://investors.oshkoshcorp.com/news/news-details/2021/Oshkosh-Corporation-named-one-of-the-Worlds-Most-Admired-Companies-by-FORTUNE/default.aspx

In 2020 and 2021, the company was awarded one of America's Most Responsible Companies by Newsweek. Oshkosh has earned this award for two consecutive years and is ranked #159 out of 399 companies on the list. America's Most Responsible Companies were defined based on key performance indicators around environmental, social and corporate governance areas. For more info please refer to the link below: https://www.oshkoshcorp.com/en/news/12-23-20-most-responsible-newsweek

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Oshkosh was named one of the "World's Best Employers" by Forbes in 2020. The 2020 results included 750 multinational and large corporations across 45 countries. Oshkosh is ranked #76 out of 750.
Please refer to the link: https://www.oshkoshcorp.com/en/news/12-11-20-forbes

Oshkosh is one of Barron's 100 Most Sustainable Companies for the years 2019, 2020 and 2021. Please review the link for additional information. https://investors.oshkoshcorp.com/news/news-details/2021/Oshkosh-Corporations-focus-on-sustainability-earns-recognition-from-Barrons-and-SP-Global/default.aspx

Pierce's focus on energy efficiency is focused on being good stewards of company resources, budgets, and the company's ecological footprint. This earned them the recognition for Focus on Energy 2020 Energy Efficiency Excellence Award https://www.piercemfg.com/pierce/blog/pierce-recognized-with-focus-on-energy-excellence-award

		Pierce also Achieved TRUE (Total Resource Use and Efficiency) Zero Waste Certification at the Gold level. TRUE certification is administered by Green Business Certification Inc. (GBCI), an organization that independently recognizes excellence in green business industry performance and practice globally 2021 Sterling Manufacturing Business Excellence Award - Florida facility has been awarded the 2021 Sterling Manufacturing Business Excellence Award at the Gold Level! This award went out to the company that was found to be a high performing manufacturer in seven categories. Pierce Bradenton demonstrated outstanding leadership and management systems to meet the need of customers and stakeholders https://www.facebook.com/Pierce/posts/10165217512965527 Pierce was awarded the "Above and Beyond Award" by ESGR August of 2021. Pierce was 1 of 3 large companies in Wisconsin recognized for their outstanding support of our Guard and Reserve forces. Oshkosh Corporation has been named one of the "Best Managed Companies" by the Wall Street Journal in 2018 and 2019. Please visit the link for additional detail: https://www.businesswire.com/news/home/20191209005496/en/Oshkosh-Corporation-Named-One-of-the-%E2%80%9CBest-Managed-Companies-of-2019%E2%80%9D-by-the-Wall-Street-Journal ISO 14001:2015 Environmental Management System To further solidify and standardize our environmental performance, Pierce Manufacturing and the Airport Products Group are in the first domestically of formalizing an Environmental Management System for our Neenah manufacturing facility in accordance with ISO 14001:2015 for all of Oshkosh Corporation Recognized by RobecoSAM with the Industry Mover Award for critical steps taken to propel corporate sustainability by measuring impact and disclosing results. Oshkosh Corporation has achieved many awards throughout the years. Many of the awards highlight specific subsidiaries such as Pierce and Airport Products. There are many more that have not been incorporated but are incorporated on our websites. We are proud and work hard to maintain these achievements. Refer to "18. TRUE CERTS-ID 1000128616.pdf" in Additional Documents folder for certificate.	
19	What percentage of your sales are to the governmental sector in the past three years	Oshkosh has great relationship with various governmental sectors throughout the organization. We are a publicly traded company therefore the information available does not include specific sales detail.	*
20	What percentage of your sales are to the education sector in the past three years	Pierce and Airport on occasion will sell to education sectors such as Universities, Colleges, High Schools, or Fire schools. The market for our product in this group is limited.	*
21	List any state, provincial, or cooperative purchasing contracts that you hold. What is the annual sales volume for each of these contracts over the past three years?	Pierce Manufacturing participates in nationwide and state-level contracts. All programs are aligned to offer the best solutions on a consistent platform. Contracts with an asterisk (*) also have contracts held by Airport Products. 1. Sourcewell* 2. H-GAC* 3. NASPO Value Point 4. NPPGov 5. Lamas 6. BuyBoard 7. Florida Sherriff's 8. Ohio State 9. Costars	*
22	List any GSA contracts or Standing Offers and Supply Arrangements (SOSA) that you hold. What is the annual sales volume for each of these contracts over the past three years?	Current GSA (General Services Administration) contract is GS30F021DA	*

Table 4: References/Testimonials

Line Item 23. Supply reference information from three customers who are eligible to be Sourcewell participating entities.

Entity Name *	Contact Name *	Phone Number *	
Knoxville Fire Department	Bobby Palmer	865-595-4474	*
Howell Fire District #3	Louis Memmolo,III	732-905-8530	*
Clark County	Riccardo Terzo	702-455-8341	*
Tampa International Airport	Oren Hanson	813-267-0335	

Table 5: 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 *	
U.S. Army	Government	District of Columbia - DC	Pumpers, rescues, aerials	N/A	N/A	*
U.S. Air Force	Government	District of Columbia - DC	Pumpers, rescues, aerials	N/A	N/A	*
Bureau of Land Management	Government	District of Columbia - DC	Wildland pumpers	N/A	N/A	*
U.S. Navy	Government	District of Columbia - DC	Pumpers, rescues, aerials	N/A	N/A	*
U.S. Marine Corps	Government	District of Columbia - DC	Pumpers, rescues, aerials	N/A	N/A	*

Table 6: Ability to Sell and Deliver Service

Describe your company's capability to meet the needs of Sourcewell participating entities across the US and Canada, as 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.	Pierce Manufacturing has an inside sales force that manages a given territory The support can range from dealers, customer request, trade shows, warranties, specifics support within the bids, managing the sale and configuration The inside sales folks work with internal Pierce contacts to ensure a successful build and delivery to our preferred dealer network. The Oshkosh Airport Products sales force consists of 2 regional sales managers who are direct employees of Oshkosh Airport Products. Our sales team is committed to the full customer lifecycle, from initial contact throughout the vehicle life. In addition, our internal sales managers coordinate with our Canadian dealership to support the customer relationship. Refer to "25. 26. 27. Directory - Pierce Dealership Territories Map.pdf", "25. 26. Pierce Authorized Dealer_2021_Listing.pdf", "25. ARFF RSM Map Nov 2021.pdf", and "25. Pierce and Airport Internal Contacts Org Chart.pdf" in the Additional Documents folder for more information.	*
26	Dealer network or other distribution methods.	Pierce product is sold via the authorized Pierce Dealer network of 300+ sales representatives that are located across the US and Canada and are backed by the Pierce factory support of 2500+ employees to assist with product, quality, and service. In addition, the sales force is comprised of legacy tenure as well as new generations. Many of our sales representatives came from or are still part of the fire industry in some way. There are Dealers located across the US and Canada that have been assigned territory to provide Sales, Service, and aftermarket support 24/7 365 days of the year. The dealer network has invested in on hand inventory as well as the factory and dedicated aftermarket inventory available online for them to utilize and drop ship to the end customer's location. As previously mentioned, we also partner with MAXIMETAL to support our Canadian customers by being a distributor for MAXIMETAL products. Oshkosh Airport Products sells direct domestically and partners with dealer organizations internationally, including Canada. Refer to "25. 26. 27. Directory - Pierce Dealership Territories Map.pdf" and "25. 26. Pierce Authorized Dealer_2021_Listing.pdf" in the Additional Documents folder for more information.	*

27	Service force.	Pierce and its dealer network offer a wide variety of Aftermarket services to help customers maintain their Pierce branded fire apparatus. 70+ service centers throughout North America are dedicated to servicing Pierce apparatus thru its industry-leading, independently owned & managed dealer network. 20 United States & 3 Canadian dealerships support our wide array of service centers. Pierce authorized service centers offer: • Dedicated Service Professionals • Nearly 250 mobile service vehicles, strategically located throughout North America • Offer scheduled & unscheduled maintenance services • 24/7 access to Pierce Technical Support Hot-Line, • Ability to execute warranty-related repairs, in accordance with the Pierce limited warranty statement. Pierce also offers a full line of spare parts, available for purchase thru its dedicated dealer network. The spare parts warehouse, located in Appleton, Wisconsin, boasts over 100,000 sq. ft. of storage space, all of which supports Pierce fire apparatus. Key facts about the warehouse include: • Dedicated and committed on-hand spare parts inventory • Management of over 100,000 unique spare part numbers (inventory, min/max, pricing, country of origin, etc.) • Same-day & next-day shipping services from UPS, FedEx, and XPO • 24/7 website to locate and check pricing & availability of spare parts by authorized dealer • Tens of thousands of digital photographs & 3D artwork of replacement parts for fast & easy identification Pierce offers a complete set of training classes, for both operators & maintainers, to keep your Pierce apparatus running at peak performance. • Regional & Corporate training events held throughout the calendar year • Instructors with over 100 combined years of Pierce & industry expertise • Innovative "Training Truck"; key technology mounted on stand-alone truck to simulate any key system • Technology training on key components such as Pierce Ultimate Configuration (PUC™) water pumps, TAK-4® independent suspension systems, Husky™ Foam systems, and Command Zone™ III • Operation overview of foam & aerial devices Attached you will find a summary per authorized dealer mobile vehicles and acknowledgment of service technicians along with dealer contact and the territory they cover. Oshkosh Airport Products employs full time Field Service Representatives to provide vehicle in-service, training, and service work. We also rely on support from organizations across the US and have service provider agreements to provide local support to our customers as well. In addition, we are supported through Oshkosh Corporation's training center to provide world-class maintenance and operations training. These trainings are designed specifically for our ARFF products and are available to our dealers and customers alike. Refer to "25. 26. 27. Directory - Pierce Dealership Territories Map.pdf", "27. Pierce Dealer Service & Sales Coverage.pdf", and "27. ARFF Service Providers Map.pdf" in the Additional Documents folder for more information.
28	Describe the ordering process. If orders will be handled by distributors, dealers or others, explain the respective roles of the Proposer and others.	When the customer works with the Pierce authorized dealer they will accept all purchase orders; however, every sale is configured in the Pierce customized truck configurator, Pulse. This sales tool includes the corresponding cooperative procurement option applicable to the sale. This option is used to generate monthly audits that Pierce performs with their dealer network as well as generate the quarterly required reports sent direct to the contracting agency. The authorized Dealer network utilizes the customized apparatus specification software (PULSE) to configure to the customer's expectations and is used internally throughout the supply chain of the order from booking the order to engineer the final product. The tool is supported with internal communication tools such as workflow, Communication Central, online scheduling, Build Status, and a complete Truck Library. This provides our Dealer network a direct link to the factory to accurately communicate details to the end user. Airport Products will be the primary point of contact for sales inquiries, except where we have an authorized dealer. With complexity of ARFF vehicles, our team will work directly with the customer to customize their truck configuration using the base vehicle as a starting point. Options will be added to the base price with the Sourcewell discount. This quotation will be used by the customer to issue a purchase order or contract which will be reviewed by Airport Products and accepted. Airport Products will then be responsible for manufacture of the vehicle.
29	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	AFTERMARKET PIERCE MODEL Pierce service after the sale is where we truly are set apart from others. The Pierce Dealer network spans across the US and Canada and each have made investment in facilities, inventory, staff, and training. The Dealer is the first point of contact for the customer however all customers can access Pierceparts.com to aid in any

	that help your providers meet your stated service goals or promises.	service needs they may have. TEAM MEMBERS Pierce Service Brigade An army of 600 service technicians across the US and Canada. Certified Master Technicians We specifically created the Pierce Certified Master Technician program to ensure that our Service Brigade professionals possess the highest level of proficiency with today's sophisticated emergency vehicles, including non-Pierce apparatus. The Right Attitude and the Right Tools Our team members take pride in going home at the end of each day knowing they made a difference. The mobile training unit takes Customer Service training to another level and brings training to the customer. This mobile unit has built-in training tools and props that are configurable to the training needs of our customers. It allows the technician to troubleshoot, dismantle, and most importantly, provide the hands-on training customers ask for. INVENTORY As the manufacturer, facilities are available in Appleton, WI, Weyauwega, WI, and Bradenton, FL. These facilities are equipped with factory personnel and committed healthy stock of inventory dedicated to service and replacement parts to ensure quick response and minimize down time. Furthermore, Pierce Manufacturing Inc. houses inventory in a dedicated facility, with a dedicated shipping area that ensures service parts are given priority and extends a customized, Pierce aftermarket website for authorized Dealers to conduct business in real-time. FACTORY HOURS OF OPERATION Pierce Manufacturing Inc. and Oshkosh Airport products also maintains a 24 hour/ 7 day a week, toll free emergency hot line and employs a staff of dedicated individuals to troubleshooting and parts support. Pierce Customer Service core hours of operation are Monday – Friday, 7:30 a.m. – 4:00 p.m. CST. We also have Pierce factory technicians on call for after-hours support available 24 hours a day, seven days a week. PROBLEM IDENTIFICATION & RESOLUTION As product or service issues are identified by the customer, they are to contact their local Pierce authorized dealer since they are the customer's first point of contact. All issues are documented, resolved, and archived for future reference by the local dealership. If there is an issue that needs elevated assistance, the dealership will contact the Pierce customer service account representative for assistance. Parts identification is provided to both the dealer and the Fire Department through an on-line web-based application for the specific truck. Access will be granted using the specific VIN number of the vehicle and the online web application provides the ability to view complete bills of materials, digital photographs, parts drawings, assembly drawings, and access to all current operation, maintenance, and service publications. The end user can access this information via the Guest Login. TECHNICAL SERVICE SUPPORT Both Pierce and their authorized Dealers can provide both in-house and on-site service for the apparatus along with training per request. Replacement parts and various levels of service after delivery are available from your local Pierce authorized dealer, including but not limited to those shown below: SERVICE: Warranty repair for Pierce product line for all items except for those that must be handled directly by an authorized component manufacture such as engine and transmission. Direct access to Pierce technical support Routine preventative maintenance Annual aerial ladder testing Pump testing Ground ladder testing NFPA 1911 annual inspections maintenance and testing Repairs from small minor issues to major overhauls and many other services Dealer repair services extend to most other fire and emergency rescue product lines in addition to Pierce Manufacturing Service provided by EVT, ASE, Pierce and industry specific certified technicians All Pierce authorized sales and service dealers have access to Pierce's extensive level of technical and customer service support staff PARTS: Pierce authorized dealers maintain a large assortment of products supplied with fire	*

		apparatus. Including, but not limited to, the most commonly required parts and components required for apparatus repair. This level of inventory enables “out of service” time to be kept to a bare minimum. All Pierce authorized sales and service dealers have access to Pierce’s extensive level of replacement parts inventory, which is more than $15M as well as any Pierce required fabrication services. Oshkosh Airport Products partners with Pierce Manufacturing's internal customer support team to provide the same superior service for municipal products with the smaller scale of ARFF products. We maintain a 24 hour/ 7 day a week, toll free emergency hot line with core hours of operation being Monday through Friday, 7:30 a.m. – 4:00 p.m. CST. We also have Pierce factory technicians on call for after-hours support available 24 hours a day, seven days a week via our service support line 1-800-222-6635	
30	Describe your ability and willingness to provide your products and services to Sourcewell participating entities in the United States.	Pierce Manufacturing Inc has 20 US based authorized dealers, each which has an establishes sales and service infrastructure to support the sale of our whole goods from time of sale through its lifecycle. We are committed to support the customer by educating them in all possible avenue to ensure they know the benefits of Sourcewell. Pierce will be able to support the entire US including Hawaii and Alaska along with Canada regions. Our established dealer network includes assignment for these territories. Airport Products is able and willing to provide our products and services to participating entities in the United States.	*
31	Describe your ability and willingness to provide your products and services to Sourcewell participating entities in Canada.	Pierce Manufacturing Inc has 3 US based authorized dealers, each which has an establishes sales and service infrastructure to support the sale of our whole goods from time of sale through its lifecycle. Pierce Manufacturing Inc. has three Dealers that cover the Canadian territories – Commercial Emergency Equipment, Safety Source, and L ’Arsenal. Commercial Emergency Equipment is the largest of those exclusive dealers. They cover Western Canada (BC, AB, SK, MB), Ontario, as well as the Northern Territories (YT, NWT, NT). Pierce brands the MAXI Saber custom-chassis fire apparatus which are also marketed in Canada. Pierce is our authorized dealers are in exclusive product partnership since 2016 with MAXIMETAL. Pierce is committed to growing the market in Canada while also providing service support. Airport Products will work in conjunction with our authorized dealer(s), and together we are able and willing to provide our products and services to participating entities in Canada.	*
32	Identify any geographic areas of the United States or Canada that you will NOT be fully serving through the proposed contract.	There are no geographic areas in the US or Canada that we will not be fully servicing through the proposed contract. Pierce and Airport Products are proud to provide excellent coverage across the nation. There are no areas throughout US or Canada that we are not able to fully support either through our dealer network or direct coverage through coverage.	*
33	Identify any Sourcewell participating entity 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 are no defined sectors that Pierce or Airport Products would not be willing and able to sell to and extend the after the sale service and support we pride ourselves on.	*
34	Define any specific contract requirements or restrictions that would apply to our participating entities in Hawaii and Alaska and in US Territories.	Pierce and Airport Products is not aware of any specific contract requirements or restrictions that apply to members. Those territories determine what contracts they support and allow to be used.	*

Table 7: Marketing Plan

Line Item	Question	Response *	
35	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.	The marketing strategy we have taken with all the awards has begun with marketing to our sales force. The initial launch provides the sales team: • Overview of the contract and what differentiates it from the others • Training and updating internal User Guide/Handbook • Adding the contract option to our custom truck configurator Pulse • Adding the contract to the internal communication portal • Update www.piercemfg.com and www.oshkoshairport.com website with the addition of the new contract • Develop a flyer or FAQ to provide sales reps and customers as a takeaway • Including a Sourcewell purchased truck at Pierce shows. The Sourcewell consortium logo is noted on the configuration that is displayed on the truck. Refer to "35. Pierce Example Marketing.pdf" in the Marketing Plan/Samples folder. Additional marketing brochures available in the Marketing Plan/Samples folder. Please refer to these files for current representative material.	*
36	Describe your use of technology and digital data (e.g., social media, metadata usage) to enhance marketing effectiveness.	Pierce has a dedicated marketing team that manages our website and social media; we also have 23 Dealers that have established websites and utilize social media platforms such as twitter, Instagram, and Facebook to share messaging. We are able to track engagement and metadata on our followers through these platforms. Not only is our marketing team well versed in looking at industry trends, we also partner with external organizations for a more robust approach to technology. Both Pierce and Airport Products' websites will include award and have a direct link to the Sourcewell website were facts and information can be obtained. Airport Products also utilizes Showpad for organization and distribution of marketing material which is available to our domestic and international sales team. This tool allows us to share information across the globe, including information on available purchasing consortiums. This tool allows users to track customer engagement with the material.	*
37	In your view, what is Sourcewell's role in promoting contracts arising out of this RFP? How will you integrate a Sourcewell-awarded contract into your sales process?	Sourcewell's role in promoting the Fire Apparatus contract is primarily accessibility to customers and/or their procurement officials. Sourcewell' s role is to be partner with the awarded vendors and understand the product on the contract so that as a joint effort, end users can be informed and educated on cooperative procurement and how this contract best fits them. This may include training creation, networking at a specific show or dealer location. Cooperative procurement needs to fold into the sales process shortly after introductions. A Sales representative should understand what programs the customer has been a part of and/or what they know about cooperative procurement programs available. That basic understanding is a must have from the onset. This program won't determine what apparatus they buy or what customization they can have – this program provides them the avenue to get what they need through an efficient procurement process. For the Airport direct sales team, all opportunities that are not competitively bid will be provided information on the Sourcewell contract as an avenue for purchase.	*
38	Are your products or services available through an e-procurement ordering process? If so, describe your e-procurement system and how governmental and educational customers have used it.	We do not offer an e-procurement ordering process due to the complexity of our product. We have determined this platform does not fit in our business model.	*

Table 8: Value-Added Attributes

Line Item	Question	Response *	

39	Describe any product, equipment, maintenance, or operator training programs that you offer to Sourcewell participating entities. Include details, such as whether training is standard or optional, who provides training, and any costs that apply.	Training is offered in several different ways: • A customer can request factory personnel to provide training and it will be added to the sale or available at a later date. • The dealer may have a training program to offer that introduces the customer to the dealer's support team • The customer may choose to attend regional training classes offered throughout the year. All customers receive a Delivery Orientation class prior to placing the apparatus in service. Other training is often customized to the customer's needs and scheduled around their calendars. Factory and/or Dealer training may include Operation, Maintenance, Foam training, Aerial training, Customer Mechanics, or customizable. On-site training during vehicle in-service is standard. This provides a basic vehicle operations and maintenance overview. This training is consistent with industry standards. Refer to "39. Pierce Training Offerings.pdf" in Additional Documents for more information on Pierce training. We also offer additional training through our Oshkosh Product Training Center. We have two rigorous courses focused on the vehicles chassis and firefighting systems. The cost of additional maintenance or operations courses are not included and schedule and pricing is available on our training website. Specialized training can also be requested and will be quoted at time of request. https://oshkoshcorporation.csod.com/LMS/catalog/Welcome.aspx. Refer to "39. Striker Chassis and Firefighting Maintenance Training Outline.pdf" in Additional Information folder for ARFF training outline.	*

40	Describe any technological advances that your proposed products or services offer.	Oshkosh Corporation a leader in innovation and each of our products and technologies is designed with customers and end-users in mind, including advances in electrification, autonomy and active safety and intelligent products. Leveraging the latest in technology for today and tomorrow across the different markets we serve differentiates us and helps us remain market leaders and stay ahead of the competition. Advancing our company into new markets and categories will support continued growth for the company. Through this contract, we offer numerous proprietary features that standout from others and not limited to: • Electric Vehicles - Pierce Manufacturing and Oshkosh Airport Products have introduced the Volterra™ platform of electric vehicles for the fire and emergency market, with the first municipal truck already in service with the City of Madison, Wisconsin. The Striker® Volterra performance hybrid Aircraft Rescue and Fire Fighting (ARFF) vehicle is available for demonstration, as available, at customer locations. Refer to "40. Volterra Press Release.pdf" in Additional Documents folder for more information. • Idle Reduction Technology (IRT) - Power NFPA 1901 required devices, user-defined mission critical on-scene loads, and HVAC climate control with the main chassis engine shut down for one hour of run time at 150 amps. Featuring built-in safety interlocks and Pierce Command Zone™ auto-start for battery power monitoring and engine re-start, departments can work more safely and efficiently without a second thought. Pierce Idle Reduction Technology is an option on new apparatus and as an aftermarket solution Refer to "40. Pierce-Manufacturing-Idle-Reduction-Technology-6-21.pdf" in Additional Documents folder for more information. • Ascendant® class of aerial products – Pierce patented design that offers 107' of vertical reach and 100' of horizontal reach; rated at a 750 lb (dry) / 500 lb (wet) tip load capacity with an additional 100 lb equipment allowance; flow up to 1,500 gpm and is capable of a store front blitz feature as standard. • Pulse - Customized in-house truck configurator that allows us to build to the customer's level of customization • TAK-4® Suspension – offers shorter stopping distance, no brake steer, improved ride quality, and proven technology used by the US military. • Command Zone™ III electronics – provides vehicle reliability, easy serviceability, 5-yr standard warranty • Pierce Ultimate Configuration (PUC™) - Eliminates the pumphouse so you can build your apparatus around your needs and not the pump. It minimizes vehicular space used for fire suppression and maximizes space for equipment while still providing big pump, foam and CAFS capabilities. • Husky™ foam systems - Hydraulic drive powered; Single point, direct injection, flow-based system using digital technology to indicate pump position and a flow meter; a built-in flush system, equipped with an auxiliary foam pick-up; a foam tank refill system is available to fill the foam tank(s) from the ground. • Snozzle® HRET – The Snozzle High Reach Extendible Turret is available is a 50 ft or 65 ft configuration. Our HRET is available on the Oshkosh Striker 4x4, 6x6 and 8x8. • Eco EFP™ Foam Measurement System – Measure foam percentages from every discharge on the vehicle without using foam on the Oshkosh Striker vehicles. Eco EFP measures both the solution and foam flows on the vehicle, and even archives the testing data with a time and date stamp for three years. Refer to "40. Eco EFP Brochure.pdf" in Additional Documents folder for more information. The Company's advanced design and engineering capabilities have contributed to the development of innovative and/or proprietary, severe-duty components that enhance vehicle performance, reduce manufacturing costs and strengthen customer relationships. The Company's advanced design and engineering capabilities have also allowed it to integrate many of these components across various segments and product lines, which enhances its ability to compete for new business and reduces its costs to manufacture its products compared to manufacturers who simply assemble purchased components. The Company has been a supplier of electric-powered products for more than 20 years and recently launched several new products that leverage zero emissions electrification for mobility across all segments.	*

41	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.	Oshkosh Corporation, including Pierce and its sister segments, have Environmental Policies & Procedures including, but not limited to, an Environmental Protection Policy and an Energy Management Policy. Please refer to our response in question 18 on our recent award achievements as well. Refer to "9. 2020_Sustainability_Report.pdf" in the Financial Strength and Stability folder. Pierce Sustainability Efforts Sustainability is defined as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” Pierce is continuously improving how we make and distribute products. It’s about reducing the environmental impact of our products and production, improving workplace conditions, reducing costs, increasing value, and being active in our communities. Pierce has established waste and energy Key Performance Indicators (KPIs) and are developing and implementing plans to meet these goals month over month. KPIs are tracked, recorded, and shared monthly with the teams and our sister segments including Corporate. Oshkosh Corporation conducts internal environmental audits using a third-party environmental auditing tool. These audits are completed on all sites on a rotating basis. Each facility is audited at least once every three years. Pierce is an active member of the Dow Jones Sustainability Index (DJSI). The Dow Jones Sustainability Indices (DJSI) launched in 1999, are a family of indices evaluating the sustainability performance of the largest 2,500 companies listed on the Dow Jones Global Total Stock Market Index. Department of Energy’s Better Buildings, Better Plants Program Pierce along with the other Oshkosh segments demonstrate our commitment to improving energy performance by signing a voluntary pledge to reduce our energy intensity by 25% over a ten-year period with the U.S. Department of Energy’s Better Buildings, Better Plants Program. Leading manufacturers and industrial-scale energy using organizations implement cost-effective energy efficiency improvements that save energy and improve competitiveness. ISO 14001:2015 Environmental Management System To further solidify and standardize our environmental performance, Pierce Manufacturing and the Airport Products Group are in the process of formalizing an Environmental Management System for our Neenah manufacturing facility in accordance with ISO 14001:2015. Refer to "16. ISO 14001 Oshkosh Airport Products.pdf" in Financial Strength and Stability folder. Community – Goodwill Pierce works with the local Goodwill in many different facets. One is the reuse of our safety glasses. Our friends at Goodwill clean and repackage the glasses for reuse at our facilities. It is a cost savings, but most importantly it is helping our community and reducing waste to landfill.	*

42	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.	Pierce Manufacturing has received certifications and awards towards our commitment to energy efficiency, conservation, and sustainability. All certifications and awards are driven through Key performance Indicators (KPIs), auditing and continuous performance throughout the Pierce family and Oshkosh Corporation. Certifications and awards are attached and linked for reference. CERTIFICATIONS: ISO 14001:2015 Certification Our Neenah, WI facility has received the ISO 14001:2015 certification, demonstrating our strong commitment to performance, implementation of a world-class environmental management system, and completion of a rigorous third-party evaluation. TRUE Zero Waste Certification The Total Resource Use and Efficiency (TRUE) Zero Waste certification program, administered by Green Business Certification Inc., provides rigorous third-party certification for zero waste goals. Facilities earn credits toward certification for activities in redesigning processes, reducing waste, reusing materials, and finding solutions other than landfill for waste. Our Neenah, WI facility has achieved TRUE certification at the Gold Level. AWARDS: The advances Pierce has made in sustainable practices thus far have been recognized by numerous agencies, both governmental and private. Additionally, we have obtained certifications and joined programs which serve as pledges to our continuous improvement in sustainability and environmental stewardship. The majority of the awards referenced below you will also find in the table 3 question 18. Energy Efficiency Excellence Award The Energy Efficiency Excellence Award recognizes business participants of Focus on Energy, Wisconsin's statewide energy efficiency and renewable resources program, who have demonstrated an outstanding commitment to reducing energy waste by implementing energy-saving upgrades in their facilities and operations. In 2020, Pierce was honored with this award for our efforts in reducing energy in our products and production. Wisconsin Recycling Excellence Award The Department of Natural Resources recognizes outstanding recycling and waste minimization efforts through its annual Recycling Excellence Award program. Pierce received the Overall Program Award in 2020 for our diverse and extensive waste reduction efforts. GREEN / SUSTAINABILITY: Dow Jones Sustainability Index Our sustainability efforts have been recognized through our inclusion on the Dow Jones Sustainability World Index (DJSI). The DJSI, is a family of best-in-class benchmarks which track the stock performance of the world's leading companies in terms of economic, environmental, and social criteria. 2021 marked the third consecutive year we were named to the Index, highlighting our commitment to sustainable business practices. World's Most Ethical Companies In 2021, we celebrated our sixth consecutive year being named one of the World's Most Ethical Companies by Ethisphere™. The assessment considers over 200 data points on culture, environmental and social practices, ethics and compliance activities, diversity and inclusion, and initiatives to support a strong value chain. Green Masters The Green Masters Program is an assessment and recognition program for Wisconsin businesses interested in improving and being recognized for their sustainability initiatives. 2021 marked the seventh consecutive year we were deemed a Green Master, indicating that we are in the top 20% of companies evaluated.	*
43	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.	Oshkosh Corporation is a large publicly traded company and does not qualify for diversity certifications. However, as an organization Oshkosh is a member of National Minority Supplier Development Council (NMSDC). At Oshkosh Corporation we are about building, protecting and serving communities throughout the globe. We are committed to working with a diverse supply base that is representative of our customers and the communities we serve. Refer to "43. Oshkosh Supplier Diversity.pdf" in Additional Documents for more information.	*
44	What unique attributes does your company, your products, or your services offer to Sourcewell participating entities? What makes your proposed solutions unique in your industry as it applies to Sourcewell participating entities?	Oshkosh Corporation is a trusted partner with over 100 years in business, focused on innovation with the customer in mind. With our work in electrification and intelligent products, we will continue to lead in the specialty truck manufacturing market. Our customers benefit from the size and scale of a large organization yet receive focused attention from our subsidiaries and their respective dealerships. Pierce is a leading manufacturer of customized fire apparatus with a dealer network second to none. The longevity, stability, and family tradition in the fire industry that is threaded throughout our dealer network sets us apart from others. Our partnership with the other segments within the Oshkosh Corporation and the backing of our parent company, Oshkosh Corporation leverages innovation and financial strength. Pierce understands the customer's needs and provides the detail, the commitment, and the follow through long after the apparatus is delivered. Oshkosh Airport Products completes the full products supported by this contract through its Oshkosh Striker ARFF. Airport Products is dedicated to leading the way in technology, product support and customer service in the ARFF market.	*

Table 9: 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 *	
45	Do your warranties cover all products, parts, and labor?	Yes, Our one-year bumper to bumper warranty covers all product, parts, and labor. Pierce, the “manufacturer”, warrants each newly manufactured fire apparatus to the original end user/purchaser of specified periods stated below from the date of delivery. The standard Cab & chassis warranty provides a one-year warranty that warrants against defects in product, workmanship, and/or design. This warranty shall apply provided the vehicle is properly maintained. Nothing contained in this warranty shall make the Manufacturer liable beyond the express limitations hereof, for loss, injury, or damage of any kind to any person or entity resulting defect or failure of the product (except as covered by Product liability insurance). Refer to "45. 01-WA0008 100208 Pierce 1 year.pdf" and "45. Oshkosh 1 Year Basic Vehicle Warranty.pdf" in the Warranty folder for our standard 1 year warranty. The Manufacturer’s warranty shall not apply to the following: • Wear items • Normal adjustments and maintenance services. • Failures resulting from the product being operated in a manner not in accordance with the operation manual or for a purpose not recommended by the Manufacturer. • Any product which shall have been repaired, modified, or altered in any way to have been adversely affected the unit’s stability or reliability. • Items subjected to misuse, negligence, accident, or improper maintenance. • Loss of time or use of the product, inconvenience, or other incidental expenses. The authorized Pierce dealer manages all warranty issues on behalf of the end customer. The Pierce dealer utilizes an online claim filing system known as One Warranty for claim processing. Pre-approval for a claim or request for credit (post- correction claim) can be filed via the One Warranty system in the event a warrantable failure is found. All Standard and Extended Warranty claims are subject to specific Standard and Extended Warranty guidelines. Specific warranties exist for particular makes, models, chassis, options, etc. for Pierce products. Specific warranty bulletins are provided at time of sale to the end customer. Refer to a sampling of our other warranty statements and manufacturers' statements on engines, transmissions, water pump, etc. in the Warranty folder. A summary of warranty is also available "45. Warranty Overview.pdf".	*
46	Do your warranties impose usage restrictions or other limitations that adversely affect coverage?	We do have some base and extended warranties that have mileage limitations set to them. Limitations varies based on the options of the vehicle. Examples of base warranties are our structural warranties which carry a 100,000-mile limit. Extended warranties carry various mileage limits based on the specific coverage. Paint warranties are prorated based on age of the unit.	*
47	Do your warranties cover the expense of technicians’ travel time and mileage to perform warranty repairs?	We pride ourselves with the coverage we have across the nation. There are no areas that we do not have coverage throughout US or Canada. Warranty is managed through our Pierce authorized dealers and dealer travel expenses are covered per our established internal One Warranty guidelines. Airport Products warranty is managed through authorized service representatives or our internal resources. Travel expenses are covered per our established internal one Warranty guidelines.	*
48	Are there any geographic regions of the United States or Canada (as applicable) for which you cannot provide a certified technician to perform warranty repairs? How will Sourcewell participating entities in these regions be provided service for warranty repair?	Pierce prides themselves in the coverage we have across the nation. Pierce requires a certified technician for each area Therefore we are to support all regions throughout US or Canada. Airport Products will provide service through internal or external service representatives.	*

49	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?	Major components installed but not manufactured by Pierce or Airport Products are covered under original equipment manufacturer's warranties passed through to end user/customer. These include, but are not limited to, engine, transmission, water pump, ABS, and axles. Component Warranties In some cases, suppliers will offer warranties beyond the Pierce or Airport Products one-year warranty. Warranties provided by individual suppliers other than Pierce or Airport Products apply after the one-year vehicle warranty. The administration of individual supplier warranties, per the supplier, are to be addressed directly with the supplier themselves.	*
50	What are your proposed exchange and return programs and policies?	Pierce offers a return/exchange program for aftermarket parts only to the purchaser (Pierce dealer) and the dealer may extend this and other terms and conditions to the end customer. Aftermarket Parts Warranty Pierce and Airport Products warrants the purchaser that the parts sold by aftermarket be free from defects in product and workmanship for the period of six months from the delivery of the product. This Parts Warranty does not include freight, labor, travel, or markup. It is a part warranty only. Return of Defective Parts If parts used in the repair of an apparatus are required to be returned to Pierce, Dealers will receive notification. Dealers have up to 30 days to return the defective component or the warranty claim will be rejected.	*
51	Describe any service contract options for the items included in your proposal.	Authorized Pierce dealers may offer service contracts for preventative maintenance purposes. No service contracts are included in this proposal.	*

Table 10: Payment Terms and Financing Options

Line Item	Question	Response *	
52	Describe your payment terms and accepted payment methods.	All sales of Pierce apparatus are sold through the authorized Pierce dealers. Payment terms are Cash on Delivery (COD) or prepayment unless otherwise agreed upon by the Pierce dealer. Oshkosh Airport Products' standard payment terms are net 30 days after delivery of vehicle. Accepted payment methods include check and wire transfer.	*
53	Describe any leasing or financing options available for use by educational or governmental entities.	The same logic behind our custom chassis applies to our financial services: Tailor the product to the department, not the other way around. The Company offers two- to fifteen-year municipal lease financing programs to its Fire & Emergency segment customers in the U.S. through the Pierce Financial Solutions program, provided by PNC Equipment Finance. Programs include competitive lease financing rates, creative and flexible finance arrangements and the ease of one-stop shopping for customers' equipment and financing. The Company executes the lease financing transactions through a co-branded arrangement with an independent third-party finance company. The Company typically provides credit support in connection with these financing and leasing arrangements With industry-leading tax-exempt rates, zero documentation fees, flexible payment plans and quick approvals that can bypass voter referendums, we make it easy to get behind the wheel of your new Pierce. Refer to "53. Pierce Financial Solutions Testimonials.pdf" and "53. Financial_Solutions.pdf" in the Additional Documents folder.	*
54	Describe any standard transaction documents that you propose to use in connection with an awarded contract (order forms, terms and conditions, service level agreements, etc.). Upload a sample of each (as applicable) in the document upload section of your response.	Pierce has a variation of standard warranty documents. Sample documents are included in the warranty document uploads. No standard transaction documents are being requested to use in connection with an awarded contract. No service contracts are included in this proposal. Authorized Pierce dealers may offer service contracts for preventative maintenance purposes.	*
55	Do you accept the P-card procurement and payment process? If so, is there any additional cost to Sourcewell participating entities for using this process?	Pierce, Airport Products, and their independent dealers do not find that P-card procurement and payment feasible due to the size and build complexity of our products	*

Table 11: 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 described in the RFP, the template Contract, and the Sourcewell Price and Product Change Request Form.

Line Item	Question	Response *	
56	Describe your pricing model (e.g., line-item discounts or product-category discounts). Provide detailed pricing data (including standard or list pricing and the Sourcewell discounted price) on all of the items that you want Sourcewell to consider as part of your RFP response. If applicable, provide a SKU for each item in your proposal. Upload your pricing materials (if applicable) in the document upload section of your response.	Combination of line item and percentage discount are provided in an attached PDF document identified as follows • Product Category • Identification ID# • Product Description • List Price • Percentage off per product • Line Item (Contract) Price The Percentage Discount items are also applicable to the unpublished options added to the published base specification with a standard discount off of List contingent on the product.	*
57	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.	The pricing presented in this proposal represents a 5.5% discount from Pierce's list price for unpublished options. ARFF products (Airport Products) represents a 7% discount off of list price.	*
58	Describe any quantity or volume discounts or rebate programs that you offer.	Multi-Unit Purchase Discount: Additional discounts may be available for identical multi-unit purchases. Discount varies dependent upon the number of identical units, the configuration of the units, and will be handled on a case-by-case basis. Pre-Payment Discount Discount amount varies dependent upon apparatus price, delivery schedule, extent of pre-payment, and applicable rate. If elected, payment for the entire contract amount is due within thirty (30) days of contract execution. This deduction is in addition to all other discounts listed above. If this option is elected, final payment for any changes processed during manufacturing is due prior to the unit leaving the factory for delivery. Payment & pricing options: Chassis Progress Payment Discount: Discount of approximately 3% of the custom chassis price is offered if a chassis progress payment is made three (3) months prior to the RFP (ready for pick up from the factory) date. Example: Chassis progress payment in the amount of $220,714.00 could earn a discount of ($6,621.00). This discount is not available for Commercial chassis products. Aerial Device Progress Payment Discount: Discount of approximately 2% of the aerial device price is offered if an aerial device progress payment is made two (2) months prior to the RFP (ready for pick up from the factory) date. Example: Aerial device progress payment in the amount of $310,385.00 could earn a discount of ($6,207.00).	*
59	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.	Sourced or open market items may be provided by the Pierce authorized dealer and would be quoted at time of request.	*

60	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.	Pre-Delivery Expenses Dealer provided options can be added to the apparatus contract upon request and will be handled by the Pierce authorized dealer. Dealer provided options can vary depending upon the customer's request and can include but are not limited to the items listed below. Pricing will be provided to each customer upon request and varies by dealership and customer location. Factory inspection trips Weekly construction photo progress reports Orientation DVD specific to your apparatus Loose Equipment Engine and or transmission diagnostic software Loose equipment (open market items) such as but not limited to monitors, hose, intercom system, radio equipment, and rescue tools and equipment Pre-delivery service consisting of basic fluids and filters Custom fabrication for tool mounting and communication equipment Other items as requested by customer and deemed sourced or open market Delivery Sales and other taxes, license, handling, or title fees are also not included.	*
61	If freight, delivery, or shipping is an additional cost to the Sourcewell participating entity, describe in detail the complete freight, shipping, and delivery program.	Transportation Expenses Prices quoted in RFP #113021 are FOB Manufacturer's facility. Transportation of the apparatus from the factory to the customer's facility can be added to the contract. In most cases the apparatus is delivered to the Pierce authorized dealer facility in the area for a Pre-Delivery inspection and the installation of any dealer provided options, if applicable. If there is not a Pierce authorized dealer facility near the customer location, the apparatus may be delivered directly to the facility. The cost for this transportation varies dependent upon the type of apparatus and the proximity of your facility to the location of the manufacturer's facility. Delivery is conducted in accordance with DOT regulations. Delivery charges can vary based on the logistic or shipping location and requirements for example, more if flatbed, barge, or container ship transport is required.	*
62	Specifically describe freight, shipping, and delivery terms or programs available for Alaska, Hawaii, Canada, or any offshore delivery.	Shipping and Delivery programs for areas such as Alaska, Hawaii, or any offshore delivery requires coordination of different transit methods. Most often the apparatus is flatbed to the port destination, prepared for ocean transit, and travel to final destination (roll-on/roll off vessel is preferred). This unique shipping and delivery requirements are priced on a case-by-case basis as required. Shipping within the contiguous US states and Canada, shipping is calculated using numerous factors including but not limited to the type of apparatus which impacts permits as well as the distance to destination. Shipping expenses are not included in the base specifications cost.	*
63	Describe any unique distribution and/or delivery methods or options offered in your proposal.	For ARFF vehicles, due to size and weight restrictions all trucks will be transported via low-boy or flatbed. All required licenses and permits will be obtained prior to shipment.	*

Table 12: Pricing Offered

Line Item	The Pricing Offered in this Proposal is: *	Comments
64	b. the same as the Proposer typically offers to GPOs, cooperative procurement organizations, or state purchasing departments.	Pierce will not favor one GPO over another. Therefore, pricing model is consistent across all.

Table 13: Audit and Administrative Fee

Line Item	Question	Response *	
65	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 participating entities 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. Provide sufficient detail to support your ability to report quarterly sales to Sourcewell as described in the Contract template.	Pierce takes pride in upholding the integrity of the programs and contracts we participate in. System software changes have been built to facilitate the information gathered throughout any of our programs to efficiently run reports on demand. These reports are run at a minimum monthly for internal audit purposes and quarterly for contract requirements. All base specifications and additional upgrade options have been created in our customized truck configurator tool, PULSE so that a Dealer can copy that base specification to confirm line-item pricing. Any changes made to the base specification is then controlled and captured in a Change Report that can be validated to honor the Percentage Discount on options added. The process (see additional documents) outline shows that Pierce has a closed-loop process that provide checks and balances for all involved. Our reporting capabilities for other contracts have been noted to be timely, thorough, and accurate. The volume of sales under our consortium programs requires Pierce to have a well-defined and efficient process Awarded contracts are audited on product cost, labor efficiencies, product margin and customer satisfaction. Refer to "Table 13. Question 65 Audit and Administrative Fee.pdf" in Pricing folder.	*
66	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.	On a monthly basis Pierce will provide the percentage of Sourcewell orders to each authorized dealer in which they can compare to the prior year, this is provided in their monthly dashboards.	*
67	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.)	The Administrative Fee that Pierce will pay to Sourcewell for this proposed contract is aligned with the other contracts awarded to Pierce to create alignment and consistency. That fee will be a flat $2000.00 USD per customer purchase order or separate contract.	*

Table 14A: Depth and Breadth of Offered Equipment Products and Services

Line Item	Question	Response *	
68	Provide a detailed description of the equipment, products, and services that you are offering in your proposal.	Pierce is offering an array of fire apparatus to meet the customer's needs across the US and Canada, including Hawaii and Alaska. Authorized Pierce dealers may offer service contracts for preventative maintenance purposes. Our product portfolio includes the industry standard categories: Custom and Commercial Pumper products Aerial products, Command, ARFF, Rescue products, Tanker products, and Specialty vehicles. CUSTOM AND COMMERCIAL PUMPER PRODUCTS Pumper products include commercial and custom chassis with varying body sizes, pump rates, water tank capacity, and pump module style. AERIAL PRODUCTS Aerial products include ladders, platforms, and tillers. These provide ladder lengths ranging from 61' – 110'. Selections will include various axle configurations, pumping rates, ladder styles, and material. EMERGENCY RESPONSE VEHICLES - Designed to support the demands of emergency response. Many models fall under this category such as large mobile command, mid-size command vehicle, small mobile command, and cru 22mobile command vehicle. RESCUE PRODUCTS Rescue products will include commercial and custom chassis offerings along with a walk-in or non-walk-in style. The configuration capabilities vary but includes capacity to integrate complex A /V, network and radio systems, air tool systems, breathing air systems with compressors, hydraulic rescue tool systems and winching capabilities, crew seating with storage, and custom fabricated shelves and trays. TANKER PRODUCT Tanker products offer a dual role of water transport and on-the-spot firefighting. Pierce offers Elliptical tankers, Tanker/Pumper models, Dry side and Wet side styles to choose from. Each tanker is custom designed to accommodate the fire department's water, foam and equipment storage needs. Pierce Tankers feature solid, lightweight, corrosion-free polypropylene tanks. The tanks are form-fitted specifically for Pierce vehicles and come with a lifetime warranty. SPECIALTY VEHICLES Specialty vehicles are those unique vehicles that have a purpose in which just one may be needed. Specialty vehicles may range from a mini pumper to a Wildland Type III vehicle or a Industrial Fire Fighting Vehicle. Maxi-Metal Partnership MAXIMETAL PRODUCTS- are distributed in the USA through PIERCE MANUFACTURING and the dealer network under the brand name "CONTENDER BY MAXIMETAL. The "Contender by MAXIMETAL" product line will be submitted by MAXI-METAL for consideration. Aircraft Rescue and Fire Fighting Vehicles (ARFF) – Airport Products offers the Oshkosh Striker 4x4, 6x6 and 8x8 along with the Stinger Q4 RIV (Rapid Intervention Vehicle). The ARFF vehicle will be equipped to meet NFPA 414 requirements with optional equipment and configurations to meet individual airport needs.	*
69	Within this RFP category there may be subcategories of solutions. List subcategory titles that best describe your products and services.	Please see question 68 subcategories as they are described. There is also literature included to provide the breath of products we sell, service and support. No service contracts are included in this proposal. Example below of subcategories Category - Emergency Response Vehicles , ARFF, Aerial, Pumper, Rescue, Tanker, Specialty Subcategory - Ladder, Pumpers, Walk In, Pumper Tanker, Wildland, Platforms, Rescue -Pumper, Non Walk-In Dry-side Tanker, Mini-Pumper, Command	*

Table 14B: Depth and Breadth of Offered Equipment Products and Services

Indicate below if the listed types or classes of equipment, products, and services are offered within your proposal. Provide additional comments in the text box provided, as necessary.

Line Item	Category or Type	Offered *	Comments	
70	Firefighting apparatus and service vehicles, of all types, such as: pumper/engine, initial attack, mobile water supply, aerial, quint, special service, mobile foam, command and communications, and purpose-built firefighting or rescue trailers	(•) Yes ( ) No	Frontline leads service on command and communications.	*
71	Wildland fire apparatus, of all types, such as: fire suppression equipment, mobile water supply, and crew carriers	(•) Yes ( ) No	N/A	*
72	Aircraft rescue and firefighting vehicles	(•) Yes ( ) No	Oshkosh Airport Products	*
73	Purpose-built chassis and vehicle components for firefighting apparatus and fire service vehicles	(•) Yes ( ) No	Pierce has a variety of custom built chassis that you will find within the documents	*
74	Equipment, options, accessories, and supplies complementary or incidental to the purchase of a turnkey or complete unit of the types described in Lines 70-72 above	(•) Yes ( ) No	Can be open source Offering is only in conjunction with a new order.....	
75	Services related to the offering of the solutions described in Lines 70-74, including installation, customization, remount, refurbishment, inspection, repair, maintenance, training, and support	(•) Yes ( ) No	We are required to provide training of our vehicle per compliance with NFPA. We do provide options within our proposals for this, and extended durations that have added cost associated.	*

Table 15: Industry Specific Questions

Line Item	Question	Response *	
76	Describe available service and repair options for the equipment and products offered in your proposal.	Pierce Master Technician Program The Pierce Master Technician Program is focused on recognizing service technicians throughout the dealer network for their knowledge and ability to provide expert service on Pierce apparatus. With this tiered level program, a technician can work their way up from having one certification to the level of Master Technician. Active participation in the ASE & EVT programs is encouraged. A Pierce Master Technician must successfully complete the defined core classes dedicated to exclusive Pierce products. A cumulative final exam is taken upon completion of the core classes to obtain a Pierce Master Technician status. Pierce has over a 150 Master Technicians certified.	*
77	Describe available remount or refurbishing services included within your proposal, the pricing method for such services, and any related order processes.	Remount and refurbished services are offered however each job is quoted independently from one another. This is required due to the complexity to refurb or remount. Refurb and remount pricing will not be part of this submission however pricing can vary depending on the repair or service needed.	
78	Describe your compliance with US standards for the equipment and products offered in your proposal, including applicable federal and state requirements.	Pierce fire apparatus are built with pride and dedication to a product that helps save lives. We have many internal quality check points throughout the build process and before the fire apparatus can be delivered it must go through third party testing by Underwriters Laboratories (UL). Pierce contracts with Underwriter's Laboratories to inspect Pierce apparatus for compliance to NFPA standards. Every NFPA 1901 apparatus manufactured in the Appleton facility is reviewed by a UL certified inspector after it is completed. Each apparatus is subjected to a visual inspection of construction and installed components such as chassis, driving and crew compartments, body compartments, steps, warning lights, reflective trim, warning, and instructional labels, etc. The inspection checklist, based on apparatus type, may have over 100 items to check. Once the UL inspection is complete a certification of NFPA compliance is provided to the customer upon delivery of their fire apparatus. Oshkosh ARFF products comply with latest edition of NFPA 414 and the Federal Aviation Administration Advisory Circular (AC) 150/5110-10E.	
79	Describe your compliance with Canadian standards for the equipment and products offered in your proposal, including applicable federal and provincial requirements.	CERTIFIED: UL/ULC NFPA 1901 UL Certification & UL Canada (ULC) Certification Pierce is the first fire apparatus manufacturer to be both 3rd party certified to NFPA 1901-2009 edition and ULC listed to Canada ULC-S515-04 standard by Underwriters Laboratories. Stages of testing include road, pump, weight, brake, performance and aerial application. All products must pass all tests before a truck is released into Canada. This commitment to quality applies to trucks sold in the U.S. as well. All chassis' comply with Canadian Motor Vehicle Safety Standards CMVSS. Oshkosh ARFF products comply with latest edition of NFPA 414 and the Federal Aviation Administration Advisory Circular (AC) 150/5110-10E. We will work with the customer on specific Canadian requirements to ensure compliance as needed.	

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."

- Pricing - Table 12. Pricing.zip - Tuesday November 30, 2021 15:16:30
- Financial Strength and Stability - Table 2. Financial Strength and Stability.zip - Tuesday November 30, 2021 14:31:23
- Marketing Plan/Samples - Table 7. Marketing Plan.Samples.zip - Tuesday November 30, 2021 13:40:24
- WMBE/MBE/SBE or Related Certificates (optional)
- Warranty Information - Table 9. Warranty Information.zip - Tuesday November 30, 2021 13:41:02
- Standard Transaction Document Samples - SALES_TEMPLATE_Sales Proposal Order Form .pdf - Tuesday November 30, 2021 13:43:12
- Upload Additional Document - Additional Documents.zip - Tuesday November 30, 2021 16:02:10

Addenda, Terms and Conditions

PROPOSER AFFIDAVIT AND ASSURANCE OF COMPLIANCE

I certify that I am the authorized representative of the Proposer submitting the foregoing Proposal with the legal authority to bind the Proposer to this Affidavit and Assurance of Compliance:

1. The Proposer is submitting this Proposal under its full and complete legal name, and the Proposer legally exists in good standing in the jurisdiction of its residence.

2. The Proposer warrants that the information provided in this Proposal is true, correct, and reliable for purposes of evaluation for contract award.

3. The Proposer, including any person assisting with the creation of this Proposal, has arrived at this Proposal independently and the Proposal has been created without colluding with any other person, company, or parties that have or will submit a proposal under this solicitation; and the Proposal has in all respects been created fairly without any fraud or dishonesty. The Proposer has not directly or indirectly entered into any agreement or arrangement with any person or business in an effort to influence any part of this solicitation or operations of a resulting contract; and the Proposer has not taken any action in restraint of free trade or competitiveness in connection with this solicitation. Additionally, if Proposer has worked with a consultant on the Proposal, the consultant (an individual or a company) has not assisted any other entity that has submitted or will submit a proposal for this solicitation.

4. To the best of its knowledge and belief, and except as otherwise disclosed in the Proposal, there are no relevant facts or circumstances which could give rise to an organizational conflict of interest. An organizational conflict of interest exists when a vendor has an unfair competitive advantage or the vendor's objectivity in performing the contract is, or might be, impaired.

5. The contents of the Proposal have not been communicated by the Proposer or its employees or agents to any person not an employee or legally authorized agent of the Proposer and will not be communicated to any such persons prior to Due Date of this solicitation.

6. If awarded a contract, the Proposer will provide to Sourcewell Participating Entities the equipment, products, and services in accordance with the terms, conditions, and scope of a resulting contract.

7. The Proposer possesses, or will possess before delivering any equipment, products, or services, all applicable licenses or certifications necessary to deliver such equipment, products, or services under any resulting contract.

8. The Proposer agrees to deliver equipment, products, and services through valid contracts, purchase orders, or means that are acceptable to Sourcewell Members. Unless otherwise agreed to, the Proposer must provide only new and first-quality products and related services to Sourcewell Members under an awarded Contract.

9. The Proposer will comply with all applicable provisions of federal, state, and local laws, regulations, rules, and orders.

10. The Proposer understands that Sourcewell will reject RFP proposals that are marked "confidential" (or "nonpublic," etc.), either substantially or in their entirety. Under Minnesota Statutes Section 13.591, subdivision 4, all proposals are considered nonpublic data until the evaluation is complete and a Contract is awarded. At that point, proposals become public data. Minnesota Statutes Section 13.37 permits only certain narrowly defined data to be considered a "trade secret," and thus nonpublic data under Minnesota's Data Practices Act.

11. Proposer its employees, agents, and subcontractors are not:
    1. Included on the "Specially Designated Nationals and Blocked Persons" list maintained by the Office of Foreign Assets Control of the United States Department of the Treasury found at: https://www.treasury.gov/ofac/downloads/sdnlist.pdf;

    2. Included on the government-wide exclusions lists in the United States System for Award Management found at: https://sam.gov/SAM/; or

    3. 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 the Canadian government, as applicable; or any Participating Entity. Vendor certifies and warrants that neither it nor its principals have been convicted of a criminal offense related to the subject matter of this solicitation.

☑ By checking this box I acknowledge that I am bound by the terms of the Proposer's Affidavit, have the legal authority to submit this Proposal on behalf of the Proposer, and that this electronic acknowledgment has the same legal effect, validity, and enforceability as if I had hand signed the Proposal. This signature will not be denied such legal effect, validity, or enforceability solely because an electronic signature or electronic record was used in its formation. - Michelle Swokowski, Sales Operations Manager, Oshkosh Corporation/ Pierce Manufacturing/ Oshkosh Airport Products

The Proposer declares that there is an actual or potential Conflict of Interest relating to the preparation of its submission, and/or the Proposer foresees an actual or potential Conflict of Interest in performing the contractual obligations contemplated in the bid.

○ **Yes** ◉ **No**

The Bidder acknowledges and agrees that the addendum/addenda below form part of the Bid Document.

Check the box in the column "**I have reviewed this addendum"** below to acknowledge each of the addenda.

File Name	I have reviewed the below addendum and attachments (if applicable)	Pages
Addendum_4_Fire_Apparatus_RFP_113021 Sat November 20 2021 12:53 PM	☑	5
Addendum_3_Fire_Apparatus_RFP_113021 Thu November 11 2021 02:09 PM	☑	1
Addendum_2_Fire_Apparatus_RFP_113021 Fri October 29 2021 09:20 AM	☑	1
Addendum_1_Fire_Apparatus_RFP_113021 Fri October 29 2021 09:20 AM	☑	1

Pierce Manufacturing #113021-OKC

Pricing for contract #113021-OKC for Pierce's unpublished options is provided at a 5.5% discount.

Additional discounts may be available for identical multi-unit purchases. Discount varies dependent on the number of identical units, the configuration of the units, and will be handled on as case by case basis.

Authorized Pierce dealers may offer service contracts for preventative maintenance and other services. Pricing would be quoted on a time and material bases, by the dealer, at the time of request. Pierce offers our dealers the ability to offer/develop custom service/maintenance contracts to Sourcewell members utilizing this contract.

September 18, 2023

Flagstaff Fire Department, AZ
One (1) Velocity Pumper EM764
Build Location: Appleton, WI

Proposal Price	$1,031,302.00	
Arizona State Sales Tax @ 5.60%		57,752.91
Phoenix Sales Tax @ 2.70%		27,845.15
PHX Transportation Plan Tax @ 0.3% of $11,631.00		34.89
Total Bid Price Including Sales Tax		*$1,116,934.95*
Less chassis progress payment discount	(12,750.00)	
Less payment upon completion @ factory discount	(10,347.00)	
Pre-payment of $425,000.00 due at Contract Execution	(69,063.00)	
Subtotal including all pre-pay discounts	$939,142.00	
Arizona State Sales Tax @ 5.60%		52,591.95
Phoenix Sales Tax @ 2.70%		25,356.83
PHX Transportation Plan Tax @ 0.3% of $11,631.00		34.89
Total Bid Price Including Pre-Pay Discounts & Sales Tax		*$1,017,125.67*

Terms:

Price Expiration: The above pricing is valid until October 27, 2023.

Future Changes: Various state or federal regulatory agencies (e.g. NFPA, DOT, EPA) may require changes to the Specifications and in any such event any resulting cost increases incurred to comply will be added to the Purchase Price to be paid by the Customer and documented on a Change Order.

Component Price Volatility: Company shall not be responsible for any unforeseen price increase enacted by the suppliers of major components of the Product (including but not limited to engine, transmission, and fire pump) after the execution of contract or purchase order. Any price increase major components of the product will be passed through to the Customer and will be documented on a Change Order.

Delivery: Based on Pierce's current delivery schedule the apparatus would be ready for delivery from factory within 43 to 48 months after contract execution or purchase order. Delivery is subject to change pending Pierce's delivery schedule at time of order. This time does not include any possible delays that may be caused by national disasters or pandemic.

Payment Terms:

a. If pre-payment discount options are elected, the following terms will apply:

i. Chassis Progress Payment Discount: The chassis progress payment in the amount of **$537,994.00** will be due three (3) months prior to the ready for pick up from the factory date. If elected, an invoice will be provided 30 days prior to the chassis payment due date. If payment is not made when due the discount total will be added back to the final invoice.

ii. Payment Upon Completion at Factory Discount: If elected final payment is due prior to apparatus leaving the factory for delivery. If payment is not processed upon receipt of invoice the discount total will be required in addition to the invoice amount.

iii.Pre-Payment of $425,000.00 due at Contract Execution Discount: If elected, an invoice will be provided upon order processing for the pre-payment in the amount of **$425,000.00**. Upon receipt of invoice, payment must be made within thirty (30) days. If payment is not made when due, the above mentioned pre-payment discounts or a portion thereof, will be added back to the final invoice. The pre-payment discount is valid for 90 days from quote unless interest rates change; at which time a notification of change will be given and a new quote will be issued.

b. If pre-payment discount options are not elected standard payment terms will apply: Final payment will be due 30 days after the apparatus leaves the factory for delivery. If payment is not made at that time a late fee will be applicable.

c. Payments made for apparatus using a credit card will be applicable to a credit card convenience fee.

Consortium Purchase: The proposal is based on the apparatus being purchased through Sourcewell utilizing Contract No. 113021-OKC-1 valid until 2/10/2026. It is the purchaser's responsibility to determine if the use of consortiums meets their purchasing requirements.

Performance Bond: A performance bond is included in the above price and will be provided after order placement. If customer elects to remove the performance bond **$3,091.00** may be deducted from the purchase price. All purchase orders must include the following verbiage if a performance bond is elected, "**Due to global supply chain constraints, any delivery date contained herein is a good faith estimate as of the date of this order/contract, and merely an approximation based on current information. Delivery updates will be made available, and a final firm delivery date will be provided as soon as possible.**"

Transportation: Transportation of the apparatus to be driven from the factory to the customers location is included in the above pricing. However, if permits are not obtainable, due to the weight of the apparatus, and the apparatus must be transported on a flat bed, additional Transportation charges will be the responsibility of the customer. We will provide pricing at that time if necessary. If customer elects to drive the apparatus from the factory, **$5,500.00** may be deducted from the purchase price. if this option is elected payment in full and proof of insurance must be provided prior to leaving the factory and the customer is responsible for compliance with all state, local and federal DOT requirements including the driver possessing a valid CDL license.

Inspection Trips: Two (2) factory inspection trips for **four (4)** customer representatives is included in the above pricing. The inspection trips will be scheduled at times mutually agreed upon between the manufacture's representative and the customer, during the window provided by the manufacturer. Airfare, lodging and meals while at the factory are included. In the event the customer is unable to travel to the factory or the factory is unable to accept customers due to the restrictions caused by a national disaster or pandemic then the Dealership reserves the right to use forms of electronic media to accomplish the intention of the inspection trips. Every effort will be made to make the digital media as thorough as possible to satisfy the expectations of the of the customer. If the customer elects to forgo an inspection trip $2,400.00 per traveler (per trip) will be deducted from the final invoice.

Persistent Inflationary Environment: Effective September 1, 2023, verbiage concerning the Persistent Inflationary Environment must be present on customer purchase document. Please speak with your sales representative for the specific terms that are a requisite for acceptance of order.

Acceptance of Proposal: If the customer wishes to purchase the proposed apparatus Hughes Fire Equipment will provide the Customer its form of Purchase Agreement for the Customer's review and signature. If the Customer desires to use its standard form of purchase order as the Purchase Agreement, the purchase order is subject to review for any required revisions prior to acceptance. **All purchase orders shall be made out to Hughes Fire Equipment, Inc., reference proposal EM764 component list dated 9/18/2023, and must be signed and dated.**

Proposal Details Report

9/15/2023

Customer: FLAGSTAFF FIRE DEPARTMENT
Bid Number: 764
Representative McDonald, Ed
Job Number:
Requirements Manager:
Organization: Hughes Fire Equipment, Inc
Description: Flagstaff Velocity Pumper-Dupe
Chassis: Velocity Chassis (Big Block), 2010
Body: Pumper, Medium, Galvanneal, 2nd Gen

OptionCode	Type	Option	ProposalText
0766611		Boiler Plates, Pumper	Hughes Fire Equipment is pleased to submit a proposal to City of Flagstaff for a **Pierce® triple combination pumper** per your request for quotation. The following paragraphs will describe in detail the apparatus, construction methods, and equipment proposed. This proposal will indicate size, type, model and make of components parts and equipment, providing proof of compliance with each and every item (except where noted) in the departments advertised specifications. PIERCE MANUFACTURING was founded in 1913. Since then we have been building bodies with one philosophy, "BUILD THE FINEST". Our skilled craftsmen take pride in their work, which is reflected, in the final product. We have been building fire apparatus since the early "forties" giving Pierce Manufacturing over 75 years of experience in the fire apparatus market. Pierce Manufacturing has built and put into service more than 62,500 apparatus, including more than 33,900 on Pierce custom chassis designed and built specifically for fire and emergency applications. Our Appleton, Wisconsin facility has over 870,000 total square feet of floor space situated on approximately 105 acres of land. Our Bradenton, Florida facility has 300,000 square feet of floor space situated on approximately 38 acres of land. Our beliefs in high ethical standards are carried through in all of our commitments and to everyone with whom we do business. Honesty, Integrity, Accountability and Citizenship are global tenets by which we all live and work. Consequently, we neither engage in, nor have we ever been convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market. Pierce has only one brand of fire apparatus "Pierce", ensuring you are receiving top of the line product that meets your specification. In accordance with the current edition of applicable NFPA standards, this proposal will specify whether the fire department, manufacturer, or apparatus dealership will provide required loose equipment. Images and illustrative material in this proposal are as accurate as known at the time of publication, but are subject to change without notice. Images and illustrative material is for reference only, and may include optional equipment and accessories and may not include all standard equipment. **GENERAL DESIGN AND CONSTRUCTION** To control quality, ensure compatibility, and provide a single source for service and warranty, the custom cab, chassis, pump module and body will be entirely designed, assembled/welded and painted in Pierce owned manufacturing facilities. This includes, but not limited to the cab weldment, the pumphouse module assembly, the chassis assembly, the body and the electrical system. **QUALITY AND WORKMANSHIP** Pierce has set the pace for quality and workmanship in the fire apparatus field. Our tradition of building the highest quality units with craftsmen second to none has been the rule right from the beginning and we demonstrate that ongoing commitment by: Ensuring all steel welding follows American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding follows American Welding society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding follows American welding Society B2.1-2000 requirements for structural welding of sheet metal. Our flux core arc welding uses alloy rods, type 7000 and is performed to American Welding Society standards A5.20-E70T1. Furthermore, all employees classified as welders are tested and certified to meet the American welding Society codes upon hire and every three (3) years thereafter. Pierce also employs and American Welding Society certified welding inspector in plant during working hours to monitor weld quality. Pierce Manufacturing operates a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International Organization for Standardization (ISO) specify the quality systems that are established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance is included with this proposal. In addition to the Quality Management system, we also employ a Quality Achievement Supplier program to insure the vendors and suppliers that we utilize meet the high standards we demand. That is just part of our overall "Quality at the Source" program at Pierce. To demonstrate the quality of our products and services, a list of at least twenty five (25) fire departments/municipalities that have purchased vehicles for a second time is provided. **DELIVERY** The apparatus will be delivered under its own power to insure proper break-in of all components while the apparatus is still under warranty. A qualified delivery representative shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in proper operation, care and maintenance of the equipment delivered. **MANUAL AND SERVICE INFORMATION** At time of delivery, complete operation and maintenance manuals covering the apparatus will be provided. A permanent plate will be mounted in the driver's compartment specifying the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle. **SAFETY VIDEO** At the time of delivery Pierce will also provide one (1) 39-minute, professionally produced apparatus safety video, in DVD format. This video will address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus, including the following: vehicle pre-trip inspection, chassis operation, pump operation, aerial operation, and safety during maintenance. **PERFORMANCE TESTS** A road test will be conducted with the apparatus fully loaded and a continuous run of no less than

ten (10) miles. During that time the apparatus will show no loss of power nor will it overheat. The transmission drive shaft or shafts and the axles will run quietly and be free of abnormal vibration or noise. The apparatus when fully loaded will not have less than 25 percent nor more than 50 percent on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle. The apparatus will meet the current edition of applicable NFPA standards acceleration and braking requirements.

SERVICE AND WARRANTY SUPPORT

Pierce dealership support will be provided by Hughes Fire Equipment by operating a Pierce authorized service center. The service center will have factory-trained mechanics on staff versed in Pierce fire apparatus. The service facility will be located within twenty five (25) miles of the fire department.

In addition to the dealership, Pierce has service facilities located in both, Weyauwega, Wisconsin and Bradenton, Florida. Pierce also maintains a dedicated parts facility of over 100,000 square feet in Appleton, Wisconsin. The parts facility stocks in excess of $5,000,000 in parts dedicated to service and replacement parts. The parts facility employs a staff dedicated solely for the distribution and shipment of service and replacement parts.

Service parts for the apparatus being proposed can be found via Pierceparts.com which, is an interactive online tool that delivers information regarding your specific apparatus as well as the opportunity to register for training classes.

As a Pierce customer you have the ability to view the complete bill of materials for your specific apparatus, including assembly drawings, piece part drawings, and beneficial parts notations. You will also have the ability to search the complete Pierce item master through a parts search function which offers all Pierce SKU's and descriptions offered on all Pierce apparatus. Published component catalogs, which include proprietary systems along with an extensive operators manual library is available for easy reference.

Pierce Manufacturing maintains a dedicated service and warranty staff of over 35 personnel, dedicated to customer support, which also maintains a 24 hour 7 day a week toll free hot line, four (4) on staff EVTs, and offers hands-on repair and maintenance training classes multiple times a year.

LIABILITY

The successful bidder will defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.

INSURANCE PROVIDED BY BIDDER

COMMERCIAL GENERAL LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

Each Occurrence $1,000,000

Products/Completed Operations Aggregate $1,000,000

Personal and Advertising Injury $1,000,000

General Aggregate $2,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form and will include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy will include Owner as an additional insured when required by written contract.

COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

The successful bidder will, during the performance of the contract, keep in force at least the following minimum limits of commercial automobile liability insurance and coverage will be written on a Commercial Automobile liability form:

Each Accident Combined Single Limit: $1,000,000

UMBRELLA/EXCESS LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Aggregate: $3,000,000

Each Occurrence: $3,000,000

The umbrella policy will be written on an occurrence basis and at a minimum provide excess to the bidder's General Liability and Automobile Liability policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Bidder agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as certificate holder.

INSURANCE PROVIDED BY MANUFACTURER

PRODUCT LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of Product Liability insurance:

Each Occurrence $1,000,000

Products/Completed Operations Aggregate $1,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form. The manufacturer's policy will include the owner as additional insured when required by written contract between the Owner and a Pierce authorized dealer.

UMBRELLA/EXCESS LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Each Occurrence: $25,000,000

Aggregate: $25,000,000

The umbrella policy will be written on an occurrence basis and provide excess to the manufacturer's General Liability/Products policies.

The required limits can be provided by one (1) or more policies provided all other insurance

		requirements are met. Coverage will be provided by a carrier(s) rated A- or better by A.M. Best. All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions. Manufacturer agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as the certificate holder.
0661794	Single Source Compliance	**SINGLE SOURCE MANUFACTURER** Pierce Manufacturing, Inc. provides an integrated approach to the design and manufacture of our products that delivers superior apparatus and a dedicated support team. From our facilities, the chassis, cab weldment, cab, pumphouse (including the sheet metal enclosure, valve controls, piping and operators panel) and body will be entirely designed, tested, and hand assembled to the customer's exact specifications. The electrical system either hardwired or multiplexed, will be both designed and integrated by Pierce Manufacturing. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) will be provided by Pierce as a single source manufacturer. Pierce's single source solution adds value by providing a fully engineered product that offers durability, reliability, maintainability, performance, and a high level of quality.
0584456	Manufacture Location, Appleton, Wisconsin	Your apparatus will be manufactured in Appleton, Wisconsin.
0584452	RFP Location: Appleton, Wisconsin	
0588609	Vehicle Destination, US	
0670275	Unit to be Similar in some Aspects, Excluding Pump Panel	**SPECIAL INSTRUCTIONS** The apparatus being proposed will be designed and built to match the Unit to match as close as possible to previous unit Job # 37138. However, some variation may be necessary due to changes in our manufacturing processes or our product offering. Revisions in NFPA guidelines and/or other regulations may also affect our ability to match the previous unit.
0610784	Comply NFPA 1901 Changes Effective Jan 1, 2016, With Exceptions	**NFPA 2016 STANDARDS** This unit will comply with the NFPA standards effective January 1, 2016, except for fire department directed exceptions. These exceptions will be set forth in the Statement of Exceptions. Certification of slip resistance of all stepping, standing and walking surfaces will be supplied with delivery of the apparatus. All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points will be identified on the customer approval print and are shown as approximate. Actual location(s) will be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack. A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating. The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications. An official of the company will designate, in writing, who is qualified to witness and certify test results.
0533347	Pumper/Pumper with Aerial Device Fire Apparatus	
0588611	Vehicle Certification, Pumper	

0661778	Agency, Apparatus Certification, Pumper/Tanker, U.L.	**NFPA COMPLIANCY** Apparatus proposed by the bidder will meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications will be indicated in the proposal as "non-NFPA". **PUMP TEST** Underwriters Laboratory (UL) will test, approved, and certify the pump. The test results and the pump manufacturer's certification of hydrostatic test; the engine manufacturer's certified brake horsepower curve; and the pump manufacturer's record of pump construction details will be forwarded to the Fire Department. **GENERATOR TEST** If the unit has a generator, Underwriters Laboratory (UL) will test, approved, and certify the generator. The test results will be provided to the Fire Department at the time of delivery. **BREATHING AIR TEST** If the unit has breathing air, Pierce Manufacturing will draw an air sample from the air system and have the sample certified that the air quality meets the requirements of NFPA 1989, *Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection.*
0891947	Certification, Vehicle Inspection Program, NFPA 1901	**VEHICLE INSPECTION PROGRAM CERTIFICATION** To assure the vehicle is built to current NFPA 1901 standards, the apparatus, in its entirety, will be third-party, independent, audit-certified through Underwriters Laboratory (UL) that it is built and complies to all applicable standards in the current edition. The certification includes: all design, production, operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus. A placard will be affixed in the driver's side area stating the third party agency, the date, the standard and the certificate number of the whole vehicle audit.
0000114	Inspection Trip(s)	**INSPECTION TRIP(S)** The bidder will provide two (2) factory inspection trip(s) for four (4) customer representative(s). The inspection trip(s) will be scheduled at times mutually agreed upon between the manufacturer's representative and the customer. All costs such as travel, lodging and meals will be the responsibility of the bidder.
0536644	Customer Service Website	**AFTERMARKET SUPPORT WEBSITE** Pierceparts.com will provide Pierce authorized dealer access to comprehensive information pertaining to the maintenance and service of their customer's apparatus. This tool will provide the Pierce authorized dealer the ability to service and support their customers to the best of their ability with factory support at their fingertips. Pierceparts.com is also accessible to the end user through the guest login. Limited access is available and vehicle specific parts information accessible by entering a specific VIN number. All end users should see their local authorized Pierce dealer for additional support and service. The website will consist of the following screens at the dealer level: **My Fleet Screen** The My Fleet screen will provide access to truck detail information on the major components of the vehicle, warranty information, available vehicle photographs, vehicle drawings, sales options, applicable vehicle software downloads, etc. **Parts Screens** The Parts screens will provide parts look-up capability of Pierce Manufacturing sourced items, with the aid of digital photographs, part drawings and assembly drawings. The parts search application will permit the searching of parts by item description or function group (major system category). The parts application will provide the ability to submit electronically a parts order, parts quote, or parts return request directly to Pierce Manufacturing for processing. **Warranty Screen** The Warranty screens will provide dealers the ability to submit electronically warranty claims directly to Pierce Manufacturing for reimbursement. **My Reports Screens** The My Reports screens will provide access to multiple dealer reports to allow the dealership to maintain communication with the customer on the status of orders, claims, and phone contacts. **Technical Support Screens** The Technical Support screens will provide access to all currently published Operation and Maintenance and Service Publications. Access to Pierce Manufacturing Service Bulletins and Work Instructions, containing information on current service topics and recommendations will be provided. **Training** The Training screens will provide access to upcoming training classes offered by Pierce Manufacturing along with interactive electronic learning modules (Operators Guides) covering the operation of major vehicle components will be provided. Access to training manuals used in Pierce Manufacturing training classes will be provided. **About Pierce** Access to customer service articles, corporate news, quarterly newsletters, and key contacts within the Customer Service Department will be provided. The current Customer Service Policy and Procedure Manual, detailing the operation of the Customer Service group will also be accessible.
0766110	Consortium, Sourcewell	
0537375	Unit of Measure, US Gallons	

0529326	Bid Bond, 10%, Pierce Built Chassis	**BID BOND** A bid bond as security for the bid in the form of a 10% bid bond will be provided with the proposal. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language which assures that the bidder/principal will give a bond or bonds, as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract. Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.
0816574	Performance Bond, 100% with Warranty Bond, 1 Yr, and Payment Bond, PPI Terms	**PERFORMANCE BOND, 1 YEAR** The successful bidder will furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond will be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required. Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Basic One (1) Year Limited Warranty period included within this proposal. Owner agrees that the penal amount of this bond will be simultaneously amended to 100 percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type will not exceed one (1) year from the date of such satisfactory acceptance and delivery, or the actual Basic One (1) Year Limited Warranty period, whichever is shorter. Due to global supply chain constraints, any delivery date contained herein is a good faith estimate as of the date of this order/contract, and merely an approximation based on current information. Delivery updates will be made available, and a final firm delivery date will be provided as soon as possible. If the Producer Price Index of Components for Manufacturing [www.bls.gov Series ID: WPUID6112] ("PPI") has increased at a compounded annual growth rate of 5.0% or more between the month Pierce accepts the order ("Order Month") and a month 14 months prior to the then predicted Ready For Pickup date ("Evaluation Month"), then pricing may be updated in an amount equal to the increase in PPI over 5.0% for each year or fractional year between the Order Month and the Evaluation Month. The seller will document any such updated price for the customer's approval before proceeding and provide an option to cancel the order.
0000007	Approval Drawing	**APPROVAL DRAWING** A drawing of the proposed apparatus will be prepared and provided to the purchaser for approval before construction begins. The Pierce sales representative will also be provided with a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc. A "revised" approval drawing of the apparatus will be prepared and submitted by Pierce to the purchaser showing any changes made to the approval drawing.
0002928	Electrical Diagrams	**ELECTRICAL WIRING DIAGRAMS** Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.
0564202	Velocity Chassis (Big Block), 2010	**VELOCITY CHASSIS** The Pierce Velocity® is the custom chassis developed exclusively for the fire service. Chassis provided will be a new, tilt-type custom fire apparatus. The chassis will be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis will be designed and manufactured for heavy-duty service, with adequate strength and capacity for the intended load to be sustained and the type of service required. The chassis will be the manufacturer's first line tilt cab.
0000110	Wheelbase	**WHEELBASE** The wheelbase of the vehicle will be 187.50 inches.
0000070	GVW Rating	**GVW RATING** The gross vehicle weight rating will be 49,800.

0000203	Frame Rails, 13.38 x 3.50 x .375, Qtm/AXT/Imp/Vel/DCF	**FRAME** The chassis frame will be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails will have a 13.38" tall web over the front and mid sections of the chassis, with a continuous smooth taper to 10.75" over the rear axle. Each rail will have a section modulus of 25.992 cubic inches and a resisting bending moment (rbm) of 3,119,040 in-lb over the critical regions of the frame assembly, with a section modulus of 18.96 cubic inches with an rbm of 2,275,200 in-lb over the rear axle. The frame rails will be constructed of 120,000 psi yield strength heat-treated 0.38" thick steel with 3.50" wide flanges.
0020018	Frame Liner Not Req'd	
0508849	Axle, Front, Oshkosh TAK-4, Non Drive, 22,800 lb, Imp/Vel	**FRONT NON DRIVE AXLE** The Oshkosh TAK-4® front axle will be of the independent suspension design with a ground rating of 22,800 lb. Upper and lower control arms will be used on each side of the axle. Upper control arm castings will be made of 100,000-psi yield strength 8630 steel and the lower control arm casting will be made of 55,000-psi yield ductile iron. The center cross members and side plates will be constructed out of 80,000-psi yield strength steel. Each control arm will be mounted to the center section using elastomer bushings. These rubber bushings will rotate on low friction plain bearings and be lubricated for life. Each bushing will also have a flange end to absorb longitudinal impact loads, reducing noise and vibrations. There will be nine (9) grease fittings supplied, one (1) on each control arm pivot and one (1) on the steering gear extension. The upper control arm will be shorter than the lower arm so that wheel end geometry provides positive camber when deflected below rated load and negative camber above rated load. Camber at load will be 0 degrees for optimum tire life. The ball joint bearing will be of low friction design and be maintenance free. Toe links that are adjustable for alignment of the wheel to the center of the chassis will be provided. The wheel ends will have little to no bump steer when the chassis encounters a hole or obstacle. The steering linkage will provide proper steering angles for the inside and outside wheel, based on the vehicle wheelbase. The axle will have a turning angle of up to 45 degrees.
0010427	Suspension, Front TAK-4, 22,800 lb, Qtm/AXT/Imp/Vel/Enf/SFR	**FRONT SUSPENSION** Front Oshkosh TAK-4™ independent suspension will be provided with a minimum ground rating of 22,800 lb. The independent suspension system will be designed to provide maximum ride comfort. The design will allow the vehicle to travel at highway speeds over improved road surfaces and at moderate speeds over rough terrain with minimal transfer of road shock and vibration to the vehicle's crew compartment. Each wheel will have torsion bar type spring. In addition, each front wheel end will also have energy absorbing jounce bumpers to prevent bottoming of the suspension. The suspension design will be such that there is at least 10.00" of total wheel travel and a minimum of 3.75" before suspension bottoms. The torsion bar anchor lock system allows for simple lean adjustments, without the use of shims. One can adjust for a lean within 15 minutes per side. Anchor adjustment design is such that it allows for ride height adjustment on each side. The independent suspension was put through a durability test that simulated 140,000 miles of inner city driving.
0087572	Shock Absorbers, KONI, TAK-4, Qtm/AXT/Imp/Vel/DCF/Enf	**FRONT SHOCK ABSORBERS** KONI heavy-duty telescoping shock absorbers will be provided on the front suspension.
0000322	Oil Seals, Front Axle	**FRONT OIL SEALS** Oil seals with viewing window will be provided on the front axle.
0804562	Tires, Front, Michelin, XZE (wb), 425/65R22.50, 20 ply, Fire Service Speed Rtng	**FRONT TIRES** Front tires will be Michelin 425/65R22.50 radials, 20 ply XZE wide base tread, rated for 22,800 lb maximum axle load and 75 mph maximum speed.
0604672	Wheels, Front, Accuride, 22.50" x 12.25", Steel, Hub Pilot	The tires will be mounted on Accuride® 22.50" x 12.25" steel disc type wheels with a ten (10) stud, 11.25" bolt circle.
0530466	Axle, Rear, Meritor RS26-185, 27,000 lb, Imp/Vel	**REAR AXLE** The rear axle will be a Meritor™, Model RS-26-185, with a capacity of 27,000 lb.

0814721	Top Speed of Vehicle, 75 MPH/120 KPH, Non-NFPA 2016	**TOP SPEED OF VEHICLE** NFPA 1901, 2016 edition requires limits on the top speed of vehicles. NFPA 4.15.2 requires that the maximum top speed of fire apparatus with a GVWR over 26,000 lb will not exceed either 68 mph / 109 kph or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower. NFPA 4.15.3 requires that if the combined water tank and foam agent tank on the fire apparatus exceed 1250 gallons or the GVWR of the vehicle is over 50,000 lb, the maximum top speed of the apparatus will not exceed either 60 mph / 96 kph or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower. It is the intention of the standard to improve safety by limiting the speed of all apparatus to 68 mph / 109 kph , and tankers or heavy apparatus to 60 mph / 96 kph. By requesting an exception to this requirement, the purchasing authority is consciously choosing to operate their apparatus at speeds above the limits designated as safe speeds by the NFPA Technical Committee on Fire Department Apparatus. The top sped of the apparatus as manufactured exceeds the NFPA requirements. Per fire department specification of a top speed that exceeds NFPA requirements, the apparatus will be non-compliant to NFPA 1901 standards at time of contract execution. The rear tires being specified have a top speed limit of 75 mph / 120 kph from the tire manufacturer.
0122075	Suspen, Rear, Standens, Spring, 27,000 lb, Imp/Vel	**REAR SUSPENSION** The rear suspension will be Standens, semi-elliptical, 3.00" wide x 53.00" long, 12-leaf pack with a ground rating of 27,000 lb. The spring hangers will be castings. The two (2) top leaves will wrap the forward spring hanger pin, and the rear of the spring will be a slipper style end that will ride in a rear slipper hanger. To reduce bending stress due to acceleration and braking, the front eye will be a berlin eye that will place the front spring pin in the horizontal plane within the main leaf. A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.
0000485	Oil Seals, Rear Axle	**REAR OIL SEALS** Oil seals will be provided on the rear axle(s).
0070728	Tires, Rear, Michelin, XDN2, 12R22.50, 16 ply, Single	**REAR TIRES** Rear tires will be four (4) Michelin 12R22.50 radials, 16 ply all season XDN2 tread, rated for 27,120 lb maximum axle load and 75 mph maximum speed.
0654806	Wheels, Rear, Accuride, 22.50" x 8.25", Steel, Hub Pilot, Single	The tires will be mounted on Accuride® 22.50" x 8.25" steel disc type wheels with a ten (10) stud, 11.25" bolt circle.
0568081	Tire Balancing, Counteract Beads	**TIRE BALANCE** All tires will be balanced with Counteract balancing beads. The beads will be inserted into the tire and eliminate the need for wheel weights.
0620570	Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Single Axle	**TIRE PRESSURE MANAGEMENT** There will be a RealWheels LED AirSecure™ tire alert pressure management system provided, that will monitor each tire's pressure. A sensor will be provided on the valve stem of each tire for a total of six (6) tires. The sensor will calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor will activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi. Removing the cap from the sensor will indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED will immediately start to flash.
0759842	Chains, Rud automatic tire, 6 strand	**AUTOMATIC TIRE CHAINS** One (1) pair of Rud 6-strand automatic tire chains will be provided at the rear axle. The system will be an electric-over-air type. A switch to engage/disengage the chains will be provided on the cab instrument panel. This system will be operable at speeds up to 35 mph.
0544802	Chocks, Wheel, SAC-44-E, Folding	**WHEEL CHOCKS** There will be one (1) pair of folding Ziamatic, Model SAC-44-E, aluminum alloy, Quick-Choc wheel blocks, with easy-grip handle provided.
0544806	Mounting Brackets, Chocks, SAC-44-E, Folding, Horizontal	**Wheel Chock Brackets** There will be one (1) pair of Zico, Model SQCH-44-H, horizontal mounting wheel chock brackets provided for the Ziamatic, Model SAC-44-E, folding wheel chocks. The brackets will be made of aluminum and consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets will be mounted one (1) forward and one (1) rearward of the left side rear tire.

0010670	ABS Wabco Brake System, Single rear axle	**ANTI-LOCK BRAKE SYSTEM** The vehicle will be equipped with a Meritor WABCO 4S4M, anti-lock braking system. The ABS will provide a 4-channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology will control the anti-lock braking system. Each wheel will be monitored by the system. When any particular wheel begins to lockup, a signal will be sent to the control unit. This control unit then will reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system will eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.
0030185	Brakes, Knorr/Bendix 17", Disc, Front, TAK-4	**BRAKES** The service brake system will be full air type. The front brakes will be Knorr/Bendix disc type with a 17.00" ventilated rotor for improved stopping distance. The brake system will be certified, third party inspected, for improved stopping distance.
0000730	Brakes, Meritor, Cam, Rear, 16.50 x 7.00"	The rear brakes will be Meritor™ 16.50" x 7.00" cam operated with automatic slack adjusters. Dust shields will be provided.
0020784	Air Compressor, Brake, Cummins/Wabco 18.7 CFM	**BRAKE SYSTEM AIR COMPRESSOR** The air compressor will be a Cummins/WABCO with 18.7 cubic feet per minute output.
0000785	Brake Reservoirs, Three	**BRAKE SYSTEM** The brake system will include: Bendix® dual brake treadle valve Heated automatic moisture ejector on air dryer Total air system capacity of 4,362 cubic inches Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi Spring set parking brake system Parking brake operated by a push-pull style control valve A parking "brake on" indicator light on instrument panel Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, with an automatic spring brake application at 40 psi A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa) 1/4 turn drain valve on each air tank The air tank will be primed and painted to meet a minimum 750 hour salt spray test. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.
0568012	Air Dryer, Wabco System Saver 1200, Heater, 2010	**BRAKE SYSTEM AIR DRYER** The air dryer will be WABCO System Saver 1200 with spin-on coalescing filter cartridge and 100 watt heater.
0000790	Brake Lines, Nylon	**BRAKE LINES** Color-coded nylon brake lines will be provided. The lines will be wrapped in a heat protective loom in the chassis areas that are subject to excessive heat.
0000854	Air Inlet, w/Disconnect Coupling	**AIR INLET** One (1) air inlet with 3D series male coupling will be provided. It will allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet will be located on the driver side pump panel. A check valve will be provided to prevent reverse flow of air. The inlet will discharge into the "wet" tank of the brake system. A mating female fitting will also be provided with the loose equipment.
0509837	Adjustable Brake & Throttle Pedals	**ADJUSTABLE BRAKE & THROTTLE PEDALS** Brake and throttle pedals will be capable of stroking approximately 1.50" forward and 1.50" rearward of standard pedals location for a total stroke of 3.00" on both brake and accelerator pedals. Both pedals will stroke in unison at the touch of a rocker switch located on a lower switch panel within easy reach of the driver.
0000845	Air Tank, Additional for Extra Capacity	**ADDITIONAL AIR TANK** An additional air tank with 1454 cubic inch displacement will be provided to increase the capacity of the main air brake system. This tank will be plumbed into the rear half of the brake system. The air tank will be primed and painted to meet a minimum 750 hour spray test. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets. The output flow of the engine air compressor will vary with engine rpm. Full compressor output will only be achieved at governed engine speed. Engine speed will be limited by generators, pumps and other PTO driven options.

0615609		Fittings, Compression Type, Entire Apparatus, Single Rear Axle	**COMPRESSION FITTINGS ONLY** Any nylon tube on the apparatus that is pneumatic will be plumbed with compression type fittings where applicable. Push lock fittings will not be acceptable for any pneumatic nylon tube plumbing.
0808504		Engine, Cummins X15, 605 hp, 1850 lb-ft, W/OBD, EPA 2027, Velocity	**ENGINE** The chassis will be powered by an electronically controlled engine as described below: Make: Cummins® Model: X15 Power: 605 hp at 1800 rpm Torque: 1850 lb-ft at 1000 rpm Governed Speed: 2100 rpm Emissions Level: EPA 2027 Fuel: Diesel Cylinders: Six (6) Displacement: 912 cubic inches (14.9L) Starter: Delco 39MT+™ Fuel Filters: Frame mounted spin-on style primary filter with water separator and water-in-fuel sensor The engine will include On-board diagnostics (OBD), which provides self diagnostic and reporting. The system will give the owner or repair technician access to state of health information for various vehicle sub systems. The system will monitor vehicle systems, engine and after treatment. The system will illuminate a malfunction indicator light on the dash console if a problem is detected. The engine will be filled with FA-4 10W30 oil as required by Cummins.
0811409		Not Required, Engine Contingency Adjustment	
0730808		Filters, Remote Mounted, Oil, Fuel, X15, VEL/AXT/Enf	**REMOTE MOUNTED ENGINE FILTERS** The engine fuel and oil filters will be remote mounted for ease of maintenance.
0001244		High Idle w/Electronic Engine, Custom	**HIGH IDLE** A high idle switch will be provided, inside the cab, on the instrument panel, that will automatically maintain a preset engine rpm. A switch will be installed, at the cab instrument panel, for activation/deactivation. The high idle will be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light will be provided, adjacent to the switch. The light will illuminate when the above conditions are met. The light will be labeled "OK to Engage High Idle."
0001236		Not Required, Auxiliary Brake, Alt. Aux. Brake Selected	
0552334		Clutch, Fan, Air Actuated, Horton Drive Master	**CLUTCH FAN** A Horton® fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and fully engaged in "Pump" position.
0001302		Heater, 1500 Watt Immersion, Thermostatically Controlled	**ENGINE HEATER** A 1,500 watt, 120 volt, immersion type engine heater will be installed with the AC power inlet located to the rear of the driver's door. The heater is thermostatically controlled.
0813730	SP	Adj, EPA 2024, DO NOT SEND	
0123135		Air Intake, w/Ember separator, Imp/Vel	**ENGINE AIR INTAKE** An air intake with an ember separator (to prevent road dirt, burning embers, and recirculating hot air from entering the engine) will be mounted at the front of the apparatus, on the passenger side of the engine. The ember separator will be mounted in the air intake with flame retardant, roto-molded polyethylene housing. It will be easily accessible by the hinged access panel at the front of the vehicle.

0814375	Exhaust System, Horizontal, Right Side	**EXHAUST SYSTEM** The exhaust system will be stainless steel from the turbo to the engine's aftertreatment device. The exhaust system will include an aftertreatment device to meet current EPA standards. An insulation wrap will be provided on all exhaust pipe between the turbo and the aftertreatment device to minimize the transfer of heat to the cab. The exhaust will terminate horizontally ahead of the right side rear wheels and will be be flush with the side of the body . The exhaust pipes will be aluminized steel. There will be an aluminized steel exhaust diffuser with a standard straight tip on the end provided to reduce the temperature of the exhaust as it exits. Heat deflector shields will be provided to isolate chassis and body components from the heat of the tailpipe diffuser.
0787999	Radiator, Impel/Velocity	**RADIATOR** The radiator and the complete cooling system will meet or exceed NFPA and engine manufacturer cooling system standards. For maximum corrosion resistance and cooling performance, the entire radiator core will be constructed using long life aluminum alloy. The core will be made of aluminum fins, having a serpentine design, brazed to aluminum tubes. The tubes will be brazed to aluminum headers. The radiator core will have a minimum frontal area of 1434 square inches. Supply tank made of glass-reinforced nylon and a return tank of cast aluminum alloy will be crimped on to the core assembly using header tabs and a compression gasket to complete the radiator core assembly. The radiator will be compatible with commercial antifreeze solutions. There will be a full steel frame around the entire radiator core assembly. The radiator core assembly will be isolated within the steel frame by rubber inserts to enhance cooling system durability and reliability. The radiator will be mounted in such a manner as to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven ground. The radiator assembly will be isolated from the chassis frame rails with rubber isolators. The radiator assembly will include an integral de-aeration tank permanently mounted to the top of the radiator framework, with a readily accessible remote-mounted overflow tank. For visual coolant level inspection, the radiator will have a built-in sight glass. The radiator will be equipped with a 15 psi pressure relief cap. A drain port will be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system. A heavy-duty fan will draw in fresh, cool air through the radiator. Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.
0511425	Cooling Hoses, Rubber	**COOLANT LINES** Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by the chassis manufacturer. Hose clamps will be stainless steel "constant torque type" to prevent coolant leakage. They will react to temperature changes in the cooling system and expand or contract accordingly while maintaining a constant clamping pressure on the hose.
0001125	Fuel Tank, 65 Gallon, Left Side Fill	**FUEL TANK** A 65 gallon fuel tank will be provided and mounted at the rear of the chassis. The tank will be constructed of 12-gauge, hot rolled steel. It will be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank will be mounted with stainless steel straps. A 0.75" drain plug will be located in a low point of the tank for drainage. A fill inlet will be located on the left hand side of the body and is covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only." A 0.50" diameter vent will be installed from tank top to just below fuel fill inlet. The fuel tank will meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume.
0001129	Lines, Fuel	All fuel lines will be provided as recommended by the engine manufacturer.
0662965	DEF Tank, 4.5 Gallon, DS Fill, Rear of Axle, Common Air Bottle Door	**DIESEL EXHAUST FLUID TANK** A 4.5 gallon diesel exhaust fluid (DEF) tank will be provided and mounted in the driver's side body rearward of the rear axle. A 0.50" drain plug will be provided in a low point of the tank for drainage. A fill inlet will be provided and marked "Diesel Exhaust Fluid Only". The fill inlet will be located adjacent to the air bottle storage behind a common door on the driver side of the vehicle. The tank will meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing. The tank will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.
0723716	Fuel Priming Pump, Electronic, Automatic, Cummins, No Swt Req'd	**FUEL PRIMING PUMP** A Cummins automatic electronic fuel priming pump will be integrated as part of the engine.
0582243	Shutoff Valves, Fuel Line @ Primary Filter, Cummins	**FUEL SHUTOFF** A fuel line shutoff valve will be installed on both the inlet and outlet of the primary fuel filter.

0553019		Cooler, Engine Fuel, Imp/Vel, AXT/Qtm/Sab/DCF/SFR/Enf	**FUEL COOLER** An air to fuel cooler will be installed in the engine fuel return line.
0578959		Fuel/Water Separator, Racor Inline	**FUEL SEPARATOR** The engine will be equipped with a Racor in-line spin-on fuel and water separator in addition to the engine fuel filters.
0801882		Trans, Allison 6th Gen, 4000 EVS PR, w/Prognostics, Imp/Vel/Enf	**TRANSMISSION** An Allison 6th generation, Model EVS 4000PR, electronic, torque converting, automatic transmission with retarder will be provided. The transmission will be equipped with prognostics to monitor oil life, filter life, and transmission health. A wrench icon on the shift selector's digital display will indicate when service is due. Two (2) PTO openings will be located on left side and top of converter housing (positions eight (8) o'clock and one (1) o'clock). A transmission temperature gauge, with amber light and audible alarm, will be installed on the cab instrument panel. The transmission retarder control will be activated 33 percent by release of the accelerator pedal or 66 percent by slight application of the brake pedal, or 100 percent by heavy application of brake pedal. A second on/off switch is provided to activate and deactivate the auto apply portion. The transmission will have the 1600 ft. lb. torque (medium) spring setting for retardation force. The transmission retarder will have a master "on/off" switch on the instrument panel. A red indicator light will be provided to warn that the transmission is being overworked. The retarder will be wired to the brake lights so they are energized when the retarder is slowing the vehicle down. The ABS system will automatically disengage the auxiliary braking device when required.
0625331		Transmission, Shifter, 6-Spd, Push Button, 4000 EVS	**TRANSMISSION SHIFTER** A six (6)-speed push button shift module will be mounted to right of driver on console. Shift position indicator will be indirectly lit for after dark operation. The transmission ratio will be: 1st 3.51 to 1.00 2nd 1.91 to 1.00 3rd 1.43 to 1.00 4th 1.00 to 1.00 5th 0.75 to 1.00 6th 0.64 to 1.00 R 4.80 to 1.00
0797408		Transmission Oil Cooler, Modine, External, w/Modine External Sump	**TRANSMISSION COOLER** An externally mounted Modine bar plate transmission oil cooler will be provided using engine coolant to control the transmission oil temperature. The internal bar plates will be constructed of stainless steel. The cooler's housing will be constructed of 1020 steel, coated to protect from corrosion. The cooler will be tagged with information including OEM part number, vendor serial number and date / lot code. An externally mounted Modine bar plate transmission oil cooler will be provided using engine coolant to control the transmission retarder oil temperature. The internal bar plates will be constructed of stainless steel. The cooler's housing will be constructed of 1020 steel, coated to protect from corrosion. The cooler will be tagged with information including OEM part number, vendor serial number and date / lot code.
0001375		Driveline, Spicer 1810	**DRIVELINE** Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1810 universal joints. The shafts will be dynamically balanced before installation. A splined slip joint will be provided in each driveshaft where the driveline design requires it. The slip joint will be coated with Glidecoat® or equivalent.
0651288	SP	Shield, Grease for Drive Shaft U Joints	**GREASE SHIELD** The drive shaft universal joints require a grease shield to prevent grease from being thrown against the underside of the apparatus. This will include the joint on the output of the pump transmission and the differential.
0669988		Steering, Sheppard M110 w/Tilt, TAK-4, Eaton Pump, w/Cooler	**STEERING** Dual Sheppard, Model M110, steering gears, with integral heavy-duty power steering, will be provided. For reduced system temperatures, the power steering will incorporate an air to oil cooler and an Eaton, Model VN20, hydraulic pump with integral pressure and flow control. All power steering lines will have wire braded lines with crimped fittings. A tilt and telescopic steering column will be provided to improve fit for a broader range of driver configurations.

0001544	Not Required, Steering Assist Cylinder on Front Axle	
0509230	Steering Wheel, 4 Spoke without Controls	**STEERING WHEEL** The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 4-spoke design.
0690274	Logo/Emblem, on Dash	**LOGO AND CUSTOMER DESIGNATION ON DASH** The dash panel will have an emblem containing the Pierce logo and customer name. The emblem will have three (3) rows of text for the customer's department name. There will be a maximum of eight (8) characters in the first row, 11 characters in the second row and 11 characters in the third row. The first row of text will be: Flagstaff The second row of text will be: Fire The third row of text will be: Dept.
0654471	Cover, Rubber, Driveshaft Grease, DS Framerail	**GUARD, WIRES IN FRAME RAIL** A rubber flap guard will be provided to protect the wires and relays around the u-joints of the driveshaft from grease build-up on the driver's side of the frame.
0530385	Bumper, 16" Extended, Steel Painted, Imp/Vel	**BUMPER** A one (1)-piece bumper manufactured from 0.25" formed steel with a 0.38" bend radius will be provided. The bumper will be a minimum of 10.00" high with a 1.50" top and bottom flange, and will extend 16.00" from the face of the cab. The bumper will be 102.00" wide with 45 degree corners and side plates. The bumper will be metal finished and painted job color. To provide adequate support strength, the bumper will be mounted directly to the front of the C channel frame. The frame will be a bolted modular extension frame constructed of 50,000 psi tensile steel. **Gravel Pan** A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and the cab face. The pan will be properly supported from the underside to prevent flexing and vibration.
0610315	Tray, Hose, Center, 16" Bumper, Outside AH, 13" Deep, 10" Below/3" Above,Imp/Vel	**CENTER HOSE TRAY** A hose tray, constructed of aluminum, will be placed in the center of the bumper extension. The tray will have a capacity of 100' of 1.75" double jacket cotton-polyester hose. Aluminum grating will be provided at the bottom of the tray. Drain holes are also provided.
0633479	Hose Restraint, Bumper Tray, Velcro Straps, Pair	**Center Hose Tray Restraint** There will be one (1) pair of hose tray restraint straps located over the center mounted tray. The restraints will be a pair of 2.00" wide black nylon straps with Velcro® fasteners provided. The strap(s) will be used to secure the hose in the tray.
0510226	Lift & Tow Package, Imp/Vel, AXT, Dash CF	**LIFT AND TOW MOUNTS** Mounted to the frame extension will be lift and tow mounts. The lift and tow mounts will be designed and positioned to adapt to certain tow truck lift systems. The lift and tow mounts with eyes will be painted the same color as the frame.
0002270	Tow Hooks, Chrome	**TOW HOOKS** Two (2) chromed steel tow hooks will be installed under the bumper and attached to the front frame members. The tow hooks will be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow hooks will not be used for lifting of the apparatus.
0698960	Coating, Top Flange, Front Bumper, Outside Exterior, UL-LX Coating, Black	**FRONT BUMPER UL-LX COATING** Protective black UL-LX® coating will be provided on the outside exterior of the top front bumper flange. It will not be sprayed on the underside of the flange. The lining will be properly installed by an authorized UL-LX dealer.

0668315 Cab, Velocity FR, 7010 Raised Roof

CAB

The Velocity cab will be designed specifically for the fire service and will be manufactured by Pierce Manufacturing.

To provide quality at the source and single source customer support, the cab will be built by the apparatus manufacturer in a facility located on the manufacturer's premises.

For reasons of structural integrity and enhanced occupant protection, the cab will be of heavy duty design, constructed to the following minimal standards.

The cab will have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts) and rear wall areas. The A-pillar will be constructed of 0.25" heavy wall extrusions joined by a solid A356-T6 aluminum joint casting. The B-pillar and C-pillar will also be constructed from 0.25" heavy wall extrusions. The rear wall will be constructed of two (2) 4.00" x 2.00" outer aluminum extrusions and two (2) 3.00" x 2.00" inner aluminum extrusions. All main vertical structural members will run from the floor to 7.50" x 3.50" x 0.125" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.75" thick corner casting at each of the front corners of the roof assembly.

The front of the cab will be constructed of a 0.25" thick firewall, covered with a 0.125" front skin (for a total thickness of 0.38"), and reinforced with 24.50" wide x 10.00" deep x 0.50" thick supports on each side of the engine tunnel. The cross-cab support will be welded to the A-pillar, 0.25" firewall, and engine tunnel, on the left and right sides.

The cab floors will be constructed of 0.1875" thick aluminum plate and reinforced at the firewall with an additional 0.25" thick cross-floor support providing a total thickness of 0.44" of structural material at the front floor area. The front floor area will also be supported with three (3) 0.50" plates bolted together that also provides the mounting point for the cab lift. This tubing will run from the front of the cab to the 0.1875" thick engine tunnel, creating the structure to support the forces created when lifting the cab.

The cab will be a full-tilt style. A 3-point cab mount system with rubber isolators will improve ride quality by isolating chassis vibrations from the cab.

The crew cab will be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants.

The forward cab section will have an overall height (from the cab roof to the ground) of approximately 102.00". The crew cab section will have a 10.00" raised roof, with an overall cab height of approximately 112.00". The raised portion will start at the most forward point of the B-pillar and continue rearward to the back of the cab. The overall height listed will be calculated based on a truck configuration with the lowest suspension weight ratings, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension will increase the overall height listed.

The cab will have an interior width of not less than 93.50". The driver and passenger seating positions will have a minimum 24.00" clear width at knee level.

To reduce injuries to occupants in the seated positions, proper head clearance will be provided. The floor-to-ceiling height inside the forward cab will be no less than 60.25". The floor-to-ceiling height inside the crew cab will be no less than 62.95" in the center position and 68.75" in the outboard positions.

The crew cab will measure a minimum of 57.50" from the rear wall to the backside of the engine tunnel (knee level) for optimal occupant legroom.

INTERIOR CAB INSULATION

The cab walls, ceiling and engine tunnel will be insulated in all strategic locations to maximize acoustic absorption and thermal insulation. The cab will be insulated with 2.00" insulation in the rear wall, 3.00" insulation in the side walls, and 1.50" insulation in the ceiling.

FENDER LINERS

Full-circular, aluminum, inner fender liners in the wheel wells will be provided.

PANORAMIC WINDSHIELD

A one (1)-piece, safety glass windshield with more than 2,802 square inches of clear viewing area will be provided. The windshield will be full width and will provide the occupants with a panoramic view. The windshield will consist of three (3) layers: the outer light, the middle safety laminate, and the inner light. The 0.114" thick outer light layer will provide superior chip resistance. The middle safety laminate layer will prevent the windshield glass pieces from detaching in the event of breakage. The inner light will provide yet another chip resistant layer. The cab windshield will be bonded to the aluminum windshield frame using a urethane adhesive. A custom frit pattern will be applied on the outside perimeter of the windshield for a finished automotive appearance.

WINDSHIELD WIPERS

Three (3) electric windshield wipers with a washer, in conformance with FMVSS and SAE requirements, will be provided. The wiper blades will be 21.65" long and together will clear a minimum of 1,783 square inches of the windshield for maximum visibility in inclement weather. The windshield washer fluid reservoir will be located at the front of the vehicle and be accessible through the access hood for simple maintenance.

FAST SERVICE ACCESS FRONT TILT HOOD

A full-width access hood will be provided for convenient access to engine coolant, steering fluid, wiper fluid, cab lift controls, headlight power modules, and ember separator. The hood will also provide complete access to the windshield wiper motor and components. The hood will be contoured to provide a sleek, automotive appearance. The hood will be constructed of two (2) fiberglass panels bonded together and will include reinforcing ribs for structural integrity. The hood will include air cylinders to hold the hood in open and closed positions, and a heavy duty latch system that will meet FMVSS 113 (Hood Latch System). The spring-loaded hood latch will be located at the center of the hood with a double-action release lever located behind the Pierce logo. The two (2)-step release requires the lever first be pulled to the driver side until the hood releases from the first latch (primary latch) then to the passenger side to fully release the hood (secondary latch).

0724207	Engine Tunnel, X12-15, MX13, Mech Fasteners, Velocity FR	**ENGINE TUNNEL** To provide structural strength, the engine tunnel sidewalls will be constructed of .50" aluminum plate that is welded to both the .25" firewall and .38" heavy wall extrusion under the crew cab floor. To maximize occupant space, the top edges will be tapered. The engine tunnel will be insulated for protection from heat and sound. Perforated foil faced insulation will be over a 1.00" thick closed cell foam affixed with pressure sensitive adhesive and further secured with mechanical fasteners. Thermal rating for this insulation will be -40 degrees Fahrenheit to 300 degrees Fahrenheit. The noise insulation keeps the dBA level within the limits stated in the current NFPA 1901 standards.
0677478	Rear Wall, Exterior, Cab, Aluminum Treadplate	**CAB REAR WALL EXTERIOR COVERING** The exterior surface of the rear wall of the cab will be overlaid with bright aluminum treadplate except for areas that are not typically visible when the cab is lowered.
0122466	Cab Lift, Elec/Hyd, w/Manual Override, Imp/Vel	**CAB LIFT** A hydraulic cab lift system will be provided, consisting of an electric-powered hydraulic pump, fluid reservoir, dual lift cylinders, remote cab lift controls and all necessary hoses and valves. The hydraulic pump will have a backup manual override, for use in the event of an electrical failure. The cab lift controls will be located at the driver side front of the cab, easily accessible under the full width front access hood. The controls will include a permanently mounted raise/lower switch. For enhanced visibility during cab tilt operations, a remote control tether with on/off switch will be supplied on a coiled cord that will extend from 2.00' (coiled) to 6.00' (extended). The cab will be capable of tilting 42 degrees and 80 degrees with crane assist to accommodate engine maintenance and removal. The cab pivots will be located 46.00" apart to provide stability while tilting the cab. The rear of the cab will be locked down by a two (2)-point, automatic, hydraulic, double hook mechanism that fully engages after the cab has been lowered (self-locking). The dual 2.25" diameter hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the cab is in the tilt position. For increased safety, a redundant mechanical stay arm will be provided that must be manually put in place on the driver side between the chassis and cab frame when cab is in the raised position. This device will be manually stowed to its original position before the cab can be lowered. **Cab Lift Interlock** The cab lift safety system will be interlocked to the parking brake. The cab tilt mechanism will be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism will be disabled.
0123176	Grille, Bright Finished, Front of Cab, Velocity	**GRILLE** A bright finished aluminum mesh grille screen, inserted behind a formed bright finished grille surround, will be provided on the front center of the cab, and will serve as an air intake to the radiator.
0002224	Scuffplates, S/S At Cab Door Jambs, 4-Door Cab	**DOOR JAMB SCUFFPLATES** All cab door jambs will be furnished with a 1.00" polished stainless steel scuffplate, mounted on the striker side of the jamb.
0527032	Trim, S/S Band, Across Cab Face, Rect Lights, Velocity	**FRONT CAB TRIM** A band of 22 gauge polished stainless steel trim will be installed across the front of the cab, from door hinge to door hinge. The trim band will be centered on the head lights and applied with two (2)-sided tape. A 0.625" self adhesive trim strip will be applied around the perimeter of the trim band. There will be polished stainless steel corner covers provided over the painted cab corner where the cab turn signals are located.
0087357	Molding, Chrome on Side of Cab	**SIDE OF CAB MOLDING** Chrome molding will be provided on both sides of cab.
0521669	Mirrors, Retrac, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex	**MIRRORS** A Retrac, Model 613423, dual vision, motorized, west coast style mirror, with chrome finish, will be mounted on each side of the front cab door with spring loaded retractable arms. The flat glass and convex glass will be heated and adjustable with remote control within reach of the driver.

0667921	Door, Half-Height, Velocity FR 4-Door Cab, Raised Roof	**CAB DOORS** The forward cab and crew cab doors will be the half-height style door. To enhance entry and egress to the cab, the forward cab doors will be a minimum of 43.59" wide x 64.71" high. The crew cab doors will measure a minimum of 37.87" wide x 73.75" high. The forward cab and crew cab doors will be constructed of extruded aluminum with a nominal material thickness of 0.125". The exterior door skins will be constructed from 0.090" aluminum. The forward cab door windows will include a 7.50" high x 10.00" wide drop area at the front to enhance visibility. A customized, vertical, pull-down type door handle will be provided on the exterior of each cab door. The finish of the door handle will be chrome/black. The exterior handle will be designed specifically for the fire service to prevent accidental activation, and will provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands. Each door will also be provided with an interior flush, open style paddle handle that will be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles will provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands. The cab doors will be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The keys will be Model 751. The locks will be capable of activating when the doors are open or closed. The doors will remain locked if locks are activated when the doors are opened, then closed. A full length, heavy duty, stainless steel, piano-type hinge with a 0.38" pin and 11 gauge leaf will be provided on all cab doors. There will be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit. A chrome grab handle will be provided on the inside of each cab and crew cab door. A red webbed grab handle will be installed on the crew cab door stop strap. The grab handles will be securely mounted. The cab steps at each cab door location will be located below the cab doors and will be exposed to the exterior of the cab.
0655511	Door Panel, Brushed Stainless Steel, Impel/Velocity 4-Door Cab	**Door Panels** The inner cab door panels will be constructed out of brushed stainless steel. The cab door panels will be removable.
0671014	Face Plate/s, Blank, Overhead, Imp/Vel, Dash CF	**BLANK FACE PLATE** Blank face plate/s will be provided, in place of standard storage pockets, within the overhead console.
0667902	Controls, Electric Windows, All Cab Doors, Impel/Velocity FR	**ELECTRIC WINDOW CONTROLS** Each cab entry door will be equipped with an electrically operated tempered glass window. A window control panel will be located on the door panel within easy reach of the respective occupant. Each switch will allow intermittent or auto down operation for ease of use. Auto down operation will be actuated by holding the window down switch for approximately 1 second. The driver control panel will contain a control switch for each cab door's window. All other door control panels will contain a single switch to operate the window within that door. The window switches will be connected directly to the battery power. This allows the windows to be raised and lowered when the battery switch is in the off position.
0606691	Steps, 4-Door Cab, Dual, 2" Larger Middle and Bottom Steps, Imp/Vel	**DUAL STEPS** A dual step will be provided below each cab and crew cab door. The steps will be designed with a grip pattern punched into bright aluminum treadplate material providing support, slip resistance, and drainage. The steps will be a bolt-on design and provide a 24.00" wide x 9.00" deep stepping surface. The step design raises the middle step higher and closer to the cab floor, resulting in a 12.00" distance from the step to cab floor in the cab and a 13.50" distance from the step to cab floor in the crew cab. Stepping distances from the ground to first step will be 16.50" and from first step to middle step will be 12.00". The first step will be lit by a white 12 volt DC LED light provided on the step.
0770194	Handrail, Exterior, Knurled, Alum, 4-Door Cab	**CAB EXTERIOR HANDRAILS** A 1.25" diameter slip-resistant, knurled aluminum handrail will be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress.
0892637	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 1Lt Per Step	**STEP LIGHTS** There will be four (4) white P25 LED step lights provided. The lights will be installed at each cab and crew cab door, one (1) per step. The lights will be located in the driver side front doorstep, driver side crew cab doorstep, passenger side front doorstep and passenger side crew cab doorstep. In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. The light(s) will have a chrome housing. The lights will be activated when the adjacent door is opened.
0002140	Fenders, S/S on Cab	**FENDER CROWNS** Stainless steel fender crowns will be installed at the cab wheel openings.

0586564	Window, Side of C/C, Fixed, w/EMS Cabinet, Imp/Vel	**CREW CAB WINDOWS** One (1) fixed window with tinted glass will be provided on each side of the cab, to the rear of the front cab door. The windows will be sized to enhance light penetration into the cab interior. The windows will measure 20.00" wide x 20.50" high.
0552935	Trim, Cab Side Windows, Velocity	**WINDOWS INTERIOR TRIM** For improved aesthetics, the cab side windows will include a vacuum formed ABS interior trim panel.
0012090	Not Required, Windows, Front/Side of raised roof	
0509286	Not Required, Windows Rear of Crew Cab, Imp/Vel	
0558334	Not Required, Trim, Cab Rear Windows, No Rear Windows	
0663375	Mounting Provisions, 1/4" Alum, Full Engine Tunnel, Vel/Imp	**MOUNTING PLATE ON ENGINE TUNNEL** Equipment installation provisions will be installed on the engine tunnel. A 0.25" smooth aluminum plate will be bolted to the top surface of the engine tunnel. The plate will be located to the left of the officer and on the rear of the tunnel. It will follow the contour of the engine tunnel and will run the entire length of the engine tunnel. The plate will be spaced off the engine tunnel .50" to allow for wire routing below the plate. The mounting surface will be painted to match the cab interior.
0748671	Cab Interior, Vinyl, Velocity FR, CARE	**CAB INTERIOR** With safety as the primary objective, the wrap-around style cab instrument panel will be designed with unobstructed visibility to instrumentation. The dash layout will provide the driver with a quick reference to gauges that allows more time to focus on the road. The center console will be a high impact ABS polymer and will be easily removable. The passenger side dashboard will be constructed of painted aluminum for durability and low maintenance. For enhanced versatility, the passenger side dash will include a flat working surface. To provide optional (service friendly) control panels, switches and storage modules, a painted aluminum overhead console will also be provided. To complete the cab front interior design, painted aluminum modesty panels will be provided under the dash on both sides of the cab. The driver side modesty panel will provide mounting for the battery switch and diagnostic connectors, while the passenger side modesty panel provides a glove box, and ground access to the main electrical distribution panel via quick quarter turn fasteners. To provide a deluxe automotive interior, the engine tunnel, side walls and rear wall will be covered by a leather grain vinyl that is resistant to oil, grease, and mildew. The headliner will be installed in both forward and rear cab sections. The headliner panel will be a composition of an aluminum panel covered with a sound barrier and upholstery. The cab structure will include designated raceways for electrical harness routing from the front of the cab to the rear upper portion of the cab. Raceways will be extruded in the forward door frame, floor, walls and overhead in the area where the walls meet the ceiling. The raceways located in the floor will be covered by aluminum extrusion, while the vertical and overhead raceways will be covered by painted aluminum covers. The raceways will improve harness integrity by providing a continuous harness path that eliminates wire chafing and abrasion associated with exposed wiring or routing through drilled metal holes. Harnesses will be laid in place. **CAB INTERIOR UPHOLSTERY** The cab interior upholstery will be 36 oz dark silver gray vinyl. All cab interior materials will meet FMVSS 302 (flammability of interior materials).
0667943	Cab Interior, Paint Color, Impel/Velocity FR	**CAB INTERIOR PAINT** The following metal surfaces will be painted black, vinyl textured paint: Modesty panel in front of driver Vertical surface of dash in front of the officer (not applicable for recessed dash) Glove box in front of the officer (if applicable) Power distribution in front of the officer Rear heater vent panels The remaining cab interior metal surfaces will be painted fire smoke gray, vinyl texture paint.
0682140	Floor, Alum Cab & Crew Cab, Include Vertical Floor Surfaces, AXT/Imp/Vel, CARE	**CAB FLOOR** The cab and crew cab flooring will be constructed with bright aluminum treadplate. The vertical surfaces where the center floor rises will be covered with aluminum treadplate.

0741239	HVAC, Impel/Velocity FR, CARE	**DEFROST/AIR CONDITIONING SYSTEM** A ceiling mounted combination heater, defroster and air conditioning system will be installed in the cab above the engine tunnel area. **Cab Defroster** A 54,000 BTU heater-defroster unit with 690 SCFM of air flow will be provided inside the cab. The heater-defrost will be installed in the forward portion of the cab ceiling. Air outlets will be strategically located in the cab header extrusion per the following: One (1) adjustable will be directed towards the left side cab window One (1) adjustable will be directed towards the right side cab window Six (6) fixed outlets will be directed at the windshield The defroster will be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system will meet or exceed SAE J382 requirements. **Cab/Crew Auxiliary Heater** There will be one (1) 31,000 BTU auxiliary heater with 560 SCFM of air flow provided in each outboard rear facing seat risers with a dual scroll blower. An aluminum plenum incorporated into the cab structure used to transfer heat to the forward positions. **Air Conditioning** A 19.10 cubic inch compressor will be installed on the engine. A roof-mounted condenser with a 78,000 BTU output at 2,400 SCFM that meets and exceeds the performance specification will be installed on the cab roof. The condenser cover to be painted to match the cab roof. The air conditioning system will be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit at 50 percent relative humidity within 30 minutes. The cooling performance test will be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours. The evaporator unit will be installed in the rear portion of the cab ceiling over the engine tunnel. The evaporator will include one (1) high performance heating core, one (1) high performance cooling core with (1) plenum directed to the front and one (1) plenum directed to the rear of the cab. The evaporator unit will have a 52,000 BTU at 690 SCFM rating that meets and exceeds the performance specifications. Adjustable air outlets will be strategically located on the forward plenum cover per the following: Four (4) will be directed towards the seating position on the left side of the cab Four (4) will be directed towards the seating position on the right side of the cab Adjustable air outlets will be strategically located on the evaporator cover per the following: Five (5) will be directed towards crew cab area A high efficiency particulate air (HEPA) filter will be included for the system. Access to the filter cover will be secured with four (4) screws. The air conditioner refrigerant will be R-134A and will be installed by a certified technician. **Climate Control** An automotive style controller will be provided to control the heat and air conditioning system within the cab. The controller will have three (3) functional knobs for fan speed, temperature, and air flow distribution (front to rear) control. The system will control the temperature of the cab and crew cab automatically by pushing the center of the fan speed control knob. Rotate the center temperature control knob to set the cab and crew cab temperature. The AC system will be manually activated by pushing the center of the temperature control knob. Pushing the center of the air flow distribution knob will engage the AC for max defrost, setting the fan speeds to 100 percent and directing all air flow to the overhead forward position. **Gravity Drain Tubes** Two (2) condensate drain tubes will be provided for the air conditioning evaporator. The drip pan will have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan. No pumps will be provided. The drain tubes will terminate under the cab, on the inboard side of the front wheelwells.
0639675	Sun Visor, Smoked Lexan, AXT, Imp/Vel, Saber FR/Enforcer	**SUN VISORS** Two (2) smoked Lexan™ sun visors will be provided. The sun visors will be located above the windshield with one (1) mounted on each side of the cab. There will be a black plastic thumb latch provided to help secure each sun visor in the stowed position.
0548173	Grab Handles, Driver and Passenger Door Post, Imp/Vel	**GRAB HANDLE** A black rubber covered grab handle will be mounted on the door post of the driver side and passenger side cab door to assist in entering the cab. The grab handle will be securely mounted to the post area between the door and windshield.
0002526	Light, Engine Compt, All Custom Chassis	**ENGINE COMPARTMENT LIGHT** An engine compartment light will be installed under the engine hood, of which the switch is an integral part. Light will have a .125" diameter hole in its lens to prevent moisture retention.
0122516	Fluid Check Access, Imp/Vel	**ACCESS TO ENGINE DIPSTICKS** For access to the engine oil and transmission fluid dipsticks, there will be a door on the engine tunnel, inside the crew cab. The door will be on the rear wall of the engine tunnel, on the vertical surface. The door will be flush with the wall of the engine tunnel. The engine oil dipstick will allow for checking only. The transmission dipstick will allow for both checking and filling. An additional port will be provided for filling the engine oil. The door will have a rubber seal for thermal and acoustic insulation. One (1) flush lift and turn latch will be provided on the access door.

0002508		Map Box, 3 Bin/30 deg Slant, Custom Chassis	**MAP BOX** There will be one (1) map box(es) with three (3) bins, open at top. The map box(es) will be installed at final inspection. The map box(es) will be divided into three (3) bins, each being 12.50" wide x 3.00" high x 12.00" deep. Each bin will slant 30 degrees from horizontal. The map box(es) will be constructed of 0.125" aluminum and will be painted to match the cab interior.
0583039		Not Required, Side Roll and Frontal Impact Protection	
0622618		Seating Capacity, 5 Seats	**SEATING CAPACITY** The seating capacity of the vehicle (including tiller cab and belted seat positions in the rescue body) will be five (5).
0697007		Seat, Driver, Pierce PS6, Premium, Air Ride, High Back	**DRIVER SEAT** A Pierce PS6® seat will be provided in the cab for the driver. The seat design will be a cam action type, with air suspension. For increased convenience, the seat will include electric controls to adjust the rake (15 degrees), height (1.75" travel) and horizontal (7.00" travel) position. Electric controls will be located below the forward part of the seat cushion. To provide flexibility for multiple driver configurations, the seat will have a reclining back, adjustable from 20 degrees back to 45 degrees forward. The seat back will be a high back style with manual lumbar adjustment lever, for lower back support, and will include minimum 7.50" deep side bolster pads for maximum support. For optimal comfort, the seat will be provided with 17.00" deep dual density foam cushions designed with EVC (elastomeric vibration control). The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.
0696997		Seat, Officer, Pierce PS6, Premium, Air Ride, High Back	**OFFICER SEAT** A Pierce PS6® seat will be provided in the cab for the officer. The seat will be a cam action type with air suspension. For increased convenience, the seat will include a manual control to adjust the horizontal position (6.00" travel). The manual horizontal control will be a towel-bar style located below the forward part of the seat cushion. To provide flexibility for multiple passenger configurations, the seat will have a reclining back adjustable from 20 degrees back to 0 degrees forward. The seat back will be a high back style with manual lumbar adjustment lever and will include minimum 7.50" deep side bolster pads for maximum support. For optimal comfort, the seat will be provided with 17.00" deep dual density foam cushions designed with EVC (elastomeric vibration control). To ensure safe operation, the seat will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not buckled. The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.
0540561		Radio Compartment, Behind Officer Seat, Vented, Imp/Vel	**RADIO COMPARTMENT** A compartment for the radio amplifier will be located on the floor of the cab behind the front passenger seat. A lift-up door with a chrome plated lift and turn latch will be provided for access. The compartment will be constructed of smooth aluminum and painted to match the cab interior. Louvers will be provided to allow for ventilation.
0888158	SP	Cabinet, Rear Facing, LS, 26.87 W x 28 H x 30.5 D, Roll, Imp/Vel	**REAR FACING LEFT SIDE CABINET** A rear facing cabinet will be provided in the crew cab at the left side outboard position. The cabinet will be 26.87" wide x 28.00" high x 30.50" deep with one (1) Amdor rollup door with white finish, locking with #751 key. The door opening will be square and extend in front of the engine tunnel and the right side of the cabinet will blister to accommodate the angle of the engine tunnel. The area between the cabinet floor and the cab floor at the engine tunnel will be left open. The frame to frame opening will be 24.375" wide x 22.75" high. The minimum clear door opening will be 21.625" wide x 16.87" high. The cabinet will include two (2) infinitely adjustable shelves with a 0.75" up-turned lippainted to match the cab interior. The cabinet will include no louvers. The cabinet will be constructed of smooth aluminum, and painted to match the cab interior. **Cabinet Light** There will be one (1) white LED strip light installed on the right side of the interior cabinet door opening and one (1) white LED strip light installed on the left side of the interior cabinet door opening. The lights will be controlled by an automatic door switch.

CLEAR DOOR OPENINGS (F-F = Frame to Frame)					
AMDOR		GORTITE		ROM	
HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
Subtract 2.00" from F-F	Subtract 5.88" from F-F	Subtract 2.75" from F-F	Subtract 4.75" from F-F	Subtract 2.56" from F-F	Subtract 4.50" from F-F

0102783		Not Required, Seat, Rr Facing C/C, Center	
0102790		Not Required, Seat, Rear Facing C/C, PS Outboard	
0660826		Seat, Forward Facing C/C, DS Outboard, Pierce PS6, Hi-Back, Foldup, 9 Deg,17"Btm	**FORWARD FACING DRIVER SIDE OUTBOARD SEAT** There will be one (1) forward facing, Pierce PS6® foldup seat provided at the driver side outboard position in the crew cab. To provide improved ride comfort, and maximize accessibility to the crew cab, the seat will be a minimum of 17.00" from the front of the cushion to the face of the seat back and the seat back will be provided with 9 degree fixed recline angle. To ensure safe operation, the seat will be equipped with seat belt sensors in the seat cushion and belt receptacle, that will activate an alarm indicating a seat is occupied but not buckled. The seat back will be high back style. The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.
0777454	SP	Seat, Forward Facing C/C, Center, (1) Pierce PS6, Premium, Hi-Back, Foldup	**FORWARD FACING CENTER SEAT** There will be one (1) forward facing, Pierce PS6® foldup seat provided at the center position in the crew cab. The seat back will be a high back style with 9 degree fixed recline angle, and will include minimum 7.50" deep side bolster pads for maximum support. For optimal comfort, the seat will be provided with 17.00" deep, dual density foam cushions designed with EVC (elastomeric vibration control). To ensure safe operation, the seat will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not buckled. The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.
0660820		Seat, Forward Facing C/C, PS Outboard, Pierce PS6, Hi-Back, Foldup, 9 Deg,17"Btm	**FORWARD FACING PASSENGER SIDE OUTBOARD SEAT** There will be one (1) forward facing, Pierce PS6® foldup seat provided at the passenger side outboard position in the crew cab. To provide improved ride comfort, and maximize accessibility to the crew cab, the seat will be a minimum of 17.00" from the front of the cushion to the face of the seat back and the seat back will be provided with 9 degree fixed recline angle. To ensure safe operation, the seat will be equipped with seat belt sensors in the seat cushion and belt receptacle, that will activate an alarm indicating a seat is occupied but not buckled. The seat back will be high back style. The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.
0740632	SP	Cabinet, Rr Fcng, Top Eng Tnl, 34 W x 16 H x 17.5 D,Drop Dr,Hasp,Prtn,Imp/Vel FR	**REAR FACING CENTER CABINET** A rear facing cabinet will be provided on the top rear of the engine tunnel. The cabinet will be 34.00" wide x 16.00" high x 17.50" deep. A horizontally hinged drop down door with a pair of Southco C2 chrome raised trigger lever latches will be provided on the rear of the cabinet, facing the crew cab. A male end hasp will be provided to allow the customer to use a padlock to secure the drop down door. A pair of rubber bumper stops will be provided on the door hinge. The clear door opening of the cabinet will be 31.50" wide x 13.50" high. A vertical partition will be provided separating the cabinet into two (2) equal sections. The cabinet will include no louvers. The cabinet will be constructed of smooth aluminum, and painted to match the cab interior. **Cabinet Light** There will be one (1) white LED strip light installed on the right side of the interior cabinet door opening and one (1) white LED strip light installed on the left side of the interior cabinet door opening. The lighting will be controlled by an automatic door switch.

0888156	SP	Box, Adj, Inside EMS Cabinet, w/Locking Hasp	**ADJUSTABLE BOX** One (1) box will be provided within the cab cabinet located - In the cabinet (option 888158) needs to be as wide as the clear door opening width 24.125". The box will be adjustable within the EMS cabinet on standard adjustable shelf tracks. Adjustment will be obtained from the inside. Outside dimensions of the box will be 22.50" wide x 11.25" high x 25.88" deep. The inside will be large enough to store a pelican case that is 21.50" wide x 8.50" high x 17.00" deep. An aluminum treadplate drop down door with two (2) non locking flush mounted lift and turn pawl latches will be provided. Three (3) round vent holes will be provided in the drop down door. A male end hasp will be provided to allow our customer to use a padlock to secure the drop down door.
0766467		Upholstery, Seats In Cab, All Vinyl, Seats Inc, CARE	**SEAT UPHOLSTERY** All seat upholstery will be leather grain 36 oz dark silver gray vinyl resistant to oil, grease and mildew. The cab will have five (5) seating positions.
0511471		No SCBA Brackets Required In Cab Seats, Imp/Vel, AXT 2010, Qtm 2010,Saber FR/Enf	
0603867		Seat Belt, ReadyReach	**SEAT BELTS** All seating positions in the cab, crew cab and tiller cab (if applicable) will have red seat belts. To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length will meet or exceed the current edition of NFPA 1901 and CAN/ULC - S515 standards. The 3-point shoulder type seat belts will also include the ReadyReach D-loop assembly to the shoulder belt system. The ReadyReach feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location. Any flip up seats will include a 3-point shoulder type belts only.
0604864		Seat Belt Height Adjustment, 5 Seats, Imp/Vel, Dash CF	**SHOULDER HARNESS HEIGHT ADJUSTMENT** All seating positions furnished with 3-point shoulder type seat belts will include a height adjustment. This adjustment will optimize the belts effectiveness and comfort for the seated firefighter. A total of five (5) seating positions will have the adjustable shoulder harness.
0602464		Helmet Storage, Provided by Fire Department, NFPA 2016	**HELMET STORAGE PROVIDED BY FIRE DEPARTMENT** NFPA 1901, 2016 edition, section 14.1.7.4.1 requires a location for helmet storage be provided. There is no helmet storage on the apparatus as manufactured. The fire department will provide a location for storage of helmets.
0647638		Lights, Dome, Weldon Dual LED 4 Lts	**CAB DOME LIGHTS** There will be four (4) Weldon 808* series, dual LED dome lights with black bezels provided. Two (2) lights will be mounted above the inside shoulder of the driver and officer and two (2) lights will be installed and located, one (1) on each side of the crew cab. The color of the LED's will be red and white . The white LED's will be controlled by the door switches and the lens switch. The color LED's will be controlled by the lens switch.
0896451		Enhanced Software for Cab and Crew Cab Dome Lts	**ENHANCED SOFTWARE FOR CAB AND CREW CAB DOME LIGHTS** The cab and crew cab dome lights will remain on for 10 seconds for improved visibility after the doors are closed. The dome lights will dim after 10 seconds or immediately if the vehicle's transmission is put into gear.
0631776		Not Required, Overhead Map Lights	
0727540		Spotlight, Golight/RadioRay, Model 20**4GT, LED, 1 Lt	**CAB SPOTLIGHT** There will be one (1) Golight/RadioRay®, Model 20**4GT, white LED spotlight located on the cab roof, behind lightbar centered. The spotlight will be mounted on a painted Z bracket. This light may be load managed when the parking brake is applied.
0650074		Controller, Spotlight, Golight, Wired Dash Mount, 1 Lt	**SPOTLIGHT CONTROLLER** There will be one (1) wired dash mounted remote provided for the spotlight.
0649965		Location, Spotlight Controller, Driver's Side	**SPOTLIGHT CONTROLLER LOCATION** The remote to control each spotlight will be located within reach of the driver.

0602637	Portable Hand Light, Provided by Fire Dept, Pumper NFPA 2016 Classification	**PORTABLE HAND LIGHTS, PROVIDED BY FIRE DEPARTMENT** NFPA 1901, 2016 edition, section 5.9.4 requires two portable hand lights mounted in brackets fastened to the apparatus. The hand lights are not on the apparatus as manufactured. The fire department will provide and mount these hand lights.
0568369	Cab Instruments, Ivory Gauges, Chrome Bezels, Impel/Velocity 2010	**CAB INSTRUMENTATION** The cab instrument panel will consist of gauges, an LCD display, telltale indicator lights, alarms, control switches, and a diagnostic panel. The function of instrument panel controls and switches will be identified by a label adjacent to each item. Actuation of the headlight switch will illuminate the labels in low light conditions. Telltale indicator lamps will not be illuminated unless necessary. The cab instruments and controls will be conveniently located within the forward cab section directly forward of the driver. Gauge and switch panels will be designed to be removable for ease of service and low cost of ownership. **Gauges** The gauge panel will include the following ten (10) ivory gauges with chrome bezels to monitor vehicle performance: **Voltmeter gauge (Volts)** **Low volts (11.8 VDC)** **Amber indicator on gauge assembly with alarm** **High volts (15 VDC)** **Amber indicator on gauge assembly with alarm** **Very low volts (11.3 VDC)** **Amber indicator on gauge assembly with alarm** **Very high volts (16 VDC)** **Amber indicator on gauge assembly with alarm** **Tachometer (RPM)** **Speedometer (Primary (outside) MPH, Secondary (inside) Km/H)** **Fuel level gauge (Empty - Full in fractions)** **Low fuel (1/8 full)** **Amber indicator on gauge assembly with alarm** **Very low fuel (1/32) fuel** **Amber indicator on gauge assembly with alarm** **Engine oil pressure gauge (PSI)** **Low oil pressure to activate engine warning lights and alarms** **Red indicator on gauge assembly with alarm** **Front air pressure gauge (PSI)** **Low air pressure to activate warning lights and alarm** **Red indicator on gauge assembly with alarm** **Rear air pressure gauge (PSI)** **Low air pressure to activate warning lights and alarm** **Red indicator on gauge assembly with alarm** **Transmission oil temperature gauge (Fahrenheit)** **High transmission oil temperature activates warning lights and alarm** **Amber indicator on gauge assembly with alarm** **Engine coolant temperature gauge (Fahrenheit)** **High engine temperature activates an engine warning light and alarm** **Red indicator on gauge assembly with alarm** **Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions)** **Low fluid (1/8 full)** **Amber indicator on gauge assembly with alarm** **All gauges and gauge indicators will perform prove out at initial power-up to ensure proper performance.** **Indicator Lamps** **To promote safety, the following telltale indicator lamps will be integral to the gauge assembly and are located above and below the center gauges. The indicator lamps will be "dead-front" design that is only visible when active. The colored indicator lights will have descriptive text or symbols.** **The following amber telltale lamps will be present:** **Low coolant** **Trac cntl (traction control) (where applicable)** **Check engine** **Check trans (check transmission)** **Aux brake overheat (Auxiliary brake overheat)** **Air rest (air restriction)** **Caution (triangle symbol)** **Water in fuel** **DPF (engine diesel particulate filter regeneration)** **Trailer ABS (where applicable)** **Wait to start (where applicable)** **HET (engine high exhaust temperature) (where applicable)** **ABS (antilock brake system)** **MIL (engine emissions system malfunction indicator lamp) (where applicable)** **SRS (supplemental restraint system) fault (where applicable)** **DEF (low diesel exhaust fluid level)** **The following red telltale lamps will be present:** **Warning (stop sign symbol)** **Seat belt** **Parking brake** **Stop engine** **Rack down** **The following green telltale lamps will be provided:** **Left turn** **Right turn** **Battery on** **The following blue telltale lamp will be provided:**

High beam

Alarms

Audible steady tone warning alarm: A steady audible tone alarm will be provided whenever a warning message is present.
Audible pulsing tone caution alarm: A pulsing audible tone alarm (chime/chirp) will be provided whenever a caution message is present without a warning message being present.
Alarm silence: Any active audible alarm will be able to be silenced by holding the ignition switch at the top position for 3 to 5 seconds. For improved safety, silenced audible alarms will intermittently chirp every 30 seconds until the alarm condition no longer exists. The intermittent chirp will act as a reminder to the operator that a caution or warning condition still exists. Any new warning or caution condition will enable the steady or pulsing tones respectively.

Indicator Lamp and Alarm Prove-Out

Telltale indicators and alarms will perform prove-out at initial power-up to ensure proper performance.

Control Switches

For ease of use, the following controls will be provided immediately adjacent to the cab instrument panel within easy reach of the driver.
Emergency master switch: A molded plastic push button switch with integral indicator lamp will be provided. Pressing the switch will activate emergency response lights and siren control. A green lamp on the switch provides indication that the emergency master mode is active. Pressing the switch again disables the emergency master mode.
Headlight / Parking light switch: A three (3)-position maintained rocker switch will be provided. The first switch position will deactivate all parking lights and the headlights. The second switch position will activate the parking lights. The third switch position will activate the headlights.
Panel backlighting intensity control switch: A three (3)-position momentary rocker switch will be provided. The first switch position decreases the panel backlighting intensity to a minimum level as the switch is held. The second switch position is the default position that does not affect the backlighting intensity. The third switch position increases the panel backlighting intensity to a maximum level as the switch is held.
The following standard controls will be integral to the gauge assembly and are located below the right hand gauges. All switches have backlit labels for low light applications.
High idle engagement switch: A two (2)-position momentary rocker switch with integral indicator lamp will be provided. The first switch position is the default switch position. The second switch position will activate and deactivate the high idle function when pressed and released. The "Ok To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch will indicate when the high idle function is engaged.
"Ok To Engage High Idle" indicator lamp: A green indicator light will be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.
The following standard controls will be provided adjacent to the cab gauge assembly within easy reach of the driver. All switches will have backlit labels for low light applications.
Ignition switch: A three (3)-position maintained/momentary rocker switch will be provided. The first switch position will deactivate vehicle ignition. The second switch position will activate vehicle ignition. The third momentary position will disable the Command Zone audible alarm if held for 3 to 5 seconds. A green indicator lamp will be activated with vehicle ignition.
Engine start switch: A two (2)-position momentary rocker switch will be provided. The first switch position is the default switch position. The second switch position will activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.
4-way hazard switch: A two (2)-position maintained rocker switch will be provided. The first switch position will deactivate the 4-way hazard switch function. The second switch position will activate the 4-way hazard function. The switch actuator will be red and includes the international 4-way hazard symbol.
Heater, defroster, and air conditioning control panel.
Turn signal arm: A self-canceling turn signal with high beam headlight and windshield wiper/washer controls will be provided. The windshield wiper control will have high, low, and intermittent modes.
Parking brake control: An air actuated push/pull park brake control valve will be provided.
Chassis horn control: Activation of the chassis horn control will be provided through the center of the steering wheel.

Custom Switch Panels

The design of cab instrumentation will allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There will be positions for up to four (4) switch panels in the overhead console on the driver's side, up to four (4) switch panels in the engine tunnel console facing the driver, up to four (4) switch panels in the overhead console on the officer's side and up to two (2) switch panels in the engine tunnel console facing the officer. All switches will have backlit labels for low light applications.

Diagnostic Panel

A diagnostic panel will be accessible while standing on the ground and located inside the driver's side door left of the steering column. The diagnostic panel will allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches will allow ABS systems to provide blink codes should a problem exist.
The diagnostic panel will include the following:
Engine diagnostic port
Transmission diagnostic port
ABS diagnostic port
SRS diagnostic port (where applicable)
Command Zone USB diagnostic port
ABS diagnostic switch (blink codes flashed on ABS telltale indicator)
Diesel particulate filter regeneration switch (where applicable)
Diesel particulate filter regeneration inhibit switch (where applicable)

		Cab LCD Display **A digital four (4)-row by 20-character dot matrix display will be integral to the gauge panel. The display will be capable of showing simple graphical images as well as text. The display will be split into three (3) sections. Each section will have a dedicated function.** **The upper left section will display the outside ambient temperature.** **The upper right section will display, along with other configuration specific information:** **Odometer** **Trip mileage** **PTO hours** **Fuel consumption** **Engine hours** **The bottom section will display INFO, CAUTION, and WARNING messages. Text messages will automatically activate to describe the cause of an audible caution or warning alarm. The LCD will be capable of displaying multiple text messages should more than one caution or warning condition exist.**
0509511	Air Restriction Indicator, Imp/Vel, AXT, Dash CF, Enf MUX	**AIR RESTRICTION INDICATOR** A high air restriction warning indicator light LCD message with amber warning indicator and audible alarm will be provided.
0543751	Light, Do Not Move Apparatus	**"DO NOT MOVE APPARATUS" INDICATOR** A flashing red indicator light, located in the driving compartment, will be illuminated automatically per the current NFPA requirements. The light will be labeled "Do Not Move Apparatus If Light Is On." The same circuit that activates the Do Not Move Apparatus indicator will activate a pulsing alarm when the parking brake is released.
0509042	Messages, Open Dr/DNMT, Color Dsply,	**DO NOT MOVE TRUCK MESSAGES** Messages will be displayed on the Command Zone™, color display located within sight of the driver whenever the Do Not Move Truck light is active. The messages will designate the item or items not in the stowed for vehicle travel position (parking brake disengaged). The following messages will be displayed (where applicable): Do Not Move Truck DS Cab Door Open (Driver Side Cab Door Open) PS Cab Door Open (Passenger's Side Cab Door Open) DS Crew Cab Door Open (Driver Side Crew Cab Door Open) PS Crew Cab Door Open (Passenger's Side Crew Cab Door Open) DS Body Door Open (Driver Side Body Door Open) PS Body Door Open (Passenger's Side Body Door Open) Rear Body Door Open DS Ladder Rack Down (Driver Side Ladder Rack Down) PS Ladder Rack Down (Passenger Side Ladder Rack Down) Deck Gun Not Stowed Lt Tower Not Stowed (Light Tower Not Stowed) Fold Tank Not Stowed (Fold-A-Tank Not Stowed) Aerial Not Stowed (Aerial Device Not Stowed) Stabilizer Not Stowed Steps Not Stowed Handrail Not Stowed Any other device that is opened, extended, or deployed that creates a hazard or is likely to cause major damage to the apparatus if the apparatus is moved will be displayed as a caution message after the parking brake is disengaged.
0611681	Switching, Cab, Membrane, Impel/Velocity/Quantum, Dash CF, AXT WiFi MUX	**SWITCH PANELS** The emergency light switch panel will have a master switch for ease of use plus individual switches for selective control. Each switch panel will contain eight (8) membrane-type switches each rated for one million (1,000,000) cycles. Panels containing less than eight (8) switch assignments will include non-functioning black appliqués. Documentation will be provided by the manufacturer indicating the rated cycle life of the switches. The switch panel(s) will be located in the overhead position above the windshield on the driver side overhead to allow for easy access. Additional switch panel(s) will be located in the overhead position(s) above the windshield or in designated locations on the lower instrument panel layout. The switches will be membrane-type and also act as an integral indicator light. For quick, visual indication the entire surface of the switch will be illuminated white whenever back lighting is activated and illuminated green whenever the switch is active. An active illuminated switch will flash when interlock requirements are not met or device is actively being load managed. For ease of use, a two (2)-ply, scratch resistant laser engraved Gravoply label indicating the use of each switch will be placed in the center of the switch. The label will allow light to pass through the letters for ease of use in low light conditions.
0555915	Wiper Control, 2-Speed with Intermittent, MUX, Impel/Velocity	**WIPER CONTROL** For simple operation and easy reach, the windshield wiper control will be an integral part of the directional light lever located on the steering column. The wiper control will include high and low wiper speed settings, a one (1)-speed intermittent wiper control and windshield washer switch. The control will have a "return to park" provision, which allows the wipers to return to the stored position when the wipers are not in use.

0548004	Wiring, Spare, 15 A 12V DC 1st	**SPARE CIRCUIT** There will be two (2) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features: The positive wire will be connected directly to the battery power The negative wire will be connected to ground Wires will be protected to 15 amps at 12 volts DC Power and ground will terminate Both on panel LOC#9 back side of instrument panel. Termination will be with 15 amp, power point plug with rubber cover Wires will be sized to 125 percent of the protection The circuit(s) may be load managed when the parking brake is set.
0548006	Wiring, Spare, 15 A 12V DC 2nd	**SPARE CIRCUIT** There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features: The positive wire will be connected directly to the battery power. The negative wire will be connected to ground. Wires will be protected to 15 amps at 12 volts DC. Power and ground will terminate RS1 above shelf on front wall, recessed. . Termination will be with 15 amp, power point plug with rubber cover. Wires will be sized to 125 percent of the protection. This circuit(s) may be load managed when the parking brake is set.
0548007	Wiring, Spare, 15 A 12V DC 3rd	**SPARE CIRCUIT** There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features: The positive wire will be connected directly to the battery power. The negative wire will be connected to ground. Wires will be protected to 15 amps at 12 volts DC. Power and ground will terminate Mounted on top of engine tunnel near LOC#9 with 2' coil of wire.. Termination will be with heat shrinkable butt splicing. Wires will be sized to 125 percent of the protection. This circuit(s) may be load managed when the parking brake is set.
0548009	Wiring, Spare, 20 A 12V DC 1st	**SPARE CIRCUIT** There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features: The positive wire will be connected directly to the battery power The negative wire will be connected to ground Wires will be protected to 20 amps at 12 volts DC Power and ground will terminate In the ems box mounted on top of rear of engine tunnel w/ 2' coil wire, power strip bar to to be mounted at pick up. Termination will be with a 10-place bus bar with screws and removable cover Wires will be sized to 125% of the protection This circuit(s) may be load managed when the parking brake is set.
0560535	Wiring, Spare, 15 A 12V DC 4th	**SPARE CIRCUIT** There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features: The positive wire will be connected directly to the battery power. The negative wire will be connected to ground. Wires will be protected to 15 amps at 12 volts DC. Power and ground will terminate Mounted on top of engine tunnel near LOC#9 with 2' coil of wire.. Termination will be with heat shrinkable butt splicing. Wires will be sized to 125 percent of the protection. This circuit(s) may be load managed when the parking brake is set.
0691301	Wiring, Spare, 30 A 12V DC, Set, Red & Yellow Power w/Ground, 18" Pigtail	**SPARE CIRCUIT** There will be one (1) set of wires, including a positive (red), a positive (yellow) and a negative (black) installed on the apparatus. The above wires will have the following features: The positive red wire will be connected to directly to the battery power . The positive yellow wire will be connected to directly to the battery switched power The negative wire will be connected to ground. The red wire will be protected to 15 amps @ 12 volts DC. The yellow wire will be protected to 15 amps @ 12 volts DC. Power and ground will terminate To terminate in the radio box located behind the officer seat with an 18" pigtail. Termination will be with heat shrinkable butt splicing . Wires will be sized to 125% of the protection. This circuit(s) may be load managed when the parking brake is set.

0797189	Wiring, Spare, 4.8 A 12V DC, USB Termination Blue Sea 1045 1st	**SPARE CIRCUIT** There will be one (1) dual USB fast charge socket mounts installed on the apparatus. The above wires will have the following features: The positive wire will be connected directly to the battery power. The negative wire will be connected to ground. Wires will be protected to 4.8 amps at 12 volts DC. The USB socket mount will be In LOC#9 panel with the two Power points.. Termination will be a Blue Sea Systems part number 1045 dual USB charger socket. Wires will be sized to 125% of the protection. This circuit(s) may be load managed when the parking brake is applied.
0566101	Recess, Dash Panel, Officer Side, Vel/Imp	**DASH PANEL RECESS** The dash panel across from the officer will be recessed to accommodate the mounting of miscellaneous items. The recess will be 7.25" down x 7.81" back and 20.88" wide.
0803875	Radio, AM/FM/WB, Jensen, Frt,Rear Aux In/Frt,Rear USB/Bluetooth	**STEREO RADIO** A Jensen, heavy duty AM/FM / Bluetooth / Weatherband stereo radio, with front and rear auxiliary input will be installed per switch panel layout. There will be 5.25" speakers installed one (1) pair of 5.25" speakers in the cab and one (1) pair of 5.25" speakers in the crew cab. The antenna will be a roof-mounted rubber antenna located in an open space, on the cab roof. The following features will be included: - 180 watts max power output (45W x 4) - Bluetooth® streaming audio and controls (A2DP/AVRCP) with hands-free calling (HFP) - Electronic AM/FM tuner (US/Euro) - iPod®/iPhone® ready via USB - SiriusXM-Ready® - Seven-channel NOAA weatherband with S.A.M.E. technology - USB 2.0 for playback of MP3 & WMA audio files - RBDS with PTY search - Front and rear USB input - Front and rear AUX input
0814201	Vehicle Information Center, 7" Color Display, Touchscreen, MUX, CL714	**INFORMATION CENTER** An information center employing a 7.00" diagonal touch screen color LCD display will be encased in an ABS plastic housing. The information center will have the following specifications: Operate in temperatures from -40 to 158 degrees Fahrenheit LCD optically bonded to hardened AR glass lens Five weather resistant user interface switches Grey with black accents Sunlight Readable Linux operating system Minimum of 1000nits rated display Display can be changed to an available foreign language A LCD display integral to the cab gauge panel will be included as outlined in the cab instrumentation area. Programmed to read US Customary **General Screen Design** Where possible, background colors will be used to provide "At a Glance" vehicle information. If information provided on a screen is within acceptable limits, a green background will be used. If a caution or warning situation arises the following will occur: An amber background/text color will indicate a caution condition A red background/text color will indicate a warning condition The information center will utilize an "Alert Center" to display text messages for audible alarm tones. The text messages will be written to identify the item(s) causing the audible alarm to sound. If more than one (1) text message occurs, the messages will cycle every second until the problem(s) have been resolved. The background color for the "Alert Center" will change to indicate the severity of the "warning" message. If a warning and a caution condition occur simultaneously, the red background color will be shown for all alert center messages. A label for each button will exist. The label will indicate the function for each active button for each screen. Buttons that are not utilized on specific screens will have a button label with no text or symbol. **Home/Transit Screen** This screen will display the following: Vehicle Mitigation (if equipped) Water Level (if the water level system includes compatible communications to the information center) Foam Level (if the foam level system includes compatible communications to the information center) Seat Belt Monitoring Screen Tire Pressure Monitoring (if equipped) Digital Speedometer Active Alarms **On Scene Screen** This screen will display the following and will be auto activated with pump engaged (if equipped): Battery Voltage Fuel Oil Pressure Coolant Temperature RPM Water Level (if equipped) Foam Level (if equipped)

Foam Concentration (if equipped)
Water Flow Rate (if equipped)
Water Used (if equipped)
Active Alarms

Virtual Buttons

There will be four (4) virtual switch panel screens that match the overhead and lower lighting and HVAC switch panels.

Page Screen

The page screen will display the following and allow the user to progress into other screens for further functionality:
Diagnostics
Faults
Listed by order of occurrence
Allows to sort by system
Interlock
Throttle Interlocks
Pump Interlocks (if equipped)
Aerial Interlocks (if equipped)
PTO Interlocks (if equipped)
Load Manager
A list of items to be load managed will be provided. The list will provide a description of the load. The lower the priority numbers the earlier the device will be shed should a low voltage condition occur.
The screen will indicate if a load has been shed (disabled) or not shed.
"At a glance" color features are utilized on this screen.
Systems
Command Zone
Module type and ID number
Module Version
Input or output number
Circuit number connected to that input or output
Status of the input or output
Power and Constant Current module diagnostic information
Foam (if equipped)
Pressure Controller (if equipped)
Generator Frequency (if equipped)
Live Data
General Truck Data
Maintenance
Engine oil and filter
Transmission oil and filter
Pump oil (if equipped)
Foam (if equipped)
Aerial (if equipped)
Setup
Clock Setup
Date & Time
12 or 24 hour format
Set time and date
Backlight
Daytime
Night time
Sensitivity
Unit Selection
Home Screen
Virtual Button Setup
On Scene Screen Setup
Configure Video Mode
Set Video Contrast
Set Video Color
Set Video Tint
Do Not Move
The screen will indicate the approximate location and type of item that is open or is not stowed for travel. The actual status of the following devices will be indicated
Driver Side Cab Door
Passenger's Side Cab Door
Driver Side Crew Cab Door
Passenger's Side Crew Cab Door
Driver Side Body Doors
Passenger's Side Body Doors
Rear Body Door(s)
Ladder Rack (if applicable)
Deck Gun (if applicable)
Light Tower (if applicable)
Hatch Door (if applicable)
Stabilizers (if applicable)
Steps (if applicable)
Notifications
View Active Alarms
Shows a list of all active alarms including date and time of the occurrence is shown with each alarm
Silence Alarms - All alarms are silenced
Timer Screen
HVAC (if equipped)
Tire Information (if equipped)
Ascendant Set Up Confirmation (if equipped)
Button functions and button labels may change with each screen.

0816633	Collision Mitigation, HAAS Alert (R2V), HA7	**COLLISION MITIGATION** There will be a HAAS Alert®, Model HA7 Responder-to-Vehicle (R2V) collision avoidance system provided on the apparatus. The HA7 cellular transponder module will be installed behind the cab windshield, as high and near to the center as practical, to allow clear visibility to the sky. The module dimensions are 5.40" long x 2.70" wide x 1.30" high, and operating temperature range is -40 degree C to 85 degree C. The transponder will be connected to the vehicle's emergency master circuit and battery direct power and ground. While responding with emergency lights on, the HA7 transponder sends alert messages via cellular network to motorists in the vicinity of the responding truck that are equipped with the WAZE app. While on scene with emergency lights on, the HA7 transponder sends road hazard alerts to motorists in the vicinity of the truck that are equipped with the WAZE app. The HA7 Responder-to-Vehicle (R2V) collision avoidance system will include the transponder and a 5 year cellular plan subscription. Activation of the HAAS Alert system requires a representative of the customer to accept the End User License Agreement (EULA) via an on-line portal.
0606248	Vehicle Data Recorder w/CZ Display Seat Belt Monitor, Unique Alarm	**VEHICLE DATA RECORDER** There will be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided. The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line. The vehicle data recorder will be capable of recording the following data via hardwired and/or CAN inputs: Vehicle Speed - MPH Acceleration - MPH/sec Deceleration - MPH/sec Engine Speed - RPM Engine Throttle Position - % of Full Throttle ABS Event - On/Off Seat Occupied Status - Yes/No by Position Seat Belt Buckled Status - Yes/No by Position Master Optical Warning Device Switch - On/Off Time - 24 Hour Time Date - Year/Month/Day **Seat Belt Monitoring System** A seat belt monitoring system (SBMS) will be provided on the Command Zone™ color display. The SBMS will be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following: Seat Occupied & Buckled = Green LED indicator illuminated Seat Occupied & Unbuckled = Red LED indicator with audible alarm No Occupant & Buckled = Red LED indicator with audible alarm No Occupant & Unbuckled = No indicator and no alarm The seat belt monitoring screen will become active on the Command Zone color display when: The home screen is active: and there is any occupant seated but not buckled or any belt buckled with an occupant. and there are no other Do Not Move Apparatus conditions present. As soon as all Do Not Move Apparatus conditions are cleared, the SBMS will be activated. The SBMS will include an audible alarm that will warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park. The alarm will have a unique sound that will be different than all other alarm sounds on the vehicle. A "Seat Belt Alarm" label will be provided above this buzzer.
0735006	Intercom, David Clark, 4-Pos, 2-Radio, (D,O,RPTT), 2obC, U3805	**INTERCOM SYSTEM** There will be a four (4) position David Clark, Model U3800, intercom system with single radio interface capability at the driver and officer positions and remote radio push to talk buttons located Driver, Officer, & two forward facing rear crew cab . Two (2) crew cab outboard seats will have intercom only capability. The following components will be provided: One (1) U3805 Radio Cord Junction Module Two (2) U3815 Radio interface modules (Driver, Officer) Two (2) Remote Push To Talk Button Kits One (1) U3800 Master station (1 Crew) One (1) U3801 Remote headset intercom station (1 Crew) One (1) C3820 Power cord All necessary station cables and connectors
0637058	David Clark Universal Radio Interfaces Included with Single/Dual System	**RADIO / INTERCOM INTERFACE INCLUDED** All radio interfaced stations will have universal radio interfaces installed. The interface wiring will be routed within the cab to Behind officer seat in radio compartment. .

0589947

Headset, David Clark, H3432 Over The Head, Flex Mic, Push On Push Off

OVER THE HEAD HEADSET
There will be four (4) over the head, headset(s) provided Driver, Officer & two rear crew cab..
Each David Clark, Model H3432, headset will feature:
5' Coiled cord
Noise cancelling electric microphone
Flexible microphone boom rotates 200 degrees for left or right dress
Microphone on/off button
Comfort Gel Earseals
23 dB noise reduction

0681408

Hangers For Headsets, NFPA, Each

HEADSET HANGERS
There will be four (4) headset hanger(s) installed driver's seat, officer's seat and rear, center, forward facing seat. The hanger(s) will meet NFPA 1901, Section 14.1.11, requirement for equipment mounting.

0640003

Install Customer Provided Modem

MOBILE RADIO MODEM INSTALLATION
There will be one (1) customer supplied modem(s) sent to the apparatus manufacturers preferred installer to be installed Cradle get mounted on top of engine tunnel per signed instrument panel drawing..
Specific shipping requirements will be followed.

0559156

Install Customer Provided Two-Way Radio(s)

TWO WAY RADIO INSTALLATION
There will be one (1) customer supplied two way radio(s) sent to the apparatus manufacturers preferred radio installer to be installed The remote head goes in the LOC#6 position & the radio gets mounted in the radio compartment behind officer. per the shipping document.
No antenna mount or whip will be included in this option.
Specific radio shipping requirements will be followed.

0616382

Install Customer Provided GPS/Multimode Antenna(s)

GPS / MULTIMODE ANTENNA INSTALLATION
There will be one (1) customer supplied GPS / Multimode antenna(s) with stud mount for thick roof material to be installed on the roof. The antenna coax cable(s) will be run per the packing list / instructions provided to the third party installer.
Specific shipping requirements will be followed. The GPS / Multimode antenna will be sent to the apparatus manufacturers preferred installer prior to cab fabrication.

0687904

Antenna Mount, Custom Chassis, Cable Routed to Behind Officer Seat

RADIO ANTENNA MOUNT
There will be two (2) standard 1.125", 18 thread antenna-mounting base(s) installed On the cab roof. on the cab roof with high efficiency, low loss, coaxial cable(s) routed to behind the officer seat. A weatherproof cap will be installed on the mount.

0816486	Camera, Pierce, LS Mux, RS, R, SD Cameras, CL714	**VEHICLE CAMERA SYSTEM** There will be a color vehicle camera system provided with the following: One (1) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse One (1) camera located on the right side of the apparatus, pointing rearward, displayed automatically with the right side turn signal The camera images will be displayed on the left side vehicle information center display. Audio from the microphone on the rear camera will be emitted by an amplified speaker with volume control located behind the driver seat. The following components will be included: One (1) SV-CW134639CAI SD Camera One (1) CS134404CI Side SD Camera All necessary cables
0814831	Not Required, Camera Switcher	**CAMERA SWITCHER** A camera switcher is not required.
0511071	Guard, 4-Way, Rear Vision Camera	**VEHICLE CAMERA GUARD** There will be one (1) aluminum treadplate guard(s) fastened over the vehicle camera(s) located rear camera .
0896458	Pierce Command Zone, Advanced Electronics & Control System, Vel WiFi CZT	**ELECTRICAL POWER CONTROL SYSTEM** The primary power distribution will be located forward of the officer's seating position and be easily accessible while standing on the ground for simplified maintenance and troubleshooting. Additional electrical distribution centers will be provided throughout the vehicle to house the vehicle's electrical power, circuit protection, and control components. The electrical distribution centers will be located strategically throughout the vehicle to minimize wire length. For ease of maintenance, all electrical distribution centers will be easily accessible. All distribution centers containing fuses, circuit breakers and/or relays will be easily accessible. Distribution centers located throughout the vehicle will contain battery powered studs for supplying customer installed equipment thus providing a lower cost of ownership. Circuit protection devices, which conform to SAE standards, will be utilized to protect electrical circuits. All circuit protection devices will be rated per NFPA requirements to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will be Type-I automatic reset (continuously resetting). When required, automotive type fuses will be utilized to protect electronic equipment. Control relays and solenoid will have a direct current rating of 125 percent of the maximum current for which the circuit is protected per NFPA. **Solid-State Control System** A solid-state electronics based control system will be utilized to achieve advanced operation and control of the vehicle components. A fully computerized vehicle network will consist of electronic modules, electronic control modules to include black housings, a power indicator and status indicator located near their point of use to reduce harness lengths and improve reliability. The control system will comply with SAE J1939-11 recommended practices. The control system will operate as a master-slave system whereas the main control module instructs all other system components. The system will contain patented Mission Critical software that maintains critical vehicle operations in the unlikely event of a main controller error. The system will utilize a Real Time Operating System (RTOS) fully compliant with OSEK/VDX™ specifications providing a lower cost of ownership. For increased reliability and simplified use the control system modules will include the following attributes: Green LED indicator light for module power Red LED indicator light for network communication stability status Control system self test at activation and continually throughout vehicle operation No moving parts due to transistor logic Software logic control for NFPA mandated safety interlocks and indicators Integrated electrical system load management without additional components Integrated electrical load sequencing system without additional components Customized control software to the vehicle's configuration Factory and field programmable to accommodate changes to the vehicle's operating parameters To assure long life and operation in a broad range of environmental conditions, the solid-state control system modules will meet the following specifications: Module circuit board will meet SAE J771 specifications Operating temperature from -40C to +70C Storage temperature from -40C to +70C Vibration to 50g IP67 rated enclosure (Totally protected against dust and also protected against the effect of temporary immersion between 15 centimeters and one (1) meter) Operating voltage from eight (8) volts to 32 volts DC The main controller will activate status indicators and audible alarms designed to provide warning of problems before they become critical. **Circuit Protection and Control Diagram** Copies of all job-specific, computer network input and output (I/O) connections will be provided with each chassis. The sheets will indicate the function of each module connection point, circuit protection information (where applicable), wire numbers, wire colors and load management information. **On-Board Electrical System Diagnostics** The on-board information center will include the following diagnostic information: Text description of active warning or caution alarms Simplified warning indicators Amber caution indication with intermittent alarm Red warning indication with steady tone alarm Advanced diagnostic feature will be provided in this control system. From the Command Zone display or connected wireless device, these features allow the user to monitor the real-time status

of every input or output on the vehicle. It also allows users logged in as an administrator to force on inputs or outputs to assist the troubleshooting process.

TCU Module with WiFi

An in cab module will provide WiFi wireless interface and data logging capability. The WiFi interface will comply with IEEE 802.11 b/g/n capabilities while communicating at 2.4 Gigahertz. The module will communicate through a white WiFi antenna allowing a line of site communication range of up to 300 feet with a roof mounted antenna.

The module will transmit a password protected web page to a WiFi enabled device (i.e. most smart phones, tablets or laptops) allowing two levels of user interaction. The firefighter level will allow vehicle monitoring of the vehicle and firefighting systems on the apparatus. The technician level will allow diagnostic access to inputs and outputs installed on the Command Zone™, control and information system.

The TCU capability will record faults from the engine, transmission, ABS and Command Zone™, control and information systems as they occur. No other data will be recorded at the time the fault occurs. The data TCU will provide up to 2 Gigabytes of data storage.

The TCU will provide a means to download the TCU information and update software in the device.

Indicator Light and Alarm Prove-Out System

A system will be provided which automatically tests basic indicator lights and alarms located on the cab instrument panel.

Voltage Monitor System

A voltage monitoring system will be provided to indicate the status of the battery system connected to the vehicle's electrical load. The system will provide visual and audible warning when the system voltage is below or above optimum levels.

The alarm will activate if the system falls below 11.8 volts DC for more than two (2) minutes.

Dedicated Radio Equipment Connection Points

There will be three (3) studs provided in the primary power distribution center located in front of the officer for two-way radio equipment. The studs will consist of the following:

12-volt 40-amp battery switched power

12-volt 60-amp ignition switched power

12-volt 60-amp direct battery power

There will also be a 12-volt 100-amp ground stud located in or adjacent to the power distribution center.

EMI/RFI Protection

To prevent erroneous signals from crosstalk contamination and interference, the electrical system will meet, at a minimum, SAE J551/2, thus reducing undesired electromagnetic and radio frequency emissions. An advanced electrical system will be used to ensure radiated and conducted electromagnetic interference (EMI) or radio frequency interference (RFI) emissions are suppressed at their source.

The apparatus will have the ability to operate in the electromagnetic environment typically found in fire ground operations to ensure clean operations. The electrical system will meet, without exceptions, electromagnetic susceptibility conforming to SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter. The vehicle OEM, upon request, will provide EMC testing reports from testing conducted on an entire apparatus and will certify that the vehicle meets SAE J551/2 and SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter requirements. Component and partial (incomplete) vehicle testing is not adequate as overall vehicle design can impact test results and thus is not acceptable by itself.

EMI/RFI susceptibility will be controlled by applying appropriate circuit designs and shielding. The electrical system will be designed for full compatibility with low-level control signals and high-powered two-way radio communication systems. Harness and cable routing will be given careful attention to minimize the potential for conducting and radiated EMI/RFI susceptibility.

0896456 Prognostics, Electrical System

ELECTRICAL SYSTEM PROGNOSTICS

There will be a software based vehicle tool provided to predict remaining life of the vehicles critical fluid and events.

The system will send automatic indications to the Command Zone™ information center and/or wireless enabled devices to proactively alert of upcoming service intervals.

Prognostics will include the following:

Engine oil and filter

Transmission oil and filter

0730603	Electrical System, Velocity ESP, Cummins, Paccar	**ELECTRICAL** All 12-volt electrical equipment installed by the apparatus manufacturer will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids. Electrical wiring and equipment will be installed utilizing the following guidelines: All holes made in the roof will be caulked with silicon. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof. Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body. Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work. Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will require this compound in the plug to prevent corrosion and for easy separation (of the plug). All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area. All electrical terminals in exposed areas will have silicon applied completely over the metal portion of the terminal. All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments. An operational test will be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order. The results of the tests will be recorded and provided to the purchaser at time of delivery.
0089703	Batteries, (6) Interstate Grp 31, 950 CCA each, Threaded Stud	**BATTERY SYSTEM** Six (6) 12 volt group 31 Interstate batteries that include the following features will be provided: 950 CCA (cold cranking amps) 195 reserve capacity High cycle Maintenance free Rating of 5700 CCA at 0 degrees Fahrenheit 1170 minutes of reserve capacity Threaded studs
0008621	Battery System, Single Start, All Custom Chassis	**BATTERY SYSTEM** There will be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel. **MASTER BATTERY SWITCH** There will be a master battery switch provided within the cab within easy reach of the driver to activate the battery system. An indicator light will be provided on the instrument panel to notify the driver of the status of the battery system.
0123174	Battery Compartment, Imp/Vel	**BATTERY COMPARTMENTS** The batteries will be stored in well-ventilated compartments that are located under the cab and bolted directly to the chassis frame. The battery compartments will be constructed of 3/16" steel plate and be designed to accommodate a maximum of three (3) group 31 batteries in each compartment. The compartments will include formed fit heavy-duty roto-molded polyethylene battery tray inserts with drains on each side of the frame rails. The batteries will be mounted inside of the roto-molded trays. **JUMPER STUDS** One (1) set of battery jumper studs with plastic color-coded covers will be installed on the battery box on the driver's side. This will allow enough room for easy jumper cable access.
0813848	Charger, Sngl Sys, IOTA, DLS-75, 75 amp, IQ4 Controller	**BATTERY CHARGER** There will be an IOTA, Model DLS 75, 75 amp battery charger with IQ4 controller provided. The battery charger will be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger.
0814935	Location, Cab, Charger, EMS Compt, Vertical Wall, LS	Battery charger will be located in the cab, on the vertical wall of the left side EMS compartment.
0814872	Location, Cab, Ind/Remote, Display Through Window Behind Driver Seat	The battery charger indicator/remote panel will be displayed through the window behind the driver seat. The display will be mounted on a bracket so that it is visible from outside the apparatus in the lower corner of the window.

0691933		Shoreline, 30A 120V, Twist lock, Hubbell HBL303NM	**SHORELINE** There will be one (1) Hubbell, Model HBL303NM, 30 amp 120 volt AC twist-lock shoreline inlet with flip up cover provided. The shoreline will be connected to Directly to the charger..
0026800		Shoreline Location	The shoreline receptacle will be located on the driver side seat riser.
0036802		Sub Feed Breaker Box Cutler Hammer, For Shoreline	**SUB FEED CIRCUIT BREAKER BOX (shoreline)** A Cutler Hammer sub feed box will be supplied to protect the on board circuits when an auxiliary power source is used. The box will be installed in the D3. The sub feed box will distribute power to specific circuits in the vehicle. A directory for each breaker will be provided adjacent to the circuit breaker panel. Identification of circuits will be done in a durable manner that provides years of service.
0647728		Alternator, 430 amp, Delco Remy 55SI	**ALTERNATOR** A Delco Remy®, Model 55SI, alternator will be provided. It will have a rated output current of 430 amps, as measured by SAE method J56. The alternator will feature an integral regulator and rectifier system that has been tested and qualified to an ambient temperature of 257 degrees Fahrenheit (125 degrees Celsius). The alternator will be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.
0610111	SP	Cover, Inverter, Vented	**POWER INVERTER COVER** A cover will be provided over the power inverter. The cover will be properly vented to meet the inverter manufacturer's specifications.
0092582		Load Manager/Sequencer, MUX	**ELECTRONIC LOAD MANAGER** An electronic load management (ELM) system will be provided that monitors the vehicles 12-volt electrical system, automatically reducing the electrical load in the event of a low voltage condition, and automatically restoring the shed electrical loads when a low voltage condition expires. This ensures the integrity of the electrical system. For improved reliability and ease of use, the load manager system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load management tasks. Load management systems which require additional components will not be allowed. The system will include the following features: System voltage monitoring. A shed load will remain inactive for a minimum of five minutes to prevent the load from cycling on and off. Sixteen available electronic load shedding levels. Priority levels can be set for individual outputs. High Idle to activate before any electric loads are shed and deactivate with the service brake. If enabled: "Load Man Hi-Idle On" will display on the information center. Hi-Idle will not activate until 30 seconds after engine start up. Individual switch "on" indicator to flash when the particular load has been shed. The information center indicates system voltage. The information center, where applicable, includes a "Load Manager" screen indicating the following: Load managed items list, with priority levels and item condition. Individual load managed item condition: ON = not shed SHED = shed **SEQUENCER** A sequencer will be provided that automatically activates and deactivates vehicle loads in a preset sequence thereby protecting the alternator from power surges. This sequencer operation will allow a gradual increase or decrease in alternator output, rather than loading or dumping the entire 12 volt load to prolong the life of the alternator. For improved reliability and ease of use, the load sequencing system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load sequencing tasks. Load sequencing systems which require additional components will not be allowed. Emergency light sequencing will operate in conjunction with the emergency master light switch. When the emergency master switch is activated, the emergency lights will be activated one by one at half-second intervals. Sequenced emergency light switch indicators will flash while waiting for activation. When the emergency master switch is deactivated, the sequencer will deactivate the warning light loads in the reverse order. Sequencing of the following items will also occur, in conjunction with the ignition switch, at half-second intervals: Cab Heater and Air Conditioning Crew Cab Heater (if applicable) Crew Cab Air Conditioning (if applicable) Exhaust Fans (if applicable) Third Evaporator (if applicable)

0720839	Switch, CZ Display Only, Load Manager	**SWITCH, COMMAND ZONE DISPLAY** A virtual switch will be provided for the load manager in the Command Zone display on cab instrument panel.
0783153	Headlights, Rect LED, JW Spkr Evo 2, AXT/DCF/Enf/Imp/Sab/Vel	**HEADLIGHTS** There will be four (4) JW Speaker®, Model 8800, 4" x 6" rectangular LED lights mounted in the front quad style, chrome housing on each side of the cab grille: the outside light on each side will contain a part number 055***1 low beam module the inside light on each side will contain a part number 055***1 high beam module the headlights to include chrome bezels The low beam lights will be activated when the headlight switch is on. The high beam and low beam lights will be activated when the headlight switch and the high beam switch is activated.
0648425	Light, Directional, Wln 600 Cmb, Cab Crn, Imp/Vel/AXT/Qtm/DCF	**DIRECTIONAL LIGHTS** There will be two (2) Whelen 600® series, LED combination directional/marker lights provided. The lights will be located on the outside cab corners, next to the headlights. The color of the lenses will be the same color as the LED's.
0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	**INTERMEDIATE LIGHT** There will be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light will double as a turn signal and marker light.
0648074	Lights, Clearance/Marker/ID, Front, P25 LED 7 Lts	**CAB CLEARANCE/MARKER/ID LIGHTS** There will be seven (7) amber LED lights provided to indicate the presence and overall width of the vehicle in the following locations: Three (3) amber LED identification lights will be installed in the center of the cab above the windshield. Two (2) amber LED clearance lights will be installed, one (1) on each outboard side of the cab above the windshield. Two (2) amber LED marker lights will be installed, one (1) on each side above the cab doors.
0563675	Lights, Clearance/Marker/ID, Rear, Truck-Lite 33050R LED 7Lts	**REAR CLEARANCE/MARKER/ID LIGHTING** There will be three (3) Truck-Lite®, Model 33050R, LED lights used as identification lights recessed and located at the rear of the apparatus per the following: As close as practical to the vertical centerline Centers spaced not less than 6.00" or more than 12.00" apart Red in color All at the same height There will be two (2) Truck-Lite, Model 33050R, LED lights recessed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following: To indicate the overall width of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the rear All at the same height There will be two (2) Truck-Lite, Model 33050R, LED lights recessed on the side of the apparatus as marker lights as close to the rear as practical per the following: To indicate the overall length of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the side All at the same height There will be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground. There will be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground. Per FMVSS 108 and CMVSS 108 requirements.
0804761	Lights, Tail, Wln 604BTT* Red LED Stop/Tail & 604T Amb LED Dir For Housing	**REAR FMVSS LIGHTING** There will be the following stop/tail and directional lighting provided at the rear of the truck: Two (2) Whelen®, Model 604BTT*, red LED stop/tail lights Two (2) Whelen, Model 604T, amber LED directional lights The light heads will have clear lenses The lights will be mounted in a polished combination housing.
0804764	Lights, Backup, Wln 604BU, LED for Wln 3 & 4 housing	Two (2) Whelen®, Model 604BU, LED backup lights will be provided.

0889577	Bracket, License Plate & Light, P25 LED, Stainless Brkt	**LICENSE PLATE BRACKET** One (1) license plate bracket constructed of stainless steel will be provided at the rear of the apparatus. One (1) white LED light with chrome housing will be provided to illuminate the license plate. A stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.
0736667	Bezels, Wln, (2) CAST3, For Mtg (3) Wln 600 Lts Each, 6Lts Total	**LIGHTING BEZEL** Two (2) Whelen®, Model CAST3, three (3) light aluminum housings will be provided for the rear tail, directional and scene lights.
0589905	Alarm, Back-up Warning, PRECO 1040	**BACK-UP ALARM** A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse will be provided. The device will sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.
0769566	Lights, Perimeter Cab, Amdor AY-LB-12HW020 & AY-LB-12HW012 LED 4Dr	**CAB PERIMETER SCENE LIGHTS** There will be four (4) Amdor white LED strip lights provided, one (1) for each cab door and crew cab door. Two (2) Amdor, Model AY-LB-12HW020, 350 lumens each, 20.00" LED strip lights, one (1) for each cab door. Two (2) Amdor, Model AY-LB-12HW012, 190 lumens each, 12.00" LED strip lights, one (1) for each crew cab door. These lights will be activated automatically when the battery switch is on and the exit doors are opened or by the same means as the body perimeter scene lights.
0617869	Lights, Perimeter Pump House, Truck-Lite 60354C LED 2lts	**PUMP HOUSE PERIMETER LIGHTS** There will be two (2) Truck-Lite, Model 60354C, 6.00" oval LED 12 volt DC weatherproof lights with grommets provided under the pump panel running boards, one (1) each side. The lights will be controlled by the same means as the body perimeter lights.
0653942	Lights, Perimeter Body, Truck-Lite 60354C LED 2lts, Rear Step	**BODY PERIMETER SCENE LIGHTS** There will be two (2) Truck-Lite, Model 60354C, 6.00" x 2.00" oval LED lights with Model 60700, grommets provided at the rear step area on the body, one (1) each side shining to the rear. The perimeter scene lights will be activated when the battery switch is on and the parking brake is applied.
0896454	Enhanced Software for Perimeter Lts	**ENHANCED SOFTWARE FOR PERIMETER LIGHTS** All perimeter lights will be deactivated when the parking brake is released unless alternate control is selected. The cab and crew cab perimeter lights will remain on for ten (10) seconds for improved visibility after the doors closed.
0556360	Lights, Step, P25 LED 4lts, Pump Pnl Sw	**STEP LIGHTS** Four (4) white LED step lights will be provided. One (1) step light will be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard. In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. These step lights will be actuated with the pump panel light switch. All other steps on the apparatus will be illuminated per the current edition of NFPA 1901.
0581784	Lights, Side Scene, Wln 9SC0ENZR LED, 2nd	**SIDE SCENE LIGHTS** There will be two (2) Whelen, Model 9SC0ENZR LED scene light(s) with chrome flange installed on the side of the apparatus, One each side of the RS crew cab above the rear facing seat location and one on the RS rear body (around center of rear axle) centered, per AD print.. A control for the light(s) selected above will be the following: a switch at the driver's side switch panel a switch at the passenger's side switch panel no additional switch location no additional switch location These lights may be load managed when the parking brake is set.

0582055	Lights, Side Scene, Wln 9SC0ENZR LED, 1st	**SIDE SCENE LIGHTS** There will be two (2) Whelen, Model 9SC0ENZR LED scene light(s) with chrome flange installed on the side of the apparatus, One each side of the LS crew cab above the rear facing seat location and one on the LS rear body (around center of rear axle) centered per AD print... A control for the light(s) selected above will be the following: a switch at the driver's side switch panel a switch at the passenger's side switch panel no additional switch location no additional switch location These lights may be load managed when the parking brake is set.
0776357	Light, Visor, Wln, 12V P*H2* Pioneer, Cnt Feature, 1st	**12 VOLT LIGHTING** There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC light(s) with a combination of flood and spot optics provided on the front visor, centered. The housing(s) painted parts of this light assembly to be black. The light(s) will be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel. These light(s) may be load managed when the parking brake is applied.
0773172	Lights, Wln, P*H2* Pioneer, 12 VDC, 2nd	**12 VOLT DC SCENE LIGHTS** There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC powered lights with white LEDs and a combination of flood and spot optics located on the pump house Passenger side dunage area. The light(s) to be installed on pull up side mount outside pole length to be 20.00" long with handle holder and sensor connecting the pole to the Do Not Move Truck Indicator circuit. The painted parts of this light assembly to be black. The lights will be activated by a switch at the driver's side switch panel, by a switch at the left side pump panel, by a switch at the passenger's side switch panel and by a switch at the right side pump panel. The light(s) may be load managed when the parking brake is applied.
0773179	Lights, Wln, P*H2* Pioneer, 12 VDC, 1st	**12 VOLT DC SCENE LIGHTS** There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC powered lights with white LEDs and a combination of flood and spot optics located on the pump house On the driver side dunage area.. The light(s) to be installed on pull up side mount outside pole length to be 20.00" long with handle holder and sensor connecting the pole to the Do Not Move Truck Indicator circuit. The painted parts of this light assembly to be black. The lights will be activated by a switch at the driver's side switch panel and by a switch at the left side pump panel. The light(s) may be load managed when the parking brake is applied.
0532358	Not Required, Deck Lights, Other Hose Bed & Rear Lighting	
0645672	Lights, Not Required, Hose Bed, Alt. Pole Lights on Front/Rear Of Body	
0645690	Lights, Rear Scene, Wln, 9SC0ENZR LED, 30" - 102" High	**REAR SCENE LIGHTS** There will be two (2) Whelen, Model 9SC0ENZR, LED scene lights with chrome flanges installed on the rear of the apparatus. These lights will be installed between 30.00" and 102.00" above the ground. The lights will be controlled by a switch at the driver's side switch panel, by a switch at the passenger's side switch panel and by a cup switch at the driver's side rear bulkhead.
0709438	Lights, Walk Surf, FRP Flood, LED	**WALKING SURFACE LIGHT** There will be Model FRP, 4" round black 12 volt DC LED floodlight(s) with bolt mount provided to illuminate the entire designated walking surface on top of the body. The light(s) will be activated when the body step lights are on.
0060111	Pumper, Medium, Galvanneal, 2nd Gen	
0554271	Body Skirt Height, 20"	

0028244		Tank, Water, 500 Gallon, Poly, Med	**WATER TANK** Booster tank will have a capacity of 500 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated. Tank joints and seams will be nitrogen welded inside and out. Tank will be baffled in accordance with the current edition of applicable NFPA standards. Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments. Longitudinal partitions will be constructed of .38" polypropylene plastic and will extend from the bottom of the tank through the top cover to allow for positive welding. Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover. All partitions will interlock and will be welded to the tank bottom and sides. Tank top will be constructed of .50" polypropylene. It will be recessed .38" and will be welded to the tank sides and the longitudinal partitions. Tank top will be sufficiently supported to keep it rigid during fast filling conditions. Construction will include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels will be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes. A sump that will be sized dependent on the tank to pump plumbing will be provided at the bottom of the water tank. Sump will include a drain plug and the tank outlet. Tank will be installed in a fabricated cradle assembly constructed of structural steel. Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel bar channel or rectangular tubing. Tank will "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, will be placed on all horizontal surfaces that the tank rests on. Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle. Mounting system will be approved by the tank manufacturer.
0003405		Overflow, 4.00" Water Tank, Poly	Fill tower will be constructed of .50" polypropylene and will be a minimum of 8.00" wide x 14.00" long. Fill tower will be furnished with a .25" thick polypropylene screen and a hinged cover. An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.
0028104		Foam Cell Required	
0775667	SP	Equipment Storage, Below Hose Bed, HDRP Style, Special Config/Layout, Gasket	**EQUIPMENT STORAGE** An equipment storage deck will be provided below the hose bed floor. Storage area will be configured to accommodate a minimum of: - two backboards on the left side each board is 16"W x 72"L x 2"T. Customer provided stair chair on the right 40"L x 20"W x 8"H The items to be stored within the compartment will be configured as follows within the compartment: - Center rear of body above the B1 compartment. The storage deck will be designed to allow any trapped water to drain toward the front or the rear of the storage area. A gasket will be provided at the rear of the compartment to enclose the area from rear of the storage area to the door at the rear. A lift up door constructed of smooth aluminum with a D-handle latch will be provided at the rear to contain the equipment. A gas strut will be provided at each end of the door to hold it open past 90 degrees.
0553729		Not Required, Restraint, Water Tank, Heavy Duty	
0003429		Not Required, Direct Tank Fill	
0003424		Not Required, Dump Valve	
0048710		Not Required, Jet Assist	
0030007		Not Required, Dump Valve Chute	
0514778		Not Required, Switch, Tank Dump Master	

0126632		Hose Bed, Galv, Pumper	**HOSE BED** The hose bed will be fabricated of 12-gauge galvanneal steel. The sides will not form any portion of the fender compartments. Upper and rear edges of side panels will have a double break for rigidity. The upper inside area of the beavertails will be covered with brushed stainless steel to prevent damage to painted surface when hose is removed. Flooring of the hose bed will be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats will be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.
0723549		Painted Hose Bed	The hose bed interior walls will be painted to match the lower body color.
0003481		Hose Bed Capacity, Special	Hose bed will accommodate 500' of 1.5" Single Jacket wildland hose, 800' of 2.5" DJP, 1000' of 4" DJP, 200' of 2.5"DJP.
0003488		Divider, Hose Bed, Unpainted	**HOSE BED DIVIDER** Two (2) hosebed dividers will be furnished for separating hose. Each divider will be constructed of a .125" brushed aluminum sheet fitted and fastened into a slotted, 1.50" diameter radiused extrusion along the top, bottom, and rear edge. Divider will be fully adjustable by sliding in tracks, located at the front and rear of the hose bed. Divider will be held in place by tightening bolts, at each end. Acorn nuts will be installed on all bolts in the hose bed which have exposed threads.
0010133		Cross-Divider, Hose Bed	A cross-divider will be provided just behind the fill tower. The divider will be bolted to the side sheet.
0080233		Divider, .25", Unpainted	There will be one (1) additional hose bed dividers furnished. Each divider will be constructed of a .25" brushed aluminum sheet. Partition will be fully adjustable by sliding in tracks, located at the front and rear of the hose bed. Divider will be held in place by tightening two (2) bolts, one (1) at each end and located between beds 3 and 4 right next to the ladder compartment. Acorn nuts will be installed on all bolts in the hose bed which have exposed threads. Flat surfaces will be sanded for uniform appearance or constructed of brushed aluminum.
0740440	SP	Hose Restraint, Hose Bed, Vinyl, Top and Rear, Special Bungee, Cam Buckle & Hook	**HOSEBED HOSE RESTRAINT** A red hosebed cover will be provided. It will attach at the front with metal cam buckles and j-hook attachments in the center. Bungee cord and hook attachments at each corner. A bungee cord will be installed down the sides of the vinyl cover to be held with hooks. There will be footman loops and velcro fasteners at the bottom of the rear body sheet below the hosebed. The flap at the rear will be chain weighted.
0013512		Running Boards, 12.75" Deep	**RUNNING BOARDS** Running boards will be fabricated of .125" bright aluminum treadplate. Each running board will be supported by a welded 2.00" square tubing and channel assembly, which will be bolted to the pump compartment substructure. Running boards will be 12.75" deep and spaced .50" away from the pump panel. A splash guard will be provided above the running board treadplate.
0689497		Tailboard, 24" & 8" Deep, T-Shaped, Angled Corners	**TAILBOARD** The tailboard will also be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly. The tailboard area will be 24.00" deep in the center area and 8.00" deep to the rear of the side compartments. The tailboard will be T-shaped. The outboard sides of the tailboard will be angled at 45 degrees beginning at the point where the body meets the tailboard at the outboard edge angling rearward to the rear edge of the tailboard. The exterior side will be flanged down and in for increased rigidity of tailboard structure.
0690037		Wall, Rear, Smooth Aluminum/Body Material	**REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL** The rear facing surfaces of the center rear wall will be smooth aluminum. The bulkheads, the surface to the rear of the side body compartments, will be smooth and the same material as the body. Any inboard facing surfaces below the height of the hosebed will be aluminum diamondplate.
0889713		Tow Eyes, 2G Pumper	**REAR TOW EYES** Two (2) tow eyes, which are an integral part of the body mounting substructure, will be installed below the rear of the truck. The tow eyes will be of adequate strength to allow the truck to be pulled from the eyes.

0888242	SP	Hose Restraint, Running Board, Aluminum Treadplate Cover, Reinforced	**RUNNING BOARD HOSE RESTRAINT** A hinged, bright aluminum treadplate cover will be provided over each hose tray. The cover will have a two (2) Southco C2 lever latches. A stiffener will be provided to reinforce the cover. The latch will secure the cover in the closed position and a mechanical stay arm will hold the cover in the open position. There will be Two (2) hose trays located one (1) in each side running board.
0024110		Tray, Hose, Running Board, 20' of 5.00" Soft Suction Hose	**HOSE TRAY** Two (2) hose trays will be recessed one (1) in each side running board. Capacity of the tray will be 20.00' of 5.00" soft suction hose. Rubber matting will be installed on the floor of the tray to provide proper ventilation. Drain holes will be provided.
0895816		Construction, Compt, Galv, 2G Pumper	**COMPARTMENTATION** Body and compartments will be fabricated of galvanneal steel. Side compartments will be an integral assembly with the rear fenders. Circular fender liners will be provided for prevention of rust pockets and ease of maintenance. Side compartment flooring will be 12-gauge and of the sweep out design, with the floor higher than the compartment door lip. The side compartment door opening will be framed by flanging the edges in 1.75" and bending out again 0.75" to form an angle. Drip protection will be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate, or polished stainless steel. The top of the compartment will be covered with bright aluminum treadplate rolled over the edges on the front, rear, and outward side. These covers will have the corners TIG welded. Side compartment covers will be separate from the compartment tops. Front facing compartment walls will be covered with bright aluminum treadplate. All screws and bolts which protrude into a compartment will have acorn nuts on the ends to prevent injury. **UNDERBODY SUPPORT SYSTEM** Due to the severe loading requirements of this pumper, a method of body and compartment support suitable for the intended load will be provided. The backbone of the support system will be the chassis frame rails, which is the strongest component of the chassis and designed for sustaining maximum loads. The support system will include 0.375" thick steel vertical angle supports bolted to the chassis frame rails with 0.625" diameter bolts. Attached to the bottom of the steel vertical angles will be horizontal angles, with gussets welded to the vertical members, which extend to the outside edge of the body. A steel frame will be mounted on the top of these supports to create a floating substructure, which results in a 500 lb equipment support rating per lower compartment. The steel frames as well as the steel vertical angles will be treated with an epoxy E-coat to provide resistance to corrosion and chemicals as standard. The floating substructure will be separated from the horizontal members with neoprene elastomer isolators. These isolators will reduce the natural flex stress of the chassis from being transmitted to the body. The isolators will have a broad load range, proven viability in vehicular applications, be of a fail safe design and allow for all necessary movement in three (3) transitional and rotational modes. The neoprene isolators will be installed in a modified V three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body. A design with body compartments hanging on the chassis, unsupported, will not be acceptable. **AGGRESSIVE WALKING SURFACE** All exterior surfaces designated as stepping, standing, and walking areas will comply with the required average slip resistance of the current NFPA standards. **LOUVERS** Louvers will be stamped into compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment. Where these louvers are provided, they will be formed into the metal and not added to the compartment as a separate plate. **TESTING OF BODY DESIGN** Body structural analysis will be fully tested. Proven engineering and test techniques such as finite element analysis, strain gauging, and model analysis will be performed with special attention given to fatigue, life and structural integrity of the cab, body and substructure. The body will be tested while loaded to its greatest in-service weight. The criteria used during the testing procedure will include: Raising opposite corners of the vehicle tires 9.00", simulating the twisting a truck may experience when driving over a curb. Making a 90 degree turn while at 20 mph, simulating aggressive driving conditions. Driving the vehicle at 35 mph on a washboard road. Driving the vehicle at 55 mph on a smooth road. Accelerating the vehicle fully, until reaching the approximate speed of 45 mph, on rough pavement. Evidence of actual testing techniques will be made available upon request.

0720760	SP	LS 152" Rollup, Full Height Front & Rear, FDLER, Special 14" Depth Upper Deep	**LEFT SIDE COMPARTMENTATION** The left side compartmentation will consist of three rollup door compartments. A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 34.50" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 14.00" deep in the remaining upper portion. The clear door opening will be a minimum of 28.75" wide x 56.88" high. A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 14.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high. A full height, rollup door compartment behind the rear wheels will be provided.**The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 14.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high.** **The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame.** **Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.**
0693721	SP	RS 152" Rollup, Full Height Frt & Rr, FDLER, Spcl 14" Depth Upper Interior	**RIGHT SIDE COMPARTMENTATION** The right side compartmentation will consist of three rollup door compartments. A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 34.50" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 14.00" deep in the remaining upper portion. The clear door opening will be a minimum of 28.75" wide x 56.88" high. A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 14.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high. A full height, rollup door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 14.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high. The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame. Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.
0692733		Doors, Rollup, Gortite, Side Compartments	**SIDE COMPARTMENT ROLLUP DOOR(S)** There will be six (6) compartment doors installed on the side compartments. The doors will be double faced aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by Gortite®. Lath sections will be an interlocking rib design and will be individually replaceable without complete disassembly of door. Between each slat at the pivoting joint will be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments. Seals will allow door to operate in extreme temperatures ranging from 180 to -40 degrees Fahrenheit. Side, top and bottom seals will be provided to resist ingress of dirt and weather and be made of Santoprene. All hinges, barrel clips and end pieces will be nylon 66. All nylon components will withstand temperatures from 300 to -40 degrees Fahrenheit. A polished stainless steel lift bar to be provided for each roll-up door. Lift bar will be located at the bottom of door and have latches on the outer extrusion of the doors frame. A ledge will be supplied over lift bar for additional area to aid in closing the door. Doors will be constructed from an aluminum box section. The exterior surface of each slat will be flat. The interior surfaces will be concave to provide strength and prevent loose equipment from jamming the door from inside. To conserve space in the compartments, the spring roller assembly will not exceed 3.00" in diameter. The header for the rollup door assembly will not exceed 4.00". A heavy-duty magnetic switch will be used for control of open compartment door warning lights.
0083700		Compt, Rear, Rollup, 37.75" FF, 25.88" D	**REAR COMPARTMENTATION** A roll-up door compartment above the rear tailboard will be provided**.** The interior dimensions of this compartment will be 40.00" wide x 40.63" high x 25.88" deep. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartment will be calculated with the compartment door closed. A louvered, removable access panel will be furnished on the back wall of the compartment. The rear compartment will be open into the rear side compartments. The clear door opening of this compartment will be a minimum of 33.25" wide x 30.88" high. Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

0692746		Door, Gortite, Rollup, Rear Compartment	**ROLLUP REAR COMPARTMENT DOOR** There will be a rear rollup door. The door will be double faced aluminum construction, an anodized satin finish and manufactured by Gortite®. Lath sections will be an interlocking rib design and will be individually replaceable without complete disassembly of door. Between each slat at the pivoting joint will be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments. Seals will allow door to operate in extreme temperatures ranging from 180 to -40 degrees Fahrenheit. Side, top and bottom seals will be provided to resist ingress of dirt and weather and be made of Santoprene. All hinges, barrel clips and end pieces will be nylon 66. All nylon components will withstand temperatures from 300 to -40 degrees Fahrenheit. A polished stainless steel lift bar to be provided for each roll-up door. Lift bar will be located at the bottom of door and have latches on the outer extrusion of the doors frame. A ledge will be supplied over lift bar for additional area to aid in closing the door. Door will be constructed from an aluminum box section. The exterior surface of each slat will be flat. The interior surface will be concave to provide strength and prevent loose equipment from jamming the door from inside. To conserve space in the compartments, the spring roller assembly will not exceed 3.00" in diameter. The header for the rollup door assembly will not exceed 4.00". A heavy-duty magnetic switch will be used for control of open compartment door warning lights.
0554995		No Body Modification Required	
0776727	SP	Scuffplate, Brushed S/S Under Fuel Fill Door, Qty	**SCUFFPLATE(S)** One (1) scuffplate stainless steel scuffplate(s) will be furnished located directly under the fuel fill door(s). The scuffplate will be approximately 6.00" wide x full length to fender crown.
0625184		Guard, Drip Pan, S/S, Rollup Door, Pumper	**DOOR GUARD** There will be seven (7) compartment doors that will include a guard/drip pan designed to protect the rollup door from damage when in the retracted position and contain any water spray. The guard will be fabricated from stainless steel and installed left side rearward compartment, left side over the wheel compartment, left side forward compartment, right side rearward compartment, right side over the wheel compartment, right side forward compartment and rear compartment.
0019845		Guard, Drip Pan, S/S, Rollup Door	**DOOR GUARD** There will be seven (7) compartment doors that will include a guard/drip pan designed to protect the roll-up door from damage when in the retracted position and contain any water spray. The guard will be fabricated from stainless steel and installed LS1, LS2, LS3, RS1, RS2, RS3, B1.
0535355		Pull Strap for Rollup Doors, Special Location, w/ Footman loop	**DOOR PULL STRAPS** six (6) compartment doors will be provided with orange pull straps. LS1, LS2, LS3, RS1, RS2, RS3.. The straps will be located approximately one third high on each compartment. A footman loop will be provided to secure the strap in place.
0616670		Lights, Compt, Pierce LED, Dual Light Strips, Each Side of Door, Pumper/Tanker	**COMPARTMENT LIGHTING** There will be seven (7) compartment(s) with two (2) white 12 volt DC LED compartment light strips. The dual light strips will be centered vertically along each side of the door framing. There will be two (2) light strips per compartment. The dual light strips will be in all body compartment (s). Any remaining compartments without light strips will have a 6.00" diameter Truck-Lite, Model: 79384 light. Each light will have a number 1076 one filament, two wire bulb. Opening the compartment door will automatically turn the compartment lighting on.
0562348		Fasteners, Mechanical, Strip Lighting In Compartments	**COMPARTMENT LIGHTING** Metal clamps will be used to retain the strip lighting in all body compartments.
0691876		Brackets/Clamps, For Strip Lighting In Compartments, IPO Velcro	**BRACKETS/CLAMPS, COMPARTMENT LIGHTS** All LED light strips, in all locations will be mounted with brackets, part #64-0766-0063, in place of the standard Velcro®.
0687146		Shelf Tracks, Painted	**MOUNTING TRACKS** There will be seven (7) sets of tracks for mounting shelf(s) in LS1, LS2, LS3, RS1, RS2, RS3 and B1. These tracks will be installed vertically to support the adjustable shelf(s). The tracks will be painted to match the compartment interior.

0625835		Shelves, Adjustable, 500 lb Capacity, Full Width/Depth, Special Side Height	**ADJUSTABLE SHELVES** There will be nine (9) shelves with a capacity of 500 lb provided. The shelf construction will consist of .188" aluminum painted spatter gray. Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track. The shelves will be held in place by .12" thick stamped plated brackets and bolts. The location will be LS3-1 Upper & 1 Lower, LS2-1, LS1-1 upper & 1-Lower, RS1 1-Upper & 1-Lower, RS3 1-Upper & 1-Lower. The side height of the shelf/shelves will be as follows: Front: 2.00" high Rear: 2.00" high Left & Right Sides: 2.00" high
0647091		Tray, Floor Mounted, Slide-Out, 500lb, 2.00" Sides	**SLIDE-OUT FLOOR MOUNTED TRAY** There will be one (1) floor mounted slide-out tray(s) provided. Each tray will have 2.00" high sides and a minimum capacity rating of 500 lb in the extended position. Each tray will be constructed of aluminum painted spatter gray There will be two undermount-roller bearing type slides rated at 250lb each provided. The pair of slides will have a safety factor rating of 2. To ensure years of dependable service, the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117. To ensure years of easy operation, the slides will require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request. Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand. The location(s) will be B1.
0540317		Toolboard, Swing-out, Alum, .188", Peg Board	**SWING OUT TOOLBOARD** A swing out aluminum toolboard will be provided. It will be a minimum of .188" thick with .203" diameter holes in a pegboard pattern with 1.00" centers between holes. A 1.00" x 1.00" aluminum tube frame will be welded to the edge of the pegboard. The board will be mounted on a pivoting device at the back of the compartment on the top and bottom to allow easy movement in and out of the compartment. The maximum tool load will be 400 pounds. The board will have positive lock in the stowed and extended position. The board will have a D-ring handle to secure it in the stowed position. The board will be mounted on adjustable tracks from front to back within the compartment. There will be One (1) toolboard(s) provided. The toolboard(s) will be spatter gray painted and installed RS2 full height and width.
0726441		Partition, Trans Rear Compt	**PARTITION, TRANSVERSE REAR COMPARTMENT** Two (2) partitions will be bolted in place to separate the left and right side rear compartments from the rear tailboard compartment. The partition will be body material painted spatter gray.
0659383		Matting, Turtle Tile w/Ramp, Compartment Floors	**MATTING, COMPARTMENT FLOOR** Turtle Tile compartment matting will be provided in six (6) compartments on the compartment floor. The locations are, LS1, LS2, LS3, RS1, RS2 & RS3. The Turtle Tile will be black and the leading edge of the matting will include the beveled edge. The beveled edge will be black .
0028026		Matting, Turtle Tile, Compartment Shelving Only	**MATTING, COMPARTMENT SHELVING** Turtle Tile compartment matting will be provided in ten (10) shelves. The locations are, LS1, LS2, LS3, B1, RS1, RS2 & RS3. The color of the Turtle Tile will be black.
0755638		Pegboard, Back Wall Mounted, 3/16" Alum, Full Height Compt	**PEGBOARD** There will be 0.188" thick aluminum pegboard spatter gray painted will be installed on the back wall of two (2) compartments. It will be mounted using two (2) horizontal tracks. Retainers will be used to mount the pegboard to the tracks. The pegboard will be installed on the back wall. The holes will be .203" diameter, punched 1.00" on center. Pegboard will be provided in the following compartments: LS3 and RS3.
0777853	SP	Cover Plate, Toolboard Mounting Bracket, Pair, Painted	**TOOLBOARD MOUNTING BRACKET COVERS** one (1) pair of toolboard mounting bracket cover plates will be provide, one each side, to cover mounting bracket opening. Each cover will be fabricated out of aluminum and painted to match the compartment interior. The covers will be mounted to the toolboard mounting bracket located in RS2.

0027090	Tracks, Equipment Mounting, Horizontal	**MOUNTING TRACKS** There will be two (2) sets of tracks for mounting equipment. These tracks will be installed horizontally on the back wall of the compartment(s). The compartment(s) with mounting tracks will be To be mounted at pick up. for SCBA brackets.
0004016	Rub Rail, Aluminum Extruded, Side of Body	**RUB RAIL** Bottom edge of the side compartments will be trimmed with a bright aluminum extruded rub rail. Trim will be 2.12" high with 1.38" flanges turned outward for rigidity. The rub rails will not be an integral part of the body construction, which allows replacement in the event of damage.
0784811	Fender Crowns, Rear, Stainless, w/Removable Liner	**BODY FENDER CROWNS** Polished stainless steel fender crowns will be provided around the rear wheel openings with a dielectric barrier will be provided between the fender crown and the fender sheet metal to prevent corrosion. The fender crowns will be held in place with stainless steel screws that thread directly into a composite nut and not directly into the parent body sheet metal to eliminate dissimilar metals contact and greatly reduce the chance for corrosion. Rubber welting will be provided between the body and crown. **BODY FENDER LINER** A painted to match the lower body color fender liner will be provided. The liners will be removable to aid in the maintenance of rear suspension components.
0519849	Not Required, Hose, Hard Suction	**HARD SUCTION HOSE** Hard suction hose will not be required.
0626229	Handrails, Side Pump Panels, Per Print	**HANDRAILS** The handrails will be 1.25" diameter knurled aluminum to provide a positive gripping surface. Chrome plated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces. Drain holes will be provided in the bottom of all vertically mounted handrails. Handrails will be provided to meet current edition of applicable NFPA standards. The handrails will be installed as noted on the sales drawing.
0004126	Handrails, Beavertail, Standard	**HANDRAILS** One (1) vertical handrail will be located on each rear beavertail.
0011212	Handrail, Not Required, Rear Hose Bed, Pumper	
0004154	Handrail, Extra - 10" Long	**ADDITIONAL HANDRAIL** Two (2) handrails, 10.00" long, will be mounted on top of DS Stanchion to meet NFPA stepping requirements. The handrail will be constructed out of knurled aluminum.
0004150	Handrail, Extra - 15-20" Long	**ADDITIONAL HANDRAIL** Two (2) handrails will be mounted Mounted at a 45 degree angle on the interior of the rear crew cab doors.. The handrail(s) will be constructed of knurled aluminum.
0636301	Compt, Extinguisher (2) Fender Panel, Triangular Door, 8" Dia	**EXTINGUISHER/AIR BOTTLE/ STORAGE (Triangular)** A total of one (1) extinguisher/air bottle/storage compartments will be provided RS rear of axle.. The triangular shaped compartment will be sized to fit a 8.00" diameter extinguisher in the lower area and a 8.00" diameter extinguisher in the upper area. The compartment will be approximately 25.50" deep. A partition will be provided to separate the compartment. Also inside the compartment, black rubber matting will be provided. The compartment will be furnished with a drain hole. A polished stainless steel, triangular shaped door with a D-Ring latch will be provided to contain the air bottles. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal. **AIR BOTTLE COMPARTMENT STRAP** A strap will be provided in the air bottle compartment(s) to help contain the bottles when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.

0654143		Compt, Air Bottle, Single,Tri Door (DEF/Fuel), Fender Panel	**AIR BOTTLE STORAGE (Single)** A quantity of one air bottle compartment, approximately 7.50" wide x 7.50" tall x 26.00" deep, will be provided on the driver side rearward of the rear wheels. The triangular door will cover the air bottle opening, the DEF tank access, and fuel fill. The compartment will be square with angled corners. A polished stainless steel door with a D-Ring latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal. Inside the compartment, black rubber matting will be provided. **AIR BOTTLE COMPARTMENT STRAP** A strap will be provided in the air bottle compartment to help contain the air bottle when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.
0657522		Compt, Air Bottle, Triple, Fender Panel	**AIR BOTTLE STORAGE (Triple)** A quantity of two (2) air bottle compartments designed to hold (3) air bottles up to 7.25" in diameter x 26.00" deep will be provided on the left side forward of the rear wheels and on the right side forward of the rear wheels. A polished stainless steel door with a D-Ring latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal. Inside the compartment, black rubber matting will be provided. **AIR BOTTLE COMPARTMENT STRAP** A strap will be provided in the air bottle compartment(s) to help contain the air bottles when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.
0045261	SP	Scufftape, Full Circle Around Air Bottle Compt	**SCUFFTAPE AROUND AIR BOTTLE OPENINGS** Vinyl scuff tape will be provided around the entire opening of each air bottle compartment in the fender panels.
0784798	SP	Caulk, Drain, Air Bottle Compt	**CAULK, DRAIN, AIR BOTTLE COMPARTMENT** four (4) air bottle compartment(s) will have all the seams caulked to resist road debris. Drain hole/s will be provided in lowest area of air bottle compartment to allow excess moisture to drain out of compartment.
0004225		Ladder, 24' Duo-Safety 900A 2-Section	**EXTENSION LADDER** There will be a 24' two-section aluminum Duo-Safety Series 900-A extension ladder provided.
0004230		Ladder, 14' Duo-Safety 775A Roof	**ROOF LADDER** There will be a 14' aluminum Duo-Safety Series 775-A roof ladder provided.
0545945		Ladders Btwn Tank & S.Sht, LS, Ext'd Rr, Encl'd Complete, RPH	**LADDER STORAGE** The ladders will be stored between the water tank and the left side compartments. The ladders will extend into the pump compartment just to the rear of the water pump discharges. The ladder storage area will be enclosed as practical by means of sheet metal to protect the ladders from road dirt. The ladders that extend into the pump house will also be enclosed. A black rubber boot will be provided to enclosed the ladders in the gap between the pump house and the body. Each ladder will be stored vertically in a separate stainless steel storage trough. Each stainless steel trough will be lined with Dura-Surf nylon slides. A bright aluminum treadplate enclosure will be provided at the rear of the body to properly contain the ladders This enclosure will extend to the rear of the side body compartments. The enclosure will also include a vertically hinged aluminum treadplate door with a D-handle latch to access the ladders.
0733387		Ladder, 10' Duo-Safety Folding 585A	**FOLDING LADDER** One (1) 10.00' aluminum, Series 585-A, Duo-Safety folding ladder will be installed.
0733796		Trough, Folding Ladder, Ladder Storage Btwn Tank & S.Sht	**FOLDING LADDER STORAGE** There will be storage designated right side for folding ladders stored between the side sheet in a stainless steel trough in the ladder storage compartment.
0606134	SP	Drain, Enclosed Ladder Storage Between Tank and Side Sheet	**LADDER STORAGE DRAIN** A drain hole will be provided just inside the ladder storage door. An AVK will be installed in the bottom of the enclosure. A vinyl drain tube will then be secured to an AVK with a hose clamp to allow any excess water to drain down below the body.
0554060		Pike Pole, 10' Nupla, Fiberglass, YPD-10, Pumper NFPA Classification	**10' PIKE POLE** One (1) pike pole, 10' long with a Nupla Featherlight fiberglass handle will be provided.

0733370		Pike Pole, 6' DUO Safety, Fiberglass	**PIKE POLE, 6'** One (1) pike pole, 6' long Duo Safety with a fiberglass handle, will be provided.
0004361		Tubes, Alum, Pike Pole Storage	**PIKE POLE STORAGE** Aluminum tubing will be used for the storage of two (2) pike poles and will be located in ladder storage compartment. If the head of a pike pole can come in contact with a painted surface, a stainless steel scuffplate will be provided.
0616766	SP	Additional Rub Rail Supports/Spacers	**ADDITIONAL RUB RAIL SUPPORTS** There will be a quantity of two (2) additional rubber spacer supports installed RS1 and LS1 .
0785102		Steps, Folding, Front of Body, Cargo Bed Access, w/LED, Trident	**FOLDING STEPS FRONT OF BODY** Folding steps will be provided full height on the left side and right side body compartments to provide access to the cargo bed. Steps will be spaced evenly on the sales drawing. Actual quantity may vary due to pump panel interferences but will meet the NFPA required maximum stepping height. The Trident steps will be bright finished, non-skid with a luminescent tread coating, that is rechargeable from any light source and can hold a charge for up to 24 hours, on the stepping surface. The step will incorporate an LED light to illuminate the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand.
0592995		Steps, Combo Folding Trident w/LED & Corner, Rear Body	**REAR STEPS** Aluminum treadplate corner steps and bright finished, non-skid folding steps will be provided at the rear. The folding steps will have a a luminescent tread coating, that is rechargeable from any light source and can hold a charge for up to 24 hours,. Each folding step will incorporate an LED light to illuminate the stepping surface. The folding steps can be used as a hand hold with two openings wide enough for a gloved hand. All steps will provide adequate surface for stepping.
0687579	SP	Program, Activate LED Step Lights w/ P.Brake	**PROGRAM** The LED step lights will be wired to activate with the parking brake. The step lights that should be wired to activate with parking brake are located Step lights at the DS front bulkhead and rear of body.
0007575		Pump House, Side Control, 48", Control Zone	**PUMP COMPARTMENT** The pump compartment will be separate from the hose body and compartments so that each may flex independently of the other. The pump compartment will be constructed of the same material as the body compartmentation. The pump compartment substructure will be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards. The pump compartment will be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist. Pump compartment, pump, plumbing and gauge panels will be removable from the chassis in a single assembly. **PUMP MOUNTING** Pump will be mounted to a substructure which will be mounted to the chassis frame rail using rubber isolators. The mounting will allow chassis frame rails to flex independently without damage to the fire pump. **LEFT SIDE PUMP CONTROL PANEL** All pump controls and gauges will be located at the left (driver's) side of the apparatus and properly identified. Layout of the pump control panel will be ergonomically efficient and systematically organized. The pump operator's control panel will be removable in two (2) main sections for ease of maintenance: The upper section will contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable). Sub panels will be removable from the face of the pump panel for ease of maintenance. Below the sub panels will be located all valve controls and line pressure gauges. The lower section of the panel will contain all inlets, outlets, and drains. All push/pull valve controls will have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods will be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls will be capable of locking in any position. The control rods will pull straight out of the panel and will be equipped with universal joints to eliminate binding. **IDENTIFICATION TAGS** The identification tag for each valve control will be recessed in the face of the tee handle. All discharge outlets will have color coded identification tags, with each discharge having its own unique color. Color coding will include the labeling of the outlet and the drain for each corresponding discharge. All line pressure gauges will be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification. The gauge and rod guide casting will be removable from the face of the pump panel for ease of maintenance. The casting will be color coded to correspond with the discharge identification tag. All remaining identification tags will be mounted on the pump panel in chrome plated bezels. The pump panel on the right (passenger's) side will be removable with lift and turn type fasteners. Trim rings will be installed around all inlets and outlets.

0037731	Pump House Structure, Raised, Included with Ladder Storage	
0004425	Pump, Waterous, CSU, 1500 GPM, Single Stage	**PUMP** Pump will be a Waterous CSU, 1500 gpm single (1) stage midship mounted centrifugal type. Pump will be the class "A" type. Pump will deliver the percentage of rated discharge at pressures indicated below: - 100% of rated capacity at 150 psi net pump pressure. - 70% of rated capacity at 200 psi net pump pressure. - 50% of rated capacity at 250 psi net pump pressure. Pump body will be close-grained gray iron, bronze fitted, and horizontally split in two (2) sections for easy removal of the entire impeller shaft assembly (including wear rings). Pump will be designed for complete servicing from the bottom of the truck, without disturbing the pump setting or apparatus piping. Pump case halves will be bolted together on a single horizontal face to minimize chance of leakage and facilitate ease of reassembly. No end flanges will be used. Discharge manifold of the pump will be cast as an integral part of the pump body assembly and will provide a minimum of three (3) 3.50" openings for flexibility in providing various discharge outlets for maximum efficiency. The three (3) 3.50" openings will be located as follows: one (1) outlet to the right of the pump, one (1) outlet to the left of the pump, and one (1) outlet directly on top of the discharge manifold. Impeller shaft will be stainless steel, accurately ground to size. It will be supported at each end by sealed, anti-friction ball bearings for rigid precise support. Impeller will have flame plated hubs assuring maximum pump life and efficiency despite any presence of abrasive matter in the water supply. Bearings will be protected from water and sediment by suitable stuffing boxes, flinger rings, and oil seals. No special or sleeve type bearings will be used.
0004481	Seal, Grafoil, Waterous	**PUMP PACKING** Stuffing boxes will be of the conventional two (2) piece, split-gland type, to permit adjustment or replacement of Grafoil packing without disturbing the pump. Water will be fed into stuffing box lantern rings for proper lubrication and cooling when the pump is operating. Lantern rings will be located at the inner ends of the stuffing boxes, to avoid having to remove them when replacing pump packing. Wear rings will be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.
0816447	Trans, Pump, Waterous C22 Series	**PUMP TRANSMISSION** The pump transmission will be made of a three (3) piece, aluminum, horizontally split casing. Power transfer to pump will be through a high strength Morse HY-VO silent drive chain. By the use of a chain rather than gears, 50% of the sprocket will be accepting or transmitting torque, compared to two (2) or three (3) teeth doing all the work. Drive shafts will be 2.35" diameter hardened and ground alloy steel and supported by ball bearings. The case will be designed to eliminate the need for water cooling.
0635600	Pumping Mode, Stationary Only	**PUMPING MODE** An interlock system will be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system will be designed to allow stationary pumping only.
0605126	Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Waterous	**AIR PUMP SHIFT** Pump shift engagement will be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. A manual back-up shift control will also be located on the left side pump panel. Two (2) indicator lights will be provided adjacent to the pump shift inside the cab. One (1) green light will indicate the pump shift has been completed and be labeled "pump engaged". The second green light will indicate when the pump has been engaged, and that the chassis transmission is in pump gear. This indicator light will be labeled "OK to pump". The pump shift will be interlocked to prevent the pump from being shifted out of gear when the chassis transmission is in gear to meet NFPA requirements. The pump shift control in the cab will be illuminated to meet NFPA requirements.
0003148	Transmission Lock-up, EVS	**TRANSMISSION LOCK-UP** The direct gear transmission lock-up for the fire pump operation will engage automatically when the pump shift control in the cab is activated.
0004547	Auxiliary Cooling System	**AUXILIARY COOLING SYSTEM** A supplementary heat exchange cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the engine water. The heat exchanger will be a separate unit. It will be installed in the pump or engine compartment with the control located on the pump operator's control panel. The exchanger will be plumbed to the master drain valve.

0014486	Not Required, Transfer Valve, Single Stage Pump	
0746501	Valve, Relief Intake, Elkhart	**INTAKE RELIEF VALVE - PUMP** There will be One (1) Elkhart Style 40 relief valve(s) installed on the suction side of the pump preset at 125 psig. The relief valve(s) will have a working range of 75 psi to 250 psi. The outlet will terminate below the frame rails with a 2.50" National Standard hose thread adapter and will have a "do not cap" warning tag. The relief valve pressure control will be located behind behind the right side pump panel with a stainless steel access door .
0692045	Controller, Pressure, FRC, Pump Boss, PBA400	**PRESSURE CONTROLLER** A Fire Research Pump Boss Model PBA400 pressure governor will be provided. A pressure transducer will be installed in the water discharge manifold on the pump. A pressure transducer will be installed in the inlet manifold on the pump The display panel will be located at the pump operator's panel.
0072153	Primer, Trident, Air Prime, Air Operated	**PRIMING PUMP** The priming pump will be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of NFPA 1901. All wetted metallic parts of the priming system are to be of brass and stainless steel construction. One (1) priming control will open the priming valve and start the pump primer.
0780364	Manuals, Pump, (2) Total, Electronic Copies	**PUMP MANUALS** There will be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals will be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual will cover pump operation, maintenance, and parts.
0602512	Plumbing, Stainless Steel and Hose, Single Stage Pump, Control Zone	**PLUMBING, STAINLESS STEEL AND HOSE** All inlet and outlet lines will be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's will be equipped with brass or stainless steel couplings. All stainless steel hard plumbing will be a minimum of a schedule 10 wall thickness. Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping will be equipped with victaulic or rubber couplings. Plumbing manifold bodies will be ductile cast iron or stainless steel. All piping lines are to be drained through a master drain valve or will be equipped with individual drain valves. All drain lines will be extended with a hose to drain below the chassis frame. All water carrying gauge lines will be of flexible polypropylene tubing. All piping, hose and fittings will have a minimum of a 500 PSI hydrodynamic pressure rating.
0795135	Plumbing, Stainless Steel, w/Foam System	**FOAM SYSTEM PLUMBING** All piping that is in contact with the foam concentrate or foam/water solution will be stainless steel. The fittings will be stainless steel or brass. Cast iron pump manifolds will be allowed.
0004645	Inlets, 6.00" - 1250 GPM or Larger Pump	**MAIN PUMP INLETS** A 6.00" pump manifold inlet will be provided on each side of the vehicle. The suction inlets will include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.
0550696	Valve, Waterous Monarch w/Relief, LS Side Inlet, 6", Waterous Handwheel Control	**INLET BUTTERFLY VALVE** One (1) Waterous Monarch inline butterfly valve will be provided on the left side main pump inlet. The 6.00" inlet valve will be partially recessed behind the pump panel with a "key hole" shaped stainless steel trim ring around the opening. A built-in, adjustable pressure relief valve and a bleeder valve will be provided on the inlet side of the valve. A chrome plated handwheel control will be provided on the side pump panel adjacent to the inlet valve. A valve position indicator will be provided, next to the valve control.

0730368	Valve, Ball Intake, TFT, AX Series	**INLET VALVES WITH INTAKE RELIEF VALVE** There will be One (1) Task Force Tips (TFT) AX Series aluminum ball intake valve(s) provided at Passenger side intake. . The inlet connection will be 8NR (4.5" Male Threaded Rigid) with a cap with a matching cap and the outlet connection will be NX (6.0" Threaded Swivel) . There will be an eight-position adjustable 30 degree swiveling detent elbow on the inlet side of the ball intake valve. The ball intake valve will be controlled with a(n) standard crank on the left side . If ball intake valve is to be controlled with a manual handwheel, the handwheel will be controlled with a NFPA compliant slow-close hand wheel. A position indicator will be provided to allow for a quick visualization of the status of the valve in the open, closed or transition position. If the ball intake valve is to be electrically controlled, the ball intake valve will be controlled by a remote panel-mounted push-button switch with LED lights for a quick visualization of the status of the valve in the open, closed or transition position. The push button switch will be mounted on the pump operator's panel. The ball intake valve will be equipped with a standard adjustable pressure relief valve. The relief valve will have a working range of 90 PSI to 300 PSI. A 3/4" TFT bleeder/drain valve will be provided on the ball intake valve to exhaust excess air or water from the valve. For corrosion protection the aluminum casting will have a hard coat anodized finish, with a powder coated internal and external finish. All the components facing the wet side of the valve will be constructed from stainless steel.
0602448	Cap, Main Pump Inlet, Provided by Fire Department, NFPA 2016	**MAIN PUMP INLET CAP PROVIDED BY FIRE DEPARTMENT** NFPA 1901, 2016 edition, section 16.6.8 requires all intakes to be provided with caps or closures capable of withstanding a hydrostatic gauge pressure of 500 psi. The caps are not on the apparatus as manufactured. The fire department will provide both caps for the main pump inlets.
0084610	Valves, Akron 8000 series- All	**VALVES** All ball valves will be Akron® Brass. The Akron valves will be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve. Valves will have a **ten (10) year** warranty.
0016158	Valve, Inlet(s) Recessed, Side Cntrl, "Control Zone"	The location of the valve for the one (1) inlet will be recessed behind the pump panel.
0004700	Control, Inlet, at Valve	**INLET CONTROL** The side auxiliary inlet(s) will incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism will indicate the position of the valve.
0004660	Inlet (1), Left Side, 2.50"	**LEFT SIDE INLET** There will be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet will be provided with a strainer, chrome swivel and plug.
0004680	Inlet, Right Side, 2.50"	**RIGHT SIDE INLET** There will be one (1) auxiliary inlet with a 2.50" valve at the right side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet will be provided with a strainer, chrome swivel and plug.
0092569	No Rear Inlet (Large Dia) Requested	
0064116	No Rear Inlet Actuation Required	
0092696	Not Required, Cap, Rear Inlet	
0009648	No Rear Intake Relief Valve Required on Rear Inlet	
0092568	No Rear Auxiliary Inlet Requested	

0723049	Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle	**INLET BLEEDER VALVE** A 0.75" bleeder valve will be provided for each side gated inlet. The valves will be located behind the panel with a "T" swing style handle control extended to the outside of the panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders will be routed below the chassis frame rails.
0029043	Tank to Pump, (1) 3.00" Valve, 3.00" Plumbing	**TANK TO PUMP** The booster tank will be connected to the intake side of the pump with stainless steel piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line will run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing. A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.
0004905	Outlet, Tank Fill, 1.50"	**TANK REFILL** A 1.50" combination tank refill and pump re-circulation line will be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.
0062133	Control, Outlets, Manual, Pierce HW if applicable	**DISCHARGE OUTLET CONTROLS** The discharge outlets will incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism will indicate the position of the valve. If a handwheel control valve is used, the control will be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel. Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 16.7.5.3.
0004940	Outlet, Left Side, 2.50"	**LEFT SIDE DISCHARGE OUTLETS** There will be Two (2) discharge outlets with a 2.50" valve on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.
0005091	Elbow, Left Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	**LEFT SIDE OUTLET ELBOWS** The 2.50" discharge outlets located on the left side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0092570	Not Required, Outlets, Left Side Additional	
0035094	Not Required, Elbow, Left Side Outlets, Additional	
0004945	Outlet, Right Side, 2.50"	**RIGHT SIDE DISCHARGE OUTLETS** There will be Two (2) discharge outlets with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.
0025091	Elbow, Right Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	**RIGHT SIDE OUTLET ELBOWS** The 2.50" discharge outlets located on the right side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0092571	Not Required, Outlets, Right Side Additional	
0089584	Not Required, Elbow, Right Side Outlets, Additional	
0005047	Outlet, 4" w/4" Right, Handwheel	**LARGE DIAMETER DISCHARGE OUTLET** There will be a 4.00" discharge outlet with a 4.00" Akron valve installed on the right side of the apparatus, terminating with a 4.00" (M) National Standard hose thread adapter. This discharge outlet will be actuated with a handwheel control at the pump operator's control panel. An indicator will be provided to show when the valve is in the closed position.

0649166	Elbow, Large Dia Outlet, 45 Deg, 4.00" FNST x 4.00" MNST, VLH Elbow w/Cap	**LARGE DIAMETER OUTLET ELBOWS** The 4.00" outlet will be furnished with a 4.00" (F) National Standard hose thread x 4.00" (M) National Standard hose thread adapter with a cap and cable. The elbow will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0649939	Outlet, Front, 1.50" w/2" Plumbing	**FRONT DISCHARGE OUTLET** There will be one (1) 1.50" discharge outlet piped to the front of the apparatus and located in the center bumper tray. Plumbing will consist of 2.00" piping and flexible hose with a 2.00" ball valve with control at the pump operator's panel. A fabricated weldment made of stainless steel pipe will be used in the plumbing where appropriate. The piping will terminate with a 1.50" NST with 90 degree stainless steel swivel. There will be automatic drains provided at all low points of the piping.
0092575	Not Required, Outlet, Rear	
0045099	Not Required, Elbow, Rear Outlets	
0092574	Not Required, Outlet, Rear, Additional	
0085695	Not Required, Elbow, Rear Outlets, Large, Additional	
0004990	Outlet, Front HB, 2.50" w/2.50" Plumbing	**FRONT OF HOSE BED DISCHARGE OUTLET** There will be One (1) discharge outlet discharge(s) piped to the front of the hose bed and located passenger side. Plumbing will consist of 2.50" piping with a 2.50" full-flow ball valve controlled at the pump operator's panel. The discharge(s) will terminate with a 2.50" (M) National Standard hose thread adapter.
0752097	Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	**DISCHARGE CAPS/ INLET PLUGS** Chrome plated, rocker lug, caps with chain will be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets. Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size. The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.
0723042	Valve, 0.75" Bleeder, Discharges, "T" Swing Handle	**OUTLET BLEEDER VALVE** A 0.75" bleeder valve will be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application. The valves will be located behind the panel with a T swing style handle control extended to the outside of the side pump panel. The handles will be chrome plated and provide a visual indication of valve position. The T swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders will be located at the bottom of the pump panel. They will be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders will be routed below the chassis frame rails.
0549164	Outlet, 3.00" Deluge w/Akron Model 3406 Electric Riser	**DELUGE RISER** A 3.00" deluge riser will be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping will be rigidly braced and installed securely so no movement develops when the line is charged. The riser will be gated and controlled at the pump operator's panel. Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 16.7.5.3. **TELESCOPIC PIPING** The deluge riser piping will include a 12.00" Akron electrically actuated extender. This extension will be telescopic to allow the deluge gun to be raised 12.00" increasing the range of operation. A position sensor will be provided on the telescopic piping that will activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.
0095958	Deluge Outlet, Special Height/Location	**DELUGE OUTLET SPECIAL INSTRUCTIONS** The deluge gun outlet will be located To enable the deck gun to be rotated 360 degree- mounted `3.00" above cargo wall, as shown on AD.

0072930	Monitor, Akron 3416, 4" FNST Inlet	**MONITOR** An Akron Model 3416 monitor will be properly installed on the deluge riser. The monitor will include both a fixed mounting base and a portable base with one 4.00" FNST inlet. The monitor will be painted to match the body.
0501504	Nozzle, Akron 2499, Quad Tips, 3488 and 5160 Manual Fog	**NOZZLE, DELUGE** Akron model 5160 Akromatic manual pattern, control fog nozzle will be provided. The nozzle will be rated for 250 to 1250 gallons per minute of flow. Also included is an Akron model 2499 quad stacked pyrolite, deluge tips and an Akron 3488 pyrolite stream shaper . The tip sizes will be 1.375", 1.50", 1.75", and 2.00".
0626591	Deluge Mount, 3" ANSI 4 Bolt Flange, Use w/ Akron 3406 Riser	The deluge riser will have a 3.00" four (4)-bolt flange for mounting the monitor.
0723726	Speedlay Module Not Required	
0722432	Hose Restraint Not Required, No Speedlay Module	
0723395	Speedlays, Not Required	
0723394	Speedlays, Not Required	
0029167	Crosslays Sngl Sheet Unpainted, (2+) 1.50", Std. Cap	**CROSSLAY HOSE BEDS** Two (2) crosslays with 1.50" outlets will be provided. Each bed to be capable of carrying 200' of 1.75" double jacketed hose and will be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve. Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus. The crosslay controls will be at the pump operator's panel. The center crosslay dividers will be fabricated of 0.25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish. Vertical scuffplates constructed of stainless steel will be provided at the front and rear ends of the bed on each side of vehicle. Crosslay bed flooring will consist of removable perforated brushed aluminum.
0029196	Not Required, 2.50" Crosslay	
0591145	Hose Restraint, Crosslay/Deadlay, Top/Ends, Elastic Netting	**CROSSLAY/DEADLAY HOSE RESTRAINT** Elastic netting will be provided across the top and ends of two (2) crosslay/deadlay opening(s) to secure the hose during travel. The netting will be permanently attached at the top center of the crosslay/deadlay bed and removable on each end.
0029260	Not Required, Speedlays	
0750536	Hose Restr, Spdly, Not Required, No Spdly	
0019853	Crosslays, 8.00" Lower Than Standard - Control Zone w/9.00" Raised PH	**CROSSLAY 8.00" LOWER THAN STANDARD** The crosslays will be lowered 8.00" from standard.

0624939	Foam Sys, Husky 3, Single Agent, Multi Select Feature	**HUSKY 3 FOAM PROPORTIONER** A Pierce Husky® 3 foam proportioning system will be provided. The Husky 3 is an on demand, automatic proportioning, single point, direct injection system suitable for all types of Class A and B foam concentrates, including the high viscosity (6000 cps), alcohol resistant Class B foams. Operation will be based on direct measurement of water flow, and remain consistent within the specified flows and pressures. The system will automatically proportion foam solution at rates from .1 percent to 3 percent regardless of variations in water pressure and flow, up to the maximum rated capacity of the foam concentrate pump. The design of the system will allow operation from draft, hydrant, or relay operation. **System Capacity** The system will have the ability to deliver the following minimum foam solution flow rates at accuracies that meet or exceed NFPA requirements at a pump rating of 150 psi. 100 gpm @ 3 percent 300 gpm @ 1 percent 600 gpm @ 0.5 percent Class A foam setting in .1 percent increments from .1 percent to 1 percent. Typical settings of 1 percent, .5 percent and .3 percent (maximum capacity will be limited to the plumbing and water pump capacity). **Control System** The system will be equipped with a digital electronic control display located on the pump operators panel. Push button controls will be integrated into the panel to turn the system on/off, control the foam percentage, and to set the operation modes. The percent of injection will have a preset. This preset can be changed at the fire department as desired. The percent of injection will be able to be easily changed at the scene to adjust to changing demands. Three (3) .50 tall LEDs will display the foam percentage in numeric characters. Three (3) indicator LEDs will also be included, one (1) green, one (1) red, and one (1) yellow. The LEDs will indicate various system operation or error states. The indications will be: Solid Green - System On Solid Red - Valve Position Error Solid Yellow - Priming System Flashing Green - Injecting Foam Flashing Red - Low Tank Level Flashing Yellow - Refilling Tank The control display will house a microprocessor, which receives input from the systems water flow meter while also monitoring the position of the foam concentrate pump. The microprocessor will compare the values of the water flow versus the position/rate of the foam pump, to ensure the proportion rate is accurate. One (1) check valve will be installed in the plumbing to prevent foam from contaminating the water pump. **Hydraulic Drive System** The foam concentrate pump will be powered by an electric over hydraulic drive system. The hydraulic system and motor will be integrated into one (1) unit. **Foam Concentrate Pump** The foam concentrate pump will be of positive displacement, self-priming; linear actuated design, driven by the hydraulic system. The pump will be constructed of brass body; chrome plated stainless steel shaft, with a stainless steel piston. In order to increase longevity of the pump, no aluminum will be present in its construction. A relief system will be provided which is designed to protect the drive system components and prevent over pressuring the foam concentrate pump The foam concentrate pump will have minimum capacity for 3 gpm with all types of foam concentrates with a viscosity at or below 6000 cps including protein, fluoroprotein, AFFF, FFFP, or AR-AFFF. The system will deliver only the amount of foam concentrate flow required, without recirculating foam back to the storage tank. Recirculating foam concentrate back to the storage tank can cause agitation and premature foaming of the concentrate, which can result in system failure. The foam concentrate pump will be self-priming and have the ability to draw foam concentrate from external supplies such as drums or pails. **External Foam Concentrate Connection** An external foam pick-up will be provided to enable use of a foam agent that is not stored on the vehicle. The external foam pick-up will be designed to allow continued operation after the on-board foam tank is empty, or the use of foam different than the foam in the foam tank. **Panel Mounted External Pick-Up Connection / Valve** A bronze three (3)-way valve will be provided. The unit will be mounted to the pump panel. The valve unit will function as the foam system tank to pump valve and external suction valve. The external foam pick-up will be one (1) 0.75" male connection GHT (garden hose thread) with a cap. **Pick-Up Hose** A 0.75" flexible hose with an end for insertion into foam containers will be provided. The hose will be supplied with a 0.75" female swivel GHT (garden hose thread) swivel connector. The hose will be shipped loose. **Discharges** The foam system will be plumbed to the center of front bumper, right rear outlet, front crosslay and rear crosslay. **System Electrical Load** The maximum current draw of the electric motor and system will be no more than 55 amperes at 12 VDC.
0012126	Not Required, CAF Compressor	

0592527	Refill, Foam Tank, Integral, Husky 3	**SINGLE FOAM TANK REFILL** The foam system's proportioning pump will be used to fill the foam tank. This will allow use of the auxiliary foam pick-up to pump the foam from pails or a drum on the ground into the foam tank. A foam shut-off switch will be installed in the fill dome of the tank to shut the system down when the tank is full. The fill operation will be controlled by a mode in the foam system controller. While the proportioner pump is filling the tank, the controller will display a flashing yellow LED to indicate that the tank is filling. When the tank is full, as determined by the float switch in the tank dome, the pump will stop and the controller will shut the yellow LED off. If it attempted to use tank fill and the refill valve and suction valve are in the wrong position(s), then a red LED will illuminate to indicate the improper valve position(s). When the valves are positioned properly, then filling will commence.
0031896	Demonstration, Foam System, Dealer Provided	
0005446	Foam Cell, 20 Gallon, Not Reduce Water	**FOAM TANK** The foam tank will be an integral portion of the polypropylene water tank. The cell will have a capacity of 20 gallons of foam with the intended use of Class A foam. The foam cell will not reduce the capacity of the water tank. The foam cell will have a screen in the fill dome and a breather in the lid.
0697589	Drain, 1.00", Foam Tank #1, Husky 3 Foam System, Quarter Turn	**FOAM TANK DRAIN** The foam tank drain will be a 1.00" quarter turn drain valve located inside the pump/plumbing compartment.
0091079	Not Required, Foam Tank #2	
0091112	Not Required, Foam Tank #2 Drain	
0746447	Approval Dwg, All Pump Panel(s), Includes Color And Label Tags	The following drawing(s) will be provided for approval by the customer. The drawing(s) will be made for up One (01) Truck apparatus and/or similar Pierce job number. **PUMP OPERATOR'S PANEL DRAWING** A detailed drawing to scale of the pump operator's panel will be provided for the customer to review. The drawing will include all of the gauges, controls, switching, etc.., located on the pump operator's panel. The customer will be allowed to make changes and/or mark-ups to this approval drawing. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line. The finalized and signed customer approved pump operator's panel drawing will become part of the contract documents. Due to the way drain(s), bleeder(s), operational/maintenance tag(s) and NFPA required warning tag(s) are placed on pump panel(s), these items will NOT be shown on any pump panel approval drawing(s). These item(s) will be placed on pump panel(s) at the fire apparatus manufacturer discretion. **REMAINING PUMP PANEL(S)** Detailed drawing(s) to scale of the remaining pump panel(s) will be provided for the customer to review. The drawing(s) will include all of the gauges, controls, switching, etc.., located on the pump panel(s). The customer will be allowed to make changes and/or mark-ups to these approval drawing(s). The fire apparatus manufacturer will make revisions (If needed) to the drawing(s) per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line. The finalized and signed customer approved pump panel drawing(s) will become part of the contract documents. Due to the way drain(s), bleeder(s), operational/maintenance tag(s) and NFPA required warning tag(s) are placed on pump panel(s), these items will NOT be shown on any pump panel approval drawing(s). These item(s) will be placed on pump panel(s) at the fire apparatus manufacturer discretion. **COLOR CODED TAGS** A detailed drawing/chart of the colors used on all of the inlet(s) and outlet(s) will be provided for the customer to review. The customer will be allowed to make changes and/or mark-ups to this approval drawing/chart. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line. The finalized and signed customer approved drawing/chart of the colors will become part of the contract documents. **SPECIAL TEXT/VERBIAGE TAGS** A detailed drawing/chart of the text/verbiage used on all of the inlet(s) and outlet(s) will be provided for the customer to review. The customer will be allowed to make changes and/or mark-ups to this approval drawing/chart. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line. The finalized and signed customer approved drawing/chart of the text/verbiage will become part of the contract documents.

0032479		Pump Panel Configuration, Control Zone	**PUMP PANEL CONFIGURATION** The pump panel configuration will be arranged and installed in an organized manner that will provide user-friendly operation.
0005525		Material, Pump Panels, Side Control Brushed Stainless	**PUMP AND GAUGE PANEL** The pump and gauge panels will be constructed of stainless steel with a brushed finish. A polished aluminum trim molding will be provided on both sides of the pump panel.
0721765		Panel, Pump Access - Right Side Only, Side Control	**PUMP ACCESS** **Right Side Panel** The right side upper pump panel will be removable. **Panel Fastener** The removable panels will be secured with chrome swell latch . The left side pump panels will be attached with screws. The right side lower pump panel (drain bank) will be attached with screws.
0005945		Light, Pump Compt	**PUMP COMPARTMENT LIGHT** A pump compartment light will be provided inside the right side pump enclosure and accessible through a door on the pump panel. A .125" weep hole will be provided in each light lens, preventing moisture retention.
0586438		Gauges, Engine - Pump Panel, IAT Pressure Controller	**PUMP PANEL GAUGES AND CONTROLS** The following will be provided on the pump and gauge panels in a neat and orderly fashion. These gauges will be in addition to what is provided with the pressure controller. - Engine Oil Pressure Gauge: With visual and audible warning - Engine Water Temperature Gauge: With visual and audible warning - Tachometer: Electric - Master Pump Drain Control - Voltmeter - Fuel
0005601		Throttle, Engine, Incl'd w/Press Controller	
0739224		Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle,Green	**THROTTLE READY GREEN INDICATOR LIGHT** There will be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode.
0549333		Indicators, Engine, Included with Pressure Controller	
0745568		Indicator Light, Pump Panel, Ok To Pump, Green	**OK TO PUMP INDICATOR LIGHT** There will be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode.
0005780		Control, Air Horn At Pmp Pnl, Button	**AIR HORN BUTTON** An air horn control button will be provided at the pump operator's control panel. This button will be properly labeled and put within easy reach of the operator.
0081262		Drains, RS, Keep Area Under Main Inlet Clear	**RIGHT SIDE DRAINS** The drains on the right side pump panel will be located to keep the area under the main pump inlet clear for customer installed piston intake valve.
0066121		Drains, LS, Keep Area Under Main Inlet Clear	**DRAINS, LEFT SIDE** The drains on the left side pump panel will be located to keep the area under the main pump inlet clear for customer installed piston intake valve.
0888193	SP	Drains, Above Runningboards, LS & RS, Except for Both Foam Pump Drains, Special	**DRAINS, ABOVE RUNNING BOARDS, LS & RS** Both the left side and right side drains will be installed above the running boards, on the pump panels, with the exception of the two (2) foam pump drains, which are located next to one another beneath the left side running board and just forward of the hose box.

0005690	Gauges, 6.00" Master, Class 1, 30"-0-600psi	**VACUUM AND PRESSURE GAUGES** The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated ©. The gauges will be a minimum of 6.00" in diameter and will have white faces with black lettering, with a pressure range of 30.00"-0-600#. The pump pressure and vacuum gauges will be installed adjacent to each other at the pump operator's control panel. Test port connections will be provided at the pump operator's panel. One will be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They will have 0.25 in. standard pipe thread connections and polished stainless steel plugs. They will be marked with a label.
0511100	Gauge, 2.00" Pressure, Class 1, 30"-0-400psi	**PRESSURE GAUGES** The individual "line" pressure gauges for the discharges will be Class 1© interlube filled. They will be a minimum of 2.00" in diameter and have white faces with black lettering. Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut. Gauges will have a pressure range of 30"-0-400#. The individual pressure gauge will be installed as close to the outlet control as practical. This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.
0738602	Gauge, Water Level, Class 1, w/ (1) Large Slave & (1) Mini, Remote Module Driver	**WATER LEVEL GAUGE** An electronic master water level gauge will be provided on the operator's panel, mini level gauge inside the cab and an additional level gauge will be located on the left side pump panel. Water levels will be indicated by means of five (5) durable, ultra-bright five LED lights. The standard size (not the mini) level gauges will have a lens design that will be viewable through 180 degrees. The water level indicators will be as follows: - 100% = Green - 75% = Yellow - 50% = Yellow - 25% = Yellow - Refill = Red The light will flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights will flash sequentially when the water tank is empty. The level measurement will be based on the sensing of head pressure of the fluid in the tank. The display will be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design will provide complete protection from water and environmental elements. An industrial pressure transducer will be mounted to the outside of the tank. The field calibratable display measures head pressure to accurately show the tank level. There will be a light driver module included with this installation to power additional water level gauge(s) included on the apparatus. The system(s) will be energized when pump is in gear.
0750438	Water Level Gauge, Wln PSTANK2, LED 1-Light, 4-Level	**WATER LEVEL GAUGE** There will be two (2) additional water level indicator(s), Whelen®, Model PSTANK2, LED module with chrome trim, installed one (1) each side rearward of crew cab doors, locate appropriately off of the rear wall. This light module(s) will include four (4) colored levels, and function similar to the water level indicator located at the operators panel: First green module indicates a full water level Second blue module indicates a water level above 3/4 full Third amber module indicates a water level above 1/2 full Last red module indicates a water level above 1/4 full and empty Above 1/4 this light will be steady burning At empty this light will be flashing The flash rate will be determined by the main water level tank sensor. This module will be activated when the when either the pump is in gear, or the parking brake is applied.
0062992	Gauge, Foam Level, (1) Tank, Class 1, GAAAR 5lt	**FOAM LEVEL GAUGE** An electronic foam level gauge will be provided on the operator's panel that registers foam level by means of five (5) colored LED lights. The lights will be durable, ultra-bright five (5) LED design viewable through 180 degrees. The foam level indicators will be as follows: 100 percent = Green 75 percent = Yellow 50 percent = Yellow 25 percent = Yellow Refill = Red The light will flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights will flash sequentially when the foam tank is empty. The level measurement will be based on the sensing of head pressure of the fluid in the tank. The display will be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design will provide complete protection from foam and environmental elements. An industrial pressure transducer will be mounted to the outside of the tank. The display will be able to be calibrated in the field and will measure head pressure to accurately show the tank level.

0593143	Light Shield/Step 8", LED w/Weldon Step Light	**STEP/LIGHT SHIELD** There will be an aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the pump operators panel. There will be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house. One (1) pump panel light will come on when the pump is in ok to pump mode. There will be a light activated above the pump panel light switch when the parking brake is set. This is to afford the operator some illumination when first approaching the control panel. There will be one (1) Weldon, Model 9186-23882-30 step light provided. The step light will be installed as to illuminate the top of the step. The step light will be activated by the pump panel light switch.
0682499	Light Shield/Step 8", PS LED, Weldon Step Light	**ADDITIONAL STEP/LIGHT SHIELD** There will be an additional aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the passenger's side pump panel. There will be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house. There will be one (1) Weldon, Model 9186-23882-30 step light provided. The step light will be installed as to illuminate the top of the step. The step light will be activated by the pump panel light switch.
0606694	Air Horns, (2) Hadley, 6" Round, eTone, In Bumper	**AIR HORN SYSTEM** Two (2) Hadley®, eTone, chrome air horns will be recessed in the front bumper. The air horn system will be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve will be installed to prevent the loss of air in the brake system.
0606835	Location, Air Horns, Bumper, Each Side, Outside Frame, Outboard (Pos #1 & #7)	**Air Horn Location** The air horns will be located on each side of the bumper, towards the outside.
0036064	Control, Air Horn, Foot Sw	**AIR HORN CONTROL** The air horns will be actuated by one (1) foot switch, located on the driver side of apparatus.
0006133	Siren, Code 3 3692 100W or 200W	**ELECTRONIC SIREN** A Code 3®, Model 3692, electronic siren with noise canceling microphone will be provided. This siren to be active when the battery switch is on and the emergency master switch is on.
0510206	Location, Elect Siren, Recessed Overhead In Console	Electronic siren head will be recessed in the driver side inside switch panel.
0748306	Control, Elec Siren, Multi Select	**ELECTRONIC SIREN CONTROL** The electronic siren will be activated by the following:
0748294	Control, Elec Siren, Ft Sw, LS	The left side foot switch.
0805709	Control, Elec Siren, Horn Ring, Interlock	The steering wheel horn ring with siren/horn selector switch. The control to be available when the emergency master switch is on.
0601374	Speaker, (2) Code 3, PB100C, Chrome	**SPEAKERS** There will be two (2) Code 3®, Model PB100C, speakers with chrome finish provided. Each speaker will be connected to the siren amplifier.
0678617	Location, Speaker, Frt Bumper, Recessed, Right and Left Side Corners	There will be one (1) speaker recessed in the passenger side and one (1) speaker recessed in the driver side of the front bumper. The speakers will be located in the angled corner area of the bumper.
0746353	Not Required, Warning Lights Intensity	

0738567	SP	Lights, Wln, M4*C, RwbWRBWR RWBRWbwR 14lts	**FRONT ZONE UPPER WARNING LIGHTS** There will be 14 Whelen®, Model M4*C, 3.38" high x 5.50" long x 1.38" deep LED flashing warning lights with chrome trim provided on the cab roof. There will be a driver's side and passenger's side housing installed to hold the lights perpendicular to the cab roof and conceal all the wiring. A removable cover will be installed for maintenance. The brackets will be painted the same color as the cab roof. The lights will be installed per the following: One (1) light with red LED's will be installed on the driver's side, side position. One (1) light with blue and white LED's will be installed on the driver's side front corner position. One (1) light with white LED's will be installed on the driver's side first front position. One (1) light with red LED's will be installed on the driver's side second front position. One (1) light with blue LED's will be installed on the driver's side third front position. One (1) light with white LED's will be installed on the driver's side fourth front position. One (1) light with red LED's will be installed on the driver's side fifth front position. One (1) light with red LED's will be installed on the passenger's side fifth front position. One (1) light with white LED's will be installed on the passenger's side fourth front position. One (1) light with blue LED's will be installed on the passenger's side third front position. One (1) light with red LED's will be installed on the passenger's side second front position. One (1) light with white LED's will be installed on the passenger's side first front position. One (1) light with blue and white LED's will be installed on the driver's side front corner position. One (1) light with red LED's will be installed on the passenger's side, side position. The color of the lenses will be clear. There will be a switch in the cab on the switch panel to control the lights. The center four (4) forward facing LED lights may be load managed when the parking brake is applied. The white LED's will be disabled when the parking brake is applied.
0561394		Light, Front Zone, Wln M6*C LED, Clear Lens, 4lts Q Bez, Inside Split Color	**WARNING LIGHTS (Cab Face)** Four (4) Whelen Model M6* LED flashing warning lights will be installed on the cab face, above the headlights, mounted in a common bezel. The driver's side front outside warning light to be red. The driver's side light to be red to the outside and blue to the inside. The passenger's side light to be blue to the outside and red to the inside. The passenger's side front outside warning light to be blue. All four (4) lights will include a clear lens. There will be a switch located in the cab, on the switch panel, to control the four (4) lights. The inside lights may be load managed if colored or disabled if white, when the parking brake is set. If amber is the color feature selected for the inside lights, they will be disabled when the parking brake is released.
0653937		Flasher, Headlight Alternating	**HEADLIGHT FLASHER** The high beam headlights will flash alternately between the left and right side. There will be a switch installed in the cab on the switch panel to control the high beam flash. This switch will be live when the battery switch and the emergency master switches are on. The flashing will automatically cancel when the hi-beam headlight switch is activated or when the parking brake is set.
0898752		Lights, Side Zone Lower, Wln M6#, M6#, M6# Split Color 6Lts	**SIDE ZONE LOWER LIGHTING** There will be six (6) Whelen®, Model M6#, 4.31" high x 6.75" wide x 1.37" deep split color flashing LED warning lights with clear lenses and chrome trim installed per the following: Two (2) lights, one (1) each side on the bumper extension. The left side front light to include blue LEDs to the front with red LEDs to the rear and the right side front light to include blue LEDs to the front with red LEDs to the rear. Two (2) lights, On crew cab to the rear of the crew cab doors.. The left side middle light to include blue LEDs to the front with red LEDs to the rear and the right side middle light to include blue LEDs to the front with red LEDs to the rear. Two (2) lights, centered over the rear axle.. The left side rear light to include red LEDs to the front with blue LEDs to the rear and the right side rear light to include red LEDs to the front with blue LEDs to the rear. There will be a switch in the cab on the switch panel to control the lights. White LEDs will be deactivated when the parking brake is applied.
0895974		Lights, Door Interior Flash, 4 Dr Cab, Wln 3S*00F*R, 3" Round	**INTERIOR CAB DOOR WARNING LIGHTS** There will be four (4) Whelen® Model 3S*00F*R, 3.00" round deep flashing LED warning lights with black trim. One (1) light(s) to include amber flashing LED's on the left side cab door One (1) light(s) to include amber flashing LED's on the right side cab door. One (1) light(s) to include amber flashing LED's on the right side crew cab door. One (1) light(s) to include amber flashing LED's on the left side crew cab door. The lens color(s) to be the same as the LEDs. Each light will be located in the door pan as low and far to the outside as practical.. Each light will be activated when the battery switch is on, respective door is opened and the ignition switch is on.
0815847		Connectors, Door Interior Flash, All Cabs, Weatherproof	**ELECTRICAL CONNECTORS FOR WARNING LIGHTS** The lights shall be installed with a weatherproof insulated crimped connectors in order to provide ease of connection/disconnection of the circuit applied to.

0540783		Lights, Rear Zn Lwr, Wln M6*C LED	**REAR ZONE LOWER LIGHTING** There will be two (2) Whelen®, Model M6*C LED flashing warning lights with chrome trim located at the rear of the apparatus. The driver's side rear light to be red The passenger's side rear light to be red The lenses will be clear. There will be a switch located in the cab on the switch panel to control the lights.
0088745		Light, Rear Zone Up, Wln L31HRFN LED Beacon, Red LED	**REAR/SIDE ZONE UPPER WARNING LIGHTS** There will be two (2) Whelen®, Model L31H*FN, LED warning beacons provided at the rear of the truck, located one (1) each side. There will be a switch located in the cab on the switch panel to control the beacons. The color of the lights will be red LEDs with both domes red.
0006551		Not Required, Lights, Rear Upper Zone Blocking	
0016610		Mounting, Rear Warn Lights, Std Mount, S/S Brackets	The rear warning lights will be mounted on polished stainless steel brackets with all wiring totally enclosed. These brackets will also support the clearance/marker lights.
0791493		Light, Traffic Directing, Wln TAM65 36" Long LED	**TRAFFIC DIRECTING LIGHT** There will be one (1) Whelen® Model TAM65, 36.00" long x 2.87" high x 2.25" deep, amber LED traffic directing light installed at the rear of the apparatus. The Whelen Model TACTL5 control head will be included with this installation. The control head will be energized when the battery switch is on. The auxiliary flash to be activated when the emergency master switch is on.
0529680		Location, Traf Dir Lt, Surface Mounted with Treadplate Box	This traffic directing light will be surface mounted with a treadplate box at the rear of the apparatus.
0530288		Location, Traf Dir Lt Controller, Overhead Recessed Console, above Eng Tnl DS	The traffic directing light controller will be located within the overhead recessed console above the engine tunnel on the driver's side.
0809558		Inverter, Xantrex XPower 450, Rated @ 337W	**INVERTER** There will be a Xantrex Model XPower 450, 12 volt DC to 120 volt AC inverter with an external transfer relay provided. There will be battery switched power, through proper fusing, to 12 volt DC threaded studs installed adjacent to the inverter for the power input connection. The inverter 120 volt AC output will be connected to an external transfer relay. The transfer relay will be actuated whenever the 120 volt AC shoreline is connected. When the shoreline is connected to the truck, the external transfer relay will allow AC shoreline power to pass to the VAC loads connected to the inverter. The inverter connected VAC loads will be energized under the following conditions: When the battery switch is on. When the battery switch is on and the 120V AC shoreline is connected. When the battery switch is off and the 120V AC shoreline is connected. The inverter will be de-energized when the battery switch is off. This inverter will be rated at 337 watts to meet NFPA requirements.
0814953		Location, Body, Inverter, LS Forward Compartment	**INVERTER LOCATION** The Inverter will be located in the left side forward body compartment located on the left wall as high as practical.
0889570	SP	Approved, Inverter	
0780244		Receptacle, 15/20A 120V 3-Pr 3-Wr SB Dup, GFCI	**120 VOLT RECEPTACLE** There will be one (1), 15/20 amp 120 volt AC three (3) wire straight blade duplex GFCI receptacle (s) with exterior flip up cover(s) installed recessed on the cabinet on the rear engine tunnel on officer side . The NEMA configuration for the receptacles will be 5-20R. The receptacle(s) will be powered from the on board 12 volt DC to 120 volt AC power inverter. There will be a label installed near the receptacle(s) that state the following: Line Voltage Current Ratting (amps) Phase Frequency
0519934		Not Required, Brand, Hydraulic Tool System	

0007150	Bag of Nuts and Bolts	**LOOSE EQUIPMENT** The following equipment will be furnished with the completed unit: One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.
0602516	NFPA Required Loose Equipment, Pumper, NFPA 2016, Provided by Fire Department	**NFPA REQUIRED LOOSE EQUIPMENT PROVIDED BY FIRE DEPARTMENT** The following loose equipment as outlined in NFPA 1901, 2016 edition, section 5.9.3 and 5.9.4 will be provided by the fire department. 800 ft (60 m) of 2.50" (65 mm) or larger fire hose. 400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose. One (1) handline nozzle, 200 gpm (750 L/min) minimum. Two (2) handline nozzles, 95 gpm (360 L/min) minimum. One (1) smoothbore of combination nozzle with 2.50" shutoff that flows a minimum of 250 gpm. One (1) SCBA complying with NFPA 1981 for each assigned seating position, but not fewer than four (4), mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer. One (1) spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space(s). One (1) first aid kit. Four (4) combination spanner wrenches. Two (2) hydrant wrenches. One (1) double female 2.50" (65 mm) adapter with National Hose threads. One (1) double male 2.50" (65 mm) adapter with National Hose threads. One (1) rubber mallet, for use on suction hose connections. Two (2) salvage covers each a minimum size of 12 ft x 14 ft (3.7 m x 4.3 m). One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, *Standard for High Visibility Public Safety Vests*, and have a five-point breakaway feature that includes two (2) at the shoulders, two (2) at the sides, and one (1) at the front. Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band. Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities. One (1) automatic external defibrillator (AED). Four (4) ladder belts meeting the requirements of NFPA 1983, *Standard on Fire Service Life Safety Rope and System Components* (if equipped with an aerial device). If the supply hose carried does not use sexless couplings, an additional double female adapter and double male adapter, sized to fit the supply hose carried, will be carried mounted in brackets fastened to the apparatus. If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side will be carried. Any intake connection larger than 3.00" (75 mm) will include a pressure relief device that meets the requirements of 16.6.6. If the apparatus does not have a 2.50" National Hose (NH) intake, an adapter from 2.50" NH female to a pump intake will be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake. If the supply hose carried has other than 2.50" National Hose (NH) threads, adapters will be carried to allow feeding the supply hose from a 2.50" NH thread male discharge and to allow the hose to connect to a 2.50" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake.
0077022	Hose, 5" Soft Suction-w/4.5" Coupling 15ft lng	**SOFT SUCTION HOSE** There will be a 15 foot length of 5.00" soft suction hose provided with a 4.50" long handle swivel coupling on one (1) end and a 4.50" long handle swivel coupling on the other.
0027023	No Strainer Required	
0584119	Extinguisher, 20 lb Dry Chemical, 80-B:C Rating	**DRY CHEMICAL EXTINGUISHER** There will be One (1) extinguisher, 20 lb, dry chemical extinguisher(s) with a 80-B:C rating provided.
0533277	Extinguisher, 2.5 Gal. Pressurized Water	**WATER EXTINGUISHER** One (1) extinguisher,, 2.50 gallon pressurized water, will be provided.
0007125	Axes, (2) Flathead w/Fiberglass Handle	**FLATHEAD AXES** There will be two (2) axes provided. Each axe will be a flathead axe with a fiberglass handle and blade shield.
0591378	Axe, (1) Pickhead w/Fiberglass Handle	**PICKHEAD AXE** There will be one (1) axe provided. The axe will be a pickhead axe with a fiberglass handle and pick cover.

0741569	Paint Process / Environmental Requirements, Appleton	**PAINT PROCESS** The exterior custom cab and body painting procedure will consist of a seven (7) step finishing process as follows: Manual Surface Preparation - All exposed metal surfaces on the custom cab and body will be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces will be removed and sanded to a smooth finish. Exterior seams will be sealed before painting. Exterior surfaces that will not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate. Chemical Cleaning and Pretreatment - All surfaces will be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces will be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces will be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion. Surfacer Primer - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective basecoat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a Critical aesthetic finish. The Surfacer Primer is a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded. Finish Sanding - The Surfacer Primer will be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat. Sealer Primer - The Sealer Primer is applied prior to the Basecoat in all areas that have not been previously primed with the Surfacer Primer. The Sealer Primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when topcoated. Basecoat Paint - Two coats of a high performance, two component high solids polyurethane basecoat will be applied. The Basecoat will be applied to a thickness that will achieve the proper color match. The Basecoat will be used in conjunction with a urethane clear coat to provide protection from the environment. Clear Coat - Two (2) coats of Clear Coat will be applied over the Basecoat color. The Clear Coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style and roll-up doors will be Clear Coated to match the body. Paint warranty for the roll-up doors will be provided by the roll-up door manufacturer. After the cab and body are painted, the color will be verified to make sure that it matches the color standard. Electronic color measuring equipment will be used to compare the color sample to the color standard entered into the computer. Color specifications will be used to determine the color match. A Delta E reading will be used to determine a good color match within each family color. All removable items such as brackets, compartment doors, door hinges, and trim will be removed and painted separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly will be finish painted before assembly. The paint finish quality levels for critical areas of the apparatus (cab front and sides, body sides and doors, and boom lettering panels) are to meet or exceed Cadillac/General Motors GMW15777 global paint requirements. Orange peel levels are to meet or exceed the #6 A.C.T.standard in critical areas. The manufacture's written paint standards will be available upon request. **Environmental Impact** Contractor will meet or exceed all current state regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions: Topcoats and primers will be chrome and lead free. Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals. Particulate emission collection from sanding operations will have a 99.99 percent efficiency factor. Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter is used, it will have an efficiency rating of 98 percent. Water wash systems will be 99.97 percent efficient Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean. Paint wastes are disposed of in an environmentally safe manner. Empty metal paint containers will be recycled to recover the metal. Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse. Additionally, the finished apparatus will not be manufactured with or contain products that have ozone depleting substances. Contractor will, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with his state EPA rules and regulations.
0709846	Paint, Two-Tone Color, Velocity/Impel	**CAB TWO-TONE PAINT** The cab will be painted two-tone, with the upper section painted #20 white and the lower section painted #117 RED, same as previous job 37138.. There will be a standard two-tone cab paint break provided. There will be no cab shield provided.
0709845	Paint, Single Color, Body	**BODY PAINT** The body will be painted to match the lower section of the cab.

0646897	Paint Chassis Frame Assy, E-Coat, Standard	**PAINT CHASSIS FRAME ASSEMBLY** The chassis frame assembly will be finished with a single system black top coat before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc. Components treated with epoxy E-coat protection prior to paint: Two (2) C-channel frame rails Components that are included with the chassis frame assembly that will be painted not e-coated are: Cross members Axles Suspensions Steering gear Battery boxes Bumper extension weldment Frame extensions Body mounting angles Rear Body support substructure (front and rear) Pump house substructure Air tanks Steel fuel tank Castings Individual piece parts used in chassis and body assembly The E-coat process will meet the technical properties shown.
0693798	Paint, Front Wheels	**PAINT, FRONT WHEELS** All wheel surfaces, inside and outside, will be provided with paint red #117.
0693793	Paint, Rear Wheels, Single Axle	**PAINT, REAR WHEELS** All wheel surfaces, inside and outside, will be provided with paint red #117. Powder Coat Aluminum Paint Color
0733739	Paint, Axle Hubs	**AXLE HUB PAINT** All axle hubs will be painted to match lower job color.
0007230	Compartment, Painted, Spatter Gray	**COMPARTMENT INTERIOR PAINT** The interior of all compartments will be painted with a gray spatter finish for ease of cleaning and to make it easier to touch up scratches and nicks.
0544129	Reflective Band, 1"-6"-1"	**REFLECTIVE STRIPES** Three (3) reflective stripes will be provided across the front of the vehicle and along the sides of the body. The reflective band will consist of a 1.00" white stripe at the top with a 1.00" gap then a 6.00" white stripe with a 1.00" gap and a 1.00" white stripe on the bottom.
0510041	Reflective across Cab Face, Imp/Vel	The reflective band provided on the cab face will be below the headlights on the fiberglass.
0536954	Stripe, Chevron, Rear, Diamond Grade, Pumper	**REAR CHEVRON STRIPING** There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The rear surface, excluding the rear compartment door, will be covered. The colors will be red and fluorescent yellow green diamond grade. Each stripe will be 6.00" in width. This will meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface will be covered with chevron striping.
0027341	Jog, In Reflective Stripe, Single or Multiple	**JOG(S) IN REFLECTIVE BAND** The reflective band located on each side of the apparatus body will contain one (1) jog(s) and will be angled at approximately a 45 degrees when installed.

0545179		Stripe, Diamond Grade, Chevron, Front Bumper	**CHEVRON STRIPING ON THE FRONT BUMPER** There will be alternating chevron striping located on the front bumper. The colors will be fluorescent yellow green and red diamond grade. The size of the striping will be 6.00".
0065687		Stripe, Reflective, Cab Doors Interior	**CAB DOOR REFLECTIVE STRIPE** A 6.00" x 16.00" white reflective stripe will be provided across the interior of each cab door. The stripe will be located approximately 1.00" up from the bottom, on the door panel. This stripe will meet the NFPA 1901 requirement.
0027372		Lettering Specifications, (GOLD STAR Process)	**LETTERING** The lettering will be totally encapsulated between two (2) layers of clear vinyl.
0686434		Lettering, Gold Leaf, 3.00", (21-40)	**LETTERING** Twenty-one (21) to forty (40) genuine gold leaf lettering, 3.00" high, with outline and shade will be provided.
0685978		Lettering, Reflective, 18.00", Each	**LETTERING** There will be reflective lettering, 18.00" high, with outline and shade provided. There will be one (1) letter provided.
0685981		Lettering, Reflective, 14.00", Each	**LETTERING** There will be reflective lettering, 14.00" high, with outline and shade provided. There will be two (2) letters provided.
0686002		Lettering, Reflective, 8.00", Each	**LETTERING** There will be reflective lettering, 8.00" high, with outline and shade provided. There will be one (1) letter provided.
0686018		Lettering, Reflective, 5.00", Each	**LETTERING** There will be reflective lettering, 5.00" high, with outline provided. There will be six (6) letters provided.
0686033		Lettering, Reflective, 4.00", Each	**LETTERING** There will be reflective lettering, 4.00" high, with outline provided. There will be 12 letters provided.
0686042		Lettering, Reflective, 2.00", Each	**LETTERING** There will be reflective lettering, 2.00" high, with outline provided. There will be 14 letters provided.
0686256		Lettering, Gold Leaf, 4.00", Each	**LETTERING** There will be genuine gold leaf lettering, 4.00" high, with outline and shade provided. There will be eight (8) letters provided.
0026526		Lettering, Reflective, "Emergency Dial 911", Pair	**REFLECTIVE LETTERING, "EMERGENCY DIAL 911"** A pair of 5.00" high white, reflective decal "EMERGENCY Dial 911" will be installed at Inset into the scl/s on D1/P1.
0660881	SP	Emblem, Monogram,Goldleaf, City of Flagstaff, pair	**EMBLEMS** one (1) pair of gold leaf monogram emblem(s) will be installed Located on cab doors. The emblems will contain up to three (3) letters and match those made for previous units.

0772003	Manual, Fire Apparatus Parts, USB Flash Drive, Custom	**FIRE APPARATUS PARTS MANUAL** There will be one (1) custom parts manual(s) in USB flash drive format for the complete fire apparatus provided. The manual(s) will contain the following: Job number Part numbers with full descriptions Table of contents Parts section sorted in functional groups reflecting a major system, component, or assembly Parts section sorted in alphabetical order Instructions on how to locate parts Each manual will be specifically written for the chassis and body model being purchased. It will not be a generic manual for a multitude of different chassis and bodies. **Service Parts Internet Site** The service parts information included in these manuals are also available on the Pierce website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.
0002905	Manuals, (2) Chassis Service, Custom	**MANUALS, CHASSIS SERVICE** Two (2) chassis service manuals containing parts and service information on major components will be provided with the completed unit. The manuals will contain the following sections: - Job number - Table of contents - Troubleshooting - Front Axle/Suspension - Brakes - Engine - Tires - Wheels - Cab - Electrical, DC - Air Systems - Plumbing - Appendix The manual will be specifically written for the chassis model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.
0773381	Manual, Chassis Operation, (1) USB Flash Drive, Custom	**CHASSIS OPERATION MANUAL** The chassis operation manual will be provided on one (1) USB flash drive.
0030008	Warranty, Basic, 1 Year, Apparatus, WA0008	**ONE (1) YEAR MATERIAL AND WORKMANSHIP** A Pierce basic apparatus limited warranty certificate, WA0008, is included with this proposal.
0611136	Warranty, Chassis, 3 Year, Velocity/Impel, WA0284	**THREE (3) YEAR MATERIAL AND WORKMANSHIP** The Pierce custom chassis limited warranty certificate, WA0284, is included with this proposal.
0696698	Warranty, Engine, Cummins, 5 Year, WA0181	**ENGINE WARRANTY** A Cummins **five (5) year** limited engine warranty will be provided. A limited warranty certificate, WA0181, is included with this proposal.
0684953	Warranty, Steering Gear, Sheppard M110, 3 Year WA0201	**STEERING GEAR WARRANTY** A Sheppard **three (3) year** limited steering gear warranty will be provided. A copy of the warranty certificate will be submitted with the bid package.
0595767	Warranty, Frame, 50 Year, Velocity/Impel, WA0038	**FIFTY (50) YEAR STRUCTURAL INTEGRITY** The Pierce custom chassis frame and crossmembers limited warranty certificate, WA0038, is included with this proposal.
0595698	Warranty, Axle, 3 Year, TAK-4, WA0050	**FRONT AXLE THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY** The Pierce TAK-4 suspension limited warranty certificate, WA0050, is included with this proposal.
0733306	Warranty, Single Axle, 5 Year, Meritor, General Service, WA0384	**SINGLE REAR AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY** A Meritor™ Axle 5 year limited warranty will be provided.
0652758	Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	**ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY** A Meritor Wabco™ ABS brake system limited warranty certificate, WA0232, is included with this proposal.

0019914	Warranty, Structure, 10 Year, Custom Cab, WA0012	**TEN (10) YEAR STRUCTURAL INTEGRITY** The Pierce custom cab limited warranty certificate, WA0012, is included with this proposal.
0744240	Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	**TEN (10) YEAR PRO-RATED PAINT AND CORROSION** A Pierce cab limited pro-rated paint warranty certificate, WA0055, is included with this proposal.
0524627	Warranty, Electronics, 5 Year, MUX, WA0014	**FIVE (5) YEAR MATERIAL AND WORKMANSHIP** The Pierce Command Zone electronics limited warranty certificate, WA0014, is included with this proposal.
0695416	Warranty, Pierce Camera System, WA0188	**CAMERA SYSTEM WARRANTY** A Pierce fifty four (54) month**warranty will be provided for the camera system.**
0647720	Warranty, Pierce LED Strip Lights, WA0203	**COMPARTMENT LIGHT WARRANTY** The Pierce 12 volt DC LED strip lights limited warranty certificate, WA0203, is included with this proposal.
0046369	Warranty, 5-year EVS Transmission, Standard Custom, WA0187	**TRANSMISSION WARRANTY** The transmission will have a **five (5) year/unlimited mileage** warranty covering 100 percent parts and labor. The warranty will be provided by Allison Transmission. Note: The transmission cooler is not covered under any extended warranty you may be getting on your Allison Transmission. Please review your Allison Transmission warranty for coverage limitations.
0685945	Warranty, Transmission Cooler, WA0216	**TRANSMISSION COOLER WARRANTY** The transmission cooler will carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty will also be in effect for the first three (3) years of the warranty coverage and will not exceed $10,000 per occurrence. A copy of the warranty certificate will be submitted with the bid package.
0688798	Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	**WATER TANK WARRANTY** A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.
0596025	Warranty, Structure, 10 Year, Body, WA0009	**TEN (10) YEAR STRUCTURAL INTEGRITY** The Pierce apparatus body limited warranty certificate, WA0009, is included with this proposal.
0693127	Warranty, Gortite, Roll-up Door, 6 Year, WA0190	**ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY** A Gortite roll-up door limited warranty will be provided. The mechanical components of the roll-up door will be warranted against defects in material and workmanship for the lifetime of the vehicle. A **six (6) year** limited warranty will be provided on painted and satin roll up doors. The limited warranty certificate, WA0190, is included with this proposal.
0734463	Warranty, Pump, Waterous, 7 Year Parts, WA0382	**PUMP WARRANTY** The Waterous pump will be provided with a Seven (7) year**material and workmanship limited warranty.** **A copy of the warranty certificate will be submitted with the bid package (no exception).**
0648675	Warranty, 10 Year S/S Pumbing, WA0035	**TEN (10) YEAR PUMP PLUMBING WARRANTY** The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.
0657990	Warranty, Foam System, Husky 3, WA0231	**FOAM SYSTEM WARRANTY** The Husky 3 foam system limited warranty certificate, WA0231, is included with this proposal.
0595820	Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	**TEN (10) YEAR PRO-RATED PAINT AND CORROSION** A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.
0595421	Warranty, Goldstar, 3 Year, Apparatus, WA0018	**THREE (3) YEAR MATERIAL AND WORKMANSHIP** The Pierce Goldstar gold leaf lamination limited warranty limited warranty certificate, WA0018, is included with this proposal.

0683627	Certification, Vehicle Stability, CD0156	**VEHICLE STABILITY CERTIFICATION** The fire apparatus manufacturer will provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability. The certification will be provided at the time of bid.
0808577	Certification, Engine Installation, Velocity, Cummins X15, 2027	**ENGINE INSTALLATION CERTIFICATION** The fire apparatus manufacturer will provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification will be provided at the time of delivery.
0686786	Certification, Power Steering, CD0098	**POWER STEERING CERTIFICATION** The fire apparatus manufacturer will provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification will be provided at the time of bid.
0892701	Certification, Cab Integrity, Impel/Velocity FR, CD0190	**CAB INTEGRITY CERTIFICATION** The fire apparatus manufacturer will provide a cab crash test certification with this proposal. The certification will state that a specimen representing the substantial structural configuration of the cab has been tested and certified by an independent third party test facility. Testing events will be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer will provide a state licensed professional engineer to witness and certify all testing events. Testing will meet or exceed the requirements below: SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks. European Occupant Protection Standard ECE Regulation No.29. SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks. **Side Impact** The cab will be subjected to dynamic preload where a 14,320-lbs moving barrier is slammed into the side of the cab at 5.50 mph, striking with an impact of 13,000 ft-lbs of force. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab will see in a rollover incident. **Roof Crush** The same cab will be subjected to a roof crush force of 22,050 lbs. This value meets the ECE 29 criteria, and is equivalent to the front axle rating up to a maximum of ten (10) metric tons. **Additional Roof Crush** The same cab will be subjected to a roof crush force of 100,000 lbs. (Four and a half times the load criteria of ECE 29) **Frontal Impact** The same cab will withstand a frontal impact of 32,600 ft-lb of force using a moving barrier in accordance with SAE J2420. **Additional Frontal Impact** The same cab will withstand a frontal impact of 65,200 ft-lb of force using a moving barrier. (Twice the force required by SAE J2420) The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area. There will be no exception to any portion of the cab integrity certification. Nonconformance will lead to immediate rejection of bid.
0548950	Certification, Cab Door Durability, Velocity/Impel, CD0001	**CAB DOOR DURABILITY CERTIFICATION** Robust cab doors help protect occupants. Cab doors will survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder will certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.
0548967	Certification, Windshield Wiper Durability, Impel/Velocity, CD0005	**WINDSHIELD WIPER DURABILITY CERTIFICATION** Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers will survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 *Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles.* The bidder will certify that the wiper system design has been tested and that the wiper system has met these criteria.
0667411	Certification, Electric Window Durability, Velocity/Impel FR, CD0004	**ELECTRIC WINDOW DURABILITY CERTIFICATION** Cab window roll-up systems can cause maintenance problems if not designed for long service life. The window regulator design will complete 30,000 complete up-down cycles and still function normally when finished. The bidder will certify that sample doors and windows similar to those provided on the apparatus have been tested and have met these criteria without malfunction or significant component wear.

0549273	Certification, Seat Belt Anchors and Mounting, Imp/Vel/Vel SLT, CD0018	**SEAT BELT ANCHOR STRENGTH** Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design will withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder will certify that each anchor design was pull tested to the required force and met the appropriate criteria. **SEAT MOUNTING STRENGTH** Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design will be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder will certify that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.
0735950	Certification, Cab HVAC System Perf, Vel/Imp FR, CD0166/CD0168/CD0176/CD0177	**PERFORMANCE CERTIFICATIONS** **Cab Air Conditioning** Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene. The cab air conditioning system will cool the cab from a heat-soaked condition at 100 degrees Fahrenheit to an average of 78 degrees Fahrenheit in 30 minutes. The bidder will certify that a substantially similar cab has been tested and has met these criteria. **Cab Defroster** Visibility during inclement weather is essential to safe apparatus performance. The defroster system will clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And Multipurpose Vehicles.*The bidder will certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.* ***Cab Auxiliary Heater*** *Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. An auxiliary cab heater will warm the cab 77 degrees Fahrenheit from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder will certify, at time of delivery, that a substantially similar cab has been tested and has met these criteria.*
0545073	Amp Draw Report, NFPA Current Edition	**AMP DRAW REPORT** The bidder will provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system. The manufacturer of the apparatus will provide the following: Documentation of the electrical system performance tests. A written load analysis, which will include the following: The nameplate rating of the alternator. The alternator rating under the conditions specified per: Applicable NFPA 1901 or 1906 (Current Edition). The minimum continuous load of each component that is specified per: Applicable NFPA 1901 or 1906 (Current Edition). Additional loads that, when added to the minimum continuous load, determine the total connected load. Each individual intermittent load. All of the above listed items will be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).
0002758	Amp Draw, NFPA/ULC Radio Allowance	
0799248	Appleton/Florida BTO	
0000018	PUMPER, 2ND GEN	
0000012	PIERCE CHASSIS	
0004713	ENGINE, OTHER	
0046396	EVS 4000 Series TRANSMISSION	
0020011	WATEROUS PUMP	
0020009	POLY TANK	
0028048	FOAM SYSTEM	

0020006	SIDE CONTROL
0020007	AKRON VALVES
0020015	ABS SYSTEM
0658751	PUMPER BASE

Option List

9/15/2023

Customer:	FLAGSTAFF FIRE DEPARTMENT	**Bid Number:**	764
Representative	McDonald, Ed	**Job Number:**	
Organization:	Hughes Fire Equipment, Inc	**Number of Units:**	1
Requirements Manager:		**Bid Date:**	07/31/2023
Description:	Flagstaff Velocity Pumper-Dupe 38910	**Stock Number:**	
Body:	Pumper, Medium, Galvanneal, 2nd Gen	**Price Level:**	46 (Current: 46)
Chassis:	Velocity Chassis (Big Block), 2010	**Lane:**	Lane 2

Line	Option	Type	Option Description	Qty
1	0766611		Boiler Plates, Pumper	1
			Fire Department/Customer - City of Flagstaff Operating/In conjunction W-Service Center - Operating Miles - 25 Miles Number of Fire Dept/Municipalities - 25 Bidder/Sales Organization - Hughes Fire Equipment Delivery - Delivery representative Dealership/Sales Organization, Service - Hughes Fire Equipment	
2	0661794		Single Source Compliance	1
3	0584456		Manufacture Location, Appleton, Wisconsin	1
4	0584452		RFP Location: Appleton, Wisconsin	1
5	0588609		Vehicle Destination, US	1
6	0670275		Unit to be Similar in some Aspects, Excluding Pump Panel	1
			Fill in Blank - Unit to match as close as possible to previous unit Job # 37138	
7	0610784		Comply NFPA 1901 Changes Effective Jan 1, 2016, With Exceptions	1
8	0533347		Pumper/Pumper with Aerial Device Fire Apparatus	1
9	0588611		Vehicle Certification, Pumper	1
10	0661778		Agency, Apparatus Certification, Pumper/Tanker, U.L.	1
11	0891947		Certification, Vehicle Inspection Program, NFPA 1901	1
12	0000114		Inspection Trip(s)	2
			Qty, - 02 Fill in Blank - four (4)	
13	0536644		Customer Service Website	1
14	0766110		Consortium, Sourcewell	1
15	0537375		Unit of Measure, US Gallons	1
16	0529326		Bid Bond, 10%, Pierce Built Chassis	1
17	0816574		Performance Bond, 100% with Warranty Bond, 1 Yr, and Payment Bond, PPI Terms	1
			Percentage, Contract - 100	
18	0000007		Approval Drawing	1
19	0002928		Electrical Diagrams	1
20	0564202		Velocity Chassis (Big Block), 2010	1
21	0000110		Wheelbase	1
			Wheelbase - 187.50 inches	
22	0000070		GVW Rating	1
			GVW rating - 49,800	
23	0000203		Frame Rails, 13.38 x 3.50 x .375, Qtm/AXT/Imp/Vel/DCF	1
24	0020018		Frame Liner Not Req'd	1
25	0508849		Axle, Front, Oshkosh TAK-4, Non Drive, 22,800 lb, Imp/Vel	1
26	0010427		Suspension, Front TAK-4, 22,800 lb, Qtm/AXT/Imp/Vel/Enf/SFR	1
27	0087572		Shock Absorbers, KONI, TAK-4, Qtm/AXT/Imp/Vel/DCF/Enf	1
28	0000322		Oil Seals, Front Axle	1
29	0804562		Tires, Front, Michelin, XZE (wb), 425/65R22.50, 20 ply, Fire Service Speed Rtng	1
30	0604672		Wheels, Front, Accuride, 22.50" x 12.25", Steel, Hub Pilot	1
31	0530466		Axle, Rear, Meritor RS26-185, 27,000 lb, Imp/Vel	1
32	0814721		Top Speed of Vehicle, 75 MPH/120 KPH, Non-NFPA 2016	1
33	0122075		Suspen, Rear, Standens, Spring, 27,000 lb, Imp/Vel	1
34	0000485		Oil Seals, Rear Axle	1
35	0070728		Tires, Rear, Michelin, XDN2, 12R22.50, 16 ply, Single	1
36	0654806		Wheels, Rear, Accuride, 22.50" x 8.25", Steel, Hub Pilot, Single	1
37	0568081		Tire Balancing, Counteract Beads	1

Line	Option	Type	Option Description	Qty
38	0620570		Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Single Axle	1
			Qty, Tire Pressure Ind - 6	
39	0759842		Chains, Rud automatic tire, 6 strand	1
40	0544802		Chocks, Wheel, SAC-44-E, Folding	1
			Qty, Pair - 01	
41	0544806		Mounting Brackets, Chocks, SAC-44-E, Folding, Horizontal	1
			Qty, Pair - 01 Location, Wheel Chocks - Left Side Rear Tire, Forward and Rearward	
42	0010670		ABS Wabco Brake System, Single rear axle	1
43	0030185		Brakes, Knorr/Bendix 17", Disc, Front, TAK-4	1
44	0000730		Brakes, Meritor, Cam, Rear, 16.50 x 7.00"	1
45	0020784		Air Compressor, Brake, Cummins/Wabco 18.7 CFM	1
46	0000785		Brake Reservoirs, Three	1
47	0568012		Air Dryer, Wabco System Saver 1200, Heater, 2010	1
48	0000790		Brake Lines, Nylon	1
49	0000854		Air Inlet, w/Disconnect Coupling	1
			Location, Air Coupling(s) - h) DS Pump Panel Qty, Air Coupling (s) - 1	
50	0509837		Adjustable Brake & Throttle Pedals	1
51	0000845		Air Tank, Additional for Extra Capacity	1
52	0615609		Fittings, Compression Type, Entire Apparatus, Single Rear Axle	1
53	0808504		Engine, Cummins X15, 605 hp, 1850 lb-ft, W/OBD, EPA 2027, Velocity	1
54	0811409		Not Required, Engine Contingency Adjustment	1
55	0730808		Filters, Remote Mounted, Oil, Fuel, X15, VEL/AXT/Enf	1
56	0001244		High Idle w/Electronic Engine, Custom	1
57	0001236		Not Required, Auxiliary Brake, Alt. Aux. Brake Selected	1
58	0552334		Clutch, Fan, Air Actuated, Horton Drive Master	1
59	0001302		Heater, 1500 Watt Immersion, Thermostatically Controlled	1
60	0813730	SP	Adj, EPA 2024, DO NOT SEND	1
61	0123135		Air Intake, w/Ember separator, Imp/Vel	1
62	0814375		Exhaust System, Horizontal, Right Side	1
			Exhaust, Diffuser - Aluminized Steel (Standard) Exhaust, Material/Finish - Aluminized Steel (Standard) Location, Diffuser Termination - Flush With Side of Body Tip, Exhaust - Straight Tip (Standard)	
63	0787999		Radiator, Impel/Velocity	1
64	0511425		Cooling Hoses, Rubber	1
65	0001125		Fuel Tank, 65 Gallon, Left Side Fill	1
66	0001129		Lines, Fuel	1
67	0662965		DEF Tank, 4.5 Gallon, DS Fill, Rear of Axle, Common Air Bottle Door	1
68	0723716		Fuel Priming Pump, Electronic, Automatic, Cummins, No Swt Req'd	1
69	0582243		Shutoff Valves, Fuel Line @ Primary Filter, Cummins	1
70	0553019		Cooler, Engine Fuel, Imp/Vel, AXT/Qtm/Sab/DCF/SFR/Enf	1
71	0578959		Fuel/Water Separator, Racor Inline	1
72	0801882		Trans, Allison 6th Gen, 4000 EVS PR, w/Prognostics, Imp/Vel/Enf	1
			Trans. retarder capacity - e. medium/1600, 4000 EVS Trans, retarder control - l) Auto 1/3, 2/3, 3/3	
73	0625331		Transmission, Shifter, 6-Spd, Push Button, 4000 EVS	1
74	0797408		Transmission Oil Cooler, Modine, External, w/Modine External Sump	1
75	0001375		Driveline, Spicer 1810	1
76	0651288	SP	Shield, Grease for Drive Shaft U Joints	1
77	0669988		Steering, Sheppard M110 w/Tilt, TAK-4, Eaton Pump, w/Cooler	1
78	0001544		Not Required, Steering Assist Cylinder on Front Axle	1
79	0509230		Steering Wheel, 4 Spoke without Controls	1
80	0690274		Logo/Emblem, on Dash	1
			Text, Row (1) One - Flagstaff Text, Row (2) Two - Fire Text, Row (3) Three - Dept.	
81	0654471		Cover, Rubber, Driveshaft Grease, DS Framerail	1
82	0530385		Bumper, 16" Extended, Steel Painted, Imp/Vel	1

Line	Option	Type	Option Description	Qty
83	0610315		Tray, Hose, Center, 16" Bumper, Outside AH, 13" Deep, 10" Below/3" Above,Imp/Vel	1
			Grating, Bumper extension - Grating, Aluminum	
			Capacity, Bumper Tray - 19) 100' of 1.75"	
84	0633479		Hose Restraint, Bumper Tray, Velcro Straps, Pair	1
			Qty, Pair - 01	
85	0510226		Lift & Tow Package, Imp/Vel, AXT, Dash CF	1
86	0002270		Tow Hooks, Chrome	1
87	0698960		Coating, Top Flange, Front Bumper, Outside Exterior, UL-LX Coating, Black	1
88	0668315		Cab, Velocity FR, 7010 Raised Roof	1
89	0724207		Engine Tunnel, X12-15, MX13, Mech Fasteners, Velocity FR	1
90	0677478		Rear Wall, Exterior, Cab, Aluminum Treadplate	1
91	0122466		Cab Lift, Elec/Hyd, w/Manual Override, Imp/Vel	1
92	0123176		Grille, Bright Finished, Front of Cab, Velocity	1
93	0002224		Scuffplates, S/S At Cab Door Jambs, 4-Door Cab	1
			Material Trim/Scuffplate - c) S/S, Polished	
94	0527032		Trim, S/S Band, Across Cab Face, Rect Lights, Velocity	1
			Material Trim/Scuffplate - c) S/S, Polished	
			Turnsignal Covers - Polished S/S Covers	
95	0087357		Molding, Chrome on Side of Cab	1
96	0521669		Mirrors, Retrac, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex	1
97	0667921		Door, Half-Height, Velocity FR 4-Door Cab, Raised Roof	1
			Key Model, Cab Doors - 751	
			Cab, Exterior Door Handle, Finish - 4-Door, Chrome/Black	
98	0655511		Door Panel, Brushed Stainless Steel, Impel/Velocity 4-Door Cab	1
99	0671014		Face Plate/s, Blank, Overhead, Imp/Vel, Dash CF	1
100	0667902		Controls, Electric Windows, All Cab Doors, Impel/Velocity FR	1
101	0606691		Steps, 4-Door Cab, Dual, 2" Larger Middle and Bottom Steps, Imp/Vel	1
			Light, Step, Additional - P25 LED	
102	0770194		Handrail, Exterior, Knurled, Alum, 4-Door Cab	1
103	0892637		Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 1Lt Per Step	1
			Color, Trim - Chrome Housing	
104	0002140		Fenders, S/S on Cab	1
105	0586564		Window, Side of C/C, Fixed, w/EMS Cabinet, Imp/Vel	1
106	0552935		Trim, Cab Side Windows, Velocity	1
107	0012090		Not Required, Windows, Front/Side of raised roof	1
108	0509286		Not Required, Windows Rear of Crew Cab, Imp/Vel	1
109	0558334		Not Required, Trim, Cab Rear Windows, No Rear Windows	1
110	0663375		Mounting Provisions, 1/4" Alum, Full Engine Tunnel, Vel/Imp	1
			Mounting Provision Spacing - .50"	
			Material Finish, Cab Interior - Painted	
111	0748671		Cab Interior, Vinyl, Velocity FR, CARE	1
			Color, Cab Interior Vinyl/Fabric - Endure Vinyl - Silver/Gray	
112	0667943		Cab Interior, Paint Color, Impel/Velocity FR	1
			Color, Cab Interior Paint - i) fire smoke gray	
113	0682140		Floor, Alum Cab & Crew Cab, Include Vertical Floor Surfaces, AXT/Imp/Vel, CARE	1
114	0741239		HVAC, Impel/Velocity FR, CARE	1
			Paint Color, A/C Condenser - Painted to Match Cab Roof	
			HVAC System, Filter Access - Removable Panel	
			Auxiliary Cab Heater - Both	
115	0639675		Sun Visor, Smoked Lexan, AXT, Imp/Vel, Saber FR/Enforcer	1
			Sun Visor Retention - Thumb Latch	
116	0548173		Grab Handles, Driver and Passenger Door Post, Imp/Vel	1
117	0002526		Light, Engine Compt, All Custom Chassis	1
118	0122516		Fluid Check Access, Imp/Vel	1
			Latch, Door, Storage - Lift and Turn Latch, Flush	
119	0002508		Map Box, 3 Bin/30 deg Slant, Custom Chassis	1
			Qty, - 1	
			Location, Map Box/Straps - Final Inspection	
120	0583039		Not Required, Side Roll and Frontal Impact Protection	1
121	0622618		Seating Capacity, 5 Seats	1
122	0697007		Seat, Driver, Pierce PS6, Premium, Air Ride, High Back	1
123	0696997		Seat, Officer, Pierce PS6, Premium, Air Ride, High Back	1

Line	Option	Type	Option Description	Qty
124	0540561		Radio Compartment, Behind Officer Seat, Vented, Imp/Vel	1
125	0888158	SP	Cabinet, Rear Facing, LS, 26.87 W x 28 H x 30.5 D, Roll, Imp/Vel	1
			Light, Short Cabinet - Pierce, Interior, Right Side and Pierce, Interior, Left Side	
			Material Finish, Shelf - Painted - Cab Interior	
			Shelf/Tray, Cabinet - (2) Shelves, Adjustable, 0.75" Up-Turned Lip	
			Door, Cab Interior Cabinet - Rollup, Amdor, White, Locking #751	
			Louvers, Cabinet - 0-No Louvers	
126	0102783		Not Required, Seat, Rr Facing C/C, Center	1
127	0102790		Not Required, Seat, Rear Facing C/C, PS Outboard	1
128	0660826		Seat, Forward Facing C/C, DS Outboard, Pierce PS6, Hi-Back, Foldup, 9 Deg,17"Btm	1
129	0777454	SP	Seat, Forward Facing C/C, Center, (1) Pierce PS6, Premium, Hi-Back, Foldup	1
130	0660820		Seat, Forward Facing C/C, PS Outboard, Pierce PS6, Hi-Back, Foldup, 9 Deg,17"Btm	1
131	0740632	SP	Cabinet, Rr Fcng, Top Eng Tnl, 34 W x 16 H x 17.5 D,Drop Dr,Hasp,Prtn,Imp/Vel FR	1
			Latch, Door, Storage - Southco C2 Chrome Raised, Pair	
			Light, Short Cabinet - Pierce, Interior, Right Side and Pierce, Interior, Left Side	
			Louvers, Cabinet - 0-No Louvers	
132	0888156	SP	Box, Adj, Inside EMS Cabinet, w/Locking Hasp	1
			Location - - In the cabinet (option 888158) needs to be as wide as the clear door opening width 24.125"	
133	0766467		Upholstery, Seats In Cab, All Vinyl, Seats Inc, CARE	5
			Color, Cab Interior Vinyl/Fabric - Endure Vinyl - Silver/Gray	
			Qty, - 05	
134	0511471		No SCBA Brackets Required In Cab Seats, Imp/Vel, AXT 2010, Qtm 2010,Saber FR/Enf	1
135	0603867		Seat Belt, ReadyReach	1
			Seat Belt Color - Red	
136	0604864		Seat Belt Height Adjustment, 5 Seats, Imp/Vel, Dash CF	1
137	0602464		Helmet Storage, Provided by Fire Department, NFPA 2016	1
138	0647638		Lights, Dome, Weldon Dual LED 4 Lts	1
			Color, Dome Lt - Red & White	
			Color, Dome Lt Bzl - Black	
			Control, Dome Lt White - Door Switches and Lens Switch	
			Control, Dome Lt Color - Lens Switch	
139	0896451		Enhanced Software for Cab and Crew Cab Dome Lts	1
140	0631776		Not Required, Overhead Map Lights	1
141	0727540		Spotlight, Golight/RadioRay, Model 20**4GT, LED, 1 Lt	1
			Location - behind lightbar centered	
			Color, GoLt - White	
			Bracket, Spotlight - Z Bracket - 1 Lt	
142	0650074		Controller, Spotlight, Golight, Wired Dash Mount, 1 Lt	1
143	0649965		Location, Spotlight Controller, Driver's Side	1
144	0602637		Portable Hand Light, Provided by Fire Dept, Pumper NFPA 2016 Classification	1
145	0568369		Cab Instruments, Ivory Gauges, Chrome Bezels, Impel/Velocity 2010	1
146	0509511		Air Restriction Indicator, Imp/Vel, AXT, Dash CF, Enf MUX	1
147	0543751		Light, Do Not Move Apparatus	1
			Alarm, Do Not Move Truck - Pulsing Alarm	
148	0509042		Messages, Open Dr/DNMT, Color Dsply,	1
149	0611681		Switching, Cab, Membrane, Impel/Velocity/Quantum, Dash CF, AXT WiFi MUX	1
			Location, Emerg Sw Pnls - Driver's Side Overhead	
150	0555915		Wiper Control, 2-Speed with Intermittent, MUX, Impel/Velocity	1
151	0548006		Wiring, Spare, 15 A 12V DC 2nd	1
			Qty, - 01	
			12vdc power from - Battery direct	
			Wire termination - 15 amp power point plug	
			Location - RS1 above shelf on front wall, recessed.	
152	0548007		Wiring, Spare, 15 A 12V DC 3rd	1
			Qty, - 01	
			12vdc power from - Battery direct	
			Wire termination - Butt Splice	

Line	Option	Type	Option Description	Qty
152			Location - Mounted on top of engine tunnel near LOC#9 with 2' coil of wire.	
153	0797189		Wiring, Spare, 4.8 A 12V DC, USB Termination Blue Sea 1045 1st	1
			Qty, - 01 12vdc power from - Battery direct Location - In LOC#9 panel with the two Power points.	
154	0560535		Wiring, Spare, 15 A 12V DC 4th	1
			Qty, - 01 12vdc power from - Battery direct Wire termination - Butt Splice Location - Mounted on top of engine tunnel near LOC#9 with 2' coil of wire.	
155	0548009		Wiring, Spare, 20 A 12V DC 1st	1
			Qty, - 01 12vdc power from - Battery direct Wire termination - 10-Place Bus Bar w/Cover Location, Spare Wiring - In the ems box mounted on top of rear of engine tunnel w/ 2' coil wire, power strip bar to to be mounted at pick up.	
156	0548004		Wiring, Spare, 15 A 12V DC 1st	2
			Qty, - 02 12vdc power from - Battery direct Wire termination - 15 amp power point plug Location, Spare Wiring - Both on panel LOC#9 back side of instrument panel.	
157	0691301		Wiring, Spare, 30 A 12V DC, Set, Red & Yellow Power w/Ground, 18" Pigtail	1
			Qty, - 01 12vdc power from - Battery direct Wire termination - Butt Splice Location - To terminate in the radio box located behind the officer seat 12vdc power from 2 - b) switched battery	
158	0566101		Recess, Dash Panel, Officer Side, Vel/Imp	1
159	0803875		Radio, AM/FM/WB, Jensen, Frt,Rear Aux In/Frt,Rear USB/Bluetooth	1
			Speakers, AM/FM Radio - Two (2) pairs of speakers, Cab/Crew Antenna, AM/FM Radio - c) Roof-mounted rubber antenna Location, AM/FM Radio - e) switch panel	
160	0814201		Vehicle Information Center, 7" Color Display, Touchscreen, MUX, CL714	1
			System Of Measurement - US Customary	
161	0816633		Collision Mitigation, HAAS Alert (R2V), HA7	1
			Subscription, HAAS R2V - R2V - 5 Year Data Plan Subscription	
162	0606248		Vehicle Data Recorder w/CZ Display Seat Belt Monitor, Unique Alarm	1
163	0735006		Intercom, David Clark, 4-Pos, 2-Radio, (D,O,RPTT), 2obC, U3805	1
			Location - Driver, Officer, & two forward facing rear crew cab	
164	0637058		David Clark Universal Radio Interfaces Included with Single/Dual System	1
			Location, Radio Interface - Behind officer seat in radio compartment.	
165	0589947		Headset, David Clark, H3432 Over The Head, Flex Mic, Push On Push Off	4
			Qty, - 04 Location - Driver, Officer & two rear crew cab.	
166	0681408		Hangers For Headsets, NFPA, Each	4
			Qty, - 04 Location, Headset Hangers - Driver Seat, Officer Seat and Rear, Center, Fwrd Fcng Seat	
167	0559156		Install Customer Provided Two-Way Radio(s)	1
			Location - The remote head goes in the LOC#6 position & the radio gets mounted in the radio compartment behind officer. Qty, - 01	
168	0640003		Install Customer Provided Modem	1
			Location - Cradle get mounted on top of engine tunnel per signed instrument panel drawing. Qty, - 01	
169	0616382		Install Customer Provided GPS/Multimode Antenna(s)	1
			Qty, - 01	
170	0687904		Antenna Mount, Custom Chassis, Cable Routed to Behind Officer Seat	2
			Location - On the cab roof. Qty, - 02	

Line	Option	Type	Option Description	Qty
171	0816486		Camera, Pierce, LS Mux, RS, R, SD Cameras, CL714	1
			Camera System Audio - Speaker Behind Driver Camera System	
172	0814831		Not Required, Camera Switcher	1
173	0511071		Guard, 4-Way, Rear Vision Camera	1
			Qty, - 01	
			Location - rear camera	
174	0896458		Pierce Command Zone, Advanced Electronics & Control System, Vel WiFi CZT	1
			Color, Antenna - White Antenna	
			Module Housings - Black Housing with Power and Status Ind	
175	0896456		Prognostics, Electrical System	1
176	0730603		Electrical System, Velocity ESP, Cummins, Paccar	1
177	0089703		Batteries, (6) Interstate Grp 31, 950 CCA each, Threaded Stud	1
178	0008621		Battery System, Single Start, All Custom Chassis	1
179	0123174		Battery Compartment, Imp/Vel	1
180	0813848		Charger, Sngl Sys, IOTA, DLS-75, 75 amp, IQ4 Controller	1
181	0814935		Location, Cab, Charger, EMS Compt, Vertical Wall, LS	1
182	0814872		Location, Cab, Ind/Remote, Display Through Window Behind Driver Seat	1
183	0691933		Shoreline, 30A 120V, Twist lock, Hubbell HBL303NM	1
			Connection, Shoreline - Directly to the charger.	
184	0026800		Shoreline Location	1
			Location, Shoreline(s) - DS Seat Riser	
185	0036802		Sub Feed Breaker Box Cutler Hammer, For Shoreline	1
			Location, CB Panel - D3	
186	0647728		Alternator, 430 amp, Delco Remy 55SI	1
187	0610111	SP	Cover, Inverter, Vented	1
188	0092582		Load Manager/Sequencer, MUX	1
			Enable/Disable Hi-Idle - e)High Idle enable	
189	0720839		Switch, CZ Display Only, Load Manager	1
190	0783153		Headlights, Rect LED, JW Spkr Evo 2, AXT/DCF/Enf/Imp/Sab/Vel	1
			Color, Headlight Bez - Chrome Bezel	
191	0648425		Light, Directional, Wln 600 Cmb, Cab Crn, Imp/Vel/AXT/Qtm/DCF	1
			Color, Lens, LED's - m)match LED's	
192	0620054		Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	1
193	0648074		Lights, Clearance/Marker/ID, Front, P25 LED 7 Lts	1
194	0563675		Lights, Clearance/Marker/ID, Rear, Truck-Lite 33050R LED 7Lts	1
195	0804761		Lights, Tail, Wln 604BTT* Red LED Stop/Tail & 604T Amb LED Dir For Housing	1
			Color, Lens - Clear	
196	0804764		Lights, Backup, Wln 604BU, LED for Wln 3 & 4 housing	1
197	0889577		Bracket, License Plate & Light, P25 LED, Stainless Brkt	1
			Color, Trim - Chrome Housing	
198	0736667		Bezels, Wln, (2) CAST3, For Mtg (3) Wln 600 Lts Each, 6Lts Total	1
199	0589905		Alarm, Back-up Warning, PRECO 1040	1
200	0769566		Lights, Perimeter Cab, Amdor AY-LB-12HW020 & AY-LB-12HW012 LED 4Dr	1
201	0617869		Lights, Perimeter Pump House, Truck-Lite 60354C LED 2lts	1
202	0653942		Lights, Perimeter Body, Truck-Lite 60354C LED 2lts, Rear Step	1
			Control, Perimeter Lts - Parking Brake Applied	
203	0896454		Enhanced Software for Perimeter Lts	1
204	0556360		Lights, Step, P25 LED 4lts, Pump Pnl Sw	1
205	0581784		Lights, Side Scene, Wln 9SC0ENZR LED, 2nd	2
			Location, Lights - One each side of the RS crew cab above the rear facing seat location and one on the RS rear body (around center of rear axle) centered, per AD print.	
			Qty, - 02	
			Switch, Lt Control 1 DC,1 - a) DS Switch Panel	
			Switch, Lt Control 2 DC,2 - g) PS Switch Panel	
			Switch, Lt Control 3 DC,3 - d) No Control	
			Switch, Lt Control 4 DC,4 - d) No Control	
206	0582055		Lights, Side Scene, Wln 9SC0ENZR LED, 1st	2
			Location, Lights - One each side of the LS crew cab above the rear facing seat location and one on the LS rear body (around center of rear axle) centered per AD print..	
			Qty, - 02	
			Switch, Lt Control 1 DC,1 - a) DS Switch Panel	

Line	Option	Type	Option Description	Qty
206			Switch, Lt Control 2 DC,2 - g) PS Switch Panel Switch, Lt Control 3 DC,3 - d) No Control Switch, Lt Control 4 DC,4 - d) No Control	
207	0776357		Light, Visor, Wln, 12V P*H2* Pioneer, Cnt Feature, 1st	1
			Qty, - 01 Location, driver's/passenger's/center - Centered Color, Wln Lt Housing - Black Paint Control, Scene Lts - Cab Sw Panel DS and Cab Sw Panel PS Scene Light Optics - Flood/Spot	
208	0773172		Lights, Wln, P*H2* Pioneer, 12 VDC, 2nd	1
			Location - Passenger side dunage area Qty, - 01 Color, Wln Lt Housing - Black Paint Control, Scene Lts - Cab Sw Panel DS, Pump Panel Sw LS, Cab Sw Panel PS and Pump Panel Sw RS Scene Light Optics - combination Mount, Wln II - Pull Up Sd Mnt 20" Handle Holder & Sensor	
209	0773179		Lights, Wln, P*H2* Pioneer, 12 VDC, 1st	1
			Location - On the driver side dunage area. Qty, - 01 Color, Wln Lt Housing - Black Paint Control, Scene Lts - Cab Sw Panel DS and Pump Panel Sw LS Scene Light Optics - combination Mount, Wln II - Pull Up Sd Mnt 20" Handle Holder & Sensor	
210	0532358		Not Required, Deck Lights, Other Hose Bed & Rear Lighting	1
211	0645672		Lights, Not Required, Hose Bed, Alt. Pole Lights on Front/Rear Of Body	1
212	0645690		Lights, Rear Scene, Wln, 9SC0ENZR LED, 30" - 102" High	1
			Control, Rear Scene Lts - Cab Switch Panel DS, Cab Switch Panel PS and Body Switch, DS Rear Bulkhead	
213	0709438		Lights, Walk Surf, FRP Flood, LED	1
214	0060111		Pumper, Medium, Galvanneal, 2nd Gen	1
215	0554271		Body Skirt Height, 20"	1
216	0028244		Tank, Water, 500 Gallon, Poly, Med	1
217	0003405		Overflow, 4.00" Water Tank, Poly	1
218	0028104		Foam Cell Required	1
219	0775667	SP	Equipment Storage, Below Hose Bed, HDRP Style, Special Config/Layout, Gasket	1
			Location - Center rear of body above the B1 compartment. Fill in Blank - two backboards on the left side each board is 16"W x 72"L x 2"T. Customer provided stair chair on the right 40"L x 20"W x 8"H Door, Material & Finish, Storage - Smooth Aluminum Latch, Door, Storage - "D" Handle Latch	
220	0553729		Not Required, Restraint, Water Tank, Heavy Duty	1
221	0003429		Not Required, Direct Tank Fill	1
222	0003424		Not Required, Dump Valve	1
223	0048710		Not Required, Jet Assist	1
224	0030007		Not Required, Dump Valve Chute	1
225	0514778		Not Required, Switch, Tank Dump Master	1
226	0126632		Hose Bed, Galv, Pumper	1
227	0723549		Painted Hose Bed	1
			Paint Color, Hose Bed Interior - Match Lower Body	
228	0003481		Hose Bed Capacity, Special	1
			Capacity, Hosebed - 500' of 1.5" Single Jacket wildland hose, 800' of 2.5" DJP, 1000' of 4" DJP, 200' of 2.5"DJP	
229	0003488		Divider, Hose Bed, Unpainted	2
			Qty, Hosebed Dividers - 2	
230	0010133		Cross-Divider, Hose Bed	1
231	0080233		Divider, .25", Unpainted	1
			Location - between beds 3 and 4 right next to the ladder compartment Qty, - 1	
232	0740440	SP	Hose Restraint, Hose Bed, Vinyl, Top and Rear, Special Bungee, Cam Buckle & Hook	1
			Color, Vinyl Cover - a) red Vinyl Flap Weight - Chain Weighted	
233	0013512		Running Boards, 12.75" Deep	1

Line	Option	Type	Option Description	Qty
234	0689497		Tailboard, 24" & 8" Deep, T-Shaped, Angled Corners	1
235	0690037		Wall, Rear, Smooth Aluminum/Body Material	1
			Material, Rear Wall Inboard Facing Surfaces - Aluminum Diamondplate	
236	0889713		Tow Eyes, 2G Pumper	1
237	0888242	SP	Hose Restraint, Running Board, Aluminum Treadplate Cover, Reinforced	2
			Location, Hose Tray, Running Board - a) both sides	
			Qty, Tray, Hose - 2	
			Type of fastener - Southco C2 - Pair	
			Stay arm, Tray Cover - a) Mech Stay Arm	
238	0024110		Tray, Hose, Running Board, 20' of 5.00" Soft Suction Hose	2
			Location, Hose Tray, Running Board - a) both sides	
			Qty, Tray, Hose - 2	
239	0895816		Construction, Compt, Galv, 2G Pumper	1
240	0720760	SP	LS 152" Rollup, Full Height Front & Rear, FDLER, Special 14" Depth Upper Deep	1
241	0693721	SP	RS 152" Rollup, Full Height Frt & Rr, FDLER, Spcl 14" Depth Upper Interior	1
242	0692733		Doors, Rollup, Gortite, Side Compartments	6
			Qty, Door Accessory - 06	
			Color, Roll-up Door, Gortite - Painted to Match Lower Body	
			Latch, Roll-up Door, Gortite - Non-Locking Liftbar	
243	0083700		Compt, Rear, Rollup, 37.75" FF, 25.88" D	1
244	0692746		Door, Gortite, Rollup, Rear Compartment	1
			Color, Roll-up Door, Gortite - Satin finish	
			Latch, Roll-up Door, Gortite - Non-Locking Liftbar	
245	0554995		No Body Modification Required	1
246	0776727	SP	Scuffplate, Brushed S/S Under Fuel Fill Door, Qty	1
			Qty, Scuffplates - 01	
247	0019845		Guard, Drip Pan, S/S, Rollup Door	7
			Qty, Door Accessory - 07	
			Location, Door Accessory - LS1, LS2, LS3, RS1, RS2, RS3, B1	
248	0625184		Guard, Drip Pan, S/S, Rollup Door, Pumper	7
			Qty, Door Accessory - 07	
			Location, Door Guard/Drip Pan - LS1, LS2, LS3, RS1, RS2, RS3 and B1	
249	0535355		Pull Strap for Rollup Doors, Special Location, w/ Footman loop	6
			Qty, Door Accessory - 06	
			Location, Door Accessory - LS1, LS2, LS3, RS1, RS2, RS3.	
			Color, Strap - Orange	
250	0616670		Lights, Compt, Pierce LED, Dual Light Strips, Each Side of Door, Pumper/Tanker	7
			Qty, - 07	
			Location, Compartment Lights - All Body Compts	
251	0691876		Brackets/Clamps, For Strip Lighting In Compartments, IPO Velcro	1
252	0562348		Fasteners, Mechanical, Strip Lighting In Compartments	1
253	0687146		Shelf Tracks, Painted	7
			Qty, Shelf Track - 07	
			Location, Shelf Track - LS1, LS2, LS3, RS1, RS2, RS3 and B1	
254	0625835		Shelves, Adjustable, 500 lb Capacity, Full Width/Depth, Special Side Height	9
			Qty, Shelf - 09	
			Location, Shelf - LS3-1 Upper & 1 Lower, LS2-1, LS1-1 upper & 1-Lower, RS1 1-Upper & 1-Lower, RS3 1-Upper & 1-Lower	
			Shelf, Side Height, Front - 2"	
			Shelf, Side Height, Rear - 2"	
			Material Finish, Shelf - Painted - Spatter Gray	
			Shelf, Side Height, Right & Left - 2"	
255	0647091		Tray, Floor Mounted, Slide-Out, 500lb, 2.00" Sides	1
			Qty, - 01	
			Location, Tray Slide-Out, Floor Mounted - B1	
			Material Finish, Tray - Painted - Spatter Gray	
256	0540317		Toolboard, Swing-out, Alum, .188", Peg Board	1
			Qty - 1	
			Location, Pivot - Back	
			Mounting, Toolboard - Adjustable Frt-back	
			Hole Diameter, Pegboard/Toolboard - .203" diameter	
			Finish, Pegboard/Toolboard - Painted - Spatter Gray	
			Location, Toolboard - RS2 - Full Height/Width	

Line	Option	Type	Option Description	Qty
257	0726441		Partition, Trans Rear Compt	2
			Qty, Partition - 02	
			Location, Partition - c) both sides	
			Material Finish, Partition - Painted - Spatter Gray	
258	0028026		Matting, Turtle Tile, Compartment Shelving Only	10
			Location - LS1, LS2, LS3, B1, RS1, RS2 & RS3	
			Qty, Shelf - 10	
			Color - 1) black	
259	0659383		Matting, Turtle Tile w/Ramp, Compartment Floors	6
			Location - LS1, LS2, LS3, RS1, RS2 & RS3	
			Qty, Comp. Accessory - 06	
			Color - 1) black	
			Color, Tile Edge - black	
260	0755638		Pegboard, Back Wall Mounted, 3/16" Alum, Full Height Compt	2
			Qty, Comp. Accessory - 02	
			Hole Diameter, Pegboard/Toolboard - .203" diameter	
			Finish, Pegboard/Toolboard - Painted - Spatter Gray	
			Location, Compartment, Predefined - LS3 and RS3	
261	0777853	SP	Cover Plate, Toolboard Mounting Bracket, Pair, Painted	1
			Location - RS2	
			Qty, - 01	
262	0027090		Tracks, Equipment Mounting, Horizontal	2
			Location - To be mounted at pick up. for SCBA brackets	
			Qty, Shelf Track - 02	
263	0004016		Rub Rail, Aluminum Extruded, Side of Body	1
264	0784811		Fender Crowns, Rear, Stainless, w/Removable Liner	1
			Material Finish, Fender Liner - Painted Lower Body	
265	0519849		Not Required, Hose, Hard Suction	1
266	0626229		Handrails, Side Pump Panels, Per Print	1
267	0004126		Handrails, Beavertail, Standard	1
268	0011212		Handrail, Not Required, Rear Hose Bed, Pumper	1
269	0004154		Handrail, Extra - 10" Long	2
			Location, Handrails - on top of DS Stanchion to meet NFPA stepping requirements	
			Qty, Handrails - 02	
270	0004150		Handrail, Extra - 15-20" Long	2
			Qty, Handrails - 02	
			Location, Handrail Additional - Mounted at a 45 degree angle on the interior of the rear crew cab doors.	
271	0636301		Compt, Extinguisher (2) Fender Panel, Triangular Door, 8" Dia	1
			Location, Bracket/comp. - RS rear of axle.	
			Qty, - 1	
			Door Finish, Fender Compt - Polished	
			Latch, Air Bottle Compt - D-Ring Latch	
			Insert, Air Bottle Compt - Rubber Matting	
272	0654143		Compt, Air Bottle, Single,Tri Door (DEF/Fuel), Fender Panel	1
			Door Finish, Fender Compt - Polished	
			Latch, Air Bottle Compt - D-Ring Latch	
			Insert, Air Bottle Compt - Rubber Matting	
273	0657522		Compt, Air Bottle, Triple, Fender Panel	2
			Qty, Air Bottle Comp - 2	
			Door Finish, Fender Compt - Polished	
			Location, Fender Compt - Triple - LS Fwd and Triple - RS Fwd	
			Latch, Air Bottle Compt - D-Ring Latch	
			Insert, Air Bottle Compt - Rubber Matting	
274	0045261	SP	Scufftape, Full Circle Around Air Bottle Compt	1
275	0784798	SP	Caulk, Drain, Air Bottle Compt	4
			Qty, - 04	
276	0004225		Ladder, 24' Duo-Safety 900A 2-Section	1
277	0004230		Ladder, 14' Duo-Safety 775A Roof	1
278	0545945		Ladders Btwn Tank & S.Sht, LS, Ext'd Rr, Encl'd Complete, RPH	1
			Door, Material & Finish, Ladder Storage - aluminum treadplate	
			Latch, Door Ladder Storage - D-Handle latch	
279	0733387		Ladder, 10' Duo-Safety Folding 585A	1

Line	Option	Type	Option Description	Qty
280	0733796		Trough, Folding Ladder, Ladder Storage Btwn Tank & S.Sht	1
			Location, Left Side, Right Side - Right Side	
281	0606134	SP	Drain, Enclosed Ladder Storage Between Tank and Side Sheet	1
282	0554060		Pike Pole, 10' Nupla, Fiberglass, YPD-10, Pumper NFPA Classification	1
			Qty, Pike Poles - 1	
283	0733370		Pike Pole, 6' DUO Safety, Fiberglass	1
			Qty, Pike Poles - 1	
284	0004361		Tubes, Alum, Pike Pole Storage	2
			Qty, Pike Pole Tubes - 02	
			Location, Pike Pole Tube - Ladder Storage	
285	0616766	SP	Additional Rub Rail Supports/Spacers	2
			Location - RS1 and LS1	
			Qty, - 02	
286	0785102		Steps, Folding, Front of Body, Cargo Bed Access, w/LED, Trident	1
			Coating, Step - luminescent	
			Location, Steps - Full Height Left and Right Side w/LED Light	
287	0592995		Steps, Combo Folding Trident w/LED & Corner, Rear Body	1
			Coating, Step - luminescent	
288	0687579	SP	Program, Activate LED Step Lights w/ P.Brake	1
			Fill in Blank - Step lights at the DS front bulkhead and rear of body	
289	0007575		Pump House, Side Control, 48", Control Zone	1
290	0037731		Pump House Structure, Raised, Included with Ladder Storage	1
291	0004425		Pump, Waterous, CSU, 1500 GPM, Single Stage	1
292	0004481		Seal, Grafoil, Waterous	1
293	0816447		Trans, Pump, Waterous C22 Series	1
294	0635600		Pumping Mode, Stationary Only	1
295	0605126		Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Waterous	1
296	0003148		Transmission Lock-up, EVS	1
297	0004547		Auxiliary Cooling System	1
298	0014486		Not Required, Transfer Valve, Single Stage Pump	1
299	0746501		Valve, Relief Intake, Elkhart	1
			Qty - 1	
			Pressure Setting - 125 psig	
			Intake Relief Valve Control - Behind Right Side Pump Panel	
300	0692045		Controller, Pressure, FRC, Pump Boss, PBA400	1
301	0072153		Primer, Trident, Air Prime, Air Operated	1
302	0780364		Manuals, Pump, (2) Total, Electronic Copies	1
303	0602512		Plumbing, Stainless Steel and Hose, Single Stage Pump, Control Zone	1
304	0795135		Plumbing, Stainless Steel, w/Foam System	1
305	0004645		Inlets, 6.00" - 1250 GPM or Larger Pump	1
306	0550696		Valve, Waterous Monarch w/Relief, LS Side Inlet, 6", Waterous Handwheel Control	1
307	0730368		Valve, Ball Intake, TFT, AX Series	1
			Location - Passenger side intake.	
			Qty - 1	
			Connection, Inlet, Side B - 8NR (4.5" Male Threaded Rigid) with a cap	
			Connection, Outlet, Side A - NX (6.0" Threaded Swivel)	
			Ball Intake Valve Actuation - Standard (Crank On Left Side)	
			Relief Valve, Ball Intake - Standard	
308	0602448		Cap, Main Pump Inlet, Provided by Fire Department, NFPA 2016	1
309	0084610		Valves, Akron 8000 series- All	1
310	0016158		Valve, Inlet(s) Recessed, Side Cntrl, "Control Zone"	1
			Qty, Inlets - 1	
311	0004700		Control, Inlet, at Valve	1
312	0004660		Inlet (1), Left Side, 2.50"	1
313	0004680		Inlet, Right Side, 2.50"	1
314	0092569		No Rear Inlet (Large Dia) Requested	1
315	0064116		No Rear Inlet Actuation Required	1
316	0092696		Not Required, Cap, Rear Inlet	1
317	0009648		No Rear Intake Relief Valve Required on Rear Inlet	1
318	0092568		No Rear Auxiliary Inlet Requested	1
319	0723049		Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle	1
320	0029043		Tank to Pump, (1) 3.00" Valve, 3.00" Plumbing	1

Line	Option	Type	Option Description	Qty
321	0004905		Outlet, Tank Fill, 1.50"	1
322	0062133		Control, Outlets, Manual, Pierce HW if applicable	1
323	0004940		Outlet, Left Side, 2.50"	2
			Qty, Discharges - 02	
324	0005091		Elbow, Left Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	1
325	0092570		Not Required, Outlets, Left Side Additional	1
326	0035094		Not Required, Elbow, Left Side Outlets, Additional	1
327	0004945		Outlet, Right Side, 2.50"	2
			Qty, Discharges - 02	
328	0025091		Elbow, Right Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	1
329	0092571		Not Required, Outlets, Right Side Additional	1
330	0089584		Not Required, Elbow, Right Side Outlets, Additional	1
331	0005047		Outlet, 4" w/4" Right, Handwheel	1
			Valve, Brand - Akron	
332	0649166		Elbow, Large Dia Outlet, 45 Deg, 4.00" FNST x 4.00" MNST, VLH Elbow w/Cap	1
333	0649939		Outlet, Front, 1.50" w/2" Plumbing	1
			Fitting, Outlet - 1.50" NST with 90 degree swivel Drain, Front Outlet - Automatic Location, Front, Single - in center bumper tray	
334	0092575		Not Required, Outlet, Rear	1
335	0045099		Not Required, Elbow, Rear Outlets	1
336	0092574		Not Required, Outlet, Rear, Additional	1
337	0085695		Not Required, Elbow, Rear Outlets, Large, Additional	1
338	0004990		Outlet, Front HB, 2.50" w/2.50" Plumbing	1
			Location - passenger side Qty, Discharges - 01	
339	0752097		Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	1
340	0723042		Valve, 0.75" Bleeder, Discharges, "T" Swing Handle	1
341	0549164		Outlet, 3.00" Deluge w/Akron Model 3406 Electric Riser	1
342	0095958		Deluge Outlet, Special Height/Location	1
			Fill in Blank - To enable the deck gun to be rotated 360 degree- mounted `3.00" above cargo wall, as shown on AD	
343	0072930		Monitor, Akron 3416, 4" FNST Inlet	1
344	0501504		Nozzle, Akron 2499, Quad Tips, 3488 and 5160 Manual Fog	1
345	0626591		Deluge Mount, 3" ANSI 4 Bolt Flange, Use w/ Akron 3406 Riser	1
346	0723726		Speedlay Module Not Required	1
347	0722432		Hose Restraint Not Required, No Speedlay Module	1
348	0723395		Speedlays, Not Required	1
349	0723394		Speedlays, Not Required	1
350	0029167		Crosslays Sngl Sheet Unpainted, (2+) 1.50", Std. Cap	2
			Qty, Crosslays - 2	
351	0029196		Not Required, 2.50" Crosslay	1
352	0591145		Hose Restraint, Crosslay/Deadlay, Top/Ends, Elastic Netting	2
			Qty, - 02	
353	0029260		Not Required, Speedlays	1
354	0750536		Hose Restr, Spdly, Not Required, No Spdly	1
355	0019853		Crosslays, 8.00" Lower Than Standard - Control Zone w/9.00" Raised PH	1
356	0624939		Foam Sys, Husky 3, Single Agent, Multi Select Feature	1
			Discharge, Foam Locations - Front Bumper Center, Rear Outlet Right Side, Crosslay Front and Crosslay Rear	
357	0012126		Not Required, CAF Compressor	1
358	0592527		Refill, Foam Tank, Integral, Husky 3	1
359	0031896		Demonstration, Foam System, Dealer Provided	1
360	0005446		Foam Cell, 20 Gallon, Not Reduce Water	1
			Type of Foam - Class "A"	
361	0697589		Drain, 1.00", Foam Tank #1, Husky 3 Foam System, Quarter Turn	1
362	0091079		Not Required, Foam Tank #2	1
363	0091112		Not Required, Foam Tank #2 Drain	1
364	0746447		Approval Dwg, All Pump Panel(s), Includes Color And Label Tags	1
			Num Of Truck(s) or Sim Unit, ALL Pump Pnl, Dwg - 01	
365	0032479		Pump Panel Configuration, Control Zone	1
366	0005525		Material, Pump Panels, Side Control Brushed Stainless	1

Line	Option	Type	Option Description	Qty
367	0721765		Panel, Pump Access - Right Side Only, Side Control	1
			Latch, Pump Panel Access, Side Mount - Swell Latch, Chrome	
368	0005945		Light, Pump Compt	1
369	0586438		Gauges, Engine - Pump Panel, IAT Pressure Controller	1
370	0005601		Throttle, Engine, Incl'd w/Press Controller	1
371	0739224		Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle,Green	1
372	0549333		Indicators, Engine, Included with Pressure Controller	1
373	0745568		Indicator Light, Pump Panel, Ok To Pump, Green	1
374	0005780		Control, Air Horn At Pmp Pnl, Button	1
375	0066121		Drains, LS, Keep Area Under Main Inlet Clear	1
376	0888193	SP	Drains, Above Runningboards, LS & RS, Except for Both Foam Pump Drains, Special	1
377	0081262		Drains, RS, Keep Area Under Main Inlet Clear	1
378	0005690		Gauges, 6.00" Master, Class 1, 30"-0-600psi	1
379	0511100		Gauge, 2.00" Pressure, Class 1, 30"-0-400psi	1
380	0738602		Gauge, Water Level, Class 1, w/ (1) Large Slave & (1) Mini, Remote Module Driver	1
			Location, Water Level Gauge, Single-Select - b) LS Pump Panel	
			Activation, Water Level G - pg) pump in gear	
381	0750438		Water Level Gauge, Wln PSTANK2, LED 1-Light, 4-Level	2
			Qty, - 02	
			Activation, Water Level G - Pump in gear or parking brake applied	
			Location, Water Level Gauge, Multi-Select - Each Side Custom Cab - Most Rearward	
			Color, Trim - Chrome Trim	
382	0062992		Gauge, Foam Level, (1) Tank, Class 1, GAAAR 5lt	1
383	0593143		Light Shield/Step 8", LED w/Weldon Step Light	1
384	0682499		Light Shield/Step 8", PS LED, Weldon Step Light	1
385	0606694		Air Horns, (2) Hadley, 6" Round, eTone, In Bumper	1
386	0606835		Location, Air Horns, Bumper, Each Side, Outside Frame, Outboard (Pos #1 & #7)	1
387	0036064		Control, Air Horn, Foot Sw	1
			Location, air horn contro - a) drivers side	
388	0006133		Siren, Code 3 3692 100W or 200W	1
389	0510206		Location, Elect Siren, Recessed Overhead In Console	1
			Location, Elec Siren - Overhead, DS Inside Sw Pnl	
390	0748306		Control, Elec Siren, Multi Select	1
391	0805709		Control, Elec Siren, Horn Ring, Interlock	1
			Control, Interlocks - E Master On	
392	0748294		Control, Elec Siren, Ft Sw, LS	1
393	0601374		Speaker, (2) Code 3, PB100C, Chrome	1
			Connection, Speaker - siren head	
394	0678617		Location, Speaker, Frt Bumper, Recessed, Right and Left Side Corners	1
395	0746353		Not Required, Warning Lights Intensity	1
396	0738567	SP	Lights, Wln, M4*C, RwbWRBWR RWBRWbwR 14lts	1
			Color, Trim - Chrome Trim	
397	0561394		Light, Front Zone, Wln M6*C LED, Clear Lens, 4lts Q Bez, Inside Split Color	1
			Color, Lt DS Frnt Outside - DS Front Outside Red	
			Color, Lt PS Frnt Outside - PS Front Outside Blue	
			Color, Lt DS Frnt Split - b) Red and Blue	
			Color, Lt PS Frnt Split - c) Blue and Red	
398	0653937		Flasher, Headlight Alternating	1
			Headlt flash deactivation - a)w/high beam	
399	0898752		Lights, Side Zone Lower, Wln M6#, M6#, M6# Split Color 6Lts	1
			Location, Lights Mid - On crew cab to the rear of the crew cab doors.	
			Location, Lights Rear - centered over the rear axle.	
			Location, Lights Front Side - b)each side bumper	
			Color, Trim - Chrome Trim	
			Color, Lt Side Frnt RS Cmb - Blue Red	
			Color, Lt Side Frnt LS Cmb - Blue Red	
			Color, Lt Side Mid LS Cmb - Blue Red	
			Color, Lt Side Mid RS Cmb - Blue Red	
			Color, Lt Side Rear RS Cmb - Red Blue	
			Color, Lt Side Rear LS Cmb - Red Blue	

Line	Option	Type	Option Description	Qty
400	0895974		Lights, Door Interior Flash, 4 Dr Cab, Wln 3S*00F*R, 3" Round	1
			Color, Lens, LEDs - Match	
			Color, Trim - Black Trim	
			Control, Door Int Flash - Ignition Switch	
			Location, Light, Door Int Flash - Low and Outside	
			Color, Lt Cab Left - Amber Flashing	
			Color, Lt Cab Right - Amber Flashing	
			Color, Lt Crew Cab Left - Amber Flashing	
			Color, Lt Crew Cab Right - Amber Flashing	
401	0815847		Connectors, Door Interior Flash, All Cabs, Weatherproof	1
402	0540783		Lights, Rear Zn Lwr, Wln M6*C LED	1
			Color, Lt DS Rear - r) DS Rear Lt Red	
			Color, Lt PS Rear - r) PS Rear Lt Red	
403	0088745		Light, Rear Zone Up, Wln L31HRFN LED Beacon, Red LED	1
			Color, Dome, Rear Warning - b)both domes red	
404	0006551		Not Required, Lights, Rear Upper Zone Blocking	1
405	0016610		Mounting, Rear Warn Lights, Std Mount, S/S Brackets	1
			Material, Bracket - Polished S/S	
406	0791493		Light, Traffic Directing, Wln TAM65 36" Long LED	1
			Activation, Traffic Dir L - Aux Flash with Emergency Master	
407	0529680		Location, Traf Dir Lt, Surface Mounted with Treadplate Box	1
408	0530288		Location, Traf Dir Lt Controller, Overhead Recessed Console, above Eng Tnl DS	1
409	0809558		Inverter, Xantrex XPower 450, Rated @ 337W	1
410	0814953		Location, Body, Inverter, LS Forward Compartment	1
			Location, Comp Body - High On Left Wall	
411	0889570	SP	Approved, Inverter	1
412	0780244		Receptacle, 15/20A 120V 3-Pr 3-Wr SB Dup, GFCI	1
			Location, Receptacles - recessed on the cabinet on the rear engine tunnel on officer side	
			Qty, - 01	
			AC Power Source - Inverter	
			Cover, Receptacle - Exterior Flip Up Duplex Cover(s)	
413	0519934		Not Required, Brand, Hydraulic Tool System	1
414	0007150		Bag of Nuts and Bolts	1
			Qty, Bag Nuts and Bolts - 1	
415	0602516		NFPA Required Loose Equipment, Pumper, NFPA 2016, Provided by Fire Department	1
416	0077022		Hose, 5" Soft Suction-w/4.5" Coupling 15ft lng	1
417	0027023		No Strainer Required	1
418	0584119		Extinguisher, 20 lb Dry Chemical, 80-B:C Rating	1
			Qty, Extinguishers - 1	
419	0533277		Extinguisher, 2.5 Gal. Pressurized Water	1
			Qty, Extinguishers - 1	
420	0007125		Axes, (2) Flathead w/Fiberglass Handle	1
421	0591378		Axe, (1) Pickhead w/Fiberglass Handle	1
422	0741569		Paint Process / Environmental Requirements, Appleton	1
423	0709846		Paint, Two-Tone Color, Velocity/Impel	1
			Paint Color, Upper Area, Predefined - #20 White	
			Shield, Cab - No Shield	
			Paint Color, Lower Area, Predefined - #117 RED, same as previous job 37138.	
			Paint Break, Cab - Standard Two-Tone Cab Break	
424	0709845		Paint, Single Color, Body	1
			Paint, Body - Match Lower Cab	
425	0646897		Paint Chassis Frame Assy, E-Coat, Standard	1
			Paint Color, Frame Assembly, Predefined - Standard Black	
426	0693798		Paint, Front Wheels	1
			Paint, Wheels - Red #117	
427	0693793		Paint, Rear Wheels, Single Axle	1
			Paint, Wheels - Red #117	
428	0733739		Paint, Axle Hubs	1
			Paint, Axle Hub - Lower Job Color	
429	0007230		Compartment, Painted, Spatter Gray	1

Line	Option	Type	Option Description	Qty
430	0544129		Reflective Band, 1"-6"-1"	1
			Color, Reflect Band - A - a) white	
			Color, Reflect Band - B - l) white	
			Color, Reflect Band - C - w) white	
431	0510041		Reflective across Cab Face, Imp/Vel	1
432	0536954		Stripe, Chevron, Rear, Diamond Grade, Pumper	1
			Color, Rear Chevron DG - fluorescent yellow green	
433	0027341		Jog, In Reflective Stripe, Single or Multiple	1
			Qty, - 1	
434	0545179		Stripe, Diamond Grade, Chevron, Front Bumper	1
			Size, Chevron Striping - 06	
			Color, Chevron DG - Yellow Green, Fluorescent	
			Color, Chevron DG - B - Red	
435	0065687		Stripe, Reflective, Cab Doors Interior	1
			Color, Reflective - a) white	
436	0027372		Lettering Specifications, (GOLD STAR Process)	1
437	0686434		Lettering, Gold Leaf, 3.00", (21-40)	1
			Outline, Lettering - Outline and Shade	
438	0686033		Lettering, Reflective, 4.00", Each	12
			Qty, Lettering - 12	
			Outline, Lettering - Outline	
439	0686018		Lettering, Reflective, 5.00", Each	6
			Qty, Lettering - 06	
			Outline, Lettering - Outline	
440	0685981		Lettering, Reflective, 14.00", Each	2
			Qty, Lettering - 02	
			Outline, Lettering - Outline and Shade	
441	0685978		Lettering, Reflective, 18.00", Each	1
			Qty, Lettering - 01	
			Outline, Lettering - Outline and Shade	
442	0686256		Lettering, Gold Leaf, 4.00", Each	8
			Qty, Lettering - 08	
			Outline, Lettering - Outline and Shade	
443	0686042		Lettering, Reflective, 2.00", Each	14
			Qty, Lettering - 14	
			Outline, Lettering - Outline	
444	0686002		Lettering, Reflective, 8.00", Each	1
			Qty, Lettering - 01	
			Outline, Lettering - Outline and Shade	
445	0026526		Lettering, Reflective, "Emergency Dial 911", Pair	1
			Color, Lettering - a) white	
			Location, Lettering - Inset into the scl/s on D1/P1	
			Size, Lettering, Reflect - 05	
446	0660881	SP	Emblem, Monogram,Goldleaf, City of Flagstaff, pair	1
			Qty, - 1	
			Location, Emblem - Located on cab doors	
447	0772003		Manual, Fire Apparatus Parts, USB Flash Drive, Custom	1
			Qty, - 01	
448	0002905		Manuals, (2) Chassis Service, Custom	1
449	0773381		Manual, Chassis Operation, (1) USB Flash Drive, Custom	1
450	0030008		Warranty, Basic, 1 Year, Apparatus, WA0008	1
451	0611136		Warranty, Chassis, 3 Year, Velocity/Impel, WA0284	1
452	0696698		Warranty, Engine, Cummins, 5 Year, WA0181	1
453	0684953		Warranty, Steering Gear, Sheppard M110, 3 Year WA0201	1
454	0595767		Warranty, Frame, 50 Year, Velocity/Impel, WA0038	1
455	0595698		Warranty, Axle, 3 Year, TAK-4, WA0050	1
456	0733306		Warranty, Single Axle, 5 Year, Meritor, General Service, WA0384	1
457	0652758		Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	1
458	0019914		Warranty, Structure, 10 Year, Custom Cab, WA0012	1
459	0744240		Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	1
460	0524627		Warranty, Electronics, 5 Year, MUX, WA0014	1
461	0695416		Warranty, Pierce Camera System, WA0188	1
462	0647720		Warranty, Pierce LED Strip Lights, WA0203	1

Line	Option	Type	Option Description	Qty
463	0046369		Warranty, 5-year EVS Transmission, Standard Custom, WA0187	1
464	0685945		Warranty, Transmission Cooler, WA0216	1
465	0688798		Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	1
466	0596025		Warranty, Structure, 10 Year, Body, WA0009	1
467	0693127		Warranty, Gortite, Roll-up Door, 6 Year, WA0190	1
468	0734463		Warranty, Pump, Waterous, 7 Year Parts, WA0382	1
469	0648675		Warranty, 10 Year S/S Pumbing, WA0035	1
470	0657990		Warranty, Foam System, Husky 3, WA0231	1
471	0595820		Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	1
472	0595421		Warranty, Goldstar, 3 Year, Apparatus, WA0018	1
473	0683627		Certification, Vehicle Stability, CD0156	1
474	0808577		Certification, Engine Installation, Velocity, Cummins X15, 2027	1
475	0686786		Certification, Power Steering, CD0098	1
476	0892701		Certification, Cab Integrity, Impel/Velocity FR, CD0190	1
477	0548950		Certification, Cab Door Durability, Velocity/Impel, CD0001	1
478	0548967		Certification, Windshield Wiper Durability, Impel/Velocity, CD0005	1
479	0667411		Certification, Electric Window Durability, Velocity/Impel FR, CD0004	1
480	0549273		Certification, Seat Belt Anchors and Mounting, Imp/Vel/Vel SLT, CD0018	1
481	0735950		Certification, Cab HVAC System Perf, Vel/Imp FR, CD0166/CD0168/CD0176/CD0177	1
482	0545073		Amp Draw Report, NFPA Current Edition	1
483	0002758		Amp Draw, NFPA/ULC Radio Allowance	1
484	0799248		Appleton/Florida BTO	1
485	0000018		PUMPER, 2ND GEN	1
486	0000012		PIERCE CHASSIS	1
487	0004713		ENGINE, OTHER	1
488	0046396		EVS 4000 Series TRANSMISSION	1
489	0020011		WATEROUS PUMP	1
490	0020009		POLY TANK	1
491	0028048		FOAM SYSTEM	1
492	0020006		SIDE CONTROL	1
493	0020007		AKRON VALVES	1
494	0020015		ABS SYSTEM	1
495	0658751		PUMPER BASE	1

Pierce
WISCONSIN
FLAGSTAFF
FIRE
DEPARTMENT
FD
911
ENGINE
2

7. B.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Mark Wilson, Deputy Fire Chief
Co-Submitter:	Robert Johnson
Date:	09/26/2023
Meeting Date:	10/03/2023

TITLE:

Consideration and Approval of Contract: A Cooperative Purchase Contract with Hughes Fire Equipment, Inc. in the amount of $1,132,683.10 for two new Pierce Wildfire Type 3 Fire Engines.

STAFF RECOMMENDED ACTION:

1. Approve the Cooperative Purchase Contract with Hughes Fire Equipment, Inc. for two new Pierce Wildfire Type 3 Fire Engines in the amount of $1,132,683.10 utilizing a cooperative agreement with Sourcewell (Contract No. 113021-OKC-1); and
2. Authorize the City Manager to execute the necessary documents.

Executive Summary:

Hughes Fire Equipment, Inc. is a fully authorized dealer of Pierce Manufacturing Inc. and sells fire engines. This purchase of two Type 3 Wildfire Fire Engines would replace the current 24-year-old units. By purchasing these new engines, we will decrease down time due to mechanical failures and it will enable safer, more efficient units for use during wildfire incidents. These units would be dispersed around the City for wildfire and other all-risk response needs.

Financial Impact:

The replacement of the two wildfire engines was approved through a voter bond referendum in Nov 2022. The amount approved in the Budget as part of the 5 year financial plan is for $2,150,000.00 for two Type III Engines and two Water Tenders in FY2024-25. This purchase accomplishes half the approved replacements with the Type III Engines being the highest priority for replacement and stays within the approved budget. Remaining funds will be used to purchase two future water tenders and to outfit the units with necessary equipment to make them fully operational. While this purchase was not budgeted for in FY2034-24 Budget, the Fire Department budget has sufficient budget due to other delays to equipment deliveries to cover the budget appropriation for this purchase.

Policy Impact:

FFD identified both of these units in our FLEET approved apparatus replacement plan, as being overdue for replacement. These units can be called out of area based on local, regional, state and national needs to support wildfire efforts. Currently, we do not allow the two older units being replaced to go out of the area due to age and dependability concerns.

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

Priority Based Budget Key Community Priorities and Objectives

Safe and Healthy Community: Provide public safety services with resources, staff and training responsive to the communities needs.

Carbon Neutrality Plan

Technology not available in EV or Hybrid for these apparatus

Regional Plan

Goal PF.3. Provide high-quality emergency response and public safety services including law enforcement, fire, medical, and ambulance transport service. Policy PF.3.1. Maintain high-quality effectiveness and efficiency in law enforcement, fire, and emergency services to the extent that is consistent with governmental operations, plans, public policies, population served, and monies available.

Has There Been Previous Council Decision on This:

Funding was approved through a public vote to approve bonds in the November 2022 election and is part of the annual FY 2023-24 budget.

Options and Alternatives:

1. Approve the cooperative purchase contract with Hughes for the replacement wildfire engines; or
2. Reject the cooperative purchase contract and direct staff to conduct a new procurement process; or
3. Reject approval of the purchase of the replacement wildfire engines and continue response in a twenty-four-year-old fire units.

Background/History:

The national standard for fire engine replacement from front-line service ranges between 10-20 years base on use and typical geographical response. The City, during the recession, moved the replacement of engines up to twenty-five (25) years to reduce capital expenses. Currently, Fleet has moved this back to twenty (20) years due to significant maintenance costs and downtime seen by these older units. We have chosen to go with Pierce due to their highly regarded national reputation for building dependable, safe and functional units.

The Purchasing section has reviewed the competitively solicited cooperative purchase options available and confirmed that the Sourcewell Purchasing Cooperative conducted a competitive and open procurement process through Request for Proposal Solicitation No. 113021 that resulted in Contract No. 113021-OKC with Hughes Fire Equipment, Inc. is valid and within the scope of the materials and services requested.

Key Considerations:

Wildfire is one of the highest threats to the city and surrounding areas. By having updated units, we are better prepared for the known risks with dependable, safe and efficient units. The FFD apparatus replacement plan identified too many high priority Fire Department replacement units in the que to support them with current and future identified General Funds. This purchase was presented and approved through the citizen bond committee as a high priority need and placed on the November ballot which was passed by a public vote.

Expanded Financial Considerations:

Funds for this purchase are available in the bond funding account.

Community Benefits and Considerations:

Purchasing these new units allows our response efforts to be consistent in meeting our mission and the community expectations for public safety response.

Community Involvement:

Voter approved through a bond.

Attachments:

2024-49_Cooperative Contract
Quote - EM758
Quote - EM769
Scope Detail - EM758
Scope Detail - EM769
Spec - EM769
Spec - EM758
Type III Pic

COOPERATIVE PURCHASE CONTRACT
Contract No. 2024-49

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 Hughes Fire Equipment, Inc., an Oregon "S" Corporation ("Contractor").

RECITALS:

A. Contractor is a dealer as described in the Agency Contract; and

B. The Sourcewell Purchasing Cooperative conducted a competitive and open procurement process through Request for Proposal Solicitation No. 113021 that resulted in Contract No. 113021-OKC with Contractor ("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 the City the materials and or services, as specified in the Scope of Work attached as *Exhibit A*, and in accordance with the Agency Contract. A general description of materials and/or services being purchased is:

Wildland BX3 Pumpers EM758 & EM769

2. Specific Requirements of City: Contractor shall comply with all specific purchase and delivery requirements and/or options of City, as specified in the Scope of Work attached as *Exhibit A* and incorporated by reference.

3. Payment: Payment to the Contractor for the materials and/or services provided is **one million, one hundred thirty-two thousand, six hundred eighty-three dollars and ten cents ($1,132,683.10),** plus other fees and taxes; made in accordance with the price list and terms set forth in the Agency Contract.

4. Terms and Conditions of Agency Contract Apply: All provisions of the Agency Contract documents attached as *Exhibit B*, including any amendments, are incorporated in and shall apply to this Contract as though fully set forth herein. Contractor is responsible for promptly notifying City in writing of any changes to the Agency Contract, including, specifically changes in price for materials and/or services.

5. 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.

6. 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.

7. 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.

Hughes Fire Equipment, Inc.:

By:_____

Title:_____

CITY OF FLAGSTAFF

By:_____

Title:_____

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney's Office

EXHIBIT A

Scope of Work - Quote from Hughes Fire Equipment, Inc.

(attached)

September 15, 2023

Flagstaff Fire Department, AZ
One (1) Freightliner BX3 Wildland Pumper Stock 37582 EM758
Build Location: Bradenton, FL

Proposal Price	$523,187.00	
Arizona State Sales Tax @ 5.60%		29,298.47
Phoenix Sales Tax @ 2.70%		14,126.05
PHX Transportation Plan Tax @ 0.3% of $11,631.00		34.89
Total Bid Price Including Sales Tax		*$566,646.41*
Less payment upon completion @ factory discount	(4,581.00)	
Subtotal including all pre-pay discounts	$518,606.00	
Arizona State Sales Tax @ 5.60%		29,041.94
Phoenix Sales Tax @ 2.70%		14,002.36
PHX Transportation Plan Tax @ 0.3% of $11,631.00		34.89
Total Bid Price Including Pre-Pay Discounts & Sales Tax		*$561,685.19*

Terms:

Price Expiration: The above pricing is valid until October 27, 2023.

Future Changes: Various state or federal regulatory agencies (e.g. NFPA, DOT, EPA) may require changes to the Specifications and in any such event any resulting cost increases incurred to comply will be added to the Purchase Price to be paid by the Customer and documented on a Change Order.

Commercial Chassis & Component Price Volatility: The pricing provided is based on our best estimate factoring Pierce's backlog of apparatus and historical chassis model year pricing & availability. Company shall not be responsible for any commercial chassis price increases including changes to model year enacted by a commercial chassis supplier or price increase of any major components of Product (including but not limited to engine, transmission, and fire pump) after the execution of contract. Any price increase of commercial chassis or major component of product will be passed through to end user and will be documented on a Change Order.

Delivery: This apparatus is currently in production and has a completion at the factory dates of December, 2023.

Stock/Demo Units:
a. This stock unit is available on a first come / first serve basis.
b. This stock unit is sold on an As is basis with a Pierce (1) year bumper to bumper warranty and any remaining vendor warranties.

Payment Terms:
a. If pre-payment discount options are elected, the following terms will apply:

i. Payment Upon Completion at Factory Discount: If elected, final payment is due prior to apparatus leaving the factory for delivery. If payment is not processed upon receipt of invoice the discount total will be required in addition to the invoice amount.

b. If pre-payment discount options are not elected standard payment terms will apply: Final payment will be due 30 days after the apparatus leaves the factory for delivery. If payment is not made at that time a late fee will be applicable.

c. Payments made for apparatus using a credit card will be applicable to a credit card convenience fee.

Consortium Purchase: The proposal is based on the apparatus being purchased through Sourcewell utilizing Contract No. 113021-OKC-1 valid until 2/10/2026. It is the purchaser's responsibility to determine if the use of consortiums meets their purchasing requirements.

Performance Bond: A performance bond is not included in the above pricing.

Transportation: Transportation of the apparatus to be driven from the factory to the customers location is included in the above pricing. However, if permits are not obtainable, due to the weight of the apparatus, and the apparatus must be transported on a flat bed, additional Transportation charges will be the responsibility of the customer. We will provide pricing at that time if necessary. If customer elects to drive the apparatus from the factory, **$8,500.00** may be deducted from the purchase price. if this option is elected payment in full and proof of insurance must be provided prior to leaving the factory and the customer is responsible for compliance with all state, local and federal DOT requirements including the driver possessing a valid CDL license.

Inspection Trips: One (1) factory inspection trip for **four (4)** customer representatives is included in the above pricing. The inspection trip will be scheduled at a time mutually agreed upon between the manufacture's representative and the customer, during the window provided by the manufacturer. Airfare, lodging and meals while at the factory are included. In the event the customer is unable to travel to the factory or the factory is unable to accept customers due to the restrictions caused by a national disaster or pandemic then the Dealership reserves the right to use forms of electronic media to accomplish the intention of the inspection trip. Every effort will be made to make the digital media as thorough as possible to satisfy the expectations of the of the customer. If the customer elects to forgo an inspection trip $2,400.00 per traveler (per trip) will be deducted from the final invoice.

Persistent Inflationary Environment: Effective September 1, 2023, verbiage concerning the Persistent Inflationary Environment must be present on customer purchase document. Please speak with your sales representative for the specific terms that are a requisite for acceptance of order.

Acceptance of Proposal: If the customer wishes to purchase the proposed apparatus Hughes Fire Equipment will provide the Customer its form of Purchase Agreement for the Customer's review and signature. If the Customer desires to use its standard form of purchase order as the Purchase Agreement, the purchase order is subject to review for any required revisions prior to acceptance. **All purchase orders shall be made out to Hughes Fire Equipment, Inc., reference proposal EM758 component list dated 9/15/2023, and must be signed and dated.**

September 13, 2023

Flagstaff Fire Department, AZ
One (1) International Wildland BX3 EM769 Stock 38647
Build Location: Bradenton, FL

Proposal Price	$531,896.00	
Arizona State Sales Tax @ 5.60%		29,786.18
Phoenix Sales Tax @ 2.70%		14,361.19
PHX Transportation Plan Tax @ 0.3% of $11,631.00		34.89
Total Bid Price Including Sales Tax		*$576,078.26*
Less payment upon completion @ factory discount	(4,691.00)	
Subtotal including all pre-pay discounts	$527,205.00	
Arizona State Sales Tax @ 5.60%		29,523.48
Phoenix Sales Tax @ 2.70%		14,234.54
PHX Transportation Plan Tax @ 0.3% of $11,631.00		34.89
Total Bid Price Including Pre-Pay Discounts & Sales Tax		*$570,997.91*

Terms:

Price Expiration: The above pricing is valid until October 27, 2023.

Future Changes: Various state or federal regulatory agencies (e.g. NFPA, DOT, EPA) may require changes to the Specifications and in any such event any resulting cost increases incurred to comply will be added to the Purchase Price to be paid by the Customer and documented on a Change Order.

Commercial Chassis & Component Price Volatility: The pricing provided is based on our best estimate factoring Pierce's backlog of apparatus and historical chassis model year pricing & availability. Company shall not be responsible for any commercial chassis price increases including changes to model year enacted by a commercial chassis supplier or price increase of any major components of Product (including but not limited to engine, transmission, and fire pump) after the execution of contract. Any price increase of commercial chassis or major component of product will be passed through to end user and will be documented on a Change Order.

Delivery: This apparatus is currently in production and has a completion at the factory dates of December, 2023.

Stock/Demo Units:
a. This stock unit is available on a first come / first serve basis.
b. This stock unit is sold on an As is basis with a Pierce (1) year bumper to bumper warranty and any remaining vendor warranties.

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Consortium Purchase: The proposal is based on the apparatus being purchased through Sourcewell utilizing Contract No. 113021-OKC-1 valid until 2/10/2026. It is the purchaser's responsibility to determine if the use of consortiums meets their purchasing requirements.

Performance Bond: A performance bond is not included in the above pricing.

Transportation: Transportation of the apparatus to be driven from the factory to the customers location is included in the above pricing. However, if permits are not obtainable, due to the weight of the apparatus, and the apparatus must be transported on a flat bed, additional Transportation charges will be the responsibility of the customer. We will provide pricing at that time if necessary. If customer elects to drive the apparatus from the factory, **$8,500.00** may be deducted from the purchase price. if this option is elected payment in full and proof of insurance must be provided prior to leaving the factory and the customer is responsible for compliance with all state, local and federal DOT requirements including the driver possessing a valid CDL license.

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Acceptance of Proposal: If the customer wishes to purchase the proposed apparatus Hughes Fire Equipment will provide the Customer its form of Purchase Agreement for the Customer's review and signature. If the Customer desires to use its standard form of purchase order as the Purchase Agreement, the purchase order is subject to review for any required revisions prior to acceptance. **All purchase orders shall be made out to Hughes Fire Equipment, Inc., reference proposal EM769 component list dated 9/13/2023, and must be signed and dated.**

EXHIBIT B
AGENCY CONTRACT
(attached)

1. Agency **Contract # 113021-OKC** Award Request for Proposal Solicitation No. **RFP 113021**
2. Sourcewell Pricing for contract #113021-OKC

DocuSign Envelope ID: D25090FC-AF48-43B3-93AB-F3879467CBE8

Sourcewell

Solicitation Number: RFP #113021

CONTRACT

This Contract is between Sourcewell, 202 12th Street Northeast, P.O. Box 219, Staples, MN 56479 (Sourcewell) and Oshkosh Corporation, 1917 Four Wheel Dr., Oshkosh, WI 54902 (Supplier), and Supplier's consolidated subsidiaries as defined in the Proposal.

Sourcewell is a State of Minnesota local government unit and service cooperative created under the laws of the State of Minnesota (Minnesota Statutes Section 123A.21) that offers cooperative procurement solutions to government entities. Participation is open to eligible federal, state/province, and municipal governmental entities, higher education, K-12 education, nonprofit, tribal government, and other public entities located in the United States and Canada. Sourcewell issued a public solicitation for Firefighting Apparatus and Fire Service Vehicles from which Supplier was awarded a contract.

Supplier desires to contract with Sourcewell to provide equipment, products, or services to Sourcewell and the entities that access Sourcewell's cooperative purchasing contracts (Participating Entities).

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 February 10, 2026, unless it is cancelled sooner pursuant to Article 22. This Contract may be extended one additional year upon the request of Sourcewell and written agreement by Supplier.

C. SURVIVAL OF TERMS. Notwithstanding any expiration or termination of this Contract, all payment obligations incurred prior to expiration or termination will survive, as will the following: Articles 11 through 14 survive the expiration or cancellation of this Contract. All other rights will cease upon expiration or termination of this Contract.

2. EQUIPMENT, PRODUCTS, OR SERVICES

A. EQUIPMENT, PRODUCTS, OR SERVICES. Supplier will provide the Equipment, Products, or Services as stated in its Proposal submitted under the Solicitation Number listed above.

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Supplier'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 and the current model. Supplier may offer close-out, refurbished, or remounted Equipment or Products if they are clearly indicated in Supplier's product and pricing list. Unless agreed to by the Participating Entities in advance, Equipment or Products must be delivered as operational to the Participating Entity's site.

This Contract offers an indefinite quantity of sales, and while substantial volume is anticipated, sales and sales volume are not guaranteed.

B. WARRANTY. Supplier 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, Supplier warrants the Equipment, Products, and Services are suitable for and will perform in accordance with the ordinary use for which they are intended. Supplier's dealers and distributors must agree to assist the Participating Entity in reaching a resolution in any dispute over warranty terms with the manufacturer. Any manufacturer's warranty that extends beyond the expiration of the Supplier's warranty will be passed on to the Participating Entity.

C. DEALERS, DISTRIBUTORS, AND/OR RESELLERS. Upon Contract execution and throughout the Contract term, Supplier must provide to Sourcewell a current means to validate or authenticate Supplier's authorized dealers, distributors, or resellers relative to the Equipment, Products, and Services offered under this Contract, which will be incorporated into this Contract by reference. It is the Supplier's responsibility to ensure Sourcewell receives the most current information.

3. PRICING

All Equipment, Products, or Services under this Contract will be priced at or below the price stated in Supplier's Proposal.

When providing pricing quotes to Participating Entities, all pricing quoted must reflect a Participating Entity'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 Participating Entity's requested delivery location.

Regardless of the payment method chosen by the Participating Entity, 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 Participating Entity at the time of purchase.

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

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apparent at the time of delivery, Supplier must permit the Equipment and Products to be returned within a reasonable time at no cost to Sourcewell or its Participating Entities. Participating Entities 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. In the event of the delivery of nonconforming Equipment and Products, the Participating Entity will notify the Supplier as soon as possible and the Supplier will replace nonconforming Equipment and Products with conforming Equipment and Products that are acceptable to the Participating Entity.

Supplier must arrange for and pay for the return shipment on Equipment and Products that arrive in a defective or inoperable condition.

Sourcewell may declare the Supplier in breach of this Contract if the Supplier intentionally delivers substandard or inferior Equipment or Products.

B. SALES TAX. Each Participating Entity is responsible for supplying the Supplier with valid tax-exemption certification(s). When ordering, a Participating Entity must indicate if it is a tax-exempt entity.

C. HOT LIST PRICING. At any time during this Contract, Supplier may offer a specific selection of Equipment, Products, or Services at discounts greater than those listed in the Contract. When Supplier 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 Participating Entities.

4. PRODUCT AND PRICING CHANGE REQUESTS

Supplier 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 Supplier Development Administrator. This approved form is available from the assigned Sourcewell Supplier Development 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;

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- Individually list all Equipment, Products, or Services affected by the requested change, along with the requested change (e.g., addition, deletion, price change); and
- 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 Change Request Form will become an amendment to this Contract and will be incorporated by reference.

5. PARTICIPATION, CONTRACT ACCESS, AND PARTICIPATING ENTITY REQUIREMENTS

A. PARTICIPATION. Sourcewell's cooperative contracts are available and open to public and nonprofit entities across the United States and Canada; such as federal, state/province, municipal, K-12 and higher education, tribal government, and other public entities.

The benefits of this Contract should be available to all Participating Entities that can legally access the Equipment, Products, or Services under this Contract. A Participating Entity'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. Supplier understands that a Participating Entity's use of this Contract is at the Participating Entity's sole convenience and Participating Entities reserve the right to obtain like Equipment, Products, or Services from any other source.

Supplier is responsible for familiarizing its sales and service forces with Sourcewell contract use eligibility requirements and documentation and will encourage potential participating entities to join Sourcewell. Sourcewell reserves the right to add and remove Participating Entities to its roster during the term of this Contract.

B. PUBLIC FACILITIES. Supplier's employees may be required to perform work at government-owned facilities, including schools. Supplier's employees and agents must conduct themselves in a professional manner while on the premises, and in accordance with Participating Entity policies and procedures, and all applicable laws.

6. PARTICIPATING ENTITY USE AND PURCHASING

A. ORDERS AND PAYMENT. To access the contracted Equipment, Products, or Services under this Contract, a Participating Entity must clearly indicate to Supplier that it intends to access this Contract; however, order flow and procedure will be developed jointly between Sourcewell and Supplier. Typically, a Participating Entity will issue an order directly to Supplier or its authorized subsidiary, distributor, dealer, or reseller. If a Participating Entity issues a purchase order, it may use its own forms, but the purchase order should clearly note the applicable Sourcewell

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contract number. All Participating Entity orders under this Contract must be issued prior to expiration or cancellation of this Contract; however, Supplier performance, Participating Entity payment obligations, and any applicable warranty periods or other Supplier or Participating Entity obligations may extend beyond the term of this Contract.

Supplier's acceptable forms of payment are included in its attached Proposal. Participating Entities will be solely responsible for payment and Sourcewell will have no liability for any unpaid invoice of any Participating Entity.

B. ADDITIONAL TERMS AND CONDITIONS/PARTICIPATING ADDENDUM. Additional terms and conditions to a purchase order, or other required transaction documentation, may be negotiated between a Participating Entity and Supplier, such as job or industry-specific requirements, legal requirements (e.g., affirmative action or immigration status requirements), or specific local policy requirements. Some Participating Entities may require the use of a Participating Addendum; the terms of which will be negotiated directly between the Participating Entity and the Supplier. Any negotiated additional terms and conditions must never be less favorable to the Participating Entity than what is contained in this Contract.

C. SPECIALIZED SERVICE REQUIREMENTS. In the event that the Participating Entity requires service or specialized performance requirements not addressed in this Contract (such as e-commerce specifications, specialized delivery requirements, or other specifications and requirements), the Participating Entity and the Supplier 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.

D. TERMINATION OF ORDERS. Participating Entities may terminate an order, in whole or in part, immediately upon notice to Supplier in the event of any of the following events:

1. The Participating Entity fails to receive funding or appropriation from its governing body at levels sufficient to pay for the equipment, products, or services to be purchased; or
2. Federal, state, or provincial laws or regulations prohibit the purchase or change the Participating Entity's requirements.

E. GOVERNING LAW AND VENUE. The governing law and venue for any action related to a Participating Entity's order will be determined by the Participating Entity making the purchase.

7. CUSTOMER SERVICE

A. PRIMARY ACCOUNT REPRESENTATIVE. Supplier 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:

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- Maintenance and management of this Contract;
- Timely response to all Sourcewell and Participating Entity inquiries; and
- Business reviews to Sourcewell and Participating Entities, if applicable.

B. BUSINESS REVIEWS. Supplier must perform a minimum of one business review with Sourcewell per contract year. The business review will cover sales to Participating Entities, pricing and contract terms, administrative fees, sales data reports, 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, Supplier must provide a contract sales activity report (Report) to the Sourcewell Supplier Development Administrator assigned to this Contract. Reports are due no later than 45 days after the end of each calendar quarter. A Report must be provided regardless of the number or amount of sales during that quarter (i.e., if there are no sales, Supplier must submit a report indicating no sales were made).

The Report must contain the following fields:

- Participating Entity Name (e.g., City of Staples Highway Department);
- Participating Entity Physical Street Address;
- Participating Entity City;
- Participating Entity State/Province;
- Participating Entity Zip/Postal Code;
- Participating Entity Contact Name;
- Participating Entity Contact Email Address;
- Participating Entity Contact Telephone Number;
- Sourcewell Assigned Entity/Participating Entity Number;
- Item Purchased Description;
- Item Purchased Price;
- Sourcewell Administrative Fee Applied; and
- Date Purchase was invoiced/sale was recognized as revenue by Supplier.

B. ADMINISTRATIVE FEE. In consideration for the support and services provided by Sourcewell, the Supplier will pay an administrative fee to Sourcewell on all Equipment, Products, and Services provided to Participating Entities. The Administrative Fee must be included in, and not added to, the pricing. Supplier may not charge Participating Entities more than the contracted price to offset the Administrative Fee.

The Supplier will submit payment to Sourcewell for the percentage of administrative fee stated in the Proposal multiplied by the total sales of all Equipment, Products, and Services purchased

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by Participating Entities under this Contract during each calendar quarter. Payments should note the Supplier's name and Sourcewell-assigned contract number in the memo; and must be mailed to the address above "Attn: Accounts Receivable" or remitted electronically to Sourcewell's banking institution per Sourcewell's Finance department instructions. Payments must be received no later than 45 calendar days after the end of each calendar quarter.

Supplier 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 Supplier is delinquent in any undisputed administrative fees, Sourcewell reserves the right to cancel this Contract and reject any proposal submitted by the Supplier 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 30 days from the cancellation date.

9. AUTHORIZED REPRESENTATIVE

Sourcewell's Authorized Representative is its Chief Procurement Officer.

Supplier's Authorized Representative is the person named in the Supplier's Proposal. If Supplier's Authorized Representative changes at any time during this Contract, Supplier must promptly notify Sourcewell in writing.

10. AUDIT, ASSIGNMENT, AMENDMENTS, WAIVER, AND CONTRACT COMPLETE

A. AUDIT. Pursuant to Minnesota Statutes Section 16C.05, subdivision 5, the books, records, documents, and accounting procedures and practices relevant to this Agreement are subject to examination by Sourcewell or the Minnesota State Auditor for a minimum of six years from the end of this Contract. This clause extends to Participating Entities as it relates to business conducted by that Participating Entity under this Contract.

B. ASSIGNMENT. Neither party may assign or otherwise transfer its rights or obligations under this Contract without the prior written consent of the other party and a fully executed assignment agreement. Such consent will not be unreasonably withheld. Any prohibited assignment will be invalid.

C. AMENDMENTS. Any amendment to this Contract must be in writing and will not be effective until it has been duly executed by the parties.

D. WAIVER. Failure by either party to take action or assert any right under this Contract will not be deemed a waiver of such right in the event of the continuation or repetition of the circumstances giving rise to such right. Any such waiver must be in writing and signed by the parties.

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E. CONTRACT COMPLETE. This Contract represents the complete agreement between the parties. No other understanding regarding this Contract, whether written or oral, may be used to bind either party.For any conflict between the attached Proposal and the terms set out in Articles 1-22 of this Contract, the terms of Articles 1-22 will govern.

F. 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, or any other relationship such as master-servant, or principal-agent.

11. INDEMNITY AND HOLD HARMLESS

Supplier must indemnify, defend, save, and hold Sourcewell and its Participating Entities, including their agents and employees, harmless from any claims or causes of action, including attorneys' fees incurred by Sourcewell or its Participating Entities, arising out of any act or omission in the performance of this Contract by the Supplier 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. Sourcewell's responsibility will be governed by the State of Minnesota's Tort Liability Act (Minnesota Statutes Chapter 466) and other applicable law.

12. GOVERNMENT DATA PRACTICES

Supplier 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 Supplier under this Contract.

13. INTELLECTUAL PROPERTY, PUBLICITY, MARKETING, AND ENDORSEMENT

A. INTELLECTUAL PROPERTY

1. *Grant of License.* During the term of this Contract:
   a. Sourcewell grants to Supplier a royalty-free, worldwide, non-exclusive right and license to use thetrademark(s) provided to Supplier by Sourcewell in advertising and promotional materials for the purpose of marketing Sourcewell's relationship with Supplier.
   b. Supplier grants to Sourcewell a royalty-free, worldwide, non-exclusive right and license to use Supplier's trademarks in advertising and promotional materials for the purpose of marketing Supplier's relationship with Sourcewell.
2. *Limited Right of Sublicense*. The right and license granted herein includes a limited right of each party to grant sublicenses to their respective subsidiaries, distributors, dealers,

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resellers, marketing representatives, and agents (collectively "Permitted Sublicensees") in advertising and promotional materials for the purpose of marketing the Parties' relationship to Participating Entities. Any sublicense granted will be subject to the terms and conditions of this Article. Each party will be responsible for any breach of this Article by any of their respective sublicensees.

3. *Use; Quality Control.*

a. Neither party may alter the other party's trademarks from the form provided and must comply with removal requests as to specific uses of its trademarks or logos.

b. Each party agrees to use, and to cause its Permitted Sublicensees to use, the other party's trademarks only in good faith and in a dignified manner consistent with such party's use of the trademarks. Upon written notice to the breaching party, the breaching party has 30 days of the date of the written notice to cure the breach or the license will be terminated.

4. As applicable, Supplier agrees to indemnify and hold harmless Sourcewell and its Participating Entities against any and all suits, claims, judgments, and costs instituted or recovered against Sourcewell or Participating Entities by any person on account of the use of any Equipment or Products by Sourcewell or its Participating Entities supplied by Supplier in violation of applicable patent or copyright laws.

5. Termination. Upon the termination of this Contract for any reason, each party, including Permitted Sublicensees, will have 30 days to remove all Trademarks from signage, websites, and the like bearing the other party's name or logo (excepting Sourcewell's pre-printed catalog of suppliers which may be used until the next printing). Supplier must return all marketing and promotional materials, including signage, provided by Sourcewell, or dispose of it according to Sourcewell's written directions.

B. 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 Supplier individually or jointly with others, or any subcontractors, with respect to the program, publications, or services provided resulting from this Contract.

C. MARKETING. Any direct advertising, marketing, or offers with Participating Entities must be approved by Sourcewell. Send all approval requests to the Sourcewell Supplier Development Administrator assigned to this Contract.

D. ENDORSEMENT. The Supplier must not claim that Sourcewell endorses its Equipment, Products, or Services.

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14. GOVERNING LAW, JURISDICTION, AND VENUE

The substantive and procedural laws of the State of Minnesota will govern this Contract. Venue for all legal proceedings arising out of this Contract, or its breach, must be in the appropriate state court in Todd County, Minnesota or federal court in Fergus Falls, Minnesota.

15. 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.

16. SEVERABILITY

If any provision of this Contract is found by a court of competent jurisdiction to be illegal, unenforceable, or void then both parties will be relieved from all obligations arising from that provision. If the remainder of this Contract is capable of being performed, it will not be affected by such determination or finding and must be fully performed.

17. 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 Supplier 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 Supplier may escalate the resolution of the issue to a higher level of management. The Supplier will have 30 calendar days to cure an outstanding issue.
3. *Performance while Dispute is Pending*. Notwithstanding the existence of a dispute, the Supplier must continue without delay to carry out all of its responsibilities under the Contract that are not affected by the dispute. If the Supplier fails to continue without delay to perform its responsibilities under the Contract, in the accomplishment of all undisputed work, the Supplier will bear any additional costs incurred by Sourcewell and/or its Participating Entities as a result of such failure to proceed.

B. DEFAULT AND REMEDIES. Either of the following constitutes cause to declare this Contract, or any Participating Entity order under this Contract, in default:

1. Nonperformance of contractual requirements, or
2. A material breach of any term or condition of this Contract.

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The party claiming default must provide written notice of the default, with 30 calendar days to cure the 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:

- Exercise any remedy provided by law or equity, or
- Terminate the Contract or any portion thereof, including any orders issued against the Contract.

18. INSURANCE

A. REQUIREMENTS. At its own expense, Supplier 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.* Supplier 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), or equivalent. 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, Supplier 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

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no less broad than ISO Business Auto Coverage Form CA 0001 (2010 edition or newer), or equivalent.

Minimum Limits:
$1,000,000 each accident, combined single limit

4. *Umbrella Insurance*. During the term of this Contract, Supplier will maintain umbrella coverage over Employer's Liability, Commercial General Liability, and Commercial Automobile.

Minimum Limits:
$2,000,000

Failure of Supplier 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, Supplier 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 Supplier Development Administrator assigned to this Contract. The certificates must be signed by a person authorized by the insurer(s) to bind coverage on their behalf.

Failure to request certificates of insurance by Sourcewell, or failure of Supplier to provide certificates of insurance, in no way limits or relieves Supplier of its duties and responsibilities in this Contract.

C. ADDITIONAL INSURED ENDORSEMENT. Supplier agrees to list Sourcewell and its Participating Entities, including their officers, agents, and employees, as an additional insured under the Supplier's commercial general liability insurance policy with respect to liability arising out of activities, "operations," or "work" performed by or on behalf of Supplier, and products and completed operations of Supplier.

D. WAIVER OF SUBROGATION. Omitted.

E. UMBRELLA/EXCESS LIABILITY/SELF-INSURED RETENTION. The limits required by this Contract can be met by either providing a primary policy or in combination with umbrella/excess liability policy(ies), or self-insured retention.

19. 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.

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B. LICENSES. Supplier must maintain a valid and current status on all required federal, state/provincial, and local licenses, bonds, and permits required for the operation of the business that the Supplier conducts with Sourcewell and Participating Entities.

20. BANKRUPTCY, DEBARMENT, OR SUSPENSION CERTIFICATION

Supplier 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 Supplier declares bankruptcy, Supplier must immediately notify Sourcewell in writing.

Supplier 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 the Canadian government, as applicable; or any Participating Entity. Supplier certifies and warrants that neither it nor its principals have been convicted of a criminal offense related to the subject matter of this Contract. Supplier further warrants that it will provide immediate written notice to Sourcewell if this certification changes at any time.

21. PROVISIONS FOR NON-UNITED STATES FEDERAL ENTITY PROCUREMENTS UNDER UNITED STATES FEDERAL AWARDS OR OTHER AWARDS

Participating Entities 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. Participating Entities may have additional requirements based on specific funding source terms or conditions. Within this Article, all references to “federal” should be interpreted to mean the United States federal government. The following list only applies when a Participating Entity accesses Supplier’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.

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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. Supplier 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 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. Supplier certifies that during the term of an award for all contracts by Sourcewell resulting from this procurement process, Supplier 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,

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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. Supplier certifies that during the term of an award for all contracts by Sourcewell resulting from this procurement process, Supplier 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). Supplier 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. Supplier 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). Suppliers must file any required certifications. Suppliers 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 covered by 31 U.S.C. § 1352. Suppliers 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. Suppliers 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, Supplier must comply with the record retention requirements detailed in 2 C.F.R. § 200.333. The Supplier further certifies that it will retain all records as required by 2 C.F.R. § 200.333 for a period of 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.

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I. ENERGY POLICY AND CONSERVATION ACT COMPLIANCE. To the extent applicable, Supplier 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, Supplier 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). Supplier agrees that duly authorized representatives of a federal agency must have access to any books, documents, papers and records of Supplier that are directly pertinent to Supplier'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 Supplier'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.

M. FEDERAL SEAL(S), LOGOS, AND FLAGS. The Supplier not use the seal(s), logos, crests, or reproductions of flags or likenesses of Federal agency officials without specific pre-approval.

N. NO OBLIGATION BY FEDERAL GOVERNMENT. The U.S. federal government is not a party to this Contract or any purchase by an Participating Entity and is not subject to any obligations or liabilities to the Participating Entity, Supplier, or any other party pertaining to any matter resulting from the Contract or any purchase by an authorized user.

O. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS. The Contractor acknowledges that 31 U.S.C. 38 (Administrative Remedies for False Claims and Statements) applies to the Supplier's actions pertaining to this Contract or any purchase by a Participating Entity.

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P. FEDERAL DEBT. The Supplier certifies that it is non-delinquent in its repayment of any federal debt. Examples of relevant debt include delinquent payroll and other taxes, audit disallowance, and benefit overpayments.

Q. CONFLICTS OF INTEREST. The Supplier must notify the U.S. Office of General Services, Sourcewell, and Participating Entity as soon as possible if this Contract or any aspect related to the anticipated work under this Contract raises an actual or potential conflict of interest (as described in 2 C.F.R. Part 200). The Supplier must explain the actual or potential conflict in writing in sufficient detail so that the U.S. Office of General Services, Sourcewell, and Participating Entity are able to assess the actual or potential conflict; and provide any additional information as necessary or requested.

R. U.S. EXECUTIVE ORDER 13224. The Supplier, and its subcontractors, must comply with U.S. Executive Order 13224 and U.S. Laws that prohibit transactions with and provision of resources and support to individuals and organizations associated with terrorism.

S. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT. To the extent applicable, Supplier certifies that during the term of this Contract it will comply with applicable requirements of 2 C.F.R. § 200.216.

T. DOMESTIC PREFERENCES FOR PROCUREMENTS. To the extent applicable, Supplier certifies that during the term of this Contract will comply with applicable requirements of 2 C.F.R. § 200.322.

22. CANCELLATION

Sourcewell or Supplier may cancel this Contract at any time, with or without cause, upon 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 Supplier's Proposal. Cancellation of this Contract does not relieve either party of financial, product, or service obligations incurred or accrued prior to cancellation.

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Sourcewell

DocuSigned by:
By: Jeremy Schwartz
C0FD2A139D06489...
Jeremy Schwartz
Title: Chief Procurement Officer

4/5/2022 | 4:53 PM CDT
Date: _____

Oshkosh Corporation

By: _____
James W. Johnson
Title: Executive Vice President and President
Fire & Emergency Segment

Date: APRIL 5 '22

Approved:

DocuSigned by:
By: Chad Coauette
7E42B8F817A64CC...
Chad Coauette
Title: Executive Director/CEO

4/5/2022 | 4:54 PM CDT
Date: _____

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RFP 113021 - Firefighting Apparatus and Fire Service Vehicles

Vendor Details

Company Name:	Pierce Manufacturing
Does your company conduct business under any other name? If yes, please state:	WISCONSIN
Address:	2600 American Drive Appleton , WI 54914
Contact:	Michelle Swokowski
Email:	mswokowski@piercemfg.com
Phone:	920-832-3272
Fax:	920-740-6252
HST#:	

Submission Details

Created On:	Monday October 18, 2021 12:41:15
Submitted On:	Tuesday November 30, 2021 16:18:31
Submitted By:	Michelle Swokowski
Email:	mswokowski@piercemfg.com
Transaction #:	724f061f-10fb-4d93-bd02-b5afd9c2b906
Submitter's IP Address:	198.190.231.15

Specifications

Table 1: Proposer Identity & Authorized Representatives

General Instructions (applies to all Tables) Sourcewell prefers a brief but thorough response to each question. Do not merely attach additional documents to your response without also providing a substantive response. Do not leave answers blank; respond "N/A" if the question does not apply to you (preferably with an explanation).

Line Item	Question	Response *
1	Proposer Legal Name (one legal entity only): (In the event of award, will execute the resulting contract as "Supplier")	Oshkosh Corporation
2	Identify all subsidiary entities of the Proposer whose equipment, products, or services are included in the Proposal.	Pierce Manufacturing Inc. Oshkosh Airport Products, LLC
3	Identify all applicable assumed names or DBA names of the Proposer or Proposer's subsidiaries in Line 1 or Line 2 above.	As used herein, the "Company," "we," "us" and "our" refers to Oshkosh Corporation and its consolidated subsidiaries. "Oshkosh" refers to Oshkosh Corporation, subsidiaries, Pratt & Miller Engineering & Fabrications, LLC (Pratt Miller), Pierce Manufacturing Inc. (Pierce), McNeilus Companies, Inc. (McNeilus) and its wholly owned subsidiaries, Oshkosh Airport Products, LLC (Airport Products), Kewaunee Fabrications, LLC (Kewaunee (IMT) or any other subsidiaries. Other assume names herein are often identified to be Frontline Communications, ARFF, Airport , Pierce.
4	Proposer Physical Address:	Oshkosh Corporation 1917 Four Wheel Dr. Oshkosh WI, 54902 Pierce Manufacturing Inc. 2600 American Dr. Appleton WI, 54914 Oshkosh Airport Products, LLC. 1515 County Rd. O Neenah WI, 54956
5	Proposer website address (or addresses):	www.oshkoshcorp.com www.Piercemfg.com, www.frontlinecomm.com, www.oshkoshairport.com,
6	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 and, in the event of award, will be expected to execute the resulting contract):	James W. Johnson Executive Vice President and President, Fire & Emergency Segment Pierce Manufacturing Inc. 2600 American Drive Appleton, WI 54914 Email: jjohnson@piercemfg.com Phone: 920-832-3000 Refer to authorized signers for Oshkosh Corporation, Pierce Manufacturing and Oshkosh Airport Products in additional documents.
7	Proposer's primary contact for this proposal (name, title, address, email address & phone):	Michelle Swokowski Sales Operations Manager, Pierce Manufacturing Inc. 2600 American Drive Appleton WI 54914 Email: mswokowski@piercemfg.com Phone: 920-832-3272
8	Proposer's other contacts for this proposal, if any (name, title, address, email address & phone):	Brianna Propson, Sales Representative, Oshkosh Airport Products, LLC. 1515 County RD O Neenah WI, 54956 Email: bpropson@airport.oshkoshcorp.com Phone: 920-215-5135

Table 2: Company Information and Financial Strength

Line Item	Question	Response *

9	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.	Oshkosh Corporation Overview Oshkosh Corporation was founded in 1917, driven by a breakthrough four-wheel drive system that gave people the courage and confidence to go places they never thought they would. Today, more than 14,000 Oshkosh team members are putting over 850 active patented technologies to work serving, developing, and connecting communities around the world. Oshkosh Corporation is a leading manufacturer and marketer of access equipment, specialty vehicles and truck bodies for the primary markets of access equipment, defense, fire & emergency and municipal, refuse hauling, concrete placement as well as airport services. s. Oshkosh products can be found in more than 150 countries under the brands of JLG®, Pierce®, Oshkosh® Defense, McNeilus®, IMT®, Jerr-Dan®, Frontline™, Oshkosh® Airport Products, and London™ and Pratt Miller. Pierce and Airport Products are subsidiaries of Oshkosh and are part of the Fire & Emergency Segment of Oshkosh. We believe in advancing the world around us through building, serving, and protecting people and communities. We are united by a common purpose: to make a difference in people's lives. Our values are the belief system that helps us ensure our behaviors are aligned with our purpose and drive us to do great work for great people. Oshkosh Core Values: WE PUT PEOPLE FIRST • We treat people how they need to be treated. • We keep people safe, within our walls and those using our products. • We care for the emotional, physical, and financial wellbeing of our people. • We celebrate what makes each of us unique. • We value other's words and ideas. • We respect the impact we have on each other; on the people we serve and in communities around the world. WE DO THE RIGHT THING • We do the right thing, the right way, for the right reasons. • We take responsibility for our actions. • We speak up and share our thoughts and concerns. • We keep our promises. • We respect our environment: both where we work and the planet we rely on. WE PERSEVERE • We push the bounds of technology and engineering to bring value to our customers and those who count on us. • We challenge the impossible to make a difference every day. • We are courageous and steadfast. • We strive to overcome obstacles and achieve our goals. WE ARE BETTER TOGETHER • We welcome ideas different from our own. • We rely on diversity to drive innovation. • We create an inclusive, empowering environment for all. • We work together across geographies, platforms, business units and functions to help our company reach its fullest potential. Business Philosophy: Our strategy is "Innovate. Serve. Advance." We innovate customer solutions by combining leading technology and operational strength to empower and protect the everyday hero. We serve and support those who rely on us with a relentless focus throughout the product lifecycle. We advance by expanding into new markets and geographies to make a difference around the world. As a corporation, our culture is one committed to conducting business with integrity, in accordance with the highest ethical standards and in compliance with applicable laws and regulations. The guidelines, laws, regulations, policies, and procedures that govern our conduct as employees and contractors of Oshkosh Corporation are embodied in our Code of Ethics & Standards of Conduct - The Oshkosh Way. Business Longevity: Pierce was founded in 1913 and is the leading domestic designer and manufacturer of fire apparatus assembled on custom chassis, designed, and manufactured to meet the special needs of firefighters. Pierce also designs and manufactures fire apparatus assembled on commercially available chassis, which are produced for multiple end-customer applications. Pierce's engineering expertise allows it to design its vehicles to meet stringent industry guidelines and government regulations for safety and effectiveness. Pierce primarily serves domestic municipal customers, but also sells fire apparatus to the DoD, airports, universities, and large industrial companies, and in international markets. Pierce's history of innovation, research and development in consultation with firefighters has resulted in a broad product line that features a wide range of innovative, high-quality custom and commercial firefighting equipment with advanced fire suppression capabilities. In an effort to be a single-source supplier for its customers, Pierce offers a full line of custom and commercial fire apparatus and emergency vehicles, including pumpers, aerial platform, ladder and tiller trucks, tankers, light-, medium- and heavy-duty rescue vehicles, wildland	*

		rough terrain response vehicles, mobile command and control centers, bomb squad vehicles, hazardous materials control vehicles and other emergency response vehicles. Refer to "Pierce Timeline.pdf" in Financial Strength and Stability folder. Oshkosh Airport Products is a leader in the design and sale of ARFF vehicles to domestic and international airports. These highly specialized vehicles are required to be in service at most airports worldwide to support commercial airlines in the event of an emergency. Our first Aircraft Rescue and Fire Fighting (ARFF) vehicle was delivered to the U.S. Navy in 1968. We are able to attract and retain new customers because we take pride in a quality product we build and provide second to none in service and support nationwide. We are the leading manufacturer of fire apparatus because of this – our loyal customers! Refer to "9. Oshkosh Corporation 2020 Annual Report.pdf", "9. Oshkosh Strategy Innovate Serve Advance Strategy.pdf", "9. The_Oshkosh_Way_English.pdf", "9. 2020_Sustainability_Report.pdf", and "9. Equal Employment Opportunity.pdf" in Financial Strength and Stability folder for more information.	
10	What are your company's expectations in the event of an award?	The Sourcewell consortium program will extend another avenue for the fire industry customer base to purchase a fire apparatus efficiently and effectively through a proven program. The Sourcewell consortium will be a nationwide including Canada avenue that is promoted across the Pierce sales force that consists of 23 authorized Pierce Dealers and their respective team members. The fundamental expectation is around education and promotion. The Pierce Dealer network and Airport Products sales team is expected to understand our product and the tools available to the customer to achieve what is in the best interest of the customer.	*
11	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.	Pierce Manufacturing Inc. and Oshkosh Airport Products, LLC are subsidiaries of Oshkosh Corporation, which is a publicly traded company. We have attached our annual report, SEC Filings along with the Dunn & Bradstreet report often used by lenders and investors to determine a company's eligibility for credit. This report along with any of the financial statements demonstrate Oshkosh Corporation and its subsidiaries to be financially sound. For additional information please refer to the below path. http://investor.oshkoshcorporation.com/investors/overview/ Oshkosh Corporation maintains an investment grade credit rating. The rating agencies periodically update the Company's credit ratings as events or changes in economic conditions occur. As of September 30, 2021, the long-term credit ratings assigned to the Company's senior debt securities by the credit rating agencies engaged by the Company were as follows: Fitch Ratings BBB-; Moody's Investor Services, Inc. Baaa3; Standards & Poor's BBB. Refer to "11. Oshkosh Corp Q4 and-Full-Year-Results-2021.pdf", "11. Oshkosh Corporation Form 10-K.pdf", "11. D&B Finance Analytics Report.pdf", "11. Bank of America. Oshkosh Reference.pdf", "11. Pierce Manufacturing Certificate of Status 062021.pdf", and "11. Oshkosh Airport Products Certificate of Status July 2021.pdf" in Financial Strength and Stability folder for more information.	*

12	What is your US market share for the solutions that you are proposing?	Pierce is the leader in domestic market share of fire apparatus. Oshkosh Corporation is traded on the New York Stock Exchange since 2002. Financial information can be obtained by visiting the below link. http://investor.oshkoshcorporation.com/investors/financial-information/annual-and-quarterly-reports/default.aspx Fire & Emergency segment. Through Pierce, the Company is the leading domestic designer and manufacturer of fire apparatus assembled on custom chassis, designed and manufactured to meet the special needs of firefighters. Pierce also designs and manufactures fire apparatus assembled on commercially available chassis, which are produced for multiple end-customer applications. Pierce's engineering expertise allows it to design its vehicles to meet stringent industry guidelines and government regulations for safety and effectiveness. Pierce primarily serves domestic municipal customers, but also sells fire apparatus to the DoD, airports, universities and large industrial companies, and in international markets. Pierce's history of innovation, research and development in consultation with firefighters has resulted in a broad product line that features a wide range of innovative, high-quality custom and commercial firefighting equipment with advanced fire suppression capabilities. In an effort to be a single-source supplier for its customers, Pierce offers a full line of custom and commercial fire apparatus and emergency vehicles, including pumpers, aerial platform, ladder and tiller trucks, tankers, light-, medium- and heavy-duty rescue vehicles, wildland rough terrain response vehicles, mobile command and control centers, bomb squad vehicles, hazardous materials control vehicles and other emergency response vehicles. The Company, through Airport Products, is a leader in the design and sale of ARFF vehicles to domestic and international airports. These highly specialized vehicles are required to be in service at most airports worldwide to support commercial airlines in the event of an emergency. Many of the largest airports in the United States, including LaGuardia International Airport, John F. Kennedy International Airport, O'Hare International Airport, Denver International Airport, Baltimore-Washington International Airport, Dallas/Fort Worth International Airport, Tampa International Airport, Philadelphia International Airport and San Francisco International Airport, are served by the Company's ARFF vehicles. The U.S. government also maintains a fleet of ARFF vehicles that are used to support military operations throughout the world. Internationally, the Company's vehicles serve, among others, Beijing, China and more than fifty other airports in China; Singapore; Indonesia; Quebec, Canada; Abu Dhabi, UAE; and Birmingham, Cardiff, Manchester and Liverpool, United Kingdom. In addition, the Company has recently delivered ARFF vehicles to airports in Mexico, Japan, Egypt, Nepal, Iraq and the British Virgin Islands. The Company believes that the performance and reliability of its ARFF vehicles contribute to the Company's strong position in this market. The Company, through its Frontline brand, is a leading manufacturer, system designer and integrator of broadcast vehicles, including electronic field production trailers, satellite news gathering and electronic news gathering vehicles for broadcasters and command trucks for local and federal governments along with being a leading supplier of military simulator shelters and trailers under the Oshkosh Specialty Vehicles (OSV) brand. The Company's vehicles have been used worldwide to broadcast the NFL Super Bowl, the FIFA World Cup and the Olympics.	*
13	What is your Canadian market share for the solutions that you are proposing?	Pierce along with their strong dealer sales and service network that has driven increase Canadian market share. The Pierce Canadian dealer consist of 3 dealers that lead multiple service locations. We also partner with MAXI-METAL Inc leveraging the MAXI Saber program since 2016 and US Contender since 2017. Each Dealer has a signed dealer agreement to sell Pierce fire apparatus in the designated territory awarded to them. They are Prime on contracts and are supported by the 2500+ Pierce employees.	*
14	Has your business ever petitioned for bankruptcy protection? If so, explain in detail.	No	*

15	How is your organization best described: is it a manufacturer, a distributor/dealer/reseller, or a service provider? Answer whichever question (either a) or b) just below) best applies to your organization. a) If your company is best described as a distributor/dealer/reseller (or similar entity), provide your written authorization to act as a distributor/dealer/reseller for the manufacturer of the products proposed in this RFP. If applicable, is your dealer network independent or company owned? b) If your company is best described as a manufacturer or service provider, describe your relationship with your sales and service force and with your dealer network in delivering the products and services proposed in this RFP. Are these individuals your employees, or the employees of a third party?	Pierce and Airport Products are best described as manufacturers. Pierce and Airport Products are best described as manufacturers. The Pierce Dealer network consists of 20 US based Dealers and 3 Canadian based Dealers. Each Dealer has a signed dealer agreement to sell Pierce fire apparatus in the designated territory awarded to them. They are Prime on contracts and are supported by the 2500+ Pierce employees. The Company believes the geographic breadth, size and quality of its Pierce fire apparatus sales and service organization are competitive advantages in a market characterized by a few large manufacturers and numerous small, regional competitors. Pierce's fire apparatus is sold through an extensive network of independent sales and service organizations with over 300 hundred sales representatives in the U.S. and Canada, which combine broad geographical reach with high frequency of contact with fire departments and municipal government officials. These sales and service organizations are supported by product and marketing support professionals and contract administrators at Pierce. The Company believes high frequency of contact and local presence are important to cultivate major, and typically infrequent, purchases involving the city or town council, fire department, purchasing, finance and mayoral offices, among others, that may participate in a fire apparatus bid and selection process. After the sale, Pierce's nationwide local parts and service capability is available to help municipalities maintain peak readiness for this vital municipal service. Oshkosh Airport Products The Company markets its Oshkosh-branded ARFF vehicles through a combination of direct sales representatives domestically and an extensive network of representatives and distributors in international markets, including Canada. Certain of these international representatives and distributors also handle Pierce products and will follow the same process as noted above. For service, we support both with internal service support which is available 24/7/365 via our support line at 1-800-222-6635 and external sales representatives. Refer to "15. Pierce. Airport Manufacturer. Products.pdf" in Company Information and Financial Strength folder for an overview of our manufacturing capabilities and product offerings.	*

16	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.	Pierce Manufacturing Inc. holds state licensing for Sales, Manufacturing, Motor Vehicles, and dealer license used accordance to the state laws. The Pierce Dealer network licenses independently holds as required by law in the state in which they sell. Airport Products holds manufacturer's license, where required. We also hold our Vendors accountable to the utmost standards. Beyond ISO certifications and compliance, we require our supply chain of major components to obtain a score of 80% or above on a supplier quality audit performed by Oshkosh Corporation supplier quality. ISO 9001:2015 Certification: Pierce Manufacturing Inc. was the first single-source manufacturer of custom fire apparatus in North America to achieve ISO 9001 certification. Pierce has achieved ISO 9001:2015 certification which covers all aspects of our business life cycle, from engineering and manufacturing to customer service. ISO 9001 certification demonstrates a company's commitment to quality. To keep their ISO 9001 registered status, companies are re-audited twice per year through third-party verification to prove they are maintaining good practices. ISO 9001 certification further assures customers that a fundamental quality system is in place. It's a solid foundation for continuous improvement always striving to get even better. An ISO-certified manufacturer, like Pierce, accepts nothing but the best from its suppliers. Pierce asks its suppliers to meet many of the same stringent quality requirements and works with them to improve their quality systems as well. Refer to "16. ISO 9001.2015 Pierce Mfg and entities.pdf" in Financial Strength and Stability folder for certificate. UL/ULC: Pierce is the first fire apparatus manufacturer to be both third party certified to NFPA 1901-2013 edition and ULC listed to Canada ULC-S515-04 standard. Third Party Vehicle Inspection Program by Underwriters Laboratories to ensure our products are 100% N.F.P.A. compliant to 1901 standards. The certification includes all design, production, operational and performance testing of the complete apparatus. All products must pass all tests before a truck is released into Canada. This commitment to quality applies to trucks sold in the U.S. as well. Refer to "16. Sample UL Certs 35796 Pump Line Voltage Aerial Cert.pdf" in Financial Strength and Stability folder for sample certificate. ISO 14001:2015 Certification: Our Neenah facility is also ISO 14001:2015 certified for our Environmental Management System. Various Pierce and Airport Products vehicles are manufactured in this space. Refer to "16. ISO 14001 Oshkosh Airport Products.pdf" in Financial Strength and Stability folder for certificate.	*
17	Provide all "Suspension or Debarment" information that has applied to your organization during the past ten years.	Neither Oshkosh Corporation or subsidiary such as Pierce Manufacturing and Airport Products have suspension or debarment that applies within the past 10 years.	*

Table 3: 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	Oshkosh Corporation is honored to be named and recognized for the following awards and recognitions. World's Most Ethical Companies in 2016, 2017, 2018, 2019, 2020 and 2021. Oshkosh is one of only 124 companies, representing 52 industry sectors in 19 countries on five continents named to this prestigious list. We were the only company selected in the "Trucks and Other Vehicles" category, underscoring our commitment to leading ethical business standards and practices. This achievement is only possible with a commitment to sustainability, connecting with our communities and strong ethical culture and team members who believe in doing the right thing. Link: https://investors.oshkoshcorp.com/news/news-details/2021/Oshkosh-Corporation-named-one-of-the-Worlds-Most-Ethical-Companies-for-sixth-consecutive-year/default.aspx FORTUNE's World's Most Admired Companies in 2019 and 2020. Oshkosh Corporation is one of 330 companies to achieve this honor, as ranked by industry peers, highlighting some of the most respected and successful companies from around the world. https://investors.oshkoshcorp.com/news/news-details/2021/Oshkosh-Corporation-named-one-of-the-Worlds-Most-Admired-Companies-by-FORTUNE/default.aspx	

In 2020 and 2021, the company was awarded one of America's Most Responsible Companies by Newsweek. Oshkosh has earned this award for two consecutive years and is ranked #159 out of 399 companies on the list. America's Most Responsible Companies were defined based on key performance indicators around environmental, social and corporate governance areas. For more info please refer to the link below: https://www.oshkoshcorp.com/en/news/12-23-20-most-responsible-newsweek

Oshkosh Corporation was named a Military Friendly Company in 2017, 2018, 2019, 2020 and 2021. Being named a Military Friendly Company highlights our commitment to caring for our team member and having a culture where veterans can thrive. . Please reference the link for additional detail: https://www.oshkoshcorp.com/en/news

Oshkosh Corporation has been listed on the Dow Jones Sustainability World Index in 2019, 2020 and 2021. Please review the link below for additional info. https://investors.oshkoshcorp.com/news/news-details/2020/Oshkosh-Corporation-Named-to-the-Dow-Jones-Sustainability-World-Index-for-Second-Consecutive-Year/default.aspx

Oshkosh Corporation is honored to be named and recognized for the following awards and recognitions.
World's Most Ethical Companies in 2016, 2017, 2018, 2019, 2020 and 2021. Oshkosh is one of only 124 companies, representing 52 industry sectors in 19 countries on five continents named to this prestigious list. We were the only company selected in the "Trucks and Other Vehicles" category, underscoring our commitment to leading ethical business standards and practices. This achievement is only possible with a commitment to sustainability, connecting with our communities and strong ethical culture and team members who believe in doing the right thing.
Link: https://investors.oshkoshcorp.com/news/news-details/2021/Oshkosh-Corporation-named-one-of-the-Worlds-Most-Ethical-Companies-for-sixth-consecutive-year/default.aspx

FORTUNE's World's Most Admired Companies in 2019 and 2020. Oshkosh Corporation is one of 330 companies to achieve this honor, as ranked by industry peers, highlighting some of the most respected and successful companies from around the world. https://investors.oshkoshcorp.com/news/news-details/2021/Oshkosh-Corporation-named-one-of-the-Worlds-Most-Admired-Companies-by-FORTUNE/default.aspx

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Oshkosh was named one of the "World's Best Employers" by Forbes in 2020. The 2020 results included 750 multinational and large corporations across 45 countries. Oshkosh is ranked #76 out of 750.
Please refer to the link: https://www.oshkoshcorp.com/en/news/12-11-20-forbes

Oshkosh is one of Barron's 100 Most Sustainable Companies for the years 2019, 2020 and 2021. Please review the link for additional information. https://investors.oshkoshcorp.com/news/news-details/2021/Oshkosh-Corporations-focus-on-sustainability-earns-recognition-from-Barrons-and-SP-Global/default.aspx

Pierce's focus on energy efficiency is focused on being good stewards of company resources, budgets, and the company's ecological footprint. This earned them the recognition for Focus on Energy 2020 Energy Efficiency Excellence Award https://www.piercemfg.com/pierce/blog/pierce-recognized-with-focus-on-energy-excellence-award

		Pierce also Achieved TRUE (Total Resource Use and Efficiency) Zero Waste Certification at the Gold level. TRUE certification is administered by Green Business Certification Inc. (GBCI), an organization that independently recognizes excellence in green business industry performance and practice globally 2021 Sterling Manufacturing Business Excellence Award - Florida facility has been awarded the 2021 Sterling Manufacturing Business Excellence Award at the Gold Level! This award went out to the company that was found to be a high performing manufacturer in seven categories. Pierce Bradenton demonstrated outstanding leadership and management systems to meet the need of customers and stakeholders https://www.facebook.com/Pierce/posts/10165217512965527 Pierce was awarded the "Above and Beyond Award" by ESGR August of 2021. Pierce was 1 of 3 large companies in Wisconsin recognized for their outstanding support of our Guard and Reserve forces. Oshkosh Corporation has been named one of the "Best Managed Companies" by the Wall Street Journal in 2018 and 2019. Please visit the link for additional detail: https://www.businesswire.com/news/home/20191209005496/en/Oshkosh-Corporation-Named-One-of-the-%E2%80%9CBest-Managed-Companies-of-2019%E2%80%9D-by-the-Wall-Street-Journal ISO 14001:2015 Environmental Management System To further solidify and standardize our environmental performance, Pierce Manufacturing and the Airport Products Group are in the first domestically of formalizing an Environmental Management System for our Neenah manufacturing facility in accordance with ISO 14001:2015 for all of Oshkosh Corporation Recognized by RobecoSAM with the Industry Mover Award for critical steps taken to propel corporate sustainability by measuring impact and disclosing results. Oshkosh Corporation has achieved many awards throughout the years. Many of the awards highlight specific subsidiaries such as Pierce and Airport Products. There are many more that have not been incorporated but are incorporated on our websites. We are proud and work hard to maintain these achievements. Refer to "18. TRUE CERTS-ID 1000128616.pdf" in Additional Documents folder for certificate.	
19	What percentage of your sales are to the governmental sector in the past three years	Oshkosh has great relationship with various governmental sectors throughout the organization. We are a publicly traded company therefore the information available does not include specific sales detail.	*
20	What percentage of your sales are to the education sector in the past three years	Pierce and Airport on occasion will sell to education sectors such as Universities, Colleges, High Schools, or Fire schools. The market for our product in this group is limited.	*
21	List any state, provincial, or cooperative purchasing contracts that you hold. What is the annual sales volume for each of these contracts over the past three years?	Pierce Manufacturing participates in nationwide and state-level contracts. All programs are aligned to offer the best solutions on a consistent platform. Contracts with an asterisk (*) also have contracts held by Airport Products. 1. Sourcewell* 2. H-GAC* 3. NASPO Value Point 4. NPPGov 5. Lamas 6. BuyBoard 7. Florida Sherriff's 8. Ohio State 9. Costars	*
22	List any GSA contracts or Standing Offers and Supply Arrangements (SOSA) that you hold. What is the annual sales volume for each of these contracts over the past three years?	Current GSA (General Services Administration) contract is GS30F021DA	*

Table 4: References/Testimonials

Line Item 23. Supply reference information from three customers who are eligible to be Sourcewell participating entities.

Entity Name *	Contact Name *	Phone Number *	
Knoxville Fire Department	Bobby Palmer	865-595-4474	*
Howell Fire District #3	Louis Memmolo,III	732-905-8530	*
Clark County	Riccardo Terzo	702-455-8341	*
Tampa International Airport	Oren Hanson	813-267-0335	

Table 5: 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 *	
U.S. Army	Government	District of Columbia - DC	Pumpers, rescues, aerials	N/A	N/A	*
U.S. Air Force	Government	District of Columbia - DC	Pumpers, rescues, aerials	N/A	N/A	*
Bureau of Land Management	Government	District of Columbia - DC	Wildland pumpers	N/A	N/A	*
U.S. Navy	Government	District of Columbia - DC	Pumpers, rescues, aerials	N/A	N/A	*
U.S. Marine Corps	Government	District of Columbia - DC	Pumpers, rescues, aerials	N/A	N/A	*

Table 6: Ability to Sell and Deliver Service

Describe your company's capability to meet the needs of Sourcewell participating entities across the US and Canada, as 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.	Pierce Manufacturing has an inside sales force that manages a given territory The support can range from dealers, customer request, trade shows, warranties, specifics support within the bids, managing the sale and configuration The inside sales folks work with internal Pierce contacts to ensure a successful build and delivery to our preferred dealer network. The Oshkosh Airport Products sales force consists of 2 regional sales managers who are direct employees of Oshkosh Airport Products. Our sales team is committed to the full customer lifecycle, from initial contact throughout the vehicle life. In addition, our internal sales managers coordinate with our Canadian dealership to support the customer relationship. Refer to "25. 26. 27. Directory - Pierce Dealership Territories Map.pdf", "25. 26. Pierce Authorized Dealer_2021_Listing.pdf", "25. ARFF RSM Map Nov 2021.pdf", and "25. Pierce and Airport Internal Contacts Org Chart.pdf" in the Additional Documents folder for more information.	*
26	Dealer network or other distribution methods.	Pierce product is sold via the authorized Pierce Dealer network of 300+ sales representatives that are located across the US and Canada and are backed by the Pierce factory support of 2500+ employees to assist with product, quality, and service. In addition, the sales force is comprised of legacy tenure as well as new generations. Many of our sales representatives came from or are still part of the fire industry in some way. There are Dealers located across the US and Canada that have been assigned territory to provide Sales, Service, and aftermarket support 24/7 365 days of the year. The dealer network has invested in on hand inventory as well as the factory and dedicated aftermarket inventory available online for them to utilize and drop ship to the end customer's location. As previously mentioned, we also partner with MAXIMETAL to support our Canadian customers by being a distributor for MAXIMETAL products. Oshkosh Airport Products sells direct domestically and partners with dealer organizations internationally, including Canada. Refer to "25. 26. 27. Directory - Pierce Dealership Territories Map.pdf" and "25. 26. Pierce Authorized Dealer_2021_Listing.pdf" in the Additional Documents folder for more information.	*

27	Service force.	Pierce and its dealer network offer a wide variety of Aftermarket services to help customers maintain their Pierce branded fire apparatus. 70+ service centers throughout North America are dedicated to servicing Pierce apparatus thru its industry-leading, independently owned & managed dealer network. 20 United States & 3 Canadian dealerships support our wide array of service centers. Pierce authorized service centers offer: • Dedicated Service Professionals • Nearly 250 mobile service vehicles, strategically located throughout North America • Offer scheduled & unscheduled maintenance services • 24/7 access to Pierce Technical Support Hot-Line, • Ability to execute warranty-related repairs, in accordance with the Pierce limited warranty statement. Pierce also offers a full line of spare parts, available for purchase thru its dedicated dealer network. The spare parts warehouse, located in Appleton, Wisconsin, boasts over 100,000 sq. ft. of storage space, all of which supports Pierce fire apparatus. Key facts about the warehouse include: • Dedicated and committed on-hand spare parts inventory • Management of over 100,000 unique spare part numbers (inventory, min/max, pricing, country of origin, etc.) • Same-day & next-day shipping services from UPS, FedEx, and XPO • 24/7 website to locate and check pricing & availability of spare parts by authorized dealer • Tens of thousands of digital photographs & 3D artwork of replacement parts for fast & easy identification Pierce offers a complete set of training classes, for both operators & maintainers, to keep your Pierce apparatus running at peak performance. • Regional & Corporate training events held throughout the calendar year • Instructors with over 100 combined years of Pierce & industry expertise • Innovative "Training Truck"; key technology mounted on stand-alone truck to simulate any key system • Technology training on key components such as Pierce Ultimate Configuration (PUC™) water pumps, TAK-4® independent suspension systems, Husky™ Foam systems, and Command Zone™ III • Operation overview of foam & aerial devices Attached you will find a summary per authorized dealer mobile vehicles and acknowledgment of service technicians along with dealer contact and the territory they cover. Oshkosh Airport Products employs full time Field Service Representatives to provide vehicle in-service, training, and service work. We also rely on support from organizations across the US and have service provider agreements to provide local support to our customers as well. In addition, we are supported through Oshkosh Corporation's training center to provide world-class maintenance and operations training. These trainings are designed specifically for our ARFF products and are available to our dealers and customers alike. Refer to "25. 26. 27. Directory - Pierce Dealership Territories Map.pdf", "27. Pierce Dealer Service & Sales Coverage.pdf", and "27. ARFF Service Providers Map.pdf" in the Additional Documents folder for more information.
28	Describe the ordering process. If orders will be handled by distributors, dealers or others, explain the respective roles of the Proposer and others.	When the customer works with the Pierce authorized dealer they will accept all purchase orders; however, every sale is configured in the Pierce customized truck configurator, Pulse. This sales tool includes the corresponding cooperative procurement option applicable to the sale. This option is used to generate monthly audits that Pierce performs with their dealer network as well as generate the quarterly required reports sent direct to the contracting agency. The authorized Dealer network utilizes the customized apparatus specification software (PULSE) to configure to the customer's expectations and is used internally throughout the supply chain of the order from booking the order to engineer the final product. The tool is supported with internal communication tools such as workflow, Communication Central, online scheduling, Build Status, and a complete Truck Library. This provides our Dealer network a direct link to the factory to accurately communicate details to the end user. Airport Products will be the primary point of contact for sales inquiries, except where we have an authorized dealer. With complexity of ARFF vehicles, our team will work directly with the customer to customize their truck configuration using the base vehicle as a starting point. Options will be added to the base price with the Sourcewell discount. This quotation will be used by the customer to issue a purchase order or contract which will be reviewed by Airport Products and accepted. Airport Products will then be responsible for manufacture of the vehicle.
29	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	AFTERMARKET PIERCE MODEL Pierce service after the sale is where we truly are set apart from others. The Pierce Dealer network spans across the US and Canada and each have made investment in facilities, inventory, staff, and training. The Dealer is the first point of contact for the customer however all customers can access Pierceparts.com to aid in any

	that help your providers meet your stated service goals or promises.	service needs they may have. TEAM MEMBERS Pierce Service Brigade An army of 600 service technicians across the US and Canada. Certified Master Technicians We specifically created the Pierce Certified Master Technician program to ensure that our Service Brigade professionals possess the highest level of proficiency with today's sophisticated emergency vehicles, including non-Pierce apparatus. The Right Attitude and the Right Tools Our team members take pride in going home at the end of each day knowing they made a difference. The mobile training unit takes Customer Service training to another level and brings training to the customer. This mobile unit has built-in training tools and props that are configurable to the training needs of our customers. It allows the technician to troubleshoot, dismantle, and most importantly, provide the hands-on training customers ask for. INVENTORY As the manufacturer, facilities are available in Appleton, WI, Weyauwega, WI, and Bradenton, FL. These facilities are equipped with factory personnel and committed healthy stock of inventory dedicated to service and replacement parts to ensure quick response and minimize down time. Furthermore, Pierce Manufacturing Inc. houses inventory in a dedicated facility, with a dedicated shipping area that ensures service parts are given priority and extends a customized, Pierce aftermarket website for authorized Dealers to conduct business in real-time. FACTORY HOURS OF OPERATION Pierce Manufacturing Inc. and Oshkosh Airport products also maintains a 24 hour/ 7 day a week, toll free emergency hot line and employs a staff of dedicated individuals to troubleshooting and parts support. Pierce Customer Service core hours of operation are Monday – Friday, 7:30 a.m. – 4:00 p.m. CST. We also have Pierce factory technicians on call for after-hours support available 24 hours a day, seven days a week. PROBLEM IDENTIFICATION & RESOLUTION As product or service issues are identified by the customer, they are to contact their local Pierce authorized dealer since they are the customer's first point of contact. All issues are documented, resolved, and archived for future reference by the local dealership. If there is an issue that needs elevated assistance, the dealership will contact the Pierce customer service account representative for assistance. Parts identification is provided to both the dealer and the Fire Department through an on-line web-based application for the specific truck. Access will be granted using the specific VIN number of the vehicle and the online web application provides the ability to view complete bills of materials, digital photographs, parts drawings, assembly drawings, and access to all current operation, maintenance, and service publications. The end user can access this information via the Guest Login. TECHNICAL SERVICE SUPPORT Both Pierce and their authorized Dealers can provide both in-house and on-site service for the apparatus along with training per request. Replacement parts and various levels of service after delivery are available from your local Pierce authorized dealer, including but not limited to those shown below: SERVICE: Warranty repair for Pierce product line for all items except for those that must be handled directly by an authorized component manufacture such as engine and transmission. Direct access to Pierce technical support Routine preventative maintenance Annual aerial ladder testing Pump testing Ground ladder testing NFPA 1911 annual inspections maintenance and testing Repairs from small minor issues to major overhauls and many other services Dealer repair services extend to most other fire and emergency rescue product lines in addition to Pierce Manufacturing Service provided by EVT, ASE, Pierce and industry specific certified technicians All Pierce authorized sales and service dealers have access to Pierce's extensive level of technical and customer service support staff PARTS: Pierce authorized dealers maintain a large assortment of products supplied with fire	*

		apparatus. Including, but not limited to, the most commonly required parts and components required for apparatus repair. This level of inventory enables “out of service” time to be kept to a bare minimum. All Pierce authorized sales and service dealers have access to Pierce’s extensive level of replacement parts inventory, which is more than $15M as well as any Pierce required fabrication services. Oshkosh Airport Products partners with Pierce Manufacturing's internal customer support team to provide the same superior service for municipal products with the smaller scale of ARFF products. We maintain a 24 hour/ 7 day a week, toll free emergency hot line with core hours of operation being Monday through Friday, 7:30 a.m. – 4:00 p.m. CST. We also have Pierce factory technicians on call for after-hours support available 24 hours a day, seven days a week via our service support line 1-800-222-6635	
30	Describe your ability and willingness to provide your products and services to Sourcewell participating entities in the United States.	Pierce Manufacturing Inc has 20 US based authorized dealers, each which has an establishes sales and service infrastructure to support the sale of our whole goods from time of sale through its lifecycle. We are committed to support the customer by educating them in all possible avenue to ensure they know the benefits of Sourcewell. Pierce will be able to support the entire US including Hawaii and Alaska along with Canada regions. Our established dealer network includes assignment for these territories. Airport Products is able and willing to provide our products and services to participating entities in the United States.	*
31	Describe your ability and willingness to provide your products and services to Sourcewell participating entities in Canada.	Pierce Manufacturing Inc has 3 US based authorized dealers, each which has an establishes sales and service infrastructure to support the sale of our whole goods from time of sale through its lifecycle. Pierce Manufacturing Inc. has three Dealers that cover the Canadian territories – Commercial Emergency Equipment, Safety Source, and L ’Arsenal. Commercial Emergency Equipment is the largest of those exclusive dealers. They cover Western Canada (BC, AB, SK, MB), Ontario, as well as the Northern Territories (YT, NWT, NT). Pierce brands the MAXI Saber custom-chassis fire apparatus which are also marketed in Canada. Pierce is our authorized dealers are in exclusive product partnership since 2016 with MAXIMETAL. Pierce is committed to growing the market in Canada while also providing service support. Airport Products will work in conjunction with our authorized dealer(s), and together we are able and willing to provide our products and services to participating entities in Canada.	*
32	Identify any geographic areas of the United States or Canada that you will NOT be fully serving through the proposed contract.	There are no geographic areas in the US or Canada that we will not be fully servicing through the proposed contract. Pierce and Airport Products are proud to provide excellent coverage across the nation. There are no areas throughout US or Canada that we are not able to fully support either through our dealer network or direct coverage through coverage.	*
33	Identify any Sourcewell participating entity 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 are no defined sectors that Pierce or Airport Products would not be willing and able to sell to and extend the after the sale service and support we pride ourselves on.	*
34	Define any specific contract requirements or restrictions that would apply to our participating entities in Hawaii and Alaska and in US Territories.	Pierce and Airport Products is not aware of any specific contract requirements or restrictions that apply to members. Those territories determine what contracts they support and allow to be used.	*

Table 7: Marketing Plan

Line Item	Question	Response *	
35	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.	The marketing strategy we have taken with all the awards has begun with marketing to our sales force. The initial launch provides the sales team: • Overview of the contract and what differentiates it from the others • Training and updating internal User Guide/Handbook • Adding the contract option to our custom truck configurator Pulse • Adding the contract to the internal communication portal • Update www.piercemfg.com and www.oshkoshairport.com website with the addition of the new contract • Develop a flyer or FAQ to provide sales reps and customers as a takeaway • Including a Sourcewell purchased truck at Pierce shows. The Sourcewell consortium logo is noted on the configuration that is displayed on the truck. Refer to "35. Pierce Example Marketing.pdf" in the Marketing Plan/Samples folder. Additional marketing brochures available in the Marketing Plan/Samples folder. Please refer to these files for current representative material.	*
36	Describe your use of technology and digital data (e.g., social media, metadata usage) to enhance marketing effectiveness.	Pierce has a dedicated marketing team that manages our website and social media; we also have 23 Dealers that have established websites and utilize social media platforms such as twitter, Instagram, and Facebook to share messaging. We are able to track engagement and metadata on our followers through these platforms. Not only is our marketing team well versed in looking at industry trends, we also partner with external organizations for a more robust approach to technology. Both Pierce and Airport Products' websites will include award and have a direct link to the Sourcewell website were facts and information can be obtained. Airport Products also utilizes Showpad for organization and distribution of marketing material which is available to our domestic and international sales team. This tool allows us to share information across the globe, including information on available purchasing consortiums. This tool allows users to track customer engagement with the material.	*
37	In your view, what is Sourcewell's role in promoting contracts arising out of this RFP? How will you integrate a Sourcewell-awarded contract into your sales process?	Sourcewell's role in promoting the Fire Apparatus contract is primarily accessibility to customers and/or their procurement officials. Sourcewell' s role is to be partner with the awarded vendors and understand the product on the contract so that as a joint effort, end users can be informed and educated on cooperative procurement and how this contract best fits them. This may include training creation, networking at a specific show or dealer location. Cooperative procurement needs to fold into the sales process shortly after introductions. A Sales representative should understand what programs the customer has been a part of and/or what they know about cooperative procurement programs available. That basic understanding is a must have from the onset. This program won't determine what apparatus they buy or what customization they can have – this program provides them the avenue to get what they need through an efficient procurement process. For the Airport direct sales team, all opportunities that are not competitively bid will be provided information on the Sourcewell contract as an avenue for purchase.	*
38	Are your products or services available through an e-procurement ordering process? If so, describe your e-procurement system and how governmental and educational customers have used it.	We do not offer an e-procurement ordering process due to the complexity of our product. We have determined this platform does not fit in our business model.	*

Table 8: Value-Added Attributes

Line Item	Question	Response *	

39	Describe any product, equipment, maintenance, or operator training programs that you offer to Sourcewell participating entities. Include details, such as whether training is standard or optional, who provides training, and any costs that apply.	Training is offered in several different ways: • A customer can request factory personnel to provide training and it will be added to the sale or available at a later date. • The dealer may have a training program to offer that introduces the customer to the dealer's support team • The customer may choose to attend regional training classes offered throughout the year. All customers receive a Delivery Orientation class prior to placing the apparatus in service. Other training is often customized to the customer's needs and scheduled around their calendars. Factory and/or Dealer training may include Operation, Maintenance, Foam training, Aerial training, Customer Mechanics, or customizable. On-site training during vehicle in-service is standard. This provides a basic vehicle operations and maintenance overview. This training is consistent with industry standards. Refer to "39. Pierce Training Offerings.pdf" in Additional Documents for more information on Pierce training. We also offer additional training through our Oshkosh Product Training Center. We have two rigorous courses focused on the vehicles chassis and firefighting systems. The cost of additional maintenance or operations courses are not included and schedule and pricing is available on our training website. Specialized training can also be requested and will be quoted at time of request. https://oshkoshcorporation.csod.com/LMS/catalog/Welcome.aspx. Refer to "39. Striker Chassis and Firefighting Maintenance Training Outline.pdf" in Additional Information folder for ARFF training outline.	*

40	Describe any technological advances that your proposed products or services offer.	Oshkosh Corporation a leader in innovation and each of our products and technologies is designed with customers and end-users in mind, including advances in electrification, autonomy and active safety and intelligent products. Leveraging the latest in technology for today and tomorrow across the different markets we serve differentiates us and helps us remain market leaders and stay ahead of the competition. Advancing our company into new markets and categories will support continued growth for the company. Through this contract, we offer numerous proprietary features that standout from others and not limited to: • Electric Vehicles - Pierce Manufacturing and Oshkosh Airport Products have introduced the Volterra™ platform of electric vehicles for the fire and emergency market, with the first municipal truck already in service with the City of Madison, Wisconsin. The Striker® Volterra performance hybrid Aircraft Rescue and Fire Fighting (ARFF) vehicle is available for demonstration, as available, at customer locations. Refer to "40. Volterra Press Release.pdf" in Additional Documents folder for more information. • Idle Reduction Technology (IRT) - Power NFPA 1901 required devices, user-defined mission critical on-scene loads, and HVAC climate control with the main chassis engine shut down for one hour of run time at 150 amps. Featuring built-in safety interlocks and Pierce Command Zone™ auto-start for battery power monitoring and engine re-start, departments can work more safely and efficiently without a second thought. Pierce Idle Reduction Technology is an option on new apparatus and as an aftermarket solution Refer to "40. Pierce-Manufacturing-Idle-Reduction-Technology-6-21.pdf" in Additional Documents folder for more information. • Ascendant® class of aerial products – Pierce patented design that offers 107' of vertical reach and 100' of horizontal reach; rated at a 750 lb (dry) / 500 lb (wet) tip load capacity with an additional 100 lb equipment allowance; flow up to 1,500 gpm and is capable of a store front blitz feature as standard. • Pulse - Customized in-house truck configurator that allows us to build to the customer's level of customization • TAK-4® Suspension – offers shorter stopping distance, no brake steer, improved ride quality, and proven technology used by the US military. • Command Zone™ III electronics – provides vehicle reliability, easy serviceability, 5-yr standard warranty • Pierce Ultimate Configuration (PUC™) - Eliminates the pumphouse so you can build your apparatus around your needs and not the pump. It minimizes vehicular space used for fire suppression and maximizes space for equipment while still providing big pump, foam and CAFS capabilities. • Husky™ foam systems - Hydraulic drive powered; Single point, direct injection, flow-based system using digital technology to indicate pump position and a flow meter; a built-in flush system, equipped with an auxiliary foam pick-up; a foam tank refill system is available to fill the foam tank(s) from the ground. • Snozzle® HRET – The Snozzle High Reach Extendible Turret is available is a 50 ft or 65 ft configuration. Our HRET is available on the Oshkosh Striker 4x4, 6x6 and 8x8. • Eco EFP™ Foam Measurement System – Measure foam percentages from every discharge on the vehicle without using foam on the Oshkosh Striker vehicles. Eco EFP measures both the solution and foam flows on the vehicle, and even archives the testing data with a time and date stamp for three years. Refer to "40. Eco EFP Brochure.pdf" in Additional Documents folder for more information. The Company's advanced design and engineering capabilities have contributed to the development of innovative and/or proprietary, severe-duty components that enhance vehicle performance, reduce manufacturing costs and strengthen customer relationships. The Company's advanced design and engineering capabilities have also allowed it to integrate many of these components across various segments and product lines, which enhances its ability to compete for new business and reduces its costs to manufacture its products compared to manufacturers who simply assemble purchased components. The Company has been a supplier of electric-powered products for more than 20 years and recently launched several new products that leverage zero emissions electrification for mobility across all segments.	*

41	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.	Oshkosh Corporation, including Pierce and its sister segments, have Environmental Policies & Procedures including, but not limited to, an Environmental Protection Policy and an Energy Management Policy. Please refer to our response in question 18 on our recent award achievements as well. Refer to "9. 2020_Sustainability_Report.pdf" in the Financial Strength and Stability folder. Pierce Sustainability Efforts Sustainability is defined as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” Pierce is continuously improving how we make and distribute products. It’s about reducing the environmental impact of our products and production, improving workplace conditions, reducing costs, increasing value, and being active in our communities. Pierce has established waste and energy Key Performance Indicators (KPIs) and are developing and implementing plans to meet these goals month over month. KPIs are tracked, recorded, and shared monthly with the teams and our sister segments including Corporate. Oshkosh Corporation conducts internal environmental audits using a third-party environmental auditing tool. These audits are completed on all sites on a rotating basis. Each facility is audited at least once every three years. Pierce is an active member of the Dow Jones Sustainability Index (DJSI). The Dow Jones Sustainability Indices (DJSI) launched in 1999, are a family of indices evaluating the sustainability performance of the largest 2,500 companies listed on the Dow Jones Global Total Stock Market Index. Department of Energy’s Better Buildings, Better Plants Program Pierce along with the other Oshkosh segments demonstrate our commitment to improving energy performance by signing a voluntary pledge to reduce our energy intensity by 25% over a ten-year period with the U.S. Department of Energy’s Better Buildings, Better Plants Program. Leading manufacturers and industrial-scale energy using organizations implement cost-effective energy efficiency improvements that save energy and improve competitiveness. ISO 14001:2015 Environmental Management System To further solidify and standardize our environmental performance, Pierce Manufacturing and the Airport Products Group are in the process of formalizing an Environmental Management System for our Neenah manufacturing facility in accordance with ISO 14001:2015. Refer to "16. ISO 14001 Oshkosh Airport Products.pdf" in Financial Strength and Stability folder. Community – Goodwill Pierce works with the local Goodwill in many different facets. One is the reuse of our safety glasses. Our friends at Goodwill clean and repackage the glasses for reuse at our facilities. It is a cost savings, but most importantly it is helping our community and reducing waste to landfill.	*

42	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.	Pierce Manufacturing has received certifications and awards towards our commitment to energy efficiency, conservation, and sustainability. All certifications and awards are driven through Key performance Indicators (KPIs), auditing and continuous performance throughout the Pierce family and Oshkosh Corporation. Certifications and awards are attached and linked for reference. CERTIFICATIONS: ISO 14001:2015 Certification Our Neenah, WI facility has received the ISO 14001:2015 certification, demonstrating our strong commitment to performance, implementation of a world-class environmental management system, and completion of a rigorous third-party evaluation. TRUE Zero Waste Certification The Total Resource Use and Efficiency (TRUE) Zero Waste certification program, administered by Green Business Certification Inc., provides rigorous third-party certification for zero waste goals. Facilities earn credits toward certification for activities in redesigning processes, reducing waste, reusing materials, and finding solutions other than landfill for waste. Our Neenah, WI facility has achieved TRUE certification at the Gold Level. AWARDS: The advances Pierce has made in sustainable practices thus far have been recognized by numerous agencies, both governmental and private. Additionally, we have obtained certifications and joined programs which serve as pledges to our continuous improvement in sustainability and environmental stewardship. The majority of the awards referenced below you will also find in the table 3 question 18. Energy Efficiency Excellence Award The Energy Efficiency Excellence Award recognizes business participants of Focus on Energy, Wisconsin's statewide energy efficiency and renewable resources program, who have demonstrated an outstanding commitment to reducing energy waste by implementing energy-saving upgrades in their facilities and operations. In 2020, Pierce was honored with this award for our efforts in reducing energy in our products and production. Wisconsin Recycling Excellence Award The Department of Natural Resources recognizes outstanding recycling and waste minimization efforts through its annual Recycling Excellence Award program. Pierce received the Overall Program Award in 2020 for our diverse and extensive waste reduction efforts. GREEN / SUSTAINABILITY: Dow Jones Sustainability Index Our sustainability efforts have been recognized through our inclusion on the Dow Jones Sustainability World Index (DJSI). The DJSI, is a family of best-in-class benchmarks which track the stock performance of the world's leading companies in terms of economic, environmental, and social criteria. 2021 marked the third consecutive year we were named to the Index, highlighting our commitment to sustainable business practices. World's Most Ethical Companies In 2021, we celebrated our sixth consecutive year being named one of the World's Most Ethical Companies by Ethisphere™. The assessment considers over 200 data points on culture, environmental and social practices, ethics and compliance activities, diversity and inclusion, and initiatives to support a strong value chain. Green Masters The Green Masters Program is an assessment and recognition program for Wisconsin businesses interested in improving and being recognized for their sustainability initiatives. 2021 marked the seventh consecutive year we were deemed a Green Master, indicating that we are in the top 20% of companies evaluated.	*
43	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.	Oshkosh Corporation is a large publicly traded company and does not qualify for diversity certifications. However, as an organization Oshkosh is a member of National Minority Supplier Development Council (NMSDC). At Oshkosh Corporation we are about building, protecting and serving communities throughout the globe. We are committed to working with a diverse supply base that is representative of our customers and the communities we serve. Refer to "43. Oshkosh Supplier Diversity.pdf" in Additional Documents for more information.	*
44	What unique attributes does your company, your products, or your services offer to Sourcewell participating entities? What makes your proposed solutions unique in your industry as it applies to Sourcewell participating entities?	Oshkosh Corporation is a trusted partner with over 100 years in business, focused on innovation with the customer in mind. With our work in electrification and intelligent products, we will continue to lead in the specialty truck manufacturing market. Our customers benefit from the size and scale of a large organization yet receive focused attention from our subsidiaries and their respective dealerships. Pierce is a leading manufacturer of customized fire apparatus with a dealer network second to none. The longevity, stability, and family tradition in the fire industry that is threaded throughout our dealer network sets us apart from others. Our partnership with the other segments within the Oshkosh Corporation and the backing of our parent company, Oshkosh Corporation leverages innovation and financial strength. Pierce understands the customer's needs and provides the detail, the commitment, and the follow through long after the apparatus is delivered. Oshkosh Airport Products completes the full products supported by this contract through its Oshkosh Striker ARFF. Airport Products is dedicated to leading the way in technology, product support and customer service in the ARFF market.	*

Table 9: 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 *	
45	Do your warranties cover all products, parts, and labor?	Yes, Our one-year bumper to bumper warranty covers all product, parts, and labor. Pierce, the “manufacturer”, warrants each newly manufactured fire apparatus to the original end user/purchaser of specified periods stated below from the date of delivery. The standard Cab & chassis warranty provides a one-year warranty that warrants against defects in product, workmanship, and/or design. This warranty shall apply provided the vehicle is properly maintained. Nothing contained in this warranty shall make the Manufacturer liable beyond the express limitations hereof, for loss, injury, or damage of any kind to any person or entity resulting defect or failure of the product (except as covered by Product liability insurance). Refer to "45. 01-WA0008 100208 Pierce 1 year.pdf" and "45. Oshkosh 1 Year Basic Vehicle Warranty.pdf" in the Warranty folder for our standard 1 year warranty. The Manufacturer’s warranty shall not apply to the following: • Wear items • Normal adjustments and maintenance services. • Failures resulting from the product being operated in a manner not in accordance with the operation manual or for a purpose not recommended by the Manufacturer. • Any product which shall have been repaired, modified, or altered in any way to have been adversely affected the unit’s stability or reliability. • Items subjected to misuse, negligence, accident, or improper maintenance. • Loss of time or use of the product, inconvenience, or other incidental expenses. The authorized Pierce dealer manages all warranty issues on behalf of the end customer. The Pierce dealer utilizes an online claim filing system known as One Warranty for claim processing. Pre-approval for a claim or request for credit (post- correction claim) can be filed via the One Warranty system in the event a warrantable failure is found. All Standard and Extended Warranty claims are subject to specific Standard and Extended Warranty guidelines. Specific warranties exist for particular makes, models, chassis, options, etc. for Pierce products. Specific warranty bulletins are provided at time of sale to the end customer. Refer to a sampling of our other warranty statements and manufacturers' statements on engines, transmissions, water pump, etc. in the Warranty folder. A summary of warranty is also available "45. Warranty Overview.pdf".	*
46	Do your warranties impose usage restrictions or other limitations that adversely affect coverage?	We do have some base and extended warranties that have mileage limitations set to them. Limitations varies based on the options of the vehicle. Examples of base warranties are our structural warranties which carry a 100,000-mile limit. Extended warranties carry various mileage limits based on the specific coverage. Paint warranties are prorated based on age of the unit.	*
47	Do your warranties cover the expense of technicians’ travel time and mileage to perform warranty repairs?	We pride ourselves with the coverage we have across the nation. There are no areas that we do not have coverage throughout US or Canada. Warranty is managed through our Pierce authorized dealers and dealer travel expenses are covered per our established internal One Warranty guidelines. Airport Products warranty is managed through authorized service representatives or our internal resources. Travel expenses are covered per our established internal one Warranty guidelines.	*
48	Are there any geographic regions of the United States or Canada (as applicable) for which you cannot provide a certified technician to perform warranty repairs? How will Sourcewell participating entities in these regions be provided service for warranty repair?	Pierce prides themselves in the coverage we have across the nation. Pierce requires a certified technician for each area Therefore we are to support all regions throughout US or Canada. Airport Products will provide service through internal or external service representatives.	*

49	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?	Major components installed but not manufactured by Pierce or Airport Products are covered under original equipment manufacturer's warranties passed through to end user/customer. These include, but are not limited to, engine, transmission, water pump, ABS, and axles. Component Warranties In some cases, suppliers will offer warranties beyond the Pierce or Airport Products one-year warranty. Warranties provided by individual suppliers other than Pierce or Airport Products apply after the one-year vehicle warranty. The administration of individual supplier warranties, per the supplier, are to be addressed directly with the supplier themselves.	*
50	What are your proposed exchange and return programs and policies?	Pierce offers a return/exchange program for aftermarket parts only to the purchaser (Pierce dealer) and the dealer may extend this and other terms and conditions to the end customer. Aftermarket Parts Warranty Pierce and Airport Products warrants the purchaser that the parts sold by aftermarket be free from defects in product and workmanship for the period of six months from the delivery of the product. This Parts Warranty does not include freight, labor, travel, or markup. It is a part warranty only. Return of Defective Parts If parts used in the repair of an apparatus are required to be returned to Pierce, Dealers will receive notification. Dealers have up to 30 days to return the defective component or the warranty claim will be rejected.	*
51	Describe any service contract options for the items included in your proposal.	Authorized Pierce dealers may offer service contracts for preventative maintenance purposes. No service contracts are included in this proposal.	*

Table 10: Payment Terms and Financing Options

Line Item	Question	Response *	
52	Describe your payment terms and accepted payment methods.	All sales of Pierce apparatus are sold through the authorized Pierce dealers. Payment terms are Cash on Delivery (COD) or prepayment unless otherwise agreed upon by the Pierce dealer. Oshkosh Airport Products' standard payment terms are net 30 days after delivery of vehicle. Accepted payment methods include check and wire transfer.	*
53	Describe any leasing or financing options available for use by educational or governmental entities.	The same logic behind our custom chassis applies to our financial services: Tailor the product to the department, not the other way around. The Company offers two- to fifteen-year municipal lease financing programs to its Fire & Emergency segment customers in the U.S. through the Pierce Financial Solutions program, provided by PNC Equipment Finance. Programs include competitive lease financing rates, creative and flexible finance arrangements and the ease of one-stop shopping for customers' equipment and financing. The Company executes the lease financing transactions through a co-branded arrangement with an independent third-party finance company. The Company typically provides credit support in connection with these financing and leasing arrangements With industry-leading tax-exempt rates, zero documentation fees, flexible payment plans and quick approvals that can bypass voter referendums, we make it easy to get behind the wheel of your new Pierce. Refer to "53. Pierce Financial Solutions Testimonials.pdf" and "53. Financial_Solutions.pdf" in the Additional Documents folder.	*
54	Describe any standard transaction documents that you propose to use in connection with an awarded contract (order forms, terms and conditions, service level agreements, etc.). Upload a sample of each (as applicable) in the document upload section of your response.	Pierce has a variation of standard warranty documents. Sample documents are included in the warranty document uploads. No standard transaction documents are being requested to use in connection with an awarded contract. No service contracts are included in this proposal. Authorized Pierce dealers may offer service contracts for preventative maintenance purposes.	*
55	Do you accept the P-card procurement and payment process? If so, is there any additional cost to Sourcewell participating entities for using this process?	Pierce, Airport Products, and their independent dealers do not find that P-card procurement and payment feasible due to the size and build complexity of our products	*

Table 11: 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 described in the RFP, the template Contract, and the Sourcewell Price and Product Change Request Form.

Line Item	Question	Response *	
56	Describe your pricing model (e.g., line-item discounts or product-category discounts). Provide detailed pricing data (including standard or list pricing and the Sourcewell discounted price) on all of the items that you want Sourcewell to consider as part of your RFP response. If applicable, provide a SKU for each item in your proposal. Upload your pricing materials (if applicable) in the document upload section of your response.	Combination of line item and percentage discount are provided in an attached PDF document identified as follows • Product Category • Identification ID# • Product Description • List Price • Percentage off per product • Line Item (Contract) Price The Percentage Discount items are also applicable to the unpublished options added to the published base specification with a standard discount off of List contingent on the product.	*
57	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.	The pricing presented in this proposal represents a 5.5% discount from Pierce's list price for unpublished options. ARFF products (Airport Products) represents a 7% discount off of list price.	*
58	Describe any quantity or volume discounts or rebate programs that you offer.	Multi-Unit Purchase Discount: Additional discounts may be available for identical multi-unit purchases. Discount varies dependent upon the number of identical units, the configuration of the units, and will be handled on a case-by-case basis. Pre-Payment Discount Discount amount varies dependent upon apparatus price, delivery schedule, extent of pre-payment, and applicable rate. If elected, payment for the entire contract amount is due within thirty (30) days of contract execution. This deduction is in addition to all other discounts listed above. If this option is elected, final payment for any changes processed during manufacturing is due prior to the unit leaving the factory for delivery. Payment & pricing options: Chassis Progress Payment Discount: Discount of approximately 3% of the custom chassis price is offered if a chassis progress payment is made three (3) months prior to the RFP (ready for pick up from the factory) date. Example: Chassis progress payment in the amount of $220,714.00 could earn a discount of ($6,621.00). This discount is not available for Commercial chassis products. Aerial Device Progress Payment Discount: Discount of approximately 2% of the aerial device price is offered if an aerial device progress payment is made two (2) months prior to the RFP (ready for pick up from the factory) date. Example: Aerial device progress payment in the amount of $310,385.00 could earn a discount of ($6,207.00).	*
59	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.	Sourced or open market items may be provided by the Pierce authorized dealer and would be quoted at time of request.	*

60	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.	Pre-Delivery Expenses Dealer provided options can be added to the apparatus contract upon request and will be handled by the Pierce authorized dealer. Dealer provided options can vary depending upon the customer's request and can include but are not limited to the items listed below. Pricing will be provided to each customer upon request and varies by dealership and customer location. Factory inspection trips Weekly construction photo progress reports Orientation DVD specific to your apparatus Loose Equipment Engine and or transmission diagnostic software Loose equipment (open market items) such as but not limited to monitors, hose, intercom system, radio equipment, and rescue tools and equipment Pre-delivery service consisting of basic fluids and filters Custom fabrication for tool mounting and communication equipment Other items as requested by customer and deemed sourced or open market Delivery Sales and other taxes, license, handling, or title fees are also not included.	*
61	If freight, delivery, or shipping is an additional cost to the Sourcewell participating entity, describe in detail the complete freight, shipping, and delivery program.	Transportation Expenses Prices quoted in RFP #113021 are FOB Manufacturer's facility. Transportation of the apparatus from the factory to the customer's facility can be added to the contract. In most cases the apparatus is delivered to the Pierce authorized dealer facility in the area for a Pre-Delivery inspection and the installation of any dealer provided options, if applicable. If there is not a Pierce authorized dealer facility near the customer location, the apparatus may be delivered directly to the facility. The cost for this transportation varies dependent upon the type of apparatus and the proximity of your facility to the location of the manufacturer's facility. Delivery is conducted in accordance with DOT regulations. Delivery charges can vary based on the logistic or shipping location and requirements for example, more if flatbed, barge, or container ship transport is required.	*
62	Specifically describe freight, shipping, and delivery terms or programs available for Alaska, Hawaii, Canada, or any offshore delivery.	Shipping and Delivery programs for areas such as Alaska, Hawaii, or any offshore delivery requires coordination of different transit methods. Most often the apparatus is flatbed to the port destination, prepared for ocean transit, and travel to final destination (roll-on/roll off vessel is preferred). This unique shipping and delivery requirements are priced on a case-by-case basis as required. Shipping within the contiguous US states and Canada, shipping is calculated using numerous factors including but not limited to the type of apparatus which impacts permits as well as the distance to destination. Shipping expenses are not included in the base specifications cost.	*
63	Describe any unique distribution and/or delivery methods or options offered in your proposal.	For ARFF vehicles, due to size and weight restrictions all trucks will be transported via low-boy or flatbed. All required licenses and permits will be obtained prior to shipment.	*

Table 12: Pricing Offered

Line Item	The Pricing Offered in this Proposal is: *	Comments
64	b. the same as the Proposer typically offers to GPOs, cooperative procurement organizations, or state purchasing departments.	Pierce will not favor one GPO over another. Therefore, pricing model is consistent across all.

Table 13: Audit and Administrative Fee

Line Item	Question	Response *	
65	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 participating entities 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. Provide sufficient detail to support your ability to report quarterly sales to Sourcewell as described in the Contract template.	Pierce takes pride in upholding the integrity of the programs and contracts we participate in. System software changes have been built to facilitate the information gathered throughout any of our programs to efficiently run reports on demand. These reports are run at a minimum monthly for internal audit purposes and quarterly for contract requirements. All base specifications and additional upgrade options have been created in our customized truck configurator tool, PULSE so that a Dealer can copy that base specification to confirm line-item pricing. Any changes made to the base specification is then controlled and captured in a Change Report that can be validated to honor the Percentage Discount on options added. The process (see additional documents) outline shows that Pierce has a closed-loop process that provide checks and balances for all involved. Our reporting capabilities for other contracts have been noted to be timely, thorough, and accurate. The volume of sales under our consortium programs requires Pierce to have a well-defined and efficient process Awarded contracts are audited on product cost, labor efficiencies, product margin and customer satisfaction. Refer to "Table 13. Question 65 Audit and Administrative Fee.pdf" in Pricing folder.	*
66	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.	On a monthly basis Pierce will provide the percentage of Sourcewell orders to each authorized dealer in which they can compare to the prior year, this is provided in their monthly dashboards.	*
67	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.)	The Administrative Fee that Pierce will pay to Sourcewell for this proposed contract is aligned with the other contracts awarded to Pierce to create alignment and consistency. That fee will be a flat $2000.00 USD per customer purchase order or separate contract.	*

Table 14A: Depth and Breadth of Offered Equipment Products and Services

Line Item	Question	Response *	
68	Provide a detailed description of the equipment, products, and services that you are offering in your proposal.	Pierce is offering an array of fire apparatus to meet the customer's needs across the US and Canada, including Hawaii and Alaska. Authorized Pierce dealers may offer service contracts for preventative maintenance purposes. Our product portfolio includes the industry standard categories: Custom and Commercial Pumper products Aerial products, Command, ARFF, Rescue products, Tanker products, and Specialty vehicles. CUSTOM AND COMMERCIAL PUMPER PRODUCTS Pumper products include commercial and custom chassis with varying body sizes, pump rates, water tank capacity, and pump module style. AERIAL PRODUCTS Aerial products include ladders, platforms, and tillers. These provide ladder lengths ranging from 61' – 110'. Selections will include various axle configurations, pumping rates, ladder styles, and material. EMERGENCY RESPONSE VEHICLES - Designed to support the demands of emergency response. Many models fall under this category such as large mobile command, mid-size command vehicle, small mobile command, and cru 22mobile command vehicle. RESCUE PRODUCTS Rescue products will include commercial and custom chassis offerings along with a walk-in or non-walk-in style. The configuration capabilities vary but includes capacity to integrate complex A /V, network and radio systems, air tool systems, breathing air systems with compressors, hydraulic rescue tool systems and winching capabilities, crew seating with storage, and custom fabricated shelves and trays. TANKER PRODUCT Tanker products offer a dual role of water transport and on-the-spot firefighting. Pierce offers Elliptical tankers, Tanker/Pumper models, Dry side and Wet side styles to choose from. Each tanker is custom designed to accommodate the fire department's water, foam and equipment storage needs. Pierce Tankers feature solid, lightweight, corrosion-free polypropylene tanks. The tanks are form-fitted specifically for Pierce vehicles and come with a lifetime warranty. SPECIALTY VEHICLES Specialty vehicles are those unique vehicles that have a purpose in which just one may be needed. Specialty vehicles may range from a mini pumper to a Wildland Type III vehicle or a Industrial Fire Fighting Vehicle. Maxi-Metal Partnership MAXIMETAL PRODUCTS- are distributed in the USA through PIERCE MANUFACTURING and the dealer network under the brand name "CONTENDER BY MAXIMETAL. The "Contender by MAXIMETAL" product line will be submitted by MAXI-METAL for consideration. Aircraft Rescue and Fire Fighting Vehicles (ARFF) – Airport Products offers the Oshkosh Striker 4x4, 6x6 and 8x8 along with the Stinger Q4 RIV (Rapid Intervention Vehicle). The ARFF vehicle will be equipped to meet NFPA 414 requirements with optional equipment and configurations to meet individual airport needs.	*
69	Within this RFP category there may be subcategories of solutions. List subcategory titles that best describe your products and services.	Please see question 68 subcategories as they are described. There is also literature included to provide the breath of products we sell, service and support. No service contracts are included in this proposal. Example below of subcategories Category - Emergency Response Vehicles , ARFF, Aerial, Pumper, Rescue, Tanker, Specialty Subcategory - Ladder, Pumpers, Walk In, Pumper Tanker, Wildland, Platforms, Rescue -Pumper, Non Walk-In Dry-side Tanker, Mini-Pumper, Command	*

Table 14B: Depth and Breadth of Offered Equipment Products and Services

Indicate below if the listed types or classes of equipment, products, and services are offered within your proposal. Provide additional comments in the text box provided, as necessary.

Line Item	Category or Type	Offered *	Comments	
70	Firefighting apparatus and service vehicles, of all types, such as: pumper/engine, initial attack, mobile water supply, aerial, quint, special service, mobile foam, command and communications, and purpose-built firefighting or rescue trailers	(•) Yes ( ) No	Frontline leads service on command and communications.	*
71	Wildland fire apparatus, of all types, such as: fire suppression equipment, mobile water supply, and crew carriers	(•) Yes ( ) No	N/A	*
72	Aircraft rescue and firefighting vehicles	(•) Yes ( ) No	Oshkosh Airport Products	*
73	Purpose-built chassis and vehicle components for firefighting apparatus and fire service vehicles	(•) Yes ( ) No	Pierce has a variety of custom built chassis that you will find within the documents	*
74	Equipment, options, accessories, and supplies complementary or incidental to the purchase of a turnkey or complete unit of the types described in Lines 70-72 above	(•) Yes ( ) No	Can be open source Offering is only in conjunction with a new order.....	
75	Services related to the offering of the solutions described in Lines 70-74, including installation, customization, remount, refurbishment, inspection, repair, maintenance, training, and support	(•) Yes ( ) No	We are required to provide training of our vehicle per compliance with NFPA. We do provide options within our proposals for this, and extended durations that have added cost associated.	*

Table 15: Industry Specific Questions

Line Item	Question	Response *	
76	Describe available service and repair options for the equipment and products offered in your proposal.	Pierce Master Technician Program The Pierce Master Technician Program is focused on recognizing service technicians throughout the dealer network for their knowledge and ability to provide expert service on Pierce apparatus. With this tiered level program, a technician can work their way up from having one certification to the level of Master Technician. Active participation in the ASE & EVT programs is encouraged. A Pierce Master Technician must successfully complete the defined core classes dedicated to exclusive Pierce products. A cumulative final exam is taken upon completion of the core classes to obtain a Pierce Master Technician status. Pierce has over a 150 Master Technicians certified.	*
77	Describe available remount or refurbishing services included within your proposal, the pricing method for such services, and any related order processes.	Remount and refurbished services are offered however each job is quoted independently from one another. This is required due to the complexity to refurb or remount. Refurb and remount pricing will not be part of this submission however pricing can vary depending on the repair or service needed.	
78	Describe your compliance with US standards for the equipment and products offered in your proposal, including applicable federal and state requirements.	Pierce fire apparatus are built with pride and dedication to a product that helps save lives. We have many internal quality check points throughout the build process and before the fire apparatus can be delivered it must go through third party testing by Underwriters Laboratories (UL). Pierce contracts with Underwriter's Laboratories to inspect Pierce apparatus for compliance to NFPA standards. Every NFPA 1901 apparatus manufactured in the Appleton facility is reviewed by a UL certified inspector after it is completed. Each apparatus is subjected to a visual inspection of construction and installed components such as chassis, driving and crew compartments, body compartments, steps, warning lights, reflective trim, warning, and instructional labels, etc. The inspection checklist, based on apparatus type, may have over 100 items to check. Once the UL inspection is complete a certification of NFPA compliance is provided to the customer upon delivery of their fire apparatus. Oshkosh ARFF products comply with latest edition of NFPA 414 and the Federal Aviation Administration Advisory Circular (AC) 150/5110-10E.	
79	Describe your compliance with Canadian standards for the equipment and products offered in your proposal, including applicable federal and provincial requirements.	CERTIFIED: UL/ULC NFPA 1901 UL Certification & UL Canada (ULC) Certification Pierce is the first fire apparatus manufacturer to be both 3rd party certified to NFPA 1901-2009 edition and ULC listed to Canada ULC-S515-04 standard by Underwriters Laboratories. Stages of testing include road, pump, weight, brake, performance and aerial application. All products must pass all tests before a truck is released into Canada. This commitment to quality applies to trucks sold in the U.S. as well. All chassis' comply with Canadian Motor Vehicle Safety Standards CMVSS. Oshkosh ARFF products comply with latest edition of NFPA 414 and the Federal Aviation Administration Advisory Circular (AC) 150/5110-10E. We will work with the customer on specific Canadian requirements to ensure compliance as needed.	

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."

- Pricing - Table 12. Pricing.zip - Tuesday November 30, 2021 15:16:30
- Financial Strength and Stability - Table 2. Financial Strength and Stability.zip - Tuesday November 30, 2021 14:31:23
- Marketing Plan/Samples - Table 7. Marketing Plan.Samples.zip - Tuesday November 30, 2021 13:40:24
- WMBE/MBE/SBE or Related Certificates (optional)
- Warranty Information - Table 9. Warranty Information.zip - Tuesday November 30, 2021 13:41:02
- Standard Transaction Document Samples - SALES_TEMPLATE_Sales Proposal Order Form .pdf - Tuesday November 30, 2021 13:43:12
- Upload Additional Document - Additional Documents.zip - Tuesday November 30, 2021 16:02:10

Addenda, Terms and Conditions

PROPOSER AFFIDAVIT AND ASSURANCE OF COMPLIANCE

I certify that I am the authorized representative of the Proposer submitting the foregoing Proposal with the legal authority to bind the Proposer to this Affidavit and Assurance of Compliance:

1. The Proposer is submitting this Proposal under its full and complete legal name, and the Proposer legally exists in good standing in the jurisdiction of its residence.

2. The Proposer warrants that the information provided in this Proposal is true, correct, and reliable for purposes of evaluation for contract award.

3. The Proposer, including any person assisting with the creation of this Proposal, has arrived at this Proposal independently and the Proposal has been created without colluding with any other person, company, or parties that have or will submit a proposal under this solicitation; and the Proposal has in all respects been created fairly without any fraud or dishonesty. The Proposer has not directly or indirectly entered into any agreement or arrangement with any person or business in an effort to influence any part of this solicitation or operations of a resulting contract; and the Proposer has not taken any action in restraint of free trade or competitiveness in connection with this solicitation. Additionally, if Proposer has worked with a consultant on the Proposal, the consultant (an individual or a company) has not assisted any other entity that has submitted or will submit a proposal for this solicitation.

4. To the best of its knowledge and belief, and except as otherwise disclosed in the Proposal, there are no relevant facts or circumstances which could give rise to an organizational conflict of interest. An organizational conflict of interest exists when a vendor has an unfair competitive advantage or the vendor's objectivity in performing the contract is, or might be, impaired.

5. The contents of the Proposal have not been communicated by the Proposer or its employees or agents to any person not an employee or legally authorized agent of the Proposer and will not be communicated to any such persons prior to Due Date of this solicitation.

6. If awarded a contract, the Proposer will provide to Sourcewell Participating Entities the equipment, products, and services in accordance with the terms, conditions, and scope of a resulting contract.

7. The Proposer possesses, or will possess before delivering any equipment, products, or services, all applicable licenses or certifications necessary to deliver such equipment, products, or services under any resulting contract.

8. The Proposer agrees to deliver equipment, products, and services through valid contracts, purchase orders, or means that are acceptable to Sourcewell Members. Unless otherwise agreed to, the Proposer must provide only new and first-quality products and related services to Sourcewell Members under an awarded Contract.

9. The Proposer will comply with all applicable provisions of federal, state, and local laws, regulations, rules, and orders.

10. The Proposer understands that Sourcewell will reject RFP proposals that are marked "confidential" (or "nonpublic," etc.), either substantially or in their entirety. Under Minnesota Statutes Section 13.591, subdivision 4, all proposals are considered nonpublic data until the evaluation is complete and a Contract is awarded. At that point, proposals become public data. Minnesota Statutes Section 13.37 permits only certain narrowly defined data to be considered a "trade secret," and thus nonpublic data under Minnesota's Data Practices Act.

11. Proposer its employees, agents, and subcontractors are not:
    1. Included on the "Specially Designated Nationals and Blocked Persons" list maintained by the Office of Foreign Assets Control of the United States Department of the Treasury found at: https://www.treasury.gov/ofac/downloads/sdnlist.pdf;

    2. Included on the government-wide exclusions lists in the United States System for Award Management found at: https://sam.gov/SAM/; or

    3. 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 the Canadian government, as applicable; or any Participating Entity. Vendor certifies and warrants that neither it nor its principals have been convicted of a criminal offense related to the subject matter of this solicitation.

☑ By checking this box I acknowledge that I am bound by the terms of the Proposer's Affidavit, have the legal authority to submit this Proposal on behalf of the Proposer, and that this electronic acknowledgment has the same legal effect, validity, and enforceability as if I had hand signed the Proposal. This signature will not be denied such legal effect, validity, or enforceability solely because an electronic signature or electronic record was used in its formation. - Michelle Swokowski, Sales Operations Manager, Oshkosh Corporation/ Pierce Manufacturing/ Oshkosh Airport Products

The Proposer declares that there is an actual or potential Conflict of Interest relating to the preparation of its submission, and/or the Proposer foresees an actual or potential Conflict of Interest in performing the contractual obligations contemplated in the bid.

○ **Yes** ◉ **No**

The Bidder acknowledges and agrees that the addendum/addenda below form part of the Bid Document.

Check the box in the column "**I have reviewed this addendum"** below to acknowledge each of the addenda.

File Name	I have reviewed the below addendum and attachments (if applicable)	Pages
Addendum_4_Fire_Apparatus_RFP_113021 Sat November 20 2021 12:53 PM	☑	5
Addendum_3_Fire_Apparatus_RFP_113021 Thu November 11 2021 02:09 PM	☑	1
Addendum_2_Fire_Apparatus_RFP_113021 Fri October 29 2021 09:20 AM	☑	1
Addendum_1_Fire_Apparatus_RFP_113021 Fri October 29 2021 09:20 AM	☑	1

Pierce Manufacturing #113021-OKC

Pricing for contract #113021-OKC for Pierce's unpublished options is provided at a 5.5% discount.

Additional discounts may be available for identical multi-unit purchases. Discount varies dependent on the number of identical units, the configuration of the units, and will be handled on as case by case basis.

Authorized Pierce dealers may offer service contracts for preventative maintenance and other services. Pricing would be quoted on a time and material bases, by the dealer, at the time of request. Pierce offers our dealers the ability to offer/develop custom service/maintenance contracts to Sourcewell members utilizing this contract.

September 15, 2023

Flagstaff Fire Department, AZ
One (1) Freightliner BX3 Wildland Pumper Stock 37582 EM758
Build Location: Bradenton, FL

Proposal Price	$523,187.00	
Arizona State Sales Tax @ 5.60%		29,298.47
Phoenix Sales Tax @ 2.70%		14,126.05
PHX Transportation Plan Tax @ 0.3% of $11,631.00		34.89
Total Bid Price Including Sales Tax		*$566,646.41*
Less payment upon completion @ factory discount	(4,581.00)	
Subtotal including all pre-pay discounts	$518,606.00	
Arizona State Sales Tax @ 5.60%		29,041.94
Phoenix Sales Tax @ 2.70%		14,002.36
PHX Transportation Plan Tax @ 0.3% of $11,631.00		34.89
Total Bid Price Including Pre-Pay Discounts & Sales Tax		*$561,685.19*

Terms:

Price Expiration: The above pricing is valid until October 27, 2023.

Future Changes: Various state or federal regulatory agencies (e.g. NFPA, DOT, EPA) may require changes to the Specifications and in any such event any resulting cost increases incurred to comply will be added to the Purchase Price to be paid by the Customer and documented on a Change Order.

Commercial Chassis & Component Price Volatility: The pricing provided is based on our best estimate factoring Pierce's backlog of apparatus and historical chassis model year pricing & availability. Company shall not be responsible for any commercial chassis price increases including changes to model year enacted by a commercial chassis supplier or price increase of any major components of Product (including but not limited to engine, transmission, and fire pump) after the execution of contract. Any price increase of commercial chassis or major component of product will be passed through to end user and will be documented on a Change Order.

Delivery: This apparatus is currently in production and has a completion at the factory dates of December, 2023.

Stock/Demo Units:

a. This stock unit is available on a first come / first serve basis.
b. This stock unit is sold on an As is basis with a Pierce (1) year bumper to bumper warranty and any remaining vendor warranties.

Payment Terms:

a. If pre-payment discount options are elected, the following terms will apply:

i. Payment Upon Completion at Factory Discount: If elected, final payment is due prior to apparatus leaving the factory for delivery. If payment is not processed upon receipt of invoice the discount total will be required in addition to the invoice amount.

b. If pre-payment discount options are not elected standard payment terms will apply: Final payment will be due 30 days after the apparatus leaves the factory for delivery. If payment is not made at that time a late fee will be applicable.

c. Payments made for apparatus using a credit card will be applicable to a credit card convenience fee.

Consortium Purchase: The proposal is based on the apparatus being purchased through Sourcewell utilizing Contract No. 113021-OKC-1 valid until 2/10/2026. It is the purchaser's responsibility to determine if the use of consortiums meets their purchasing requirements.

Performance Bond: A performance bond is not included in the above pricing.

Transportation: Transportation of the apparatus to be driven from the factory to the customers location is included in the above pricing. However, if permits are not obtainable, due to the weight of the apparatus, and the apparatus must be transported on a flat bed, additional Transportation charges will be the responsibility of the customer. We will provide pricing at that time if necessary. If customer elects to drive the apparatus from the factory, **$8,500.00** may be deducted from the purchase price. if this option is elected payment in full and proof of insurance must be provided prior to leaving the factory and the customer is responsible for compliance with all state, local and federal DOT requirements including the driver possessing a valid CDL license.

Inspection Trips: One (1) factory inspection trip for **four (4)** customer representatives is included in the above pricing. The inspection trip will be scheduled at a time mutually agreed upon between the manufacture's representative and the customer, during the window provided by the manufacturer. Airfare, lodging and meals while at the factory are included. In the event the customer is unable to travel to the factory or the factory is unable to accept customers due to the restrictions caused by a national disaster or pandemic then the Dealership reserves the right to use forms of electronic media to accomplish the intention of the inspection trip. Every effort will be made to make the digital media as thorough as possible to satisfy the expectations of the of the customer. If the customer elects to forgo an inspection trip $2,400.00 per traveler (per trip) will be deducted from the final invoice.

Persistent Inflationary Environment: Effective September 1, 2023, verbiage concerning the Persistent Inflationary Environment must be present on customer purchase document. Please speak with your sales representative for the specific terms that are a requisite for acceptance of order.

Acceptance of Proposal: If the customer wishes to purchase the proposed apparatus Hughes Fire Equipment will provide the Customer its form of Purchase Agreement for the Customer's review and signature. If the Customer desires to use its standard form of purchase order as the Purchase Agreement, the purchase order is subject to review for any required revisions prior to acceptance. **All purchase orders shall be made out to Hughes Fire Equipment, Inc., reference proposal EM758 component list dated 9/15/2023, and must be signed and dated.**

September 13, 2023

Flagstaff Fire Department, AZ
One (1) International Wildland BX3 EM769 Stock 38647
Build Location: Bradenton, FL

Proposal Price	$531,896.00	
Arizona State Sales Tax @ 5.60%		29,786.18
Phoenix Sales Tax @ 2.70%		14,361.19
PHX Transportation Plan Tax @ 0.3% of $11,631.00		34.89
Total Bid Price Including Sales Tax		*$576,078.26*
Less payment upon completion @ factory discount	(4,691.00)	
Subtotal including all pre-pay discounts	$527,205.00	
Arizona State Sales Tax @ 5.60%		29,523.48
Phoenix Sales Tax @ 2.70%		14,234.54
PHX Transportation Plan Tax @ 0.3% of $11,631.00		34.89
Total Bid Price Including Pre-Pay Discounts & Sales Tax		*$570,997.91*

Terms:

Price Expiration: The above pricing is valid until October 27, 2023.

Future Changes: Various state or federal regulatory agencies (e.g. NFPA, DOT, EPA) may require changes to the Specifications and in any such event any resulting cost increases incurred to comply will be added to the Purchase Price to be paid by the Customer and documented on a Change Order.

Commercial Chassis & Component Price Volatility: The pricing provided is based on our best estimate factoring Pierce's backlog of apparatus and historical chassis model year pricing & availability. Company shall not be responsible for any commercial chassis price increases including changes to model year enacted by a commercial chassis supplier or price increase of any major components of Product (including but not limited to engine, transmission, and fire pump) after the execution of contract. Any price increase of commercial chassis or major component of product will be passed through to end user and will be documented on a Change Order.

Delivery: This apparatus is currently in production and has a completion at the factory dates of December, 2023.

Stock/Demo Units:
a. This stock unit is available on a first come / first serve basis.
b. This stock unit is sold on an As is basis with a Pierce (1) year bumper to bumper warranty and any remaining vendor warranties.

Payment Terms:
a. If pre-payment discount options are elected, the following terms will apply:

i. Payment Upon Completion at Factory Discount: If elected, final payment is due prior to apparatus leaving the factory for delivery. If payment is not processed upon receipt of invoice the discount total will be required in addition to the invoice amount.

b. If pre-payment discount options are not elected standard payment terms will apply: Final payment will be due 30 days after the apparatus leaves the factory for delivery. If payment is not made at that time a late fee will be applicable.

c. Payments made for apparatus using a credit card will be applicable to a credit card convenience fee.

Consortium Purchase: The proposal is based on the apparatus being purchased through Sourcewell utilizing Contract No. 113021-OKC-1 valid until 2/10/2026. It is the purchaser's responsibility to determine if the use of consortiums meets their purchasing requirements.

Performance Bond: A performance bond is not included in the above pricing.

Transportation: Transportation of the apparatus to be driven from the factory to the customers location is included in the above pricing. However, if permits are not obtainable, due to the weight of the apparatus, and the apparatus must be transported on a flat bed, additional Transportation charges will be the responsibility of the customer. We will provide pricing at that time if necessary. If customer elects to drive the apparatus from the factory, **$8,500.00** may be deducted from the purchase price. if this option is elected payment in full and proof of insurance must be provided prior to leaving the factory and the customer is responsible for compliance with all state, local and federal DOT requirements including the driver possessing a valid CDL license.

Inspection Trips: One (1) factory inspection trip for **four (4)** customer representatives is included in the above pricing. The inspection trip will be scheduled at a time mutually agreed upon between the manufacture's representative and the customer, during the window provided by the manufacturer. Airfare, lodging and meals while at the factory are included. In the event the customer is unable to travel to the factory or the factory is unable to accept customers due to the restrictions caused by a national disaster or pandemic then the Dealership reserves the right to use forms of electronic media to accomplish the intention of the inspection trip. Every effort will be made to make the digital media as thorough as possible to satisfy the expectations of the of the customer. If the customer elects to forgo an inspection trip $2,400.00 per traveler (per trip) will be deducted from the final invoice.

Persistent Inflationary Environment: Effective September 1, 2023, verbiage concerning the Persistent Inflationary Environment must be present on customer purchase document. Please speak with your sales representative for the specific terms that are a requisite for acceptance of order.

Acceptance of Proposal: If the customer wishes to purchase the proposed apparatus Hughes Fire Equipment will provide the Customer its form of Purchase Agreement for the Customer's review and signature. If the Customer desires to use its standard form of purchase order as the Purchase Agreement, the purchase order is subject to review for any required revisions prior to acceptance. **All purchase orders shall be made out to Hughes Fire Equipment, Inc., reference proposal EM769 component list dated 9/13/2023, and must be signed and dated.**

Proposal Details Report

9/13/2023

Customer: Summit Fire Medical District **Bid Number:** 758
Representative McDonald, Ed **Job Number:**
Requirements Manager: **Organization:** Hughes Fire Equipment, Inc
Description: BX3 Wildland, Freightliner, 1000
Chassis: Freightliner M2-106, 4x4, Wildland BX3
Body: WILDLAND BX3, Type 3, NFPA 1906

OptionCode	Type	Option	ProposalText
0765493	SP	Wildland, BX3, Freightliner, 1000 GPM Pump (SF-3202)	
0766594		Boiler Plates,1906, Wildland	Hughes Fire Equipment is pleased to submit a proposal to Flagstaff Fire Department for a **Pierce® wildland fire apparatus** per your request for quotation. The following paragraphs will describe in detail the apparatus proposed. It meets the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution, except where amended by your specifications. Loose equipment not specifically requested will not be provided. PIERCE MANUFACTURING was incorporated in 1913. Since then we have been building bodies with one (1) philosophy, "BUILD THE FINEST". Our skilled craftsmen take pride in their work, which is reflected, in the final product. We have been building fire apparatus since the early "forties" giving Pierce Manufacturing over 75 years of experience in the fire apparatus market. Pierce Manufacturing has built and put into service more than 28,500 apparatus on commercial chassis, and more than 33,900 on Pierce custom chassis designed and built specifically for fire and emergency applications. Our Appleton, Wisconsin facility has over 870,000 total square feet of floor space situated on approximately 105 acres of land. Our Bradenton, Florida facility has 300,000 square feet of floor space situated on approximately 38 acres of land. A multi-million dollar inventory of parts is available to keep your unit in service long after it has left the factory. Our beliefs in high ethical standards are carried through in all of our commitments and to everyone with whom we do business. Honesty, Integrity, Accountability and Citizenship are global tenets by which we all live and work. Consequently, we neither engage in, nor have we ever been convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market. Pierce has only one brand of fire apparatus "Pierce", ensuring you are receiving top of the line product that meets your specification. In accordance with the current edition of applicable NFPA standards, this proposal will specify whether the fire department, manufacturer, or apparatus dealership will provide required loose equipment. Images and illustrative material in this proposal are as accurate as known at the time of publication, but are subject to change without notice. Images and illustrative material is for reference only, and may include optional equipment and accessories and may not include all standard equipment. **GENERAL DESIGN AND CONSTRUCTION** To control quality and ensure the compatibility of all the components, Pierce specifically designs the pump module, body, and electrical system to properly integrate and function with the commercial cab and chassis. All welding, assembly and paint work will be done in Pierce owned manufacturing facilities. This includes, but not limited to the pumphouse module assembly, the body and the electrical system. **QUALITY AND WORKMANSHIP** Pierce has set the pace for quality and workmanship in the fire apparatus field. Our tradition of building the highest quality units with craftsmen second to none has been the rule right from the beginning and we demonstrate that ongoing commitment by: Ensuring all steel welding follows American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding follows American Welding society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding follows American welding Society B2.1-2000 requirements for structural welding of sheet metal. Our flux core arc welding uses alloy rods, type 7000 and is performed to American Welding Society standards A5.20-E70T1. Furthermore, all employees classified as welders are tested and certified to meet the American welding Society codes upon hire and every three (3) years thereafter. Pierce also employs and American Welding Society certified welding inspector in plant during working hours to monitor weld quality. Pierce Manufacturing operates a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International Organization for Standardization (ISO) specify the quality systems that are established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance is included with this proposal. In addition to the Quality Management system, we also employ a Quality Achievement Supplier program to insure the vendors and suppliers that we utilize meet the high standards we demand. That is just part of our overall "Quality at the Source" program at Pierce. To demonstrate the quality of our products and services, a list of at least twenty five (25) fire departments/municipalities that have purchased vehicles for a second time is provided. **DELIVERY** The apparatus will be delivered under its own power to insure proper break-in of all components while the apparatus is still under warranty. A qualified delivery representative shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in proper operation, care and maintenance of the equipment delivered. **MANUAL AND SERVICE INFORMATION** At time of delivery, complete operation and maintenance manuals covering the apparatus will be provided. A permanent plate will be mounted in the driver's compartment specifying the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle. **SAFETY VIDEO** At the time of delivery Pierce will also provide one (1) 39-minute, professionally-produced apparatus safety video, in DVD format. This video will address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus, including the

following: vehicle pre-trip inspection, chassis operation, pump operation, and safety during maintenance.

PERFORMANCE TESTS

A road test will be conducted with the apparatus fully loaded and a continuous run of no less than ten (10) miles. During that time the apparatus will show no loss of power nor will it overheat. The transmission drive shaft or shafts and the axles will run quietly and be free of abnormal vibration or noise. The apparatus will meet acceleration requirements and braking requirements of the current edition of applicable NFPA standards. The apparatus when fully loaded will not have less than 25 percent nor more than 50 percent on the front axle and not less than 50 percent nor more than 75 percent on the rear axle.

SERVICE AND WARRANTY SUPPORT

Pierce dealership support will be provided by Hughes Fire Equipment by operating a Pierce authorized service center. The service center will have factory-trained mechanics on staff versed in Pierce fire apparatus. The service facility will be located within twenty five (25) miles of the fire department.

In addition to the dealership, Pierce has service facilities located in both, Weyauwega, Wisconsin and Bradenton, Florida. Pierce also maintains a dedicated parts facility of over 100,000 square feet in Appleton, Wisconsin. The parts facility stocks in excess of $5,000,000 in parts dedicated to service and replacement parts. The parts facility employs a staff dedicated solely for the distribution and shipment of service and replacement parts.

Service parts for the apparatus being proposed can be found via Pierceparts.com which, is an interactive online tool that delivers information regarding your specific apparatus as well as the opportunity to register for training classes.

As a Pierce customer you have the ability to view the complete bill of materials for your specific apparatus, including assembly drawings, piece part drawings, and beneficial parts notations. You will also have the ability to search the complete Pierce item master through a parts search function which offers all Pierce SKU's and descriptions offered on all Pierce apparatus. Published component catalogs, which include proprietary systems along with an extensive operators manual library is available for easy reference.

Pierce Manufacturing maintains a dedicated service and warranty staff of over 35 personnel, dedicated to customer support, which also maintains a 24 hour 7 day a week toll free hot line, four (4) on staff EVTs, and offers hands-on repair and maintenance training classes multiple times a year.

LIABILITY

The successful bidder will defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.

INSURANCE PROVIDED BY BIDDER

COMMERCIAL GENERAL LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

Each Occurrence $1,000,000

Products/Completed Operations Aggregate $1,000,000

Personal and Advertising Injury $1,000,000

General Aggregate $2,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form and will include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy will include Owner as an additional insured when required by written contract.

COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

The successful bidder will, during the performance of the contract, keep in force at least the following minimum limits of commercial automobile liability insurance and coverage will be written on a Commercial Automobile liability form:

Each Accident Combined Single Limit: $1,000,000

UMBRELLA/EXCESS LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Aggregate: $3,000,000

Each Occurrence: $3,000,000

The umbrella policy will be written on an occurrence basis and at a minimum provide excess to the bidder's General Liability and Automobile Liability policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Bidder agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as certificate holder.

INSURANCE PROVIDED BY MANUFACTURER

PRODUCT LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of Product Liability insurance:

Each Occurrence $1,000,000

Products/Completed Operations Aggregate $1,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form. The manufacturer's policy will include the owner as additional insured when required by written contract between the Owner and a

		Pierce authorized dealer. **UMBRELLA/EXCESS LIABILITY INSURANCE** **The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:** **Each Occurrence: $25,000,000** **Aggregate: $25,000,000** **The umbrella policy will be written on an occurrence basis and provide excess to the manufacturer's General Liability/Products policies.** **The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.** **Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.** **All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.** **Manufacturer agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as the certificate holder.**
0018257	Commercial chassis & Snorkel products	
0584455	Manufacture Location, Bradenton, Florida	Your apparatus will be manufactured in Bradenton, Florida.
0584453	RFP Location: Bradenton, Florida	
0588609	Vehicle Destination, US	
0799089	Comply NFPA 1906 Changes Effect Jan 1 , 2016 with Exceptions, Commercial Chassis	**NFPA 2016 STANDARDS** This apparatus specification includes a commercial chassis that has not been certified to meet all the requirements of NFPA 1906 by the chassis manufacturer. Although this chassis may comply with certain aspects of the standard, certification has not been received from this chassis manufacturer that all criteria have been met. The body and equipment as built by Pierce will comply with the current NFPA 1906 standards effective January 2016, except as noted on the NFPA exceptions list. Certification of slip resistance of all stepping, standing and walking surfaces must be supplied with delivery of the apparatus. A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating. The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications. An official of the company will designate, in writing, who is qualified to witness and certify test results.
0547534	1906 Wildland Fire Apparatus	
0588619	Not Required, Vehicle Certification	
0511675	Certification, Pump, Wildland	**PUMP TEST** The pump will be tested and certified by the apparatus manufacturer. The test results along with the pump manufacturer's certification of hydrostatic test, the engine manufacturer's certified brake horse power curve and the manufacturer's record of pump construction details will be forwarded to the Fire Department.
0537375	Unit of Measure, US Gallons	

0030006		Bid Bond Not Requested	**BID BOND NOT REQUESTED** A bid bond will not be included. If requested, the following will apply: All bidders will provide a bid bond as security for the bid in the form of a 5% bid bond to accompany their bid. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language, which assures that the bidder/principal will give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract. Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.
0816569		Performance Bond, Not Requested, PPI Terms	**PERFORMANCE BOND NOT REQUESTED** A performance bond will not be included. If requested at a later date, one will be provided to you for an additional cost and the following will apply: The successful bidder will furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond will be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required. Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Bumper to Bumper warranty period included within this proposal. Owner agrees that the penal amount of this bond will be simultaneously amended to 25 percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type will not exceed three (3) years from the date of such satisfactory acceptance and delivery, or the actual Bumper to Bumper warranty period, whichever is shorter. Due to global supply chain constraints, any delivery date contained herein is a good faith estimate as of the date of this order/contract, and merely an approximation based on current information. Delivery updates will be made available, and a final firm delivery date will be provided as soon as possible. If the Producer Price Index of Components for Manufacturing [www.bls.gov Series ID: WPUID6112] ("PPI") has increased at a compounded annual growth rate of 5.0% or more between the month Pierce accepts the order ("Order Month") and a month 14 months prior to the then predicted Ready For Pickup date ("Evaluation Month"), then pricing may be updated in an amount equal to the increase in PPI over 5.0% for each year or fractional year between the Order Month and the Evaluation Month. The seller will document any such updated price for the customer's approval before proceeding and provide an option to cancel the order.
0010007		No Approval Drawing Req'd.	
0589819		Electrical Diagrams, Commercial	**ELECTRICAL WIRING DIAGRAMS** Two (2) electrical wiring diagrams, prepared for the body as it interfaces with the commercial chassis, will be provided.
0773668		Freightliner M2-106, 4x4, Wildland BX3	**CHASSIS** The chassis will be a Freightliner, Model M2, 106MD Conventional Chassis, supplied with the following equipment:
0893566		Model Year 2024	
0768599	SP	Use SF-3201 Freightliner Chassis Spec (Wildland BX3) [Use Also w/3202]	
0720765		Base Price,FLR M2-106,4x4,Wildland BX3, Effective 5/18/2021 - EXPIRED 11/23/2021	
0802041	SP	Surcharge, Freightliner, Effective 05/30/2022 Build Date	
0767550		Overall Height, Wildland BX3 - w/Freightliner Chassis - 10' 6"	**MAXIMUM OVERALL HEIGHT** The maximum overall height of the apparatus will be no more than 126.00" (10' 6").

0767548	Angle of Departure, Approximately 25 Degrees, Wildland BX3	**ANGLE OF DEPARTURE** The angle of departure will be about 25 degrees. This will be effective with the truck in a loaded state.
0751234	Angle of Approach,Approximately 23 Degrees, Freightliner / Wildland BX3	**ANGLE OF APPROACH** The angle of approach will be about 23 degrees. This will be effective with the truck in a loaded state.
0773610	Wheelbase, 177", Freightliner 4x4, Wildland BX3	**WHEELBASE** The wheelbase of the vehicle will be 177.00 inches.
0773641	GVW Rating, 35,000#, Commercial Chassis	**GVW RATING** The gross vehicle weight rating will be 35,000 pounds.
0579898	Frame, Chassis, Freightliner, 120 KSI	**FRAME** The frame rails will be formed from 120,000 psi yield, heat treated alloy steel. The frame rails will be E-coated prior to painting.
0582814	Frame Reinforcement, 1/4" Inner Liner, Freightliner	**FRAME LINER** An 0.25" inner frame reinforcement will be provided. The frame section properties will be: - Section Modulus: 26.80 cubic inch, per rail - RBM: 3,217,000 in-lb, per rail - Yield Strength: 120,000 psi, per rail
0686245	Axle, Front Driving, 12K, Freightliner 4x4, w/MTC4210 XL (No PTO)	**FRONT AXLE** Front axle will be a driving axle, with a ground rating capacity of 12,000 lb. The transfer case to drive the front axle will be a 2-speed transfer case. Synthetic lubricant will be provided.
0773475	Suspension, Front Spring, 12,000 lb, Commercial	**FRONT SUSPENSION** Spring mounted: Taper-leaf Capacity at Ground: 12,000 lb
0073051	Shock Absorbers, Front	Shock absorbers will be provided on the front axle.
0789186	Brakes, Cam Front, 16.50"x 5.00" Commercial	**FRONT BRAKES** The front brakes will be S-Cam, 16.50" x 5.00". The front brakes will be provided with automatic slack adjusters.
0585775	MichelinTires	**TIRE BRAND** The default brand of tire for the commercial chassis manufacturer for this apparatus is Michelin. However, the commercial chassis manufacturer reserves the right to substitute brands and models of tire as may be available at the factory on the date of manufacture. They will provide the proper tread style and weight rating for the position in which the tire is installed. Pierce Manufacturing and the chassis manufacturer are working to provide the brand of tire specified. However, due to shortages (and even model changes by the tire manufacturers), if the chassis manufacturer substitutes other tires, they will not be changed by Pierce.
0772242	Tires, Front, 22.50, Traction Tread, 4x4 (to 14.6k GAWR)	**TIRES, FRONT** Front tires will be 22.50, radial tires with a traction tread pattern suitable for the steering axle position on a front driving axle. The capacity of the tires will meet or exceed the rating of the axle and/or suspension and a maximum top speed per the requirements described elsewhere in this proposal, up to 75 MPH.
0683147	Wheel, Steel, 22.50", 4x4	**WHEELS, FRONT** Wheels for the front axle will be 22.50" steel disc, properly sized for the provided tires.
0765526	Axle, Rear, 23K, Freightliner M2-106 4x4, BX3	**REAR AXLE** The single reduction rear axle will have a ground rating capacity of 23,000 lb. **PARKING BRAKE** The parking brake will be spring set and located on the rear axle service brake.

0772020		S-Cam Style 16.50" x 7.00"	Rear axle brakes will be 16.50" x 7.00", S-Cam drum type brakes. Automatic slack adjusters will be provided.
0767494		Top Speed of Vehicle, Comply w/NFPA, Wildland BX3	**REAR AXLE RATIO** NFPA 1906, 2016 edition, section 4.15.2 requires that the maximum top speed of fire apparatus with a GVWR over 33,000 lb will not exceed either 68 mph or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower. The top speed of the apparatus as manufactured meets the NFPA requirement of a top speed of 68 miles per hour. The rear axle *ratio* provided will to allow the vehicle to reach an approximate top speed of 73 miles per hour, but the speed of the chassis will be electronically limited 68 MPH.
0773477		Suspension, Rear Spring, 23,000 lb Commercial	**REAR SUSPENSION** The rear suspension will be spring mounted multi-leaf, with a capacity at ground level of 23,000 lbs.
0649953		Oil, Synthetic Gear, Meritor 4x4, Front and Rear Axles, Freightliner M2 -106	**SYNTHETIC GEAR LUBE** Axles and rear differential will be supplied with synthetic 75W - 90W gear lube, as recommended by the axle manufacturer.
0008102		Dust Shields, Front and Rear Brakes, Commercial Chassis	**DUST SHIELDS** The front and rear brakes will be provided with dust shields.
0772235		Tires, Rear, 22.50, Traction Tread, 4x4 (to 27k GAWR)	**TIRES, REAR, 4X4** Rear tires will be 22.50, radial tires with a traction tread pattern suitable for the rear axle position on an all-wheel-drive vehicle. The tire capacity will meet or exceed the capacity of the axle and/or suspension. Tires will be rated for a maximum top speed per the requirements described elsewhere in this proposal, up to 75 MPH Due to ratio matching requirements of an all-wheel-drive vehicle, the front and rear tire sizes will be the same. The size of the tires provided will be at least the minimum size required to meet the GAWR rating of both axles.
0810393		Wheel, Steel, 22.50" x 8.25", 4x4	**WHEELS, REAR** The rear wheels will be 22.50" steel disc properly sized for the provided tires.
0767493		No Tire Pressure Indicator, Fire Department Omits, Non-NFPA 1906-2016 Compliant	**TIRE PRESSURE INDICATOR** NFPA 1906, 2016 edition, section 4.13.4 requires each tire be equipped with a visual indicator or monitoring system that indicates tire pressure. Per Fire Department specification, a tire pressure indicator is not on the apparatus as manufactured. This apparatus will be non-compliant to NFPA 1906 standards effective at time of contract execution.
0749971	SP	Carrier, Spare Tire, Under Rear Substructure, BX3, Non-NFPA 1906	**SPARE TIRE CARRIER** Provisions to carry one (1) spare tire will be provided on the apparatus. This spare tire carrier will primarily be used for on-road operations. The carrier will consist of a electric winch and set of brackets that will lift and secure the spare tire up and underneath the rear body structure. The carrier will also have a secondary retaining provision in case the primary retention mechanism fails. It is understood that with the spare tire mounted in the carrier, that the angle of departure is reduced, and no skid plate or other protections are provided. When the spare tire is in position on the carrier, it may be non-compliant to NFPA 1906 section 12.3.2.3 that states "... an angle of departure of at least 20 degrees will be maintained..." This winch and brackets will not infringe upon the angle of departure when the spare tire is not carried.
0012045		Mud Flap, Rear, Pierce Logo	**MUD FLAPS** Mud flaps with a Pierce logo will be installed behind the rear wheels.
0767491		Chocks, Wheel, Wildland, NFPA, Provided by Fire Department, NFPA 1906 - 2016	**WHEEL CHOCKS PROVIDED BY FIRE DEPARTMENT** NFPA 1906, 2016 edition, section 5.7.1 requires "Two (2) solid bottom wheel chocks mounted in readily accessible locations, ..." be provided with the apparatus. The wheel chocks are not on the apparatus as manufactured. The fire department will provide and install these wheel chocks.
0544690		Mounting Brackets, Chocks, Provided by Fire Department	**Wheel Chock Brackets Provided by Fire Department** The wheel chock brackets are not on the apparatus as manufactured. The fire department will provide and install the wheel chock brackets.

0020881	ABS, Anti-Lock Braking System, Commercial	**ANTI-LOCK BRAKE SYSTEM** The vehicle will be equipped with an anti-lock braking system. The ABS will provide anti-lock braking control on both the front and rear wheels. It will be a digitally controlled system that utilizes microprocessor technology to control the anti-lock braking system. Each wheel will be monitored by the system. When any particular wheel begins to lockup, a signal will be sent to the control unit. This control unit then will reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system will eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.
0009547	Air Compressor, Brake, 18.7 CFM, Commercial	**AIR COMPRESSOR, BRAKE SYSTEM** The air compressor will have an output of 18.7 cubic feet per minute.
0773985	Air Dryer, Brake, w/Heater, Commercial	**AIR DRYER** An air dryer with a heater will be provided. Other features of this air dryer include: - Desiccant style filter - In-line filtration system - Automatic purge valve
0020851	Not Required, Air Inlet	
0728926	Engine, Cummins L9, 360 hp, FL M2-106, BX3	**ENGINE** Model: Electronic Cummins L9 Number of Cylinders: Six (6) Bore and Stroke: 4.49" x 5.69" Displacement: 543 cubic inches (8.9 Liter) Rated Brake Horsepower: 360 at 2200 rpm Peak Torque: 1150 at 1200 rpm Governed rpm: 2200 VGT Turbocharger Fuel System: High pressure common rail (HPCR) **ENGINE ACCESSORIES** Air Cleaner: Dry type, with restriction indicator in cab Fuel Filters: Dual, with check valve Governor: Limiting speed type Lube Oil Cooler Lube Oil Filter: Combination full flow/bypass Starting Motor: 12-volt Oil Fill and Level Gauge **RADIATOR** Pressurized System, Tube and Fin Deaeration Tank Anti-Freeze Protection -34 Degrees Fahrenheit
0755088	Engine Surcharge, Cummins/Freightliner	
0001247	High Idle w/Electronic Engine, Commercial	**HIGH IDLE** A high idle switch will be provided on the instrument panel inside the cab. Activating the switch will cause the vehicle to automatically maintain a preset engine rpm. The high idle switch will be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light will be provided adjacent to the switch. The light will be labeled "OK To Engage High Idle."
0773963	Auxiliary Brake, Exhaust Brake , VGT Style, With Brake Lights, Commercial	**ENGINE EXHAUST BRAKE** An exhaust brake with an integral variable geometry turbo charger (VGT) will be provided. The control will be located on the instrument panel within easy reach of the driver. When the engine brake is engaged it will activate the brake lights.
0779576	Fuel/Water Separator,Detroit,w/Hand Primer,H2O Sensor w/Preheater, M2-106/108SD	**FUEL/WATER SEPARATOR** A Detroit fuel/water separator will be provided on the chassis. It will include a "water in fuel" sensor, hand primer and a 12-volt pre-heater.
0773981	Air Intake, Engine, w/Ember Separator, OEM Installed, Commercial	**AIR INTAKE, w/EMBER SEPARATOR** The air inlet will be equipped with a stainless steel mesh to separate water and burning embers from the air intake system such that particulate matter larger than 0.039" (1.0 mm) in diameter cannot reach the air filter element. This will comply with NFPA 1901 and 1906 standards.

0773636		Exhaust System, Horizontal, RH Step Mounted DPF/SCR, Commercial	**EXHAUST SYSTEM** The exhaust system will include a diesel particulate filter (DPF) and a selective catalytic reduction (SCR) device to meet current EPA standards. The DPF and SCR will be mounted horizontally outside of the frame rails in the right side front step area.
0684987		Exhaust Modifications, Commercial Chassis, Horizontal Exhaust	**EXHAUST MODIFICATIONS** The exhaust will terminate with a horizontal tailpipe and diffuser ahead of the right side rear wheels. A heat deflector shield will be provided where the tail pipe is routed under any side compartmentation. All modifications will be approved by the chassis engine manufacturer and/or the chassis OEM. Exhaust treatment devices will not be altered.
0061579		Coolant Hoses, Gates Blue Stripe, FL M2	**COOLANT LINES** Gates Blue Stripe rubber hose will be used for all engine coolant lines installed by the chassis manufacturer. Hose clamps will be the constant torque type to prevent coolant leakage. They will expand and contract according to coolant system temperature thereby keeping a constant clamping pressure on the hose.
0773634		Fuel Tank, 70 Gallon, Left Side, Aluminum, Commercial	**FUEL TANK** A 70 gallon fuel tank will be provided and mounted at the left-hand cab step. The tank will be constructed of aluminum.
0773952		DEF Tank, Left Side Location, Commercial	**DIESEL EXHAUST FLUID TANK** A diesel exhaust fluid (DEF) tank will be provided and mounted on the left side, below the cab. The tank will be sized by the chassis manufacturer based on the engine provided. It will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.
0723716		Fuel Priming Pump, Electronic, Automatic, Cummins, No Swt Req'd	**FUEL PRIMING PUMP** A Cummins automatic electronic fuel priming pump will be integrated as part of the engine.
0552712		Not Required, Shutoff Valve, Fuel Line	
0023745		Cooler, Chassis Fuel, Pierce Installed	**AUXILIARY FUEL COOLING SYSTEM** A supplementary fuel cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the chassis engine fuel. The heat exchanger will be a cylindrical type and will be a separate unit. The cooler will operate any time the pump is discharging water and will be plumbed to the master drain valve.
0764176		Chassis Fuel Line Protection, Fire Wrap Lagging, Wildland	**FUEL LINE PROTECTION** The fuel hoses that run from the chassis fuel tank to the fuel pump will be wrapped with fire wrap lagging to protect them from heat damage. The lagging will be able to withstand high temperatures and will be secured with stainless steel or fire proof ties.
0773950		Trans, Automatic, Allison 3000 EVS, w/(2) PTO Provsions, Commercial	**TRANSMISSION** An Allison, model 3000 EVS, electronic torque converting automatic transmission will be provided. To qualify for the EVS rating, the transmission will be filled with synthetic transmission fluid. Two (2) PTO openings will be located on left and right side of the converter housing (positions 8 o'clock and 4 o'clock). A transmission temperature gauge or warning light will be installed on cab instrument panel.
0742564	SP	Transmission, Shifter, Push Button, 6 Speed, Freightliner BX3 w/L9 Engine	**TRANSMISSION SHIFT CONTROL** A push button shift module will be mounted to right of driver. Shift position indicator will be indirectly lit for after dark operation. The transmission will be a six (6)-speed. The transmission ratios will be 1st - 3.49 to 1.00, 2nd - 1.86 to 1.00, 3rd - 1.41 to 1.00, 4th - 1.00 to 1.00, 5th - 0.75 to 1.00, 6th - 0.65 to 1.00, R - 5.03 to 1.00.
0011475		Transmission Oil Cooler, Internal, Commercial	**TRANSMISSION COOLER** A transmission oil cooler will be provided in a tank of the radiator.
0527500		Transfer Case Oil Cooler, 4x4, Commercial	**TRANSFER CASE OIL COOLER** The 4x4 transfer case will have an oil cooler specifically designed and installed for the application.

0733744	Driveline for PTO/Transfer Case or No Pump Installation - Commercial	**DRIVELINE** Drivelines will be a heavy duty metal tube equipped with universal joints properly sized for the application. A splined slip joint will be provided in each driveshaft.
0773640	Driveline Pre-Approved, Freightliner M2-106 4x4, Wildland BX3	
0773977	Steering, Power w/Tilt/Telescope Column, Commercial	**STEERING** The steering system will be hydraulically driven. The steering column will have an adjustable tilt and telescope feature.
0607536	Skid Plate and Brush Guard, For Fuel and DEF Tanks, Commercial Chassis	**SKID PLATE AND BRUSH GUARD** A 12 gauge removable steel skid plate will be fastened to the bottom side of the fuel tank hangers. The plate will be formed to protect the underside of the plastic DEF tank and will be fastened to the factory chassis steps.
0761934	Chassis Air Line Protection, Fire Wrap Lagging, Wildland	**AIR LINE PROTECTION** All air lines that are routed below the frame rails shall be wrapped with fire wrap lagging to protect them from heat damage. The lagging shall be able to withstand high temperatures and shall be secured with stainless steel or fire proof ties.
0751213	Winch, Warn, 15000 lb. Fixed, Front, Synthetic Rope, Polished Fairlead, BX3	**FRONT WINCH** A Warn Series 15, 15,000 lb electric winch will nest below the top aluminum treadplate surface of the front bumper. A cover will be provided for maintenance and access to the winch Direction control lever and remote control plug will be provided. The cover will be provided with a mechanical stay arm hold open device. Winch will be mounted on a surface that will not flex when the winch is in use, since it could bind working parts of the winch. Winch will be braced by a three (3) point mount, as recommended by the winch manufacturer. Winch will have 70 feet of .50" synthetic rope with hook, pre spooled on drum. Winch will have planetary gearing. Electric motor will have a thermal overload protection switch. Wire cables to battery will be two (2) gauge or larger. Speed and amperage draw of winch will be variable depending on winch load. Winch will have a minimum of a 30 foot remote control cable. A polished fairlead for use with synthetic rope will be supplied of sufficient strength to accommodate the winch capacity. A label will be placed on or near the mount that states the maximum winch load rating and the maximum rope load rating that the mount can support.
0751239	Bumper Extension, 19", Steel Painted, Chicago Style, Commercial Chassis, BX3	**BUMPER** A one (1) piece bumper manufactured from 0.19" formed steel with a 0.38" bend radius will be provided. The bumper will be a minimum of 10.00" high with a 1.50" top and bottom flange, and will extend 19.00 " from the face of the cab. The bumper will have 45 degree corners. The bumper will be metal finished and painted job color. To provide adequate support strength, the bumper will be mounted directly to the front of the C channel frame. The frame will be a bolted modular extension frame constructed of 50,000 psi tensile steel. **GRAVEL PAN** A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and the cab face and front wheel wells. The pan will be properly supported from the underside to prevent flexing and vibration.
0751237	Tray, (1) Hose Left Side of 19" Bumper, Wildland BX3	**LEFT SIDE HOSE TRAY** A hose tray will be placed in the left side of the extended bumper. The tray will have a capacity of 75' of 1.50" double jacket cotton-polyester hose. Black rubber grating will be provided at the bottom of the tray. Drain holes will be provided.
0766331	Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray, Notched, BX3	**Left Side Hose Tray Cover** A bright aluminum treadplate cover will be provided over the left side hose tray. The cover will be notched to allow the hose to be pre-connected to the hose connection. The cover will be attached with a stainless steel hinge. There will be one (1) D-ring latch provided to secure the cover in the closed position and a mechanical stay arm will hold the cover in the open position.
0751236	Tray, (1) Hose Right Side of 19" Bumper, Wildland BX3	**RIGHT SIDE HOSE TRAY** A hose tray will be placed in the right side of the extended bumper. The tray will have a capacity of 75' of 1.50" double jacket cotton-polyester hose. Black rubber grating will be provided at the bottom of the tray. Drain holes will be provided.

0766332	Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray, Notched, BX3	**Right Side Hose Tray Cover** A bright aluminum treadplate cover will be provided over the right side hose tray. The cover will be "notched" allowing the hose to be pre connected to hose connection. The cover will be attached with a stainless steel hinge. A D-ring latch will secure the cover in the closed position and a mechanical stay arm will hold the cover in the open position.
0002283	Tow Hooks, Painted	**TOW HOOKS** Two (2) painted steel tow hooks will be installed under the bumper and attached to the front frame members. The tow hooks will be painted to match the chassis frame assembly. The tow hooks will be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow hooks will not be used for lifting of the apparatus.
0012300	Bracket, License Plate, Frt Bumper Non-Illuminated	**LICENSE PLATE BRACKET** A non-illuminated license plate bracket will be mounted on the front bumper. The bracket will be formed from bright stainless steel.
0767590	Cab, 4-door, Crew Cab High-Roof, Freightliner, M2-106, Wildland BX3	**CAB** A 4-door, high-roof cab will be provided. The cab and doors will be of an aluminum construction. **Exterior Styling** Aerodynamic hood and windshield Tinted Glass in all Windows Fiberglass hood with mounted plastic grille Single 63"x14" rear window **Interior** Air bag rear cab suspension Black vinyl mats Forward roof mounted console Dual Sun visors Fresh Air Heater and Defroster
0769892	Cab Interior, Gray, w/Convenience Package, 4-Door Crew Cab, Freightliner	**CAB INTERIOR w/CONVENIENCE PACKAGE** The cab upholstery will be gray vinyl. The cab interior will include wood grain driver and center instrument panels, molded plastic door panels with vinyl inserts and brushed aluminum lower door kick plates.
0668972	Grille, Chromed Plastic, w/Exterior Appearance Pkg, Freightliner	**CAB GRILLE - CHROMED** The cab grille will be a chromed high impact plastic with a horizontal rib design. The headlight bezels and air intake grilles will also have a chromed accent finish. The grille will tilt with the hood.
0548159	Mirrors, West Coast, 8"Convex, Heated, Remote,Bright,PS Aux, Freightliner	**MIRRORS** West Coast style heated, remote operated mirrors constructed from a molded composite material with a bright finish will be provided. A heated 8.00" convex mirror will be included below the primary mirrors. An auxiliary down view mirror will be included on the passenger side.
0616224	Steps, Cab, as Supplied by Freightliner (Stainless Steel)	**CAB ACCESS STEPS** The cab steps will be provided by the chassis manufacturer. The stepping surface will be constructed from polished stainless steel and have a punch formed slip resistant surface. No modifications of any type will be provided by the apparatus manufacturer.
0767309	Compartment, Tool, Under RH Crew Cab, Wildland BX3	**COMPARTMENT, STORAGE** A double-door storage compartment will be provided below the right side crew cab door. Both doors will be double pan construction with a D-ring latch and vertical hinges. The exterior of this compartment will serve as an entrance step to the crew cab. An LED compartment light will be provided inside the compartment with a magnetic switch.
0767312	Compartment,Tool/Brass, Under LH Crew Cab, Max Size, BX3	**COMPARTMENT, STORAGE** A storage compartment for tools and brass attachments will be provided below the left side crew cab door. There will be a drawer style tray that slides out for access to the equipment. The exterior of this compartment will serve as an entrance step to the crew cab. An LED compartment light will be provided inside the compartment with a magnetic switch.
0637488	Lights, Cab & Crw Cab Acs Stps, LED, 4 Door Cab, BX Product	**STEP LIGHTS** There will white LED step lights provided to meet NFPA step lighting requirements. Lights will be installed at each cab and crew cab door step. The lights will be activated when any cab door is opened.

0689675	DELETE Rear Cab Window, Freightliner M2-106/112/114SD	**DELETE REAR CAB WINDOW** The chassis manufacturer will provide a metal panel in place of the rear window in the cab.
0070598	Daytime Running Lts, Commercial	**DAYTIME RUNNING LIGHTS** The chassis will be provided with daytime running lights.
0773943	Air Conditioning, Commercial	**AIR CONDITIONING** An air conditioner will be provided that is integral with heater and defroster system.
0759495	Ember Screen, for AC Filter, Air Intake, Pierce Provided, Commercial Chassis	**AIR CONDITIONING EMBER FILTER** An ember filter will be provided by the apparatus manufacturer to keep embers out of the HVAC filter element. The air inlet will be equipped with a stainless steel mesh to separate water and burning embers from the HVAC air intake system such that particulate matter larger than 0.039" (1.0 mm) in diameter cannot reach the air filter element. This will comply with NFPA 1901 and 1906 standards.
0005940	Lights, Engine Compt, (2) Commercial Chassis	**ENGINE COMPARTMENT LIGHTS** Two (2) engine compartment lights will be installed under the engine hood, of which the switches are an integral part.
0731748	Console, 4-Door, Switches, Radio and Storage, BX3	**CAB CONSOLE** There will be a console located between the front seats with room for radio installation, the electrical and emergency switches, a siren and auxiliary pump controls (if the truck is so equipped). The area for the siren and electrical and emergency switches will be located toward the front of the console. The console will be configured such that the auxiliary pump controls are to be located toward the right side for easier control by the officer . It will also be also be designed without the need to accommodate a turret control joystick . At the rear of the console will be a storage area with an open top . It will be constructed of smooth aluminum and painted black.
0726718	DECLINED - Side Roll Protection, Freightliner	
0767593	Seating Capacity, Cab, 4-Door, Wildland BX3	**SEATING CAPACITY** The seating capacity in the cab will be five (5).
0582132	Seats, Cab, Air Driver w/911 Air Susp Passenger, Non-SCBA, Freightliner	**SEATING** Seating inside the cab will consist of a Seats Inc. 911 air-ride driver seat and a Seats Inc. 911 air-ride officer seat.
0764145	Seats, 3-man bench, No Seat Occupied Sensor, FLR	**SEATING (crew cab)** Three (3)-man bench seat with shoulder belts on the outside seat positions will be provided.
0597773	Seat Belt Web Length, NFPA Compliant, Commercial Chassis	**SEAT BELT WEB LENGTH** NFPA 14.1.3.2 and 14.1.3.3 requires effective seat belt web length for a Type 1 lap belt for pelvic restraint to be a minimum of 60 in., and a Type 2 pelvic and upper torso restraint-style seat belt assembly to be a minimum of 110 in. Per Fire Department specification of a commercial chassis, this apparatus will have seat belts of the required length. These belts will provide sufficient length for large firefighters in bunker gear. This apparatus will be compliant to NFPA standards effective at time of contract execution.
0581771	Seat Belts, Orange, Freightliner	**SEAT BELTS** All seating positions in the cab and crew cab will have highly visible (orange) seat belts.
0547549	Helmet Storage, Not Required, NFPA 1906 Apparatus	
0767583	Portable Hand Light, Not Required, NFPA 1906 2016 Apparatus	

0584358	Cab Instrumentation, Commercial Chassis	**CAB INSTRUMENTS** - Engine Temperature Gauge and Warning Buzzer - Engine Oil Pressure Gauge and Warning Buzzer - Speedometer with Odometer - Engine Tachometer - Engine Hourmeter - Fuel Level Gauge - DEF Level Gauge and Warning Lamp - Voltmeter: Low voltage red warning light and audible alarm - Air Brake Pressure Gauge - Air Restriction Indicator - Circuit Breakers: For overload protection of electric circuits - Ignition Switch: Keyless type
0767575	Panel, Emergency Switch, on Console, BX3	**EMERGENCY SWITCH PANEL** An emergency switch panel will be provided in the cab. The switch panel will be located on the floor mounted console.
0641093	Light, Do not move apparatus, Commercial, BX Program	**"DO NOT MOVE APPARATUS" INDICATOR** A flashing red indicator light (located in the driving compartment) will be illuminated automatically per the current edition of NFPA. The light will be labeled "Do Not Move Apparatus If Light Is On". The same circuit that activates the Do Not Move Apparatus indicator will not activate any alarm when the parking brake is released.
0005926	Light, Open Door - Commercial Std	**OPEN DOOR INDICATOR LIGHT** A red "open door" indicator light will be provided inside the cab, in clear view of the driver, to warn of an open compartment door.
0072620	Wiper control, intermittent feature Commercial	**WIPER CONTROL** Wiper control will include an intermittent feature and windshield washer controls.
0759671	Wiring,Spare,4.8 A 12V DC,USB Termination Blue Sea 1045, on Rear of Console, BX3	**SPARE CIRCUIT** There will be two (2) dual USB fast charge socket mounts installed in the cab of the apparatus. The above wires will have the following features: The positive wire will be connected directly to the battery power. The negative wire will be connected to ground. Wires will be protected to 4.8 amps at 12 volts DC. The USB socket mount will be installed on the rear of the center cab console. Termination will be a Blue Sea Systems part number 1045 dual USB charger socket. Wires will be sized to 125% of the protection. This circuit(s) may be load managed when the parking brake is applied.
0762221	Auxiliary Power Outlet (12V) and USB Port, Commercial Chassis	**12V POWER OUTLET AND USB PORT** A 12-volt auxiliary power output and a USB port will be provided by the chassis manufacturer. They will be located in the instrument panel.
0637217	Radio, AM/FM/Weather Band, Bluetooth, USB/ Aux Input, J1939,Freightliner	**RADIO** An AM/FM stereo radio with weatherband and Bluetooth, USB inputs, auxiliary input, and J1939 compatibility will be provided. It will also include two (2) speakers and a clock.
0622928	Not Available, Vehicle Information Center, Multiplex System, Commercial Chassis	
0734854	Collision Mitigation, Not Requested	
0606231	Not Required, Vehicle Data Recorder and Seat Belt Monitor, Export/ULC	
0763435	Two-Way Radio Accommodation Package - Wildland/BX3	**TWO-WAY RADIO ACCOMMODATION PACKAGE** One set of 12 volt wire leads will be provided for the future installation of a two-way radio. These leads will consist of one (1) 30-amp battery direct circuit, one (1) 10-amp battery switched circuit and one (1) ground circuit. These leads will be 3' long and terminate inside the console with heat shrink caps. One (1) NMO mobile radio antenna mount with RG-58A/U stranded coaxial cable will be provided. The antenna mount will be installed through the cab roof, and the coaxial cable will be routed to inside the center console. All wiring will be neatly coiled and clearly marked. A weatherproof cap for the antenna mount will also be installed.

0696434	Antenna Mount, Commercial Chassis, Cable Routed to Console	**RADIO ANTENNA MOUNT** There will be two (2) standard 1.125", 18 thread antenna-mounting base(s) installed on the cab roof with high efficiency, low loss, coaxial cable(s) routed to the console. A weatherproof cap will be installed on the mount.
0622749	Weldon V-MUX, Electrical System, Freightliner Chassis, BX-Product	
0773471	Electrical System, Freightliner M2-106, BX3 Wildland	**ELECTRICAL** All 12-volt electrical equipment installed by the apparatus manufacturer will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run in loom or conduit where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids. Electrical wiring and equipment will be installed utilizing the following guidelines: (1) All holes made in the roof will be caulked with silicon. Rope caulk is not acceptable. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof. (2) Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body. (3) Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work. (4) Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will require this compound in the plug to prevent corrosion and for easy separation (of the plug). (5) All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area. (6) All electrical terminals in exposed areas will have silicon applied completely over the metal portion of the terminal. All emergency light switches will be mounted on a separate panel installed in the cab. A master warning light switch and individual switches to be provided to allow pre-selection of emergency lights. The light switches will be "rocker" type with an internal indicator light to show when switch is energized. All switches will be properly identified and mounted in a removable panel for ease in servicing. Identification of the switches will be done by either printing or etching on the switch panel. The switches and identification will be illuminated. All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments. An operational test will be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order. The results of the tests will be recorded and provided to the purchaser at time of delivery.
0768646	Single Start, (3) Batteries, 2250-2280 CCA, w/Jump Studs, FLR M2-106, BX3	**BATTERY SYSTEM** A single starting battery system will be provided consisting of three (3)-12 volt, 750 to 760 CCA, maintenance-free batteries. The battery system will have a total of 2250 to 2280 cold cranking amps. **Jump Start Connections** Positive and negative posts for jump starting will be provided by the chassis manufacturer. They will be frame mounted and located under the hood.
0756893	Battery Relocation by Pierce, FLR M2 -106, 4-Door Cab, 4x4, BX3/BLM	
0897716	Battery Location, Top of Crew Cab Step Compartment, Left Side	**BATTERY LOCATION - ABOVE CREW CAB STEP COMPARTMENT** The batteries will be relocated by the apparatus manufacturer. They will be installed on top of the left side crew cab step compartment. That compartment is defined elsewhere in this specification.

0072685	Selector, Single Start Battery, Commercial Chassis	**MASTER BATTERY SWITCH** A master battery switch, to activate the battery system, will be provided inside the cab within easy reach of the driver. The master battery disconnect switch will be wired between the starter solenoid and the remainder of the electrical loads on the apparatus. A green "battery on" indicator light, visible from the driver's position, will be provided.
0767195	Charger, Sngl Sys, Kussmaul, 1200, 091-187-12-Remote, 40 Amp, BX3, BX	**BATTERY CHARGER** There will be a Kussmaul™ 1200, Model 091-187-12-Remote, battery charger provided. A bar graph display indicating the state of charge will be provided. The charger will have a maximum output of 40 amps and a fully automatic regulation. The battery charger will be wired to the AC shoreline inlet defined elsewhere in this proposal.
0764272	Location, Charger, in Cab Behind Crew Cab Seat, BX3	**BATTERY CHARGER LOCATION** The battery charger will be located in the cab behind the crew cab seat.
0642406	Location, Bat Chrg Ind, Driver's Crew Step Area	The battery charger indicator will be located in the driver's crew step area.
0767064	Shoreline, 20A 120V, Kussmaul Auto Eject, for Battery Charger, BX3	**KUSSMAUL AUTO EJECT FOR SHORELINE** one (1) shoreline inlet will be provided to operate the dedicated 120-volt circuits on the truck without the use of the generator. The shoreline receptacle (s) will be provided with a NEMA 5-20, 120 volt, 20 amp, straight blade Kussmaul auto eject plug with a yellow weatherproof cover. The cover is spring loaded to close, preventing water from entering when the shoreline is not connected. A solenoid wired to the vehicle's starter is energized when the engine is started. This instantaneously drives the plug from the receptacle. The shoreline will be connected to the battery charger. A mating connector body will also be supplied with the loose equipment.
0767063	Shoreline Location, BX3	The shoreline receptacle will be located on the driver's side, under the crew cab door .
0621234	Alternator, 300 amp, Delco, 40SI, FLR	**ALTERNATOR** The alternator will be a Delco with a capacity of 12-volt 300 amp.
0634181	Load Manager, Inc w/MUX Electrical System , BX Program	**ELECTRONIC LOAD MANAGEMENT** Included with the apparatus manufacturer's electrical system will be a programmable load management system. This system will monitor the vehicle's 12-volt electrical system, and automatically reduce the electrical load in the event of a low voltage condition and by doing so, ensures the integrity of the electrical system.
0773739	Cab Lighting, LED Marker Lights, Commercial	**EXTERIOR LIGHTING** Exterior lighting will meet or exceed Federal Department of Transportation, Federal Motor Vehicle Safety Standards and National Fire Protection Association requirements in effect at this time. Five (5) LED clearance/marker lights will be installed across the leading edge of the cab.

0669538	Lights, Clearance/Marker/ID, Rear, P25 LED 7Lts, Pumper/Tanker/PUC	**REAR CLEARANCE/MARKER/ID LIGHTING** There will be three (3) LED identification lights located at the rear installed per the following: As close as practical to the vertical centerline Centers spaced not less than 6.00" or more than 12.00" apart Red in color All at the same height There will be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following: To indicate the overall width of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the rear All at the same height There will be two (2) LED lights installed on the side of the apparatus used as marker lights as close to the rear as practical per the following: To indicate the overall length of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the side All at the same height There will be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground. There will be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground. Per FMVSS 108 and CMVSS 108 requirements.
0619776	Lights, Tail, Truck-Lite 4.00" Round Grommet Mount, LED Lights, Wildland BX3	**REAR FMVSS LIGHTING** The rear stop/tail and directional lights will be Truck-Lite®, 4.00" round LED lamp kits. Each lamp kit will include a lamp, a rubber grommet and a connector plug. The following light kits will be provided: Two (2) Truck-Lite, Model 44002R, red stop/tail light assemblies. Two (2) Truck-Lite, Model 44001Y, amber directional light assemblies. The lights will be mounted on the rear face of the rear fender compartment with the red stop/tail light assemblies located at the bottom of the light cluster, in lieu of the standard.
0689409	Lights, Backup, Truck-Lite Model 44350C, LED, Grommmet Mount	Two (2) Truck-Lite, Model 44350C, LED backup lamps with grommets will be provided.
0664481	Bracket, License Plate & Light, P25 LED	**LICENSE PLATE BRACKET** There will be one (1) license plate bracket mounted on the rear of the body. A white LED light will illuminate the license plate. A stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.
0589905	Alarm, Back-up Warning, PRECO 1040	**BACK-UP ALARM** A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse will be provided. The device will sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.
0767028	Lights, Perimeter Cab, Amdor AY-LB-12HW012 LED 4Dr, NFPA 1906 BX3	**CAB PERIMETER SCENE LIGHTS** There will be four (4) Amdor, Model AY-LB-12HW012, 190 lumens each, 12.00" white LED strip lights provided. One (1) under the driver's side cab access step. One (1) under the passenger's side cab access step. One (1) under the passenger's side crew cab access step. One (1) under the driver's side crew cab access step. The lights will be activated when the battery switch is on and the respective door is open and whenever control has been selected for the body perimeter lights.
0769559	Lights, Perimeter Pump House, Amdor AY-LB-12HW012 LED 2lts	**PUMP HOUSE PERIMETER LIGHTS** There will be two (2) Amdor, Model AY-LB-12HW012, 190 lumens each, 12.00" LED weatherproof strip lights with brackets provided under the pump panel running boards, centered front to rear as much as possible, one (1) each side. The lights will be activated when the battery switch is on, and controlled by the same means as the body perimeter lights.
0766637	Lights, Perimeter Body, Amdor AY-LB-12HW012 LED 2lts, Rear Step, BX3	**BODY PERIMETER SCENE LIGHTS** There will be two (2) Amdor, Model AY-LB-12HW012 350 lumens, 12.00" long 12 volt DC LED strip lights provided at the rear step area of the body, one (1) each side shining to the rear. The perimeter scene lights will be activated when the battery switch is on, and and is required. EXCLUDED: [Control, Perimeter Lts]. - DS Switch Panel EXCLUDED: [Control, Perimeter Lts]. - Parking Brake Applied

0764260	Lights, Step, LED, BX3, Prk Brk	**STEP LIGHTS** White LED, step lights will be provided to meet the NFPA step lighting requirement. Lights will be provided on each side, on the front compartment face and at the rear to illuminate the tailboard. These step lights will be activated when the parking brake is applied . All other steps on the apparatus will be illuminated per the current edition of NFPA.
0764940	Light, Wln, 12V PCPSM2C Pioneer LED Fld/Spt, Surface Mnt 1st, LEFT Side, BX3	**12 VOLT LIGHTING** There will be one (1) Whelen, Model PCPSM2*, 12 volt surface mounted LED combination spot/flood light(s) located one (1) high and forward on driver's side body . The lights will be mounted with chrome flange(s). The light(s) selected above will be controlled by the following: a switch at the driver's side switch panel a switch at the driver's side pump panel These light(s) may be load managed when the parking brake is set.
0759407	Light, Wln, 12V PCPSM2C Pioneer LED Fld/Spt, Surface Mnt 1st, RIGHT Side, BX3	**12 VOLT LIGHTING** There will be one (1) Whelen, Model PCPSM2C, 12 volt surface mounted LED combination spot/flood light(s) located one (1) high and forward on passenger's side body . The lights will be mounted with chrome flange(s). The light(s) selected above will be controlled by the following: a switch at the driver's side switch panel a switch at the driver's side pump panel These light(s) may be load managed when the parking brake is set.
0772726	Light, Visor, Wln, 12V PCH2* Pioneer LED Fld/Spt, Brow Mt, Commercial, BX	**12 VOLT LIGHTING** There will be a Whelen® Pioneer™, Model PCH2*, 12 volt LED light(s) provided. The light will be mounted on a special bracket painted exterior cab roof color, provided on the front of the cab roof, centered. The painted parts of this light assembly to be white. The light(s) will be controlled by the following: a switch at the driver's side switch panel no additional switch location These light(s) may be load managed when the parking brake is set.
0603539	Not Required, Deck Lights, Rear, 1906 Wildland or Other Hose Bed & Rear Lighting	
0766626	Lights, Hose Bed, Cover, Dual LED Light Strips, BX3	**HOSE BED LIGHTS** There will be white 12 volt DC LED light strips provided to illuminate the hose bed area. Hose bed lights will be positioned to meet the photometric levels listed in NFPA for hose bed lighting requirements. The lights will be activated when the hosebed cover is raised.
0763429	Lights, Walk Surf, Additional Not Req'd, Hose Bed Light Adequate, BX3	**WALKING SURFACE ILLUMINATION** Additional lighting for the designated walking surface willl not be required. The light for illuminating the hose bed willl be adequate for the walking surface also.
0804230	WILDLAND BX3, Type 3, NFPA 1906	

0773467	Water Tank, Poly, 500 Gallon, Wildland BX3	**WATER TANK** Booster tank will have a capacity of 500 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated. Tank will be designed to provide for deep side compartments and to serve as a large sump to limit the amount of undraftable water. Tank joints and seams will be nitrogen welded inside and out. Tank will be baffled in accordance with applicable NFPA for the type of truck being constructed. Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments. Longitudinal partitions will be constructed of .38" polypropylene plastic and will extend from the bottom of the tank through the top cover to allow for positive welding. Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover. All partitions will interlock and will be welded to the tank sides. Fill tower will be constructed of .50" polypropylene. It will have a .25" thick polypropylene screen and a hinged cover. An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately four inches down the fill tower and extend through the water tank and dump to the rear of the rear axle. Tank top will be constructed of .50" polypropylene. It will be recessed .38" and will be welded to the tank sides and the longitudinal partitions. Tank top will be sufficiently supported to keep it rigid during fast filling conditions. Construction will include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. A minimum of two (2) of the dowels will be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes. A sump will be provided at the bottom of the water tank, and will include a drain plug and the tank outlet. The tank will be installed in a fabricated cradle assembly constructed of structural steel. Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel flat bar or rectangular tubing. Tank will "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, will be placed on all horizontal surfaces that the tank rests on. Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle. Mounting system to be approved by the tank manufacturer. **WATER TANK WARRANTY** Tank will have a **lifetime** warranty.
0003405	Overflow, 4.00" Water Tank, Poly	Fill tower will be constructed of .50" polypropylene and will be a minimum of 8.00" wide x 14.00" long. Fill tower will be furnished with a .25" thick polypropylene screen and a hinged cover. An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.
0766960	Foam Tank, Separate, Required	
0553725	Restraint, Water Tank, Heavy Duty, Special Type Tank, 4x4, or Export	**WATER TANK RESTRAINT** A heavy-duty water tank restraint will be provided.
0768625	Tank Fill, Direct, Rear, 2.50", Wildland	**DIRECT TANK FILL** There will be one (1) - 2.50" gated external tank fill(s) installed and properly labeled at the rear of the truck. It will be centered , with the valve installed as low as practical for easy hose connection. Piping, for the fill, will include a flow deflector to break up the stream of water entering the water tank. A 2.50" full flow ball valve with 2.50" piping and a 2.50" (F)NST chrome swivel will be located at the inlet. A 2.50" SFT style check valve will be provided to prevent backflow. A chrome plated plug and chain will be provided for the tank fill.
0773432	Hose Bed, Wildland BX3	**HOSE BED** Two main hose storage areas will be provided, one (1) on each side at the top of the truck. (In the center of the hose bed will be an equipment storage area as defined elsewhere in this specification.) Each hose storage area will be about 21.00" wide x 101.00" long (the length of the body) x 20.00" deep. Flooring of the hose bed areas will be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats will be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.
0762116	Hose Bed Capacity, 500' of 2.50" Hose, Wildland BX3	**HOSEBED CAPACITY** The hosebed shall be of a fixed design and capacity and shall accommodate a typical wildland truck rolled or flat hose storage requirements per NFPA 1906. There shall be hose storage on each side at the top of the truck with equipment / tool storage in the middle. (This center storage is defined elsewhere in this proposal.) Each side shall have a hose storage space of at least 25 cubic feet, with a total hose bed volume of at least 50.00 cubic feet.

0073494	Not Required, Divider, Hose Bed	
0751228	Covers, Hose Bed, Alum Treadplate, 4-Section, Wildland BX3	**HOSE BED COVERS** A four-section aluminum treadplate hose bed cover will be provided - two sections (one forward and one rearward) for each side of the hose bed. The covers will be hinged on the outboard side using a full length stainless steel hinge. The covers will be reinforced so that they can support the weight of a person walking on the cover. Gas shocks will aid in opening the covers and keeping them in the upright position. A safety strap to keep the covers from traveling over center will be provided. To keep them in the closed position, a latch will be provided at the rear of each rearward cover. When closed, the rearward cover will be designed to keep the forward cover in the closed position. These rear positioned latches will not require climbing on top of the covers to unlatch them. Chrome grab handles will be provided on each forward cover to aid in opening and closing the cover.
0761425	Flap, Rear of Alum Hose Bed Cover, Two Piece, Vinyl, w/Seat Belt Buckles, BX3	**HOSEBED END FLAP** A pair of black vinyl flaps will be installed on the rear, one for each of the aluminum treadplate hose bed covers. Each vinyl flap will have (2) nylon tie down straps, with seat belt buckles.
0768124	Top of Truck Gear and Equipment Storage, BX3	**TOP OF TRUCK GEAR & EQUIPMENT STORAGE** At the top of the truck will be three (3) compartments for the storage of gear and equipment. Two (2) of these storage compartments will be located toward the outside of the hose bed, one (1) on each side of the truck. These compartments will be constructed from stainless steel and incorporated into the body design and construction. Each of these compartments will be about 13.00" wide x 17.00" deep x 100.00" long. Access into these compartments will be at the rear and top. There will be a single pan vertically hinged door at the rear for each compartment. It will be constructed from brushed stainless steel and have a black push-to-open latch. The top of each of these compartments will be covered by the aluminum hose bed covers. When the hose bed covers are in the open position, contents of these compartments can be accessed from the top. The interior of these compartments will remain unpainted natural stainless steel. The floor will be smooth stainless steel and include drain holes. In the center/rear of the hose bed will be a gear/equipment storage compartment. It will be constructed from unpainted smooth aluminum. It will be about 30.00" wide x 20.00" deep x 66.00" long. Access will be from the top. A reinforced aluminum treadplate door, with a full-length stainless steel hinge will be provided. A locking D-ring latch will hold the door closed. The interior, including the floor, will be unpainted smooth aluminum. Drain holes will be provided in the floor. **WATER AND FOAM TANK DOME ACCESS** Forward of the center hose bed gear/equipment compartment will be an area primarily for housing the water and foam tank domes. The dimensions of this tank dome compartment will be about 30.00" wide x 20.00" deep x 34.00" long. It will be constructed from smooth unpainted aluminum. The tank domes will be accessed through an aluminum treadplate door on the top of this compartment that matches the construction of the center storage compartment. It will also have a full-length stainless steel hinge and a locking D-ring latch.
0768331	Running Boards, Wildland BX3	**RUNNING BOARDS** Running boards on each side of the pump module will be fabricated of .125" bright aluminum treadplate. The outer edge of the treadplate will have a punched design for extra stepping traction. Each running board will be supported by a welded tubing and channel assembly, which will be bolted to the pump compartment substructure and spaced .50" away from the pump panel.
0766413	Tailboard, w/Hinged Drop-Down Step, Wildland BX3	**REAR STEP/TAILBOARDS** A pair of 10.00" deep tailboard/steps will be provided at the rear, one each side behind the rear body bulkheads. The supporting framework will be covered with bright aluminum treadplate and will incorporate a punched design along the rearward edge for extra stepping traction. A hinged drop-down / lift-up style of step with a traction grip stepping surface will also be provided on each side of the truck to meet NFPA first-step height requirements. It will store in a manner that does not inhibit the rear angle of departure. Steps and tailboards will meet NFPA requirements.
0607673	Wall, Rear, Aluminum Treadplate, Wildland BX3	**REAR WALL, ALUMINUM TREADPLATE** The rear facing surfaces of the center rear wall directly below the hose bed will be aluminum treadplate. This treadplate serves as a kick-plate surface for the rear access steps. The bulkheads (the surface to the rear of the side body compartments) will be smooth and the same material as the body.
0766412	Tow Eyes, 1906 Wildland BX3/BLM	**TOW EYES** Two (2) rear "tow" eyes will be located at the rear of the apparatus. They will be a shackle style tow eye and will be mounted to a framework attached directly to the chassis frame rails.

0773465	Construction, Compartment, Stainless Steel, Wildland BX3	**COMPARTMENTATION** The body and compartments will be fabricated of corrosion resistant, low carbon austenitic, brushed and painted 304L stainless steel. Due to superior corrosion resistance of 300 stainless grades, other grades of austenitic stainless steels, or any grade of ferritic or martensitic stainless, will not be acceptable. The side compartments will be an integral assembly with the rear fenders. Removable circular fender liners will be provided for prevention of rust pockets and ease of maintenance. The compartment flooring will be of the sweep out design with the floor higher than the compartment door lip. The front facing compartment walls will be covered with bright aluminum treadplate. All screws and bolts which protrude into a compartment will have acorn nuts on the ends to prevent injury. **UNDERBODY SUPPORT SYSTEM** Due to the severe loading requirements of this Wildland truck, a method of body and compartment support suitable for the intended load will be provided. The backbone of the support system will be the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads. **AGGRESSIVE WALKING SURFACE** All exterior surfaces designated as stepping, standing, and walking areas will comply with the required average slip resistance of the current NFPA standards. **TESTING OF BODY DESIGN** Body structural analysis will be fully tested. Proven engineering and testing techniques such as finite element analysis, stress coating and strain gauging have been performed with special attention given to fatigue, life and structural integrity of the body and substructure. A similar body design will be tested while loaded to its greatest in-service weight. The criteria used during the testing procedure will include: - Raising opposite corners of the vehicle tires 12.00" to simulate the twisting a truck may experience when driving over a curb. - Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions. - Driving the vehicle at 35 mph on a "washboard" road. - Driving the vehicle at 55 mph on a smooth road. - Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement. Evidence of actual testing techniques will be made available upon request.
0773598	LS, Flush Style Door, Full-Depth, Wildland BX3	**LEFT SIDE COMPARTMENTATION** A vertically hinged double door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 58.00" wide x 39.00" high x 23.50" deep. The depth of the compartment will be calculated with the compartment door closed. The clear door opening of this compartment will be 55.00" wide x 39.00" high. Positive door holders will be furnished with this compartment. A full height, vertically hinged, single door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 34.00" wide x 59.00" high x 23.50" deep. The depth of the compartment will be calculated with the compartment door closed. The compartment interior will be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment will be 31.00" wide x 59.00" high. A positive door holder will be furnished with this compartment. The rear compartment will be designed to provide a superior angle of departure suitable for off-road use. Main body compartments will be vented. The vents will allow air circulation between compartments and/or to the outside atmosphere. They will be designed and located for optimum performance. **TOOL COMPARTMENT** Located below the compartment behind the rear wheels will be a tool compartment. This compartment will be about 24.75" deep and have a door opening of about 19.00" wide x 7.50" high. It will have a single pan horizontally hinged drop-down door. The door will be constructed from brushed stainless steel and have a black push-to-open latch. **FENDER PANEL STORAGE COMPARTMENT** Two (2) fender panel storage compartments will be provided. They will be located ahead of and behind the rear wheel in the body fender panel. These compartments will be designed to make use of the available space within the fender panel. The compartments will be sized as large as practical to allow for the storage of an air bottle, air pack or other tools or equipment. A drain hole will be provided in the bottom of the compartment. A brushed stainless steel door with a black push-to-open latch will be provided on each compartment. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.

0773597	RS, Flush Style Door, Full Depth, w/Ladder Storage, Wildland BX3	**RIGHT SIDE COMPARTMENTATION** A vertically hinged double door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 58.00" wide x 39.00" high x 11.50" deep. The depth of the compartment will be calculated with the compartment door closed. The clear door opening of this compartment will be 55.00" wide x 39.00" high. Positive door holders will be furnished with this compartment. A full height, vertically hinged, single door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 34.00" wide x 59.00" high x 23.50" deep in the lower 21.00" of the compartment and 11.50" deep in the remaining upper portion. The depth of the compartment will be calculated with the compartment door closed. The compartment interior will be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment will be 31.00" wide x 59.00" high. A positive door holder will be furnished with this compartment. The rear compartment will be designed to provide a superior angle of departure suitable for off-road use. The back wall of the above compartments will be removable to allow access to the interior of the ladder storage area as defined elsewhere in this specification. Main body compartments will be vented. The vents will allow air circulation between compartments and/or to the outside atmosphere. They will be designed and located for optimum performance. **TOOL COMPARTMENT** Located below the compartment behind the rear wheels will be a tool compartment. This compartment will be about 24.75" deep and have a door opening of about 19.00" wide x 7.50" high. It will have a single pan horizontally hinged drop-down door. The door will be constructed from brushed stainless steel and have a black push-to-open latch. **FENDER PANEL STORAGE COMPARTMENT** Two (2) fender panel storage compartments will be provided. They will be located ahead of and behind the rear wheel in the body fender panel. These compartments will be designed to make use of the available space within the fender panel. The compartments will be sized as large as practical to allow for the storage of an air bottle, air pack or other tools or equipment. A drain hole will be provided in the bottom of the compartment. A brushed stainless steel door with a black push-to-open latch will be provided on each compartment. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.
0768326	Doors, ALUMINUM, FLUSH STYLE w/"D" Handle - Side Compartments, Wildland BX3	**DOORS, SIDE COMPARTMENTS** All hinged body side compartment doors will be will be fabricated of 5052-H32 aluminum with a tensile strength range of 31,000 to 38,000 psi. They will be flush style with double pan construction. Doors will have a full interior panel. To provide additional door strength, a "C" section reinforcement will be installed between the outer and interior panels. A closed cell rubber gasket will be installed to provide a weather resisting compartment seal. A stainless steel continuous hinge will be provided on each compartment door. Door lock mechanisms will be protected to prevent fouling of the lock in the event equipment inside shifts onto the lock area. Latches will be recessed with polished stainless steel "D" ring handles. A gasket will be provided between the "D" ring handle and the door. **SCUFFPLATE ON INTERIOR OF COMPARTMENT DOOR(S)** **There will be a a brushed stainless steel scuffplate installed on the inside panel of each door pan that covers the width and height of the door.** **Scuffplates will be located on all main body compartment doors as follows: B1, LS1, LS2, RS1, RS2 and RS3 .**
0615834	Rear Compt, Flush Style Door, Wildland BX3	**COMPARTMENTATION, REAR** A vertically hinged, double door compartment at the rear of the truck will be provided. Interior dimensions of this compartment will be 48.00" wide x 45.00" high x 25.50" deep. Depth of the compartment will be calculated with the compartment door closed. Clear door opening of this compartment will be 30.00" wide x 39.00" high. Each of the vertically hinged compartment doors will be provided with a positive door holder.
0626754	Doors, ALUMINUM, FLUSH STYLE w/"D" Handle - Rear Compartment, Wildland BX3	**DOORS, REAR COMPARTMENT** The rear compartment doors will be will be fabricated of .125", 5052-H32 aluminum with a tensile strength range of 31,000 to 38,000 psi. They will be flush style with double pan construction. Doors will have a full interior panel. To provide additional door strength, a "C" section reinforcement will be installed between the outer and interior panels. The doors will be provided with a closed cell rubber gasket to provide a weather resisting compartment seal. A stainless steel continuous hinge will be provided on each compartment door. Door lock mechanisms will be protected to prevent fouling of the lock in the event equipment inside shifts onto the lock area. Latches will be recessed with polished stainless steel "D" ring handles. A gasket will be provided between the "D" ring handle and the door.
0597111	Not Required, Pull Strap	

0738852	Keyed Locks for Latches, Key Style 1250, Body Compts, Wildland BX3	**KEYED LOCK(S) - BODY COMPARTMENTS** The main body compartment door D-ring latches will be furnished with a keyed lock utilizing key style #1250. This includes compartments: LS1 and LS2, RS1, RS2 and RS3 (pump house compartment) and the rear compartment (B1). Other storage areas that also use the same size D-ring latch will also be the key#1250 locking style. These compartments are: the ladder storage door at the rear of the truck, the gear and equipment storage compartment and water/foam dome cover above the water tank.
0766933	Lights, Body Compt, Pierce LED, Dual Lt Strips, Each Side of Door, BX3	**COMPARTMENT LIGHTING** There will be six (6) compartment(s) with two (2) white 12 volt DC LED compartment light strips. The dual light strips will be centered vertically along each side of the door framing. There will be two (2) light strips per compartment. The dual light strips will be in compartment(s): R1, LS1, LS2, RS1, RS2 and RS3 and the tool/equipment compartment on the right side pump panel. A single LED strip light will be provided in each tool compartment located below each rear/side (LS1/RS1) compartment. Opening the compartment door will automatically turn the compartment lighting on.
0768324	Shelf Tracks, Unpainted, Wildland BX3	**MOUNTING TRACKS** There will be five (5) sets of tracks for mounting shelf(s) in LS1, LS2, RS1, RS2 and B1 . These tracks will be installed vertically to support the adjustable shelf(s), and will be full height of the compartment. The tracks will be unpainted with a natural finish.
0766575	Shelves,Adjustable,500 lb Capacity,Full Width/Depth,Brushed Alum,Wildland BX3,BX	**ADJUSTABLE SHELF** There will be five (5) shelves provided. Each shelf will be constructed of 0.188" aluminum with 2.00" high sides. Each shelf will as wide and as deep as the compartment space will allow. Each shelf will have a brushed finish. Each shelf will have a load capacity of 500 lb. Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track. The shelves will be held in place by 0.12" thick stamped plated brackets and bolts. The location will be in RS1 centered between the floor and the ceiling, in RS2 centered between the floor and the ceiling, in LS1 centered between the floor and ceiling, in LS2 centered between the floor and ceiling and in B1 centered between the floor and ceiling .
0004015	Trim, Alum Treadplate on Lower Body	**LOWER BODY TRIM** Bottom edge of the side compartments will be trimmed with bright aluminum treadplate. Trim will be about 2.00" high. It will not be an integral part of the body construction, which allows easy replacement in the event of damage.
0739426	Fender Crowns, Rear, Rubber, w/Removable Liner, BX3	**BODY FENDER CROWNS** Black rubber fender crowns will be provided around the rear wheel openings. **BODY FENDER LINER** A painted fender liner will be provided. The liners will be removable to aid in the maintenance of rear suspension components.
0766681	Hose, Hard Suction, Provided by Fire Department, NFPA 1906 2016, Wildland	**HARD SUCTION HOSE** NFPA 1906, 2016 edition, section 16.13.2.2.1 references suction hose. Hose is not on the apparatus as manufactured. The fire department will provide suction or supply hose.
0527021	Handrails Located @ Front Body	**HANDRAILS** The handrails will be 1.25" diameter knurled aluminum to provide a positive gripping surface. Chrome plated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces. Drain holes will be provided in the bottom of all vertically mounted handrails.. Handrails will be located on the front of the body in positions needed to meet NFPA requirements.
0531152	Handrails, Rear Bulkhead, Wildland	One (1) vertical handrail, with chrome stanchions will be located on each rear bulkhead.
0758878	Handrail, Rear, Above Hose Bed, BX3	One (1) handrail will be installed above the hose bed.
0044229	No Extension Ladder Req'd	
0074231	No Roof Ladder Req'd	

0773396	Ladders, Encl'd Complete, in RS Body, w/Pike Poles, Wildland BX3	**LADDER STORAGE** A ladder storage area will be provided inside the upper section of the right side compartments. The ladder rack will reduce the depth of the upper section in the side compartments by approximately 12.00". Partitions will be installed inside the compartments to conceal the ladder storage. The area will extend the full length of the body and will be enclosed to protect the ladders and other equipment from road dirt. The ladder will be stored vertically with stainless steel and Dura-Surf slides to aid in loading and unloading of the ladders. Two (2) aluminum pike pole storage tubes will be provided above the ladder storage. Access will be at the rear via a vertically hinged single pan aluminum treadplate door with a locking "D-ring" latch. The ladder storage will accommodate a 20' aluminum extension ladder (Duo Safety model #912 or equivalent) and 2 pike poles (standard or all-purpose head).
0074248	Not Required, Folding Ladder	
0766277	I Zone Bracket, Pair, Located Outboard, Wildland Style	**I-ZONE BRACKETS - WILDLAND STYLE - OUTBOARD** A pair of I-Zone brackets will be provided and mounted at the rear of the apparatus, one each side, outboard on the rear body bulkheads. The brackets will be designed with adequate reinforcement to eliminate flexing of the body (oil canning) and not interfere with rear facing lights while carrying hose. The design of these I-Zone brackets will have a 45 degree receiver and a removable extension piece that fits into the brackets for carrying hose.
0768315	Steps,(4) Cast Products,Model SP2011-1/(2) Model SP2016-1,Rear Body,Wildland BX3	**REAR ACCESS STEPS** A quantity of six (6) wedge style steps will be provided at the rear for access to the hose bed. The first step on each side will be 14.00" wide by 8.00" deep - Cast Products model SP2016-1 or equivalent. The second and third step on each side will be 6.50" wide by 8.00" deep - Cast Products model SP2011-1 or equivalent. Each step will include a handhold and an LED light provided above the step surface.
0762015	Step Access to Running Boards, w/4x4 Chassis, Wildland BX3	**ACCESS to PUMP HOUSE RUNNING BOARDS** Access to the pump house running boards will be via the crew cab access steps. For break over and ground clearance purposes, additional steps below the running boards are not desired.
0766970	Auxiliary Pump, Hydraulic Drive (Price Only)	
0766267	Pump,Auxiliary, Darley,1.5AGH,Hyd PTO Drive,150 GPM, 2016 NFPA 1906,Wildland BX3	**AUXILIARY PUMP** A hydraulic driven Darley 1.5AGH centrifugal pump will be provided for pump and roll operations. The pump will have a 2.00" suction inlet and a 2.00" discharge port. The pump will have a gear type hydraulic motor. The pump case will be vertically split for removal and service of the impeller. A Viton, carbon/ceramic shaft seal will be provided. The pump shaft and wear ring will be stainless steel. A variable displacement piston type hydraulic pump supplying the hydraulic motor on the water pump will be supplied. The displacement of the hydraulic pump will be controlled by a fixed orifice type, load sensing, hydraulic circuit. The hydraulic system will have a properly sized reservoir, cooler, filter and accessory components. The components will be mounted in the vehicle body to facilitate routine maintenance operations. The hydraulic drive design will be certified by manufacturer of the primary hydraulic components as suitable for the intended use and duty. All components of the water pump and drive system will be readily available on the domestic hydraulic market (USA). An auxiliary pump drain will be supplied. **AUXILIARY PUMP PERFORMANCE** The pump will be rated by the pump manufacturer on bench testing to the deliver the following performance at 1000 engine rpm. These numbers will be reduced when installed on the apparatus due to plumbing restrictions and/or the location of this water pump. - 150 gpm @ 80psi - 100 gpm @ 200psi - 35 gpm @ 300psi This pump will also meet NFPA 1906 section 16.2.2.1 for pump and roll performance/requirements. It will deliver 20 gpm @ 80 psi while moving at 2 mph or less.
0626923	Installation Location, Aux Pump, Inside Pump house Area	**AUXILIARY PUMP INSTALLATION** The auxiliary pump will be installed and located within the main pump module.
0788341	Not Required, Fuel Supply, (Hydraulic Drive Pump)	
0626844	Not Required, Exhaust Routing, Aux Pump	

0787477		Discharge Connections, Aux Pump, Standard, w/Foam System	**AUXILIARY PUMP DISCHARGE CONNECTIONS** A discharge manifold will be supplied as required to allow plumbing of the required discharges. This pump will supply water to all foam capable discharge outlets Check valve(s) will be provided to prevent backflows between the main pump and the auxiliary pump.
0786060		Tank to Pump Line, Hyd Aux Pump, 2.00", Separate Tank to Pump Line	**AUXILIARY PUMP -TANK TO PUMP CONNECTION** An independent 2.00" tank to pump piping with a 2.00" valve will be provided for the auxiliary pump. It will not be part of the main pump's tank to pump line nor draw water through the main pump. The design will include a method for anti-swirl protection and prevent pump cavitation. The tank to pump line will run from the pump into the front face of the water tank. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing. A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank. This tank to pump connection will have an electric valve that will open when the Pierce hydraulic pressure controller(s) "ON" switch is activated. The valve will close when the "OFF" switch is activated. The electric tank to pump valve will not be gateable.
0802862	SP	Not Required, Primer for Aux Pump, Gravity Prime	**AUXILIARY PUMP PRIMING** The auxiliary pump will be installed in such a manner that an additional primer or priming valve is not required. The pump will prime by gravity flow of water from the tank.
0766930		Controls, Hydraulic Aux Pump, Pierce, Dual,In Cab and at Pump Panel,Wildland BX3	**AUXILIARY PUMP GAUGES AND CONTROLS** The auxiliary pump system will be activated by a switch in the cab near the driver's position and on the left pump operator's panel. To control the pump pressure, a Pierce electronic water pressure controller will also be provided in the cab near the driver's position and on the left pump operator's panel. The panel containing the activation switch will also include a digital pressure gauge, pump and system status indicators and the pressure adjustment knob.
0626933		Line, Recirculating, Aux Pump, 499gpm and less, 0.375", Automatic	**AUXILIARY PUMP AUTOMATIC RECIRCULATING LINE** The auxiliary pump will be furnished with a 0.375" automatic pump recirculating line with a check valve. The line will be routed from the discharge side of the auxiliary pump to the water tank. This line will be designed to circulate water continuously from the auxiliary pump back to the tank to help maintain the water pump temperature at a safe level. The recirculating line will be plumbed into the water tank dome. It will include a check valve to facilitate priming and prevent water backflow. The check valve will be installed as close as possible to the water tank dome.
0766268		Engineering Review of Aux Pump System Not Req'd - Wildland BX3	
0773415		Pump House, Side Control, 28", Wildland BX3	**PUMP COMPARTMENT** The pump compartment will be manufactured separate from the hose body and compartments. It will be a fabricated assembly of stainless steel tubing, angles and channels which supports both the fire pump and the side running boards. The pump compartment will have substructure to facilitate the pump mounting. The substructure will be mounted on the chassis frame rails with rubber isolators in a four point pattern to allow for chassis frame flex while in motion. Pump compartment, pump, plumbing, gauge panels, hose body and compartments will be detachable and removable from the chassis and body as a single assembly. **PUMP MOUNTING** Pump will be mounted to the substructure which is attached to the chassis frame rail using the rubber isolators. The mounting allows for vehicle flex while maintaining pump alignment within the pump compartment. **PUMP CONTROL PANELS (Side Control)** All pump controls and gauges will be located at the left side of the apparatus and properly marked. The pump panels will be fastened to the enclosure with screws. The pump module will have a nominal width of 28.00". Brushed stainless steel trim collars will be installed around all inlets and outlets. Valve controls will have locking control rods. **IDENTIFICATION TAGS** All discharge outlets will have color coded identification tags, with each discharge having its own unique color. Color coding will include the labeling of the outlet and the drain for each corresponding discharge.

0769817	Pump, Darley, LSP, 1000 GPM, Single Stage, PTO Drive, Wildland BX3	**PUMP** Pump will be a Darley LSP 1000 gpm midship mounted centrifugal type. It will be driven by power take off (PTO) from the vehicle transmission. Pump will deliver the percentage of rated discharge at pressures indicated below: - 100% of rated capacity at 150 psi net pump pressure. - 70% of rated capacity at 200 psi net pump pressure. - 50% of rated capacity at 250 psi net pump pressure. Pump body will be fine-grained gray iron, bronze fitted. The pump will be easily separated from a one-piece section for convenient servicing when required. The impellers will be high strength bronze alloy accurately balanced and splined to pump shaft for precision fit and durability. Double seal ring design will help to minimize end thrust. Deep groove radial type oversize ball bearings will be provided. The bearings will be protected at the openings from road dirt and water with an oil seal and a water slinger.
0007153	Seal, Mechanical, Darley, Silicon Carbide	**MECHANICAL SEALS** Silicon carbide mechanical seals will be provided. The seals will be spring loaded and self-adjusting. The seals will have a minimum thermal conductivity of 126 W/m*K to run cooler. Seals will have a minimum hardness of 2800 kg/mm2 to be more resistant to wear, and have thermal expansion characteristics of no more than 4.0 X106mm/mm*K to be more resistant to thermal shock.
0014633	Trans, Pump, Darley, PTO, 3 Gear	**PUMP TRANSMISSION** A three gear transmission with helical gears and a 1.375" diameter splined shaft will be provided. The pump transmission will be driven by a hot shift PTO attached to the Allison Transmission.
0603731	Pumping Mode, Stationary and Pump in Motion (Pressure Gauge in Cab Included)	**PUMPING MODE** An interlock system will be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system will be designed to allow stationary pumping and the truck to be in motion while pumping. A digital pump pressure gauge will be supplied in the cab.
0535276	Pump Shift, PTO Pump	**PUMP SHIFT** A pump shift will be provided within easy reach of the driver for engagement of the PTO driven pump. The shift will include the indicator lights as mandated by NFPA. The pump shift control will be illuminated to meet NFPA requirements.
0581602	Transmission Lock-up, Not Req'd, PTO Pump	
0004547	Auxiliary Cooling System	**AUXILIARY COOLING SYSTEM** A supplementary heat exchange cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the engine water. The heat exchanger will be a separate unit. It will be installed in the pump or engine compartment with the control located on the pump operator's control panel. The exchanger will be plumbed to the master drain valve.
0014486	Not Required, Transfer Valve, Single Stage Pump	
0746511	Valve, Relief Intake, TFT	**INTAKE RELIEF VALVE** A Task Force Tips A18 series relief valve will be installed on the suction side of the pump preset at 125 psig . The relief valve will have a working range of 90 psi to 300 psi. The pressure relief valve control will be located behind an access door at the right side pump panel. The outlet will terminate below the frame rails with a 2.50" National Standard hose thread adapter and will have a "do not cap" warning tag.
0794959	Controller, Pressure, Pierce, Pump Boss, PBA300	**PRESSURE CONTROLLER** A Pierce Pump Boss Model PBA300 pressure governor will be provided. A pressure transducer will be installed in the water discharge manifold on the pump. The display panel will be located at the pump operator's panel.
0613850	Primer, Waterous, VPO Motor, (1) VAP Valve, (2) Push Button Controls, PTO Pump	**PRIMER SYSTEM** A Waterous electric pump priming system conforming to standards outlined in the current edition of NFPA 1901 will be furnished with the apparatus. One (1) VPO electric motor driven rotary vane primer will be provided. One (1) VAP vacuum activated priming valve will be plumbed to the main pump. Two (2) momentary push-button controls will be provided, with one located at the pump operator's panel for the main pump and one located in the cab. The push button control system control will operate an electric priming motor and the priming valve will automatically open during priming and close when the primer is deactivated.

0506633	Plate, Test, Main Pump	**TEST PLATE** A main pump test plate will be provided at the left pump operator's panel that states the rated discharges and pressures as determined by the pump certification test.
0694360	Pump Drain, Trident Multi-Port, IPO Std Pump Drain	**PUMP DRAIN** A Trident multi port pump drain will be used in place of the standard pump drain.
0517155	Line, 0.375" Recirculating w/Check Valve, Automatic, NFPA 1906, Wildland	**RECIRCULATING LINE, WITH CHECK VALVE** A 0.375" automatic recirculating line will be run from the discharge side of the main pump to the water tank. This line will be designed to circulate water continuously from the pump back to the tank to help maintain the water pump temperature at a safe level. The recirculating line will be plumbed into the water tank dome. The recirculation line will include a check valve to facilitate priming and prevent water backflow. The check valve will be installed as close as possible to the water tank dome.
0759034	Outlet, Back Pack Pump Filler, Gravity Fed From Tank, BX3	**BACK PACK PUMP FILLER VALVE** A brass, 0.75" quarter turn ball valve with a chrome handle will be supplied for the refill of back pumps. This outlet is gravity fed from the main water tank sump. The valve plumbing will be 0.75" I.D. Aeroquip type hose with swivel fittings. It will be routed to allow smooth flow of water from the tank sump to the valve. The valve outlet will be installed at the rear of the truck below the rear compartment. A 0.75" male garden hose fitting will be provided to allow the connection of a piece of garden hose as needed to fill back pumps, etc. A manual shut off valve will be provided at the tank.
0780364	Manuals, Pump, (2) Total, Electronic Copies	**PUMP MANUALS** There will be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals will be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual will cover pump operation, maintenance, and parts.
0602487	Plumbing, Stainless Steel and Hose, Single Stage Pump, PMFD	**PLUMBING, STAINLESS STEEL AND HOSE** All inlet and outlet lines will be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's will be equipped with brass or stainless steel couplings. All stainless steel hard plumbing will be a minimum of a schedule 10 wall thickness. Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping will be equipped with victaulic or rubber couplings. Plumbing manifold bodies will be ductile cast iron or stainless steel. All piping lines are to be drained through a master drain valve or will be equipped with individual drain valves. All drain lines will be extended with a hose to drain below the chassis frame. All water carrying gauge lines will be of flexible polypropylene tubing. All piping, hose and fittings will have a minimum of a 500 PSI hydrodynamic pressure rating.
0775901	Plumbing and Manifolds, Stainless Steel, w/Foam System	**FOAM SYSTEM PLUMBING** All piping and manifolds that is in contact with the foam concentrate or foam/water solution will be stainless steel. The fittings will be stainless steel or brass. Cast iron pump manifolds will be NOT allowed.
0762334	Inlet, 5.00" - 1000 GPM Pump, Left Side Only, BX3	**MAIN PUMP INLETS** A 5.00" pump manifold inlet will be provided on the left side of the vehicle. The suction inlet will include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.
0017541	Cap, Main Pump Inlet, Rocker Lug, NST, VLH	**MAIN PUMP INLET CAP** The main pump inlets will have National Standard Threads with a rocker lug chrome plated cap. The cap will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0084610	Valves, Akron 8000 series- All	**VALVES** All ball valves will be Akron® Brass. The Akron valves will be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve. Valves will have a **ten (10) year** warranty.
0766918	Valve, Inlet(s) Recess Behind Panel, Wildland BX3	The location of the valve for the auxiliary inlet(s) will be behind the pump panel.
0004700	Control, Inlet, at Valve	**INLET CONTROL** The side auxiliary inlet(s) will incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism will indicate the position of the valve.

0505201	Inlet, Left Side, 2.50", Wildland	**LEFT SIDE INLET** There will be one (1) auxiliary inlet with a Akron 8600 2.50" valve at the left side pump operator's panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet will be provided with a strainer, chrome swivel and plug. If the gated inlet intake valve location on the pump panel is higher than the top of the frame rail, a chrome 30 degree inlet with 2.50" NH (F) swivel will be supplied.
0763478	Inlet, Right Side, 2.50", Auxiliary Inlet, Wildland BX3, BX	**RIGHT SIDE INLET** There will be one (1) auxiliary inlet with a 2.50" valve at the right side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet will be provided with a strainer, chrome swivel and plug.
0505132	Anode, Zinc, Pair, Pump, One (1) on Inlet Side & One (1) on Discharge Side	**ANODE, INLET** One (1) pair of sacrificial Zinc anodes will be provided in the water pump to protect the pump from corrosion. One (1) will be placed in the inlet side of the pump and the other one (1) in the discharge side of the pump.
0723049	Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle	**INLET BLEEDER VALVE** A 0.75" bleeder valve will be provided for each side gated inlet. The valves will be located behind the panel with a "T" swing style handle control extended to the outside of the panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders will be routed below the chassis frame rails.
0520031	Tank to Pump,(1) 3.0" Valve,4.0" Plumbing,In/Open-Out/Closed, Wildland/BX3	**TANK TO PUMP** The booster tank will be connected to the intake side of the pump with 4.00" heavy duty piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line will run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing. The control on the pump panel will be "in" when the valve is open and "out" when the valve is closed. A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.
0006764	Tank ReFill, 2.0"	**TANK FILL** A 2.00" combination tank refill and pump re-circulation line will be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.
0021138	Control, Outlets, At Valve, NFPA 1906 Wildland	**DISCHARGE OUTLET CONTROLS** The discharge outlets will incorporate a quarter-turn ball valve with the control located at the valve. The valve operating mechanism (handle) will indicate the position (open/closed) of the valve.
0768275	Outlet, Left Side, 2.50", w/1000 GPM Pump, Wildland	**LEFT SIDE DISCHARGE OUTLETS** A quantity of One (1) discharge outlet will be provided on the left side pump operator's panel. Each outlet valve will be a 2.50" quarter turn full flow ball valve with a TS-style handle.
0015027	Not Required, Elbow, Left Side Outlets	
0759639	Outlet, Left Side, 2.50" w/2" Plumbing, Adjacent to Deadlay, Wildland BX3	There will be One (1) discharge outlet with a 2.00" valve on the left side of the apparatus, adjacent the deadlays, terminating with a male 2.50" National Standard hose thread adapter. In addition, the discharge will be equipped with a 2.50" (F) x 1.50" (M) NST reducer.
0035094	Not Required, Elbow, Left Side Outlets, Additional	
0024302	Not Required, Outlet, Right Side, Wildland	
0065478	Not Required, Elbow, Right Side Outlets	

0759637	Outlet, Right Side, 2.50" w/2" Plumbing, Adjacent to Deadlay, Wildland BX3	**RIGHT SIDE DISCHARGE OUTLET(S)** There will be One (1) discharge outlet with a 2.00" valve on the right side of the apparatus, adjacent the deadlays, terminating with a male 2.50" National Standard hose thread adapter. In addition, the discharge will be equipped with a 2.50" (F) x 1.50" (M) NST reducer.
0089584	Not Required, Elbow, Right Side Outlets, Additional	
0773401	Outlets,(2),Front1.5"w/2" Plumbing, Valves at Outlet,LS-RS,1906 Wildland BX3	**FRONT DISCHARGES** There will be two (2) 1.50" discharges at the front bumper, located one (1) each side . Plumbing will be a single line to the front bumper and will include a tee that supplies both discharges. Plumbing will consist of 2.00" piping and flexible hose with two (2) 2.00" self-locking one-quarter turn full flow ball valve with "TSC" style handles. Control of each outlet will be at the valve at the front bumper. Installed on the outlets will be 90 degree swivels with 1.50" NPSH thread and chrome caps and chains. There will be Petcock quarter turn drains provided at all low points of the piping. The valves for each front bumper hose basket will be located outboard of the frame rail and mounted below the bumper deck. The discharge swivel locations will provide adequate clearance for the use of 1.50" gated wye's and be designed so as not to interfere with the opening and closing of the hood. The swivels will feature stops to protect the hood. An emergency shut off valve will be provided for this plumbing line in case of damage. The valve will be in an accessible location on the right side of the apparatus near the pump module. This valve will be labeled "Front Discharge On/Off".
0505191	Outlet, Rear, 1.50", w/2" Plumbing, Valve at Outlet, Wildland BX3	**REAR DISCHARGE VALVE** A quantity of One (1) discharge outlet with a 2.00" valve will be provided. The valve will be a 2.00" full flow ball valve controlled at the valve body, and will have a 1.50" NH male thread adapter with chrome cap and chain. It will be installed with proper clearance for spanner wrenches or adapters. The valve will be exterior mounted below the center hose bed.
0045099	Not Required, Elbow, Rear Outlets	
0766836	Outlet, Rear, 2.50", Wildland BX3	**DISCHARGE OUTLET (Rear)** There will be One (1) discharge outlet piped to the rear of the truck, located on the center . Proper clearance will be provided for spanner wrenches or adapters. Plumbing will consist of 2.50" piping along with a 2.50" full flow ball valve with the control at the valve. The discharge outlet(s) will terminate with a 2.50" male National Standard hose thread male adapter.
0655198	Not Required, Elbow, Rear Outlets, 2.50", Additional	
0752097	Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	**DISCHARGE CAPS/ INLET PLUGS** Chrome plated, rocker lug, caps with chain will be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets. Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size. The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.
0002604	Valve, Bleeders, Individual Not Req'd	**PLUMBING SYSTEM DRAIN** The discharges and plumbing will drain through a main pump drain system that accommodates the plumbing system. Individual drains or bleeders for each discharge will not be required.
0773410	Deadlay (1), No Plumbing, Low Mount, 200' of 1.75" Capacity, Divided, BX3	**DEADLAY HOSE BED** One (1) deadlay bed, without plumbing, will be provided at the top/front of the pump compartment. It will be capable of carrying a total of 200' of 1.75" double jacketed fire hose. It will have a divider in the center that allows the storage of 100' of 1.75" hose on each side, for deployment to either side of the truck. The deadlay bed flooring will consist of perforated brushed aluminum. The deadlay will be recess mounted at the front of the pump module to provide optimum accessibility.
0766784	Hose Restraint,Treadplate Top, Vinyl Sides, Wildland BX3	**CROSSLAY HOSE RESTRAINT** An aluminum treadplate cover, hinged at the front will be installed over the top of the deadlay. It will include a latch at each end of the cover to hold it securely in place, and a foam rubber gasket where the cover comes into contact with a painted surface. **CROSSLAY END FLAPS** A red vinyl end flap will be provided over each end of the hose bed. The flaps will be permanently attached to the aluminum cover, and secured with velcro and snaps on the bottom.

0766783	NPSH Reel, Booster, LS, 2/3 H.P. Motor, Over Pump, Wildland BX3	**BOOSTER HOSE REEL ABOVE PUMP** One Hannay electric rewind booster hose reel with 2/3 HP motor will be installed over the pump compartment, on the left side of the apparatus. The exterior finish of the reel will be painted #269 gray from the reel manufacturer. A polished stainless steel roller and guide assembly will be mounted on the reel side of the apparatus. An additional roller assembly will be installed on the side of the truck opposite the reel for use with hose payout to the right side. Discharge control will be provided at the pump operator's panel. Plumbing to the reel will consist of 1.00" hose and piping with a 1.00" valve. The reel will have NPSH threaded couplings.
0005280	Switches, Reel Rewind - (1) Each Pump Panel	Reel motor will be protected from overload with a circuit breaker rated to match the motor. Two (2) electric rewind control switches will be provided, one (1) installed on each pump panel.
0018394	Hose, Booster - 150' of 1.00"/800 PSI, 1" NPSH Coupling	Booster hose, 1.00" diameter and 150 feet, with chrome plated Barway, or equal couplings will be provided. The couplings will have 1" NPSH threads. Working pressure of the booster hose will be a minimum of 800 psi.
0017858	Capacity, Hose Reel 150' of 1"	Capacity of the hose reel will be 150 feet of 1.00" booster hose.
0007428	Nozzle for Booster Reel Not Req'd	

0773416	Foam Sys, Husky 3, Single Agent, Hydraulic Drive, BX3	**FOAM PROPORTIONER** A foam proportioning system will be provided that is an on demand, automatic proportioning, single point, direct injection system suitable for all types of Class A and B foam concentrates, including the high viscosity (6000 cps), alcohol resistant Class B foams. Operation will be based on direct measurement of water flow, and remain consistent within the specified flows and pressures. The system will automatically proportion foam solution at rates from .1 percent to 3.0 percent regardless of variations in water pressure and flow, up to the maximum rated capacity of the foam concentrate pump. The design of the system will allow operation from draft, hydrant, or relay operation. **System Capacity** The system will have the ability to deliver the following minimum foam solution flow rates at accuracies that meet or exceed NFPA requirements at a pump rating of 150 psi. 100 gpm @ 3 percent 300 gpm @ 1 percent 600 gpm @ 0.5 percent Class A foam setting in .1 percent increments from .1 percent to 1 percent. Typical settings of 1 percent, .5 percent and .3 percent (maximum capacity will be limited to the plumbing and water pump capacity). **Control System** The system will be equipped with a digital electronic control display located on the pump operators panel. Push button controls will be integrated into the panel to turn the system on/off, control the foam percentage, and to set the operation modes. The percent of injection will have a preset. This preset can be changed at the fire department as desired. The percent of injection will be able to be easily changed at the scene to adjust to changing demands. Three (3) .50 tall LEDs will display the foam percentage in numeric characters. Three (3) indicator LEDs will also be included, one (1) green, one (1) red, and one (1) yellow. The LEDs will indicate various system operation or error states. The indications will be: Solid Green - System On Solid Red - Valve Position Error Solid Yellow - Priming System Flashing Green - Injecting Foam Flashing Red - Low Tank Level Flashing Yellow - Refilling Tank The control display will house a microprocessor, which receives input from the systems water flow meter while also monitoring the position of the foam concentrate pump. The microprocessor will compare the values of the water flow versus the position/rate of the foam pump, to ensure the proportion rate is accurate. One (1) check valve will be installed in the plumbing to prevent foam from contaminating the water pump. A remote foam system activation switch will be installed in the cab. The switch will include an integral indicator light. **Hydraulic Drive System** The foam concentrate pump will be powered by a hydraulic drive system, which is automatically activated, whenever the foam system is turned on. A system that drives the foam pump via an electric motor will not be acceptable. A large parasitic electric load used to power the foam pump can cause an overload of the chassis electrical system. Hydraulic oil cooler will be provided to automatically prevent overheating of the hydraulic oil, which is detrimental to system components. The oil/water cooler will be designed to allow continuous system operation without allowing hydraulic oil temperature to exceed the oil specifications. The hydraulic oil reservoir will be of four (4) gallons minimum capacity and will also be of sufficient size to minimize foaming and be located to facilitate checking oil level or adding oil without spillage or the need to remove access panels. **Foam Concentrate Pump** The foam concentrate pump will be of positive displacement, self-priming; linear actuated design, driven by the hydraulic system. The pump will be constructed of brass body; chrome plated stainless steel shaft, with a stainless steel piston. In order to increase longevity of the pump, no aluminum will be present in its construction. A relief system will be provided which is designed to protect the drive system components and prevent over pressuring the foam concentrate pump The foam concentrate pump will have minimum capacity for 3 gpm with all types of foam concentrates with a viscosity at or below 6000 cps including protein, fluoroprotein, AFFF, FFFP, or AR-AFFF. The system will deliver only the amount of foam concentrate flow required, without recirculating foam back to the storage tank. Recirculating foam concentrate back to the storage tank can cause agitation and premature foaming of the concentrate, which can result in system failure. The foam concentrate pump will be self-priming and have the ability to draw foam concentrate from external supplies such as drums or pails. **External Foam Concentrate Connection** An external foam pick-up will be provided to enable use of a foam agent that is not stored on the vehicle. The external foam pick-up will be designed to allow continued operation after the on-board foam tank is empty, or the use of foam different than the foam in the foam tank. **Panel Mounted External Pick-Up Connection / Valve** A bronze three (3)-way valve will be provided. The unit will be mounted to the pump panel. The valve unit will function as the foam system tank to pump valve and external suction valve. The external foam pick-up will be one (1) .75" male connection GHT (garden hose thread) with a cap. **Pick-Up Hose** A .75" flexible hose with an end for insertion into foam containers will be provided. The hose will be supplied with a .75" female swivel GHT (garden hose thread) swivel connector. The hose will be shipped loose. **Discharges** The foam system will be plumbed to all valved discharges 2.0" and smaller, which includes the following discharges: Front bumper outlets (would include turret discharge if so equipped), rear 1.50" discharge, right and left side discharges adjacent to the deadlays (used to pre-connect hose in deadlay) and the hose reel(s).

0012126	Not Required, CAF Compressor	
0628070	Refill, Foam Tank, Integral, Husky 3, BX	**REFILL, SINGLE FOAM TANK** The foam system's proportioning pump will be used to fill the foam tank. This will allow use of the auxiliary foam pick-up to pump the foam from pails or a drum on the ground into the foam tank. A foam shut-off switch will be installed in the fill dome of the tank to shut the system down when the tank is full. The fill operation will be controlled by a mode in the foam system controller. While the proportioner pump is filling the tank, the controller will display a flashing yellow LED to indicate that the tank is filling. When the tank is full, as determined by the float switch in the tank dome, the pump will stop and the controller will shut the yellow LED off. If it attempted to use tank fill and the refill valve and suction valve are in the wrong position(s), then a red LED will illuminate to indicate the improper valve position(s). When the valves are positioned properly, then filling will commence.
0578417	Control, Husky 3, Switch and Indicator Light in Cab	**HUSKY CONTROL** A switch and indicator light will be provided inside the cab to control the Husky 3 Foam system to be turned "on" or "off".
0031896	Demonstration, Foam System, Dealer Provided	
0768342	Foam Tank, Separate 20 Gallon, BX3	**FOAM TANK** The foam tank will be separate from the polypropylene water tank. The tank will have a capacity of 20 gallons of foam with the intended use of Class A foam. The brand of foam stored in this tank will be a nationally recognized brand. This tank will not reduce the capacity of the water tank. A screen and breather will be included in the fill dome and lid.
0628071	Drain, 1.00", Foam Tank #1, Foam System, Quarter Turn, BX	**FOAM TANK DRAIN** The foam tank drain will be a 1.00" quarter turn drain valve located inside the pump/plumbing compartment.
0738072	Approval Dwg, Pump Panel(s), Not Required	
0035570	Pump Panel Configuration, No Match Required	**PUMP PANEL CONFIGURATION** The pump panel configuration will be neat and orderly.
0762017	Material, Pump Panels, Brushed Stainless, 1906 Wildland BX3	**PUMP AND GAUGE PANEL** The pump panels will be constructed of stainless steel with a brushed finish.
0766517	Pump Access - Wildland BX3	**PUMP ACCESS** Access to the pump & plumbing will be provided through a removable panel installed on the back wall of the right side forward compartment. Access will also be via a hinged panel installed at the pump operator's position, and from the area above the pump.
0071130	Light, Pump Compt, PMFD	**PUMP COMPARTMENT LIGHT** A compartment light will be provided inside the pump enclosure.
0586382	Gauges, Engine, Included With Pressure Controller	Engine monitoring graduated LED indicators will be incorporated with the pressure controller. Also provided at the pump panel will be the following: - Master Pump Drain Control
0005601	Throttle, Engine, Incl'd w/Press Controller	
0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle,Green	**THROTTLE READY GREEN INDICATOR LIGHT** There will be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode.
0745568	Indicator Light, Pump Panel, Ok To Pump, Green	**OK TO PUMP INDICATOR LIGHT** There will be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode.

0767294	Hourmeter, Pump/PTO, Wildland BX3, BX	**PUMP HOURMETER** An hourmeter will be provided inside the pump module to record the hours the main PTO driven pump is engaged.
0511078	Gauges, 4.00" Master, Class 1, 30"-0 -600psi	**VACUUM AND PRESSURE GAUGES** The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated ©. The gauges will be a minimum of 4.00" in diameter and will have white faces with black lettering, with a pressure range of 30.00"-0-600#. Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut. The pump pressure and vacuum gauges will be installed adjacent to each other at the pump operator's control panel. Test port connections will be provided at the pump operator's panel. One will be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They will have 0.25 in. standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They will be marked with a label. This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.
0768295	No Discharge Pressure Gauges Required, NFPA 1906 Wildland	
0766488	Gauge,Water and Foam Level,Master w/Mini in Cab, Wildland BX3/BLM	**WATER and FOAM LEVEL GAUGES** An electric water level gauge manufactured by Innovative Controls Inc., the SL Series Tank Level Monitor System will be provided. One (1) master display electric water level gauge will be provided on the pump operator's panel, and one (1) "mini" slave display electric water level gauge will be provided in the cab on the console. A foam level gauge will be integrated into the water level gauge housing. The master display electric water level gauge will register water level by means of fourteen (14) brightly colored LED lights and be provided on the pump operator's panel. The water level indicators will be as follows: Full = Green 3/4 = Yellow 1/2 = Yellow 1/4 = Yellow Empty = Red The mini slave display electric water level gauge will register water level by means of five (5) brightly colored LED lights and be provided in the cab on the console. The water level indicators will be as follows: Full = Green 3/4 = Yellow 1/2 = Yellow 1/4 = Yellow Empty = Red To further alert the pump operator, the refill light will start flashing when the water level drops below the 1/4 mark. The level measurement will be based on the sensing of the electrical conductivity of the water in the tank.
0668618	Not Required, Foam Level Gauge Included With Dual Water & Foam Gauge	
0723261	Lighting, Pump Operator Control Panel Illumination, BX3	**LIGHTING, PUMP PANEL ILLUMINATION** Lighting will be provided for the pump operator's control panel. Illumination will be 12 volt DC white LED lights installed under the cargo extension. The lighting will illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. One (1) pump panel light will come on when the pump is in ok to pump mode.
0773413	Light, Over PS Pump Panel, P25 LED, Wildland BX3	There will be one (1) white LED scene lights with ABS chrome housing, installed above the passenger side pump panel. The lights will be operated from a switch on the pump operator's panel.

0751223	Compartment,Tool/Equipment,Right Side Pump Module,Angled Door Opening,BX3	**COMPARTMENT, TOOL/EQUIPMENT, PUMP PANEL** A compartment, constructed of aluminum, will be installed by the right side pump panel for storage of long handle tools. The main area of the compartment will be approximately 59.00" high (interior) x 14.00" wide (interior) x 13.75" deep. A wedge-shaped section located directly behind the door will be able to contain tall/narrow tools. A vertically hinged door constructed of aluminum will be provided. It will be installed at an angle to maximize the interior space available. It will open 135 degrees for access to the interior. The door will have a D-ring latch for keeping it closed, and a positive door holder will be provided to hold the door in an open position. The interior of the compartment will remain unpainted natural aluminum. On the inside of the compartment, the back wall toward the pump panel will have a large removable panel to allow access to the pump and plumbing behind it.
0766263	Siren, Wln 295SLSA1, 100 or 200 Watt, Wildland BX3	**ELECTRONIC SIREN** A Whelen®, Model 295SLSA1, electronic siren with noise canceling microphone will be provided. This siren to be active when the battery switch is on and that emergency master switch is on.
0637494	Location, Electronic Siren, BX Product	Siren head will be located in the cab within reach of the driver.
0076157	Control, Elec Siren, Horn Ring	**SIREN CONTROL** The electronic siren will be controllable on the siren head and horn ring only. No foot switches will be required. The driver will have the option to control the siren or the chassis horns from the horn button by means of a selector switch located on the instrument panel.
0766262	Speaker, (1) Wln, SA315P, 100 watt, Wildland BX3	**SPEAKER** There will be one (1) speaker provided. Each speaker will be a Whelen model SA315P black nylon composite, 100-watt. Each speaker will be connected to the siren amplifier. A grille to protect the speaker during off-road use will be integrated into the bumper.
0763428	Location, Speaker, Frt Bumper, Recessed, Far Left Side on Angled Corner	The speaker will be recessed in the far left side of the front bumper, in the swept-back section.
0606714	Lightbar, Wln, Freedom IV-Q, 60", RR_R_W__W_R_RR	**FRONT ZONE UPPER WARNING LIGHTS** There will be one (1) 60.00" Whelen Freedom IV LED lightbar mounted on the cab roof. The lightbar will include the following: One (1) red flashing LED module in the driver's side end position. One (1) red flashing LED module in the driver's side front corner position. Open in the driver's side first front position. One (1) red flashing LED module in the driver's side second front position. Open in the driver's side third front position. One (1) white LED module in the driver's side fourth front position. Open in the driver's side fifth front position. Open in the passenger's side fifth front position. One (1) white flashing LED module in the passenger's side fourth front position. Open in the passenger's side third front position. One (1) red flashing LED module in the passenger's side second front position. Open in the passenger's side first front position. One (1) red flashing LED module in the passenger's side front corner position. One (1) red flashing LED module in the passenger's side end position. There will be clear lenses included on the lightbar. There will be a switch installed in the cab on the switch panel to control this lightbar. The two (2) white flashing LED modules will be disabled when the parking brake is applied. The two (2) red flashing LED modules in the front positions may be load managed when the parking brake is applied.
0766470	Lights, Front Zone, Wln M6** LED, Clear Lens, Wildland BX3	**FRONT WARNING LIGHT** There will be two (2) Whelen, Model M6** LED flashing lights provided at the front of the truck. The driver's side front warning light to be red. The passenger's side front warning light to be red. The color of the lenses will be clear. The lights will be mounted with with a flange. The lights will be activated by a switch on the cab instrument panel.
0766458	Lights, Side Zone Lower, Wln M6*C LED, Clear Lens 2pr, BX3	**SIDE ZONE LOWER LIGHTING** There will be four (4) Whelen®, Model M6*C, flashing LED warning lights with chrome trim installed per the following: Two (2) lights, one (1) each side on the bumper extension. The side front lights to be red. Two (2) lights, one (1) each side on the rear corners of the body. The side rear lights to be red. The lights will include a clear lenses. There will be a switch in the cab on the switch panel to control the lights. The lights on the front bumper will be recess mounted to better protect them from damage.

0753267	Lights, Rear Zn Lwr, Wln M6*C, Clear Lens,(Use for 4" Round Tail Lights) BX3	**REAR ZONE LOWER LIGHTING** There will be two (2) Whelen®, Model M6*C, LED flashing warning lights with Model M6FC, chrome flanges located at the rear of the apparatus. The driver's side rear light to be red The passenger's side rear light to be red Both lights will include a lens that is clear. There will be a switch located in the cab on the switch panel to control the lights.
0766447	Lights, Rear/Side Up Zone, Wln M6*C LED, Clear Lens 4lts, Wildland BX3	**WARNING LIGHTS (Rear and Side upper zones)** Four (4) Whelen, model M6*C LED flashing warning lights will be provided at the rear of the apparatus. The side rear upper light(s) on the driver's side to be red. The rear upper light(s) on the driver's side to be red. The rear upper light(s) on the passenger's side to be red. The side rear upper light(s) on the passenger's side to be red. These lights will include a lens that is clear. There will be a switch located in the cab on the switch panel to control the lights.
0006551	Not Required, Lights, Rear Upper Zone Blocking	
0007150	Bag of Nuts and Bolts	**LOOSE EQUIPMENT** The following equipment will be furnished with the completed unit: One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.
0519913	Not Required, Soft Suction Hose	**SOFT SUCTION HOSE** There will be no soft suction hose provided.
0766676	Strainer, Provided by Fire Department, Wildland NFPA 1906 2016 Classification	**STRAINER PROVIDED BY FIRE DEPARTMENT** NFPA 1906, 2016 edition, section 16.2.4.1 references a suction strainer used with suction hose. The strainer is not on the apparatus as manufactured. The fire department will provide the suction strainer.
0766686	Extinguisher, Dry Chemical, Wildland NFPA 1906 2016, Provided by Fire Department	**DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT** NFPA 1906, 2016 edition, section 5.7.2 requires one (1) approved dry chemical portable fire extinguisher with a minimum 3A-40-B:C rating mounted in a bracket fastened to the apparatus. The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.
0766685	Extinguisher, 2.5 Gal, Not Required, NFPA 1906 2016 Wildland Apparatus	

0607712	Paint Process / Environmental Requirements, PMFD	**PAINT PROCESS** The exterior custom cab and/or body painting procedure will consist of a seven (7) step finishing process. A commercial chassis paint process will follow similar processes as determined by the chassis manufacturer. The following procedure will be used by Pierce: Manual Surface Preparation - All exposed metal surfaces on the custom cab and body will be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces will be removed and sanded to a smooth finish. Exterior seams will be sealed before painting. Exterior surfaces that will not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate. Chemical Cleaning and Pretreatment - All surfaces will be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces will be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces will be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion. A final pure water rinse will be applied to all metal surfaces. Surfacer Primer - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective base coat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a critical aesthetic finish. The surfacer primer will be a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded. Finish Sanding - The surfacer primer will be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat. Sealer Primer - The sealer primer is applied prior to the base coat in all areas that have not been previously primed with the surfacer primer. The sealer primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when top coated. Base coat Paint - Two coats of a high performance, two component high solids polyurethane base coat will be applied. The Base coat will be applied to a thickness that will achieve the proper color match. The Base coat will be used in conjunction with a urethane clear coat to provide protection from the environment. Clear Coat - Two (2) coats of clear coat will be applied over the base coat color. The clear coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style doors will be clear coated to match the body. Paint warranty for the roll-up doors will be provided by the roll-up door manufacturer. Our specifications are written to define cyclic corrosion testing, physical strengths, durability and minimum appearance requirements must be met in order for an exterior paint finish to be considered acceptable as a quality finish. Each batch of base coat color will be checked for a proper match before painting of the cab and the body. After the cab and body are painted, the color is verified again to make sure that it matches the color standard. Electronic color measuring equipment will be used to compare the color sample to the color standard entered into the computer. Color specifications are used to determine the color match. A Delta E reading will be used to determine a good color match within each family color. All removable items such as brackets, compartment doors, door hinges, and trim will be removed and separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly will be finish painted before assembly. **Environmental Impact** Contractor will meet or exceed all current State regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions: Topcoats and primers will be chrome and lead free. Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals. Particulate emission collection from sanding operations will have a 99.99 percent efficiency factor. Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter is used, it will have an efficiency rating of 98 percent. Water wash systems will be 99.97 percent efficient. Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean. Paint wastes will be disposed of in an environmentally safe manner. Empty metal paint containers will be recycled to recover the metal. Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse. Additionally, the finished apparatus will not be manufactured with or contain products that have ozone depleting substances. Pierce will, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with the state EPA rules and regulations.
0583882	Paint, 90 Red, Commercial Grade Chassis Finish, PMFD Commercial Chassis	**PAINT** The chassis will be painted by the chassis manufacturer, and will remain the commercial grade finish as provided. The body will be painted the matching color by Pierce. To ensure a good color match between the body and chassis, Pierce has a mutually pre-approved paint color program with the chassis manufacturer. The apparatus will be painted Pierce #90 candy apple red .
0586561	Chassis Cab Paint, #90 Red, by Chassis Manufacturer, Standard	**COMMERCIAL CHASSIS PAINT** The chassis will be painted by the chassis manufacturer. It will remain the color and commercial quality finish as provided. The primary color will be Pierce #90 candy apple red .
0583915	No Two-Tone Paint Req'd	

0582663	Paint, Chassis Frame Assy, Black, by Commerical Chassis Manufacturer	**PAINT CHASSIS FRAME ASSEMBLY** The chassis frame assembly will be painted black by the chassis manufacturer. It will remain the commercial grade finish as provided.
0651188	Paint, Wheels, By Chassis Manufacturer, Single Rear Axle, Commercial	**WHEEL PAINT** The wheels will be painted by the chassis manufacturer to match the main color of the cab.
0651181	Wheels, Silver Accent Stripe on Outer Edge, Single Axle	**WHEELS, ACCENT STRIPE** The exposed outer edge circumference of the wheel will be painted with a silver accent stripe.
0037234	Compartment, Unpainted	**COMPARTMENT INTERIOR FINISH** The interior of the body compartments will be left unpainted and have the natural finish.
0544087	Reflective Band, 6"	**REFLECTIVE BAND** A 6.00" white reflective band will be provided across the front of the vehicle and along the sides of the body.
0007357	Reflective on Front Bumper	**REFLECTIVE VINYL ON FRONT BUMPER** There will be a reflective vinyl band provided across the front bumper.
0766414	Stripe, Chevron, Rear, Reflexite, Wildland BX3	**REAR CHEVRON STRIPING** There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The rear surface, excluding the rear compartment door, will be covered. The colors will be red and L2 fluorescent yellow green . Each stripe will be 6.00" in width. This will meet the requirements of the current edition of NFPA 1906, which states that 50% of the rear surface will be covered with chevron striping.
0065785	Stripe, Reflective, Cab Drs Interior, Commercial Cabs, 4dr	**CAB DOORS REFLECTIVE STRIPE** white reflective striping will be provided on the interior of each cab door. This striping will total a minimum of 96.00 square inches and will meet the NFPA 1901 requirement.
0027286	Not Required, Lettering Specs	
0007472	[Lettering not Requested]	
0766245	Manual, Fire Apparatus Parts, USB, Body Parts Only, Commercial Product	**MANUAL, BODY PARTS ONLY** A custom parts manual for the Pierce® installed parts only will be provided in USB flash drive format with the completed unit. The manual will contain the following: - Job number - Part numbers with full descriptions - Table of contents - Parts section sorted in functional groups reflecting a major system, component, or assembly - Parts section sorted in Alphabetical order - Instructions on how to locate parts The manual will be specifically written for the body model being purchased. It will not be a generic manual for a multitude of different bodies. **SERVICE PARTS INTERNET SITE** The service parts information included in this manual are also available on the Pierce website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.
0766243	Manual on USB Flash Drive, Service, Commercial	**MANUALS, SERVICE** A USB flash drive format service manual supplement containing parts and service information on Pierce® installed components will be provided with the completed unit. The manual will be specifically written for the unit being purchased. It will not be a generic manual for a multitude of different units.
0002902	Manual, Commercial Chassis Operation	**MANUAL, CHASSIS OPERATION** One (1) chassis operation manual will be provided with the completed unit.

0080008	Warranty, Basic, 1 Year, Apparatus, Commercial Chassis, WA0008	**ONE (1) YEAR MATERIAL AND WORKMANSHIP** Each new piece of apparatus will be provided with a minimum one (1) year basic apparatus material and workmanship limited warranty. The warranty will cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service. A copy of the warranty certificate will be submitted with the bid package.
0681678	Warranty, Basic Vehicle, 3 yrs or 100,000 Miles, Freightliner	**CHASSIS WARRANTY** The chassis manufacturer will provide a **three (3) year or 100,000 mile warranty.**
0595282	Warranty, Cab Paint, As Provided By Chassis Manufacturer, Commercial	**PAINT WARRANTY** The commercial chassis manufacturer's paint warranty will apply to the paint on the chassis only.
0647720	Warranty, Pierce LED Strip Lights, WA0203	**COMPARTMENT LIGHT WARRANTY** The Pierce 12 volt DC LED strip lights limited warranty certificate, WA0203, is included with this proposal.
0021516	Warranty, 5-Year EVS Transmission, Standard Comm, WA0187	**TRANSMISSION WARRANTY** The transmission will have a **five (5) year/unlimited mileage** warranty covering 100 percent parts and labor. The warranty to be provided by Allison Transmission and not apparatus builder.
0688798	Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	**WATER TANK WARRANTY** A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.
0596025	Warranty, Structure, 10 Year, Body, WA0009	**TEN (10) YEAR STRUCTURAL INTEGRITY** The Pierce apparatus body limited warranty certificate, WA0009, is included with this proposal.
0690936	Warranty, Roll up Doors, Not Required	
0582368	Warranty, Pump, Darley, 6 Year Parts, 3 Year Labor, WA0179	**PUMP WARRANTY** A Darley pump limited warranty certificate, WA0179, is included with this proposal.
0648675	Warranty, 10 Year S/S Pumbing, WA0035	**TEN (10) YEAR PUMP PLUMBING WARRANTY** The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.
0657990	Warranty, Foam System, Husky 3, WA0231	**FOAM SYSTEM WARRANTY** The Husky 3 foam system limited warranty certificate, WA0231, is included with this proposal.
0595820	Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	**TEN (10) YEAR PRO-RATED PAINT AND CORROSION** A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.
0593921	Not Required, Warranty, No Lettering	
0544897	Certification, Cab Integrity, Freightliner, CD0022	**CAB INTEGRITY** The cab has been tested to and passed the following standards: - ECE Regulation No.29 - SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks.

0545073	Amp Draw Report, NFPA Current Edition	**AMP DRAW REPORT** The bidder will provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system. The manufacturer of the apparatus will provide the following: Documentation of the electrical system performance tests. A written load analysis, which will include the following: The nameplate rating of the alternator. The alternator rating under the conditions specified per: Applicable NFPA 1901 or 1906 (Current Edition). The minimum continuous load of each component that is specified per: Applicable NFPA 1901 or 1906 (Current Edition). Additional loads that, when added to the minimum continuous load, determine the total connected load. Each individual intermittent load. All of the above listed items will be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).
0002758	Amp Draw, NFPA/ULC Radio Allowance	
0000017	FLORIDA DIVISION BODY	
0000015	FLORIDA DIVISION COMMERCIAL CHASSIS	
0004713	ENGINE, OTHER	
0046395	EVS 3000 Series TRANSMISSION	
0018574	DARLEY PUMP	
0028048	FOAM SYSTEM	
0020006	SIDE CONTROL	
0020007	AKRON VALVES	
0020909	ABS SYSTEMS, Commercial	
0658751	PUMPER BASE	

Proposal Details Report

9/13/2023

Customer: FLAGSTAFF FIRE DEPARTMENT
Bid Number: 769
Representative McDonald, Ed
Job Number:
Requirements Manager:
Organization: Hughes Fire Equipment, Inc
Description: FX3 Wildland, International, 100
Chassis: International HV, 4x4, Wildland BX3
Body: WILDLAND BX3, Type 3, NFPA 1906

OptionCode	Type	Option	ProposalText
0765490	SP	Wildland, BX3, International, 1000 GPM Pump (SF-3204)	
0010012		No Boiler Plates requested	
0018257		Commercial chassis & Snorkel products	
0584455		Manufacture Location, Bradenton, Florida	Your apparatus will be manufactured in Bradenton, Florida.
0584453		RFP Location: Bradenton, Florida	
0588609		Vehicle Destination, US	
0799089		Comply NFPA 1906 Changes Effect Jan 1 , 2016 with Exceptions, Commercial Chassis	**NFPA 2016 STANDARDS** This apparatus specification includes a commercial chassis that has not been certified to meet all the requirements of NFPA 1906 by the chassis manufacturer. Although this chassis may comply with certain aspects of the standard, certification has not been received from this chassis manufacturer that all criteria have been met. The body and equipment as built by Pierce will comply with the current NFPA 1906 standards effective January 2016, except as noted on the NFPA exceptions list. Certification of slip resistance of all stepping, standing and walking surfaces must be supplied with delivery of the apparatus. A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating. The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications. An official of the company will designate, in writing, who is qualified to witness and certify test results.
0547534		1906 Wildland Fire Apparatus	
0588619		Not Required, Vehicle Certification	
0511675		Certification, Pump, Wildland	**PUMP TEST** The pump will be tested and certified by the apparatus manufacturer. The test results along with the pump manufacturer's certification of hydrostatic test, the engine manufacturer's certified brake horse power curve and the manufacturer's record of pump construction details will be forwarded to the Fire Department.
0537375		Unit of Measure, US Gallons	

0030006		Bid Bond Not Requested	**BID BOND NOT REQUESTED** A bid bond will not be included. If requested, the following will apply: All bidders will provide a bid bond as security for the bid in the form of a 5% bid bond to accompany their bid. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language, which assures that the bidder/principal will give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract. Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.
0816569		Performance Bond, Not Requested, PPI Terms	**PERFORMANCE BOND NOT REQUESTED** A performance bond will not be included. If requested at a later date, one will be provided to you for an additional cost and the following will apply: The successful bidder will furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond will be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required. Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Bumper to Bumper warranty period included within this proposal. Owner agrees that the penal amount of this bond will be simultaneously amended to 25 percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type will not exceed three (3) years from the date of such satisfactory acceptance and delivery, or the actual Bumper to Bumper warranty period, whichever is shorter. Due to global supply chain constraints, any delivery date contained herein is a good faith estimate as of the date of this order/contract, and merely an approximation based on current information. Delivery updates will be made available, and a final firm delivery date will be provided as soon as possible. If the Producer Price Index of Components for Manufacturing [www.bls.gov Series ID: WPUID6112] ("PPI") has increased at a compounded annual growth rate of 5.0% or more between the month Pierce accepts the order ("Order Month") and a month 14 months prior to the then predicted Ready For Pickup date ("Evaluation Month"), then pricing may be updated in an amount equal to the increase in PPI over 5.0% for each year or fractional year between the Order Month and the Evaluation Month. The seller will document any such updated price for the customer's approval before proceeding and provide an option to cancel the order.
0010007		No Approval Drawing Req'd.	
0589819		Electrical Diagrams, Commercial	**ELECTRICAL WIRING DIAGRAMS** Two (2) electrical wiring diagrams, prepared for the body as it interfaces with the commercial chassis, will be provided.
0768801		International HV, 4x4, Wildland BX3	**CHASSIS** The chassis will be an International, HV supplied with the following equipment:
0804699	SP	Model Year 2023	
0765496	SP	Use SF-3203 IHC Chassis Spec (Wildland BX3) [Use Also w/3204]	
0891187		Base Price, International HV, 4x4 Wildland BX3, Effective 2/01/2022 EXP 6/30/22	
0804578	SP	Surcharge, International	
0761935		Overall Height, Wildland BX3 - w/International Chassis - 10' 2"	**MAXIMUM OVERALL HEIGHT** The maximum overall height of the apparatus will be no more than 122.00" (10' 2").

0761289	Angle of Approach,Approximately 30 Degrees, International / Wildland BX3	**ANGLE OF APPROACH** The angle of approach will be about 30 degrees. This will be effective with the truck in a loaded state.
0767548	Angle of Departure, Approximately 25 Degrees, Wildland BX3	**ANGLE OF DEPARTURE** The angle of departure will be about 25 degrees. This will be effective with the truck in a loaded state.
0764212	Wheelbase, 183", International, 4x4, Wildland BX3	**WHEELBASE** The wheelbase of the vehicle will be 183.00".
0760045	GVW Rating, 36,000#, Commercial Chassis	**GVW RATING** The gross vehicle weight rating will be 36,000 pounds.
0027644	Frame, Chassis, International	**FRAME** The frame rails will be formed from 120,000 psi yield, heat treated alloy steel.
0686546	Frame Reinforcement, International HV 4x4, "C" Channel	**FRAME LINER** An outer "C" channel frame liner constructed of heat treated alloy steel will be provided.
0742184	Axle,Front,13K Rating,International HV 4x4 w/o Transfer Case PTO, BX3	**FRONT AXLE** The front drive axle will have a ground rating capacity of 13,000 lb. **TRANSFER CASE** The transfer case will be a two (2) speed with high and low range. Electric over air shift controls will be provided.
0770176	Suspension, Front Spring, 14,000 lb, Commercial	**FRONT SUSPENSION** Spring mounted: Parabolic, Taper Leaf Capacity at ground: 14,000 lb
0073051	Shock Absorbers, Front	Shock absorbers will be provided on the front axle.
0789186	Brakes, Cam Front, 16.50"x 5.00" Commercial	**FRONT BRAKES** The front brakes will be S-Cam, 16.50" x 5.00". The front brakes will be provided with automatic slack adjusters.
0585779	Goodyear Tires	**TIRE BRAND** The default brand of tire for the commercial chassis manufacturer for this apparatus is Goodyear. However, the commercial chassis manufacturer reserves the right to substitute brands and models of tire as may be available at the factory on the date of manufacture. They will provide the proper tread style and weight rating for the position in which the tire is installed. Pierce Manufacturing and the chassis manufacturer are working to provide the brand of tire specified. However, due to shortages (and even model changes by the tire manufacturers), if the chassis manufacturer substitutes other tires, they will not be changed by Pierce.
0772242	Tires, Front, 22.50, Traction Tread, 4x4 (to 14.6k GAWR)	**TIRES, FRONT** Front tires will be 22.50, radial tires with a traction tread pattern suitable for the steering axle position on a front driving axle. The capacity of the tires will meet or exceed the rating of the axle and/or suspension and a maximum top speed per the requirements described elsewhere in this proposal, up to 75 MPH.
0683147	Wheel, Steel, 22.50", 4x4	**WHEELS, FRONT** Wheels for the front axle will be 22.50" steel disc, properly sized for the provided tires.
0764156	Axle, Rear, Meritor, 23K Rating, International HV 4x4, BX3 Wildland	**REAR AXLE** The rear axle will have a ground rating capacity of 23,000 lb. **PARKING BRAKE** The parking brake will be spring set and located on the rear axle service brake.
0772020	S-Cam Style 16.50" x 7.00"	Rear axle brakes will be 16.50" x 7.00", S-Cam drum type brakes. Automatic slack adjusters will be provided.

0767494	Top Speed of Vehicle, Comply w/NFPA, Wildland BX3	**REAR AXLE RATIO** NFPA 1906, 2016 edition, section 4.15.2 requires that the maximum top speed of fire apparatus with a GVWR over 33,000 lb will not exceed either 68 mph or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower. The top speed of the apparatus as manufactured meets the NFPA requirement of a top speed of 68 miles per hour. The rear axle *ratio* provided will to allow the vehicle to reach an approximate top speed of 73 miles per hour, but the speed of the chassis will be electronically limited 68 MPH.
0621638	Suspension, Rear Spring, 23,500 lb w/4500 lb Steel Leaf Aux. IHC	**REAR SUSPENSION** The rear suspension will be Vari-Rate multi-leaf spring suspension with a capacity at ground of 23,500 lb. Auxiliary steel leaf spring suspension with a capacity of 4,500 lb will be included.
0772235	Tires, Rear, 22.50, Traction Tread, 4x4 (to 27k GAWR)	**TIRES, REAR, 4X4** Rear tires will be 22.50, radial tires with a traction tread pattern suitable for the rear axle position on an all-wheel-drive vehicle. The tire capacity will meet or exceed the capacity of the axle and/or suspension. Tires will be rated for a maximum top speed per the requirements described elsewhere in this proposal, up to 75 MPH Due to ratio matching requirements of an all-wheel-drive vehicle, the front and rear tire sizes will be the same. The size of the tires provided will be at least the minimum size required to meet the GAWR rating of both axles.
0810393	Wheel, Steel, 22.50" x 8.25", 4x4	**WHEELS, REAR** The rear wheels will be 22.50" steel disc properly sized for the provided tires.
0767493	No Tire Pressure Indicator, Fire Department Omits, Non-NFPA 1906-2016 Compliant	**TIRE PRESSURE INDICATOR** NFPA 1906, 2016 edition, section 4.13.4 requires each tire be equipped with a visual indicator or monitoring system that indicates tire pressure. Per Fire Department specification, a tire pressure indicator is not on the apparatus as manufactured. This apparatus will be non-compliant to NFPA 1906 standards effective at time of contract execution.
0012045	Mud Flap, Rear, Pierce Logo	**MUD FLAPS** Mud flaps with a Pierce logo will be installed behind the rear wheels.
0767491	Chocks, Wheel, Wildland, NFPA, Provided by Fire Department, NFPA 1906 - 2016	**WHEEL CHOCKS PROVIDED BY FIRE DEPARTMENT** NFPA 1906, 2016 edition, section 5.7.1 requires "Two (2) solid bottom wheel chocks mounted in readily accessible locations, ..." be provided with the apparatus. The wheel chocks are not on the apparatus as manufactured. The fire department will provide and install these wheel chocks.
0544690	Mounting Brackets, Chocks, Provided by Fire Department	**Wheel Chock Brackets Provided by Fire Department** The wheel chock brackets are not on the apparatus as manufactured. The fire department will provide and install the wheel chock brackets.
0020881	ABS, Anti-Lock Braking System, Commercial	**ANTI-LOCK BRAKE SYSTEM** The vehicle will be equipped with an anti-lock braking system. The ABS will provide anti-lock braking control on both the front and rear wheels. It will be a digitally controlled system that utilizes microprocessor technology to control the anti-lock braking system. Each wheel will be monitored by the system. When any particular wheel begins to lockup, a signal will be sent to the control unit. This control unit then will reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system will eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.
0009547	Air Compressor, Brake, 18.7 CFM, Commercial	**AIR COMPRESSOR, BRAKE SYSTEM** The air compressor will have an output of 18.7 cubic feet per minute.
0773985	Air Dryer, Brake, w/Heater, Commercial	**AIR DRYER** An air dryer with a heater will be provided. Other features of this air dryer include: - Desiccant style filter - In-line filtration system - Automatic purge valve
0020851	Not Required, Air Inlet	

0728924	Engine, Cummins L9, 360 hp, IHC HV, BX3	**ENGINE** Model: Electronic Cummins L9-360 Number of Cylinders: Six (6) Displacement: 8.9 L Rated Brake Horsepower: 360 at 2200 rpm Peak Torque: 1150 at 1200 rpm Governed rpm: 2200 VGT Turbocharger Fuel System: High pressure common rail (HPCR) **ENGINE ACCESSORIES** Fan Clutch: Electric 2-speed with nylon fan Air Cleaner: Dry type, with restriction indicator in cab In-tank Oil Cooler Oil Fill and Level Gauge Starting Motor: 12-volt **RADIATOR** Pressurized System, Cross Flow De-aeration Tank Anti-Freeze Protection -40 Degrees Fahrenheit
0001247	High Idle w/Electronic Engine, Commercial	**HIGH IDLE** A high idle switch will be provided on the instrument panel inside the cab. Activating the switch will cause the vehicle to automatically maintain a preset engine rpm. The high idle switch will be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light will be provided adjacent to the switch. The light will be labeled "OK To Engage High Idle."
0773963	Auxiliary Brake, Exhaust Brake , VGT Style, With Brake Lights, Commercial	**ENGINE EXHAUST BRAKE** An exhaust brake with an integral variable geometry turbo charger (VGT) will be provided. The control will be located on the instrument panel within easy reach of the driver. When the engine brake is engaged it will activate the brake lights.
0120374	Cruise Control, Commercial	**ELECTRONIC CRUISE CONTROL** The chassis will be provided with OEM factory installed electronic cruise control.
0773981	Air Intake, Engine, w/Ember Separator, OEM Installed, Commercial	**AIR INTAKE, w/EMBER SEPARATOR** The air inlet will be equipped with a stainless steel mesh to separate water and burning embers from the air intake system such that particulate matter larger than 0.039" (1.0 mm) in diameter cannot reach the air filter element. This will comply with NFPA 1901 and 1906 standards.
0747960	Exhaust,Horiz,RH Step Mtd DPF/SCR,w/Modification Next toTransfer Case, 4x4 IHC	**EXHAUST SYSTEM** The exhaust system will include a diesel particulate filter (DPF) and a selective catalytic reduction (SCR) device to meet current EPA standards. The DPF and SCR will be mounted horizontally outside of the frame rails in the right side front step area. The exhaust piping will include a special OEM routing closer to the transfer case that allows extra under cab space.
0684987	Exhaust Modifications, Commercial Chassis, Horizontal Exhaust	**EXHAUST MODIFICATIONS** The exhaust will terminate with a horizontal tailpipe and diffuser ahead of the right side rear wheels. A heat deflector shield will be provided where the tail pipe is routed under any side compartmentation. All modifications will be approved by the chassis engine manufacturer and/or the chassis OEM. Exhaust treatment devices will not be altered.
0071090	Coolant Hoses, Rubber - Commercial Chassis	**COOLANT LINES** Premium rubber hose will be used for all engine coolant lines installed by Pierce Manufacturing. Hose clamps will be the constant torque type to prevent coolant leakage. They will expand and contract according to coolant system temperature thereby keeping a constant clamping pressure on the hose.
0773634	Fuel Tank, 70 Gallon, Left Side, Aluminum, Commercial	**FUEL TANK** A 70 gallon fuel tank will be provided and mounted at the left-hand cab step. The tank will be constructed of aluminum.
0773952	DEF Tank, Left Side Location, Commercial	**DIESEL EXHAUST FLUID TANK** A diesel exhaust fluid (DEF) tank will be provided and mounted on the left side, below the cab. The tank will be sized by the chassis manufacturer based on the engine provided. It will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.

0723716	Fuel Priming Pump, Electronic, Automatic, Cummins, No Swt Req'd	**FUEL PRIMING PUMP** A Cummins automatic electronic fuel priming pump will be integrated as part of the engine.
0552712	Not Required, Shutoff Valve, Fuel Line	
0696186	Cooler, Chassis Fuel, Commercial, Provided by Chassis OEM	**COOLER, CHASSIS FUEL** A fuel cooler will be provided by the chassis manufacturer.
0764176	Chassis Fuel Line Protection, Fire Wrap Lagging, Wildland	**FUEL LINE PROTECTION** The fuel hoses that run from the chassis fuel tank to the fuel pump will be wrapped with fire wrap lagging to protect them from heat damage. The lagging will be able to withstand high temperatures and will be secured with stainless steel or fire proof ties.
0773950	Trans, Automatic, Allison 3000 EVS, w/(2) PTO Provsions, Commercial	**TRANSMISSION** An Allison, model 3000 EVS, electronic torque converting automatic transmission will be provided. To qualify for the EVS rating, the transmission will be filled with synthetic transmission fluid. Two (2) PTO openings will be located on left and right side of the converter housing (positions 8 o'clock and 4 o'clock). A transmission temperature gauge or warning light will be installed on cab instrument panel.
0771219	Transmission,Stalk Shifter, Column Mounted, 5 Speed, International	**TRANSMISSION SHIFT CONTROL** A column mounted stalk shifter will be provided. It will electronically control the gear selection in either a manual or automatic mode. The transmission will be a five (5)-speed.
0011475	Transmission Oil Cooler, Internal, Commercial	**TRANSMISSION COOLER** A transmission oil cooler will be provided in a tank of the radiator.
0527500	Transfer Case Oil Cooler, 4x4, Commercial	**TRANSFER CASE OIL COOLER** The 4x4 transfer case will have an oil cooler specifically designed and installed for the application.
0733744	Driveline for PTO/Transfer Case or No Pump Installation - Commercial	**DRIVELINE** Drivelines will be a heavy duty metal tube equipped with universal joints properly sized for the application. A splined slip joint will be provided in each driveshaft.
0762367	Driveline Pre-Approved, International HV 4x4, Wildland BX3	
0692499	Steering, Power, w/Tilt Column, International	**STEERING** Steering will consist of an hydraulically driven power steering system with a capacity designed for the axle rating. For additional comfort, the steering wheel column will have a tilt feature.
0607536	Skid Plate and Brush Guard, For Fuel and DEF Tanks, Commercial Chassis	**SKID PLATE AND BRUSH GUARD** A 12 gauge removable steel skid plate will be fastened to the bottom side of the fuel tank hangers. The plate will be formed to protect the underside of the plastic DEF tank and will be fastened to the factory chassis steps.
0761934	Chassis Air Line Protection, Fire Wrap Lagging, Wildland	**AIR LINE PROTECTION** All air lines that are routed below the frame rails shall be wrapped with fire wrap lagging to protect them from heat damage. The lagging shall be able to withstand high temperatures and shall be secured with stainless steel or fire proof ties.
0767463	Bumper Extension, 16", Steel Painted, Chicago Style, Commercial Chassis BX3	**BUMPER** A one (1) piece bumper manufactured from .19" formed steel with a .38" bend radius will be provided. The bumper will be a minimum of 10.00" high with a 1.50" top and bottom flange, and will extend 16.00" from the face of the cab. The bumper will be 95" wide with 45 degree corners. The bumper will be metal finished and painted job color. To provide adequate support strength, the bumper will be mounted directly to the front of the C channel frame. The frame will be a bolted modular extension frame constructed of 50,000 psi tensile steel. **GRAVEL PAN** A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and the hood and front wheel wells. The pan will be properly supported from the underside to prevent flexing and vibration.

0766336	Tray, Hose, Center, 16" Bumper, Wildland BX3	**HOSE TRAY** A hose tray, constructed of aluminum, will be placed in the center of the bumper extension. The tray will have a capacity of 75' of 1.50" double jacket cotton-polyester hose. Black rubber grating will be provided at the bottom of the tray. Drain holes are also provided.
0766330	Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray, BX3	**CENTER HOSE TRAY COVER** A bright aluminum treadplate cover will be provided over the center hose tray. The cover will be attached with a stainless steel hinge. One (1) D-ring latch will secure the cover in the closed position and a mechanical stay arm will hold the cover in the open position.
0766335	Tray, (1) Hose Left Side of 16" Bumper, Wildland BX3	**LEFT SIDE HOSE TRAY** A hose tray will be placed in the left side of the extended bumper. The tray will have a capacity of 50' of 1.50" double jacket cotton-polyester hose. Black rubber grating will be provided at the bottom of the tray. Drain holes will be provided.
0766331	Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray, Notched, BX3	**Left Side Hose Tray Cover** A bright aluminum treadplate cover will be provided over the left side hose tray. The cover will be notched to allow the hose to be pre-connected to the hose connection. The cover will be attached with a stainless steel hinge. There will be one (1) D-ring latch provided to secure the cover in the closed position and a mechanical stay arm will hold the cover in the open position.
0766334	Tray, (1) Hose Right Side of 16" Bumper, Wildland BX3	**RIGHT SIDE HOSE TRAY** A hose tray will be placed in the right side of the extended bumper. The tray will have a capacity of 50' of 1.50" double jacket cotton-polyester hose. Black rubber grating will be provided at the bottom of the tray. Drain holes will be provided.
0766332	Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray, Notched, BX3	**Right Side Hose Tray Cover** A bright aluminum treadplate cover will be provided over the right side hose tray. The cover will be "notched" allowing the hose to be pre connected to hose connection. The cover will be attached with a stainless steel hinge. A D-ring latch will secure the cover in the closed position and a mechanical stay arm will hold the cover in the open position.
0002283	Tow Hooks, Painted	**TOW HOOKS** Two (2) painted steel tow hooks will be installed under the bumper and attached to the front frame members. The tow hooks will be painted to match the chassis frame assembly. The tow hooks will be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow hooks will not be used for lifting of the apparatus.
0012300	Bracket, License Plate, Frt Bumper Non-Illuminated	**LICENSE PLATE BRACKET** A non-illuminated license plate bracket will be mounted on the front bumper. The bracket will be formed from bright stainless steel.
0772084	Standard Hood, SFA, International	**HOOD** The hood will be a three-piece Fiberglass construction. It will tilt forward and include splash panel and under hood insulation for sound abatement. Rubber fender extensions will be installed on the wheel openings.
0762462	Cab, 4-door Crew Cab, International HV, BX3	**CAB** Type: Four (4) Door, Conventional (engine forward) Construction: Welded Steel and Fiberglass Accessories: - Tinted Glass in all Windows - Black Rubber Floormats - Dual Sun-Visors - 18.00" Cab Entrance Handrails - 1.28" diameter extruded aluminum with rubber inserts one (1) each side - Dome Light with Map Light - Fresh Air Heater and Defroster - Fiberglass Front End, Three (3) Piece Construction - Composite Aero Design Halogen Headlights - Air Ride Cab Suspension
0024223	Cab Interior, IHC, Gray	**CAB INTERIOR, IHC, GRAY** Gray Vinyl Upholstery

0582768	Grille, Chromed Plastic, Stationary, International	**CAB GRILLE - STATIONARY** The cab grille will be a chrome plated high impact plastic with a vertical channel design, and will include chrome headlight bezels. The grille will be attached to the radiator core support structure and will not tilt with the hood.
0762934	Mirrors, C-Loop, Bright Finish Heads, Power Adjust, Heated, International MV/HV	**MIRRORS** Mirrors with 14.10" x 7.55" flat rear view with integral convex mirrors will be provided on both sides of the cab. The mirror housings will have a bright finish with integral LED clearance lights. Both sides will be remote controlled with thermostatically controlled heated glass.
0762227	Step Package, Under Front Cab Doors, NFPA Compliant, Wildland BX3	**CAB ACCESS STEPS** The cab steps under the front doors will be provided by the chassis manufacturer. These steps will be modified by the apparatus manufacturer as required to meet NFPA step requirements.
0767309	Compartment, Tool, Under RH Crew Cab, Wildland BX3	**COMPARTMENT, STORAGE** A double-door storage compartment will be provided below the right side crew cab door. Both doors will be double pan construction with a D-ring latch and vertical hinges. The exterior of this compartment will serve as an entrance step to the crew cab. An LED compartment light will be provided inside the compartment with a magnetic switch.
0767312	Compartment,Tool/Brass, Under LH Crew Cab, Max Size, BX3	**COMPARTMENT, STORAGE** A storage compartment for tools and brass attachments will be provided below the left side crew cab door. There will be a drawer style tray that slides out for access to the equipment. The exterior of this compartment will serve as an entrance step to the crew cab. An LED compartment light will be provided inside the compartment with a magnetic switch.
0637488	Lights, Cab & Crw Cab Acs Stps, LED, 4 Door Cab, BX Product	**STEP LIGHTS** There will white LED step lights provided to meet NFPA step lighting requirements. Lights will be installed at each cab and crew cab door step. The lights will be activated when any cab door is opened.
0070598	Daytime Running Lts, Commercial	**DAYTIME RUNNING LIGHTS** The chassis will be provided with daytime running lights.
0773943	Air Conditioning, Commercial	**AIR CONDITIONING** An air conditioner will be provided that is integral with heater and defroster system.
0759502	Ember Screen, for AC Filter, Air Intake, International	**AIR CONDITIONING EMBER FILTER** An ember filter will be provided by the commercial chassis OEM to keep embers out of the HVAC filter element.
0005940	Lights, Engine Compt, (2) Commercial Chassis	**ENGINE COMPARTMENT LIGHTS** Two (2) engine compartment lights will be installed under the engine hood, of which the switches are an integral part.
0731748	Console, 4-Door, Switches, Radio and Storage, BX3	**CAB CONSOLE** There will be a console located between the front seats with room for radio installation, the electrical and emergency switches, a siren and auxiliary pump controls (if the truck is so equipped). The area for the siren and electrical and emergency switches will be located toward the front of the console. The console will be configured such that the auxiliary pump controls are to be located toward the right side for easier control by the officer . It will also be also be designed without the need to accommodate a turret control joystick . At the rear of the console will be a storage area with an open top . It will be constructed of smooth aluminum and painted black.
0767593	Seating Capacity, Cab, 4-Door, Wildland BX3	**SEATING CAPACITY** The seating capacity in the cab will be five (5).
0073019	Seats, Cab, Air driver w/Fxd Companion Seat - International	**SEATING** Seating inside the cab will consist of a high back air-suspension driver seat and a high back non-suspension officer seat.

0762355	Seats, 3-man bench - International, Non-NFPA 2016 Compliant	**SEATING (crew cab) Non-NFPA 1906 COMPLIANT** Three (3)-man bench seat with shoulder belts on the outside seat positions shall be provided. NFPA 1906, 2016 edition, section 4.11 requires all apparatus have a vehicle data recorder, and that the data recorded includes "seat occupied" and "seat belt status". This seat does not provide the necessary sensors to accomplish the requirements of section 4.11. Per fire department specification and request, this apparatus shall be non-compliant to NFPA 1901 standards effective at time of contract execution.
0551164	Seat Belt Web Length, Commercial Chassis	**SEAT BELT WEB LENGTH** The chassis seat belt web length as supplied by the commercial chassis manufacturer will be compliant to NFPA 14.1.3.2 and 14.1.3.3.
0584364	Seat Belts, Red, Commercial Chassis	**SEAT BELTS** All seating positions in the cab and crew cab (if applicable) will have red seat belts.
0547549	Helmet Storage, Not Required, NFPA 1906 Apparatus	
0767583	Portable Hand Light, Not Required, NFPA 1906 2016 Apparatus	
0584358	Cab Instrumentation, Commercial Chassis	**CAB INSTRUMENTS** - Engine Temperature Gauge and Warning Buzzer - Engine Oil Pressure Gauge and Warning Buzzer - Speedometer with Odometer - Engine Tachometer - Engine Hourmeter - Fuel Level Gauge - DEF Level Gauge and Warning Lamp - Voltmeter: Low voltage red warning light and audible alarm - Air Brake Pressure Gauge - Air Restriction Indicator - Circuit Breakers: For overload protection of electric circuits - Ignition Switch: Keyless type
0767575	Panel, Emergency Switch, on Console, BX3	**EMERGENCY SWITCH PANEL** An emergency switch panel will be provided in the cab. The switch panel will be located on the floor mounted console.
0641093	Light, Do not move apparatus, Commercial, BX Program	**"DO NOT MOVE APPARATUS" INDICATOR** A flashing red indicator light (located in the driving compartment) will be illuminated automatically per the current edition of NFPA. The light will be labeled "Do Not Move Apparatus If Light Is On". The same circuit that activates the Do Not Move Apparatus indicator will not activate any alarm when the parking brake is released.
0005926	Light, Open Door - Commercial Std	**OPEN DOOR INDICATOR LIGHT** A red "open door" indicator light will be provided inside the cab, in clear view of the driver, to warn of an open compartment door.
0072620	Wiper control, intermittent feature Commercial	**WIPER CONTROL** Wiper control will include an intermittent feature and windshield washer controls.
0759671	Wiring,Spare,4.8 A 12V DC,USB Termination Blue Sea 1045, on Rear of Console, BX3	**SPARE CIRCUIT** There will be two (2) dual USB fast charge socket mounts installed in the cab of the apparatus. The above wires will have the following features: The positive wire will be connected directly to the battery power. The negative wire will be connected to ground. Wires will be protected to 4.8 amps at 12 volts DC. The USB socket mount will be installed on the rear of the center cab console. Termination will be a Blue Sea Systems part number 1045 dual USB charger socket. Wires will be sized to 125% of the protection. This circuit(s) may be load managed when the parking brake is applied.
0762221	Auxiliary Power Outlet (12V) and USB Port, Commercial Chassis	**12V POWER OUTLET AND USB PORT** A 12-volt auxiliary power output and a USB port will be provided by the chassis manufacturer. They will be located in the instrument panel.

0762644	Radio, AM/FM Stereo, w/Weather Band & Clock, International, BX3	**RADIO** A digital electronic tuning AM/FM stereo with a weather band and clock will be provided. The speakers will be the standard speakers provided with the AM/FM radio system .
0622928	Not Available, Vehicle Information Center, Multiplex System, Commercial Chassis	
0734854	Collision Mitigation, Not Requested	
0764276	Vehicle Data Recorder, Single Module, w/o Seat Belt Monitor, Wildland BX3	**VEHICLE DATA RECORDER** A vehicle data recorder (VDR) will be provided. The VDR will be capable of reading and storing vehicle information. The VDR will be capable of operating in a voltage range from 8VDC to 16VDC. The VDR will not interfere with, suspend, or delay any communications that may exist on the CAN data link during the power up, initialization, runtime, or power down sequence. The VDR will continue operation upon termination of power or at voltages below 8VDC for a minimum of 10ms. The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A CD provided with the apparatus will include the programming to download the information from the VDR. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The vehicle data recorder will be capable of recording the following data via hardwired and/or CAN inputs: Vehicle Speed - MPH Acceleration - MPH/sec Deceleration - MPH/sec Engine Speed - RPM Engine Throttle Position - % of Full Throttle ABS Event - On/Off Master Optical Warning Device Switch - On/Off Time - 24 Hour Time Date - Year/Month/Day
0763435	Two-Way Radio Accommodation Package - Wildland/BX3	**TWO-WAY RADIO ACCOMMODATION PACKAGE** One set of 12 volt wire leads will be provided for the future installation of a two-way radio. These leads will consist of one (1) 30-amp battery direct circuit, one (1) 10-amp battery switched circuit and one (1) ground circuit. These leads will be 3' long and terminate inside the console with heat shrink caps. One (1) NMO mobile radio antenna mount with RG-58A/U stranded coaxial cable will be provided. The antenna mount will be installed through the cab roof, and the coaxial cable will be routed to inside the center console. All wiring will be neatly coiled and clearly marked. A weatherproof cap for the antenna mount will also be installed.
0612323	Weldon V-MUX, Electrical System, International Chassis, BX3	

0770583	Electrical System, International HV, Wildland BX3	**ELECTRICAL** All 12-volt electrical equipment installed by the apparatus manufacturer will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run in loom or conduit where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids. Electrical wiring and equipment will be installed utilizing the following guidelines: (1) All holes made in the roof will be caulked with silicon. Rope caulk is not acceptable. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof. (2) Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body. (3) Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work. (4) Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will require this compound in the plug to prevent corrosion and for easy separation (of the plug). (5) All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area. (6) All electrical terminals in exposed areas will have silicon applied completely over the metal portion of the terminal. All emergency light switches will be mounted on a separate panel installed in the cab. A master warning light switch and individual switches to be provided to allow pre-selection of emergency lights. The light switches will be "rocker" type with an internal indicator light to show when switch is energized. All switches will be properly identified and mounted in a removable panel for ease in servicing. Identification of the switches will be done by either printing or etching on the switch panel. The switches and identification will be illuminated. All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments. An operational test will be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order. The results of the tests will be recorded and provided to the purchaser at time of delivery.
0762337	Single Start, (3) Grp 31, 660 CCA each, Ext/Crew Cab, International	**BATTERY SYSTEM** A single starting battery system will be provided consisting of three (3) 12 volt, 660 CCA, maintenance-free, group 31 batteries. The batteries system will have a total of 1980 CCA with a minimum reserve capacity of 540 minutes.
0768600	Battery Relocation Not Required - International HV and 4x4	
0897716	Battery Location, Top of Crew Cab Step Compartment, Left Side	**BATTERY LOCATION - ABOVE CREW CAB STEP COMPARTMENT** The batteries will be relocated by the apparatus manufacturer. They will be installed on top of the left side crew cab step compartment. That compartment is defined elsewhere in this specification.
0072685	Selector, Single Start Battery, Commercial Chassis	**MASTER BATTERY SWITCH** A master battery switch, to activate the battery system, will be provided inside the cab within easy reach of the driver. The master battery disconnect switch will be wired between the starter solenoid and the remainder of the electrical loads on the apparatus. A green "battery on" indicator light, visible from the driver's position, will be provided.
0767193	Charger, Sngl Sys, IOTA, DSL 45, 45 amp, BX3, BX	**BATTERY CHARGER** There will be an IOTA, Model DSL 45, 45 amp battery charger provided. The battery charger will be wired to the AC shoreline inlet defined elsewhere in this proposal.
0764272	Location, Charger, in Cab Behind Crew Cab Seat, BX3	**BATTERY CHARGER LOCATION** The battery charger will be located in the cab behind the crew cab seat.
0530960	Not Required, Remote Battery Charger Indicator	

0767064	Shoreline, 20A 120V, Kussmaul Auto Eject, for Battery Charger, BX3	**KUSSMAUL AUTO EJECT FOR SHORELINE** one (1) shoreline inlet will be provided to operate the dedicated 120-volt circuits on the truck without the use of the generator. The shoreline receptacle (s) will be provided with a NEMA 5-20, 120 volt, 20 amp, straight blade Kussmaul auto eject plug with a yellow weatherproof cover. The cover is spring loaded to close, preventing water from entering when the shoreline is not connected. A solenoid wired to the vehicle's starter is energized when the engine is started. This instantaneously drives the plug from the receptacle. The shoreline will be connected to the battery charger. A mating connector body will also be supplied with the loose equipment.
0767063	Shoreline Location, BX3	The shoreline receptacle will be located on the driver's side, under the crew cab door .
0607607	Alternator, 325 amp Leece-Neville, International	**ALTERNATOR** The alternator will be a 12V, 325 Amp, Leece Neville pad mount alternator.
0634181	Load Manager, Inc w/MUX Electrical System , BX Program	**ELECTRONIC LOAD MANAGEMENT** Included with the apparatus manufacturer's electrical system will be a programmable load management system. This system will monitor the vehicle's 12-volt electrical system, and automatically reduce the electrical load in the event of a low voltage condition and by doing so, ensures the integrity of the electrical system.
0762588	Cab Lighting, LED Clearance/Marker/Fender Turn Signals, International HV	**EXTERIOR LIGHTING** Exterior lighting will meet or exceed Federal Department of Transportation, Federal Motor Vehicle Safety Standards and National Fire Protection Association requirements in effect at time of proposal. Front headlights will be halogen type and comply to all FMVSS requirements. Five (5) LED clearance and marker lights will be installed across the leading edge of the cab. **TURN SIGNALS, FRONT** Halogen front turn signals will be provided. Side LED turn signals which include LED side marker lights will be mounted on the fender.
0669538	Lights, Clearance/Marker/ID, Rear, P25 LED 7Lts, Pumper/Tanker/PUC	**REAR CLEARANCE/MARKER/ID LIGHTING** There will be three (3) LED identification lights located at the rear installed per the following: As close as practical to the vertical centerline Centers spaced not less than 6.00" or more than 12.00" apart Red in color All at the same height There will be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following: To indicate the overall width of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the rear All at the same height There will be two (2) LED lights installed on the side of the apparatus used as marker lights as close to the rear as practical per the following: To indicate the overall length of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the side All at the same height There will be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground. There will be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground. Per FMVSS 108 and CMVSS 108 requirements.
0619776	Lights, Tail, Truck-Lite 4.00" Round Grommet Mount, LED Lights, Wildland BX3	**REAR FMVSS LIGHTING** The rear stop/tail and directional lights will be Truck-Lite®, 4.00" round LED lamp kits. Each lamp kit will include a lamp, a rubber grommet and a connector plug. The following light kits will be provided: Two (2) Truck-Lite, Model 44002R, red stop/tail light assemblies. Two (2) Truck-Lite, Model 44001Y, amber directional light assemblies. The lights will be mounted on the rear face of the rear fender compartment with the red stop/tail light assemblies located at the bottom of the light cluster, in lieu of the standard.
0689409	Lights, Backup, Truck-Lite Model 44350C, LED, Grommmet Mount	Two (2) Truck-Lite, Model 44350C, LED backup lamps with grommets will be provided.

0889577	Bracket, License Plate & Light, P25 LED, Stainless Brkt	**LICENSE PLATE BRACKET** One (1) license plate bracket constructed of stainless steel will be provided at the rear of the apparatus. One (1) white LED light with chrome housing will be provided to illuminate the license plate. A stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.
0589905	Alarm, Back-up Warning, PRECO 1040	**BACK-UP ALARM** A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse will be provided. The device will sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.
0767028	Lights, Perimeter Cab, Amdor AY-LB-12HW012 LED 4Dr, NFPA 1906 BX3	**CAB PERIMETER SCENE LIGHTS** There will be four (4) Amdor, Model AY-LB-12HW012, 190 lumens each, 12.00" white LED strip lights provided. One (1) under the driver's side cab access step. One (1) under the passenger's side cab access step. One (1) under the passenger's side crew cab access step. One (1) under the driver's side crew cab access step. The lights will be activated when the battery switch is on and the respective door is open and whenever control has been selected for the body perimeter lights.
0769559	Lights, Perimeter Pump House, Amdor AY-LB-12HW012 LED 2lts	**PUMP HOUSE PERIMETER LIGHTS** There will be two (2) Amdor, Model AY-LB-12HW012, 190 lumens each, 12.00" LED weatherproof strip lights with brackets provided under the pump panel running boards, centered front to rear as much as possible, one (1) each side. The lights will be activated when the battery switch is on, and controlled by the same means as the body perimeter lights.
0766637	Lights, Perimeter Body, Amdor AY-LB-12HW012 LED 2lts, Rear Step, BX3	**BODY PERIMETER SCENE LIGHTS** There will be two (2) Amdor, Model AY-LB-12HW012 350 lumens, 12.00" long 12 volt DC LED strip lights provided at the rear step area of the body, one (1) each side shining to the rear. The perimeter scene lights will be activated when the battery switch is on, and when the parking brake is applied and a switch at the driver's side switch panel is required. EXCLUDED: [Control, Perimeter Lts]. - DS Switch Panel EXCLUDED: [Control, Perimeter Lts]. - Parking Brake Applied
0764260	Lights, Step, LED, BX3, Prk Brk	**STEP LIGHTS** White LED, step lights will be provided to meet the NFPA step lighting requirement. Lights will be provided on each side, on the front compartment face and at the rear to illuminate the tailboard. These step lights will be activated when the parking brake is applied . All other steps on the apparatus will be illuminated per the current edition of NFPA.
0764940	Light, Wln, 12V PCPSM2C Pioneer LED Fld/Spt, Surface Mnt 1st, LEFT Side, BX3	**12 VOLT LIGHTING** There will be one (1) Whelen, Model PCPSM2*, 12 volt surface mounted LED combination spot/flood light(s) located one (1) high and forward on driver's side body . The lights will be mounted with chrome flange(s). The light(s) selected above will be controlled by the following: a switch at the driver's side switch panel a switch at the driver's side pump panel These light(s) may be load managed when the parking brake is set.
0759407	Light, Wln, 12V PCPSM2C Pioneer LED Fld/Spt, Surface Mnt 1st, RIGHT Side, BX3	**12 VOLT LIGHTING** There will be one (1) Whelen, Model PCPSM2C, 12 volt surface mounted LED combination spot/flood light(s) located one (1) high and forward on passenger's side body . The lights will be mounted with chrome flange(s). The light(s) selected above will be controlled by the following: a switch at the driver's side switch panel a switch at the driver's side pump panel These light(s) may be load managed when the parking brake is set.
0603539	Not Required, Deck Lights, Rear, 1906 Wildland or Other Hose Bed & Rear Lighting	
0766626	Lights, Hose Bed, Cover, Dual LED Light Strips, BX3	**HOSE BED LIGHTS** There will be white 12 volt DC LED light strips provided to illuminate the hose bed area. Hose bed lights will be positioned to meet the photometric levels listed in NFPA for hose bed lighting requirements. The lights will be activated when the hosebed cover is raised.

0763429	Lights, Walk Surf, Additional Not Req'd, Hose Bed Light Adequate, BX3	**WALKING SURFACE ILLUMINATION** Additional lighting for the designated walking surface willl not be required. The light for illuminating the hose bed willl be adequate for the walking surface also.
0804230	WILDLAND BX3, Type 3, NFPA 1906	
0773467	Water Tank, Poly, 500 Gallon, Wildland BX3	**WATER TANK** Booster tank will have a capacity of 500 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated. Tank will be designed to provide for deep side compartments and to serve as a large sump to limit the amount of undraftable water. Tank joints and seams will be nitrogen welded inside and out. Tank will be baffled in accordance with applicable NFPA for the type of truck being constructed. Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments. Longitudinal partitions will be constructed of .38" polypropylene plastic and will extend from the bottom of the tank through the top cover to allow for positive welding. Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover. All partitions will interlock and will be welded to the tank sides. Fill tower will be constructed of .50" polypropylene. It will have a .25" thick polypropylene screen and a hinged cover. An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately four inches down the fill tower and extend through the water tank and dump to the rear of the rear axle. Tank top will be constructed of .50" polypropylene. It will be recessed .38" and will be welded to the tank sides and the longitudinal partitions. Tank top will be sufficiently supported to keep it rigid during fast filling conditions. Construction will include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. A minimum of two (2) of the dowels will be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes. A sump will be provided at the bottom of the water tank, and will include a drain plug and the tank outlet. The tank will be installed in a fabricated cradle assembly constructed of structural steel. Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel flat bar or rectangular tubing. Tank will "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, will be placed on all horizontal surfaces that the tank rests on. Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle. Mounting system to be approved by the tank manufacturer. **WATER TANK WARRANTY** Tank will have a **lifetime** warranty.
0003405	Overflow, 4.00" Water Tank, Poly	Fill tower will be constructed of .50" polypropylene and will be a minimum of 8.00" wide x 14.00" long. Fill tower will be furnished with a .25" thick polypropylene screen and a hinged cover. An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.
0766960	Foam Tank, Separate, Required	
0553725	Restraint, Water Tank, Heavy Duty, Special Type Tank, 4x4, or Export	**WATER TANK RESTRAINT** A heavy-duty water tank restraint will be provided.
0768625	Tank Fill, Direct, Rear, 2.50", Wildland	**DIRECT TANK FILL** There will be one (1) - 2.50" gated external tank fill(s) installed and properly labeled at the rear of the truck. It will be centered , with the valve installed as low as practical for easy hose connection. Piping, for the fill, will include a flow deflector to break up the stream of water entering the water tank. A 2.50" full flow ball valve with 2.50" piping and a 2.50" (F)NST chrome swivel will be located at the inlet. A 2.50" SFT style check valve will be provided to prevent backflow. A chrome plated plug and chain will be provided for the tank fill.
0773432	Hose Bed, Wildland BX3	**HOSE BED** Two main hose storage areas will be provided, one (1) on each side at the top of the truck. (In the center of the hose bed will be an equipment storage area as defined elsewhere in this specification.) Each hose storage area will be about 21.00" wide x 101.00" long (the length of the body) x 20.00" deep. Flooring of the hose bed areas will be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats will be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.

0762116	Hose Bed Capacity, 500' of 2.50" Hose, Wildland BX3	**HOSEBED CAPACITY** The hosebed shall be of a fixed design and capacity and shall accommodate a typical wildland truck rolled or flat hose storage requirements per NFPA 1906. There shall be hose storage on each side at the top of the truck with equipment / tool storage in the middle. (This center storage is defined elsewhere in this proposal.) Each side shall have a hose storage space of at least 25 cubic feet, with a total hose bed volume of at least 50.00 cubic feet.
0073494	Not Required, Divider, Hose Bed	
0751228	Covers, Hose Bed, Alum Treadplate, 4-Section, Wildland BX3	**HOSE BED COVERS** A four-section aluminum treadplate hose bed cover will be provided - two sections (one forward and one rearward) for each side of the hose bed. The covers will be hinged on the outboard side using a full length stainless steel hinge. The covers will be reinforced so that they can support the weight of a person walking on the cover. Gas shocks will aid in opening the covers and keeping them in the upright position. A safety strap to keep the covers from traveling over center will be provided. To keep them in the closed position, a latch will be provided at the rear of each rearward cover. When closed, the rearward cover will be designed to keep the forward cover in the closed position. These rear positioned latches will not require climbing on top of the covers to unlatch them. Chrome grab handles will be provided on each forward cover to aid in opening and closing the cover.
0761425	Flap, Rear of Alum Hose Bed Cover, Two Piece, Vinyl, w/Seat Belt Buckles, BX3	**HOSEBED END FLAP** A pair of black vinyl flaps will be installed on the rear, one for each of the aluminum treadplate hose bed covers. Each vinyl flap will have (2) nylon tie down straps, with seat belt buckles.
0768124	Top of Truck Gear and Equipment Storage, BX3	**TOP OF TRUCK GEAR & EQUIPMENT STORAGE** At the top of the truck will be three (3) compartments for the storage of gear and equipment. Two (2) of these storage compartments will be located toward the outside of the hose bed, one (1) on each side of the truck. These compartments will be constructed from stainless steel and incorporated into the body design and construction. Each of these compartments will be about 13.00" wide x 17.00" deep x 100.00" long. Access into these compartments will be at the rear and top. There will be a single pan vertically hinged door at the rear for each compartment. It will be constructed from brushed stainless steel and have a black push-to-open latch. The top of each of these compartments will be covered by the aluminum hose bed covers. When the hose bed covers are in the open position, contents of these compartments can be accessed from the top. The interior of these compartments will remain unpainted natural stainless steel. The floor will be smooth stainless steel and include drain holes. In the center/rear of the hose bed will be a gear/equipment storage compartment. It will be constructed from unpainted smooth aluminum. It will be about 30.00" wide x 20.00" deep x 66.00" long. Access will be from the top. A reinforced aluminum treadplate door, with a full-length stainless steel hinge will be provided. A locking D-ring latch will hold the door closed. The interior, including the floor, will be unpainted smooth aluminum. Drain holes will be provided in the floor. **WATER AND FOAM TANK DOME ACCESS** Forward of the center hose bed gear/equipment compartment will be an area primarily for housing the water and foam tank domes. The dimensions of this tank dome compartment will be about 30.00" wide x 20.00" deep x 34.00" long. It will be constructed from smooth unpainted aluminum. The tank domes will be accessed through an aluminum treadplate door on the top of this compartment that matches the construction of the center storage compartment. It will also have a full-length stainless steel hinge and a locking D-ring latch.
0768331	Running Boards, Wildland BX3	**RUNNING BOARDS** Running boards on each side of the pump module will be fabricated of .125" bright aluminum treadplate. The outer edge of the treadplate will have a punched design for extra stepping traction. Each running board will be supported by a welded tubing and channel assembly, which will be bolted to the pump compartment substructure and spaced .50" away from the pump panel.
0766413	Tailboard, w/Hinged Drop-Down Step, Wildland BX3	**REAR STEP/TAILBOARDS** A pair of 10.00" deep tailboard/steps will be provided at the rear, one each side behind the rear body bulkheads. The supporting framework will be covered with bright aluminum treadplate and will incorporate a punched design along the rearward edge for extra stepping traction. A hinged drop-down / lift-up style of step with a traction grip stepping surface will also be provided on each side of the truck to meet NFPA first-step height requirements. It will store in a manner that does not inhibit the rear angle of departure. Steps and tailboards will meet NFPA requirements.

0607673	Wall, Rear, Aluminum Treadplate, Wildland BX3	**REAR WALL, ALUMINUM TREADPLATE** The rear facing surfaces of the center rear wall directly below the hose bed will be aluminum treadplate. This treadplate serves as a kick-plate surface for the rear access steps. The bulkheads (the surface to the rear of the side body compartments) will be smooth and the same material as the body.
0766412	Tow Eyes, 1906 Wildland BX3/BLM	**TOW EYES** Two (2) rear "tow" eyes will be located at the rear of the apparatus. They will be a shackle style tow eye and will be mounted to a framework attached directly to the chassis frame rails.
0773465	Construction, Compartment, Stainless Steel, Wildland BX3	**COMPARTMENTATION** The body and compartments will be fabricated of corrosion resistant, low carbon austenitic, brushed and painted 304L stainless steel. Due to superior corrosion resistance of 300 stainless grades, other grades of austenitic stainless steels, or any grade of ferritic or martensitic stainless, will not be acceptable. The side compartments will be an integral assembly with the rear fenders. Removable circular fender liners will be provided for prevention of rust pockets and ease of maintenance. The compartment flooring will be of the sweep out design with the floor higher than the compartment door lip. The front facing compartment walls will be covered with bright aluminum treadplate. All screws and bolts which protrude into a compartment will have acorn nuts on the ends to prevent injury. **UNDERBODY SUPPORT SYSTEM** Due to the severe loading requirements of this Wildland truck, a method of body and compartment support suitable for the intended load will be provided. The backbone of the support system will be the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads. **AGGRESSIVE WALKING SURFACE** All exterior surfaces designated as stepping, standing, and walking areas will comply with the required average slip resistance of the current NFPA standards. **TESTING OF BODY DESIGN** Body structural analysis will be fully tested. Proven engineering and testing techniques such as finite element analysis, stress coating and strain gauging have been performed with special attention given to fatigue, life and structural integrity of the body and substructure. A similar body design will be tested while loaded to its greatest in-service weight. The criteria used during the testing procedure will include: - Raising opposite corners of the vehicle tires 12.00" to simulate the twisting a truck may experience when driving over a curb. - Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions. - Driving the vehicle at 35 mph on a "washboard" road. - Driving the vehicle at 55 mph on a smooth road. - Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement. Evidence of actual testing techniques will be made available upon request.
0773598	LS, Flush Style Door, Full-Depth, Wildland BX3	**LEFT SIDE COMPARTMENTATION** A vertically hinged double door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 58.00" wide x 39.00" high x 23.50" deep. The depth of the compartment will be calculated with the compartment door closed. The clear door opening of this compartment will be 55.00" wide x 39.00" high. Positive door holders will be furnished with this compartment. A full height, vertically hinged, single door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 34.00" wide x 59.00" high x 23.50" deep. The depth of the compartment will be calculated with the compartment door closed. The compartment interior will be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment will be 31.00" wide x 59.00" high. A positive door holder will be furnished with this compartment. The rear compartment will be designed to provide a superior angle of departure suitable for off-road use. Main body compartments will be vented. The vents will allow air circulation between compartments and/or to the outside atmosphere. They will be designed and located for optimum performance. **TOOL COMPARTMENT** Located below the compartment behind the rear wheels will be a tool compartment. This compartment will be about 24.75" deep and have a door opening of about 19.00" wide x 7.50" high. It will have a single pan horizontally hinged drop-down door. The door will be constructed from brushed stainless steel and have a black push-to-open latch. **FENDER PANEL STORAGE COMPARTMENT** Two (2) fender panel storage compartments will be provided. They will be located ahead of and behind the rear wheel in the body fender panel. These compartments will be designed to make use of the available space within the fender panel. The compartments will be sized as large as practical to allow for the storage of an air bottle, air pack or other tools or equipment. A drain hole will be provided in the bottom of the compartment. A brushed stainless steel door with a black push-to-open latch will be provided on each compartment. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.

0773597	RS, Flush Style Door, Full Depth, w/Ladder Storage, Wildland BX3	**RIGHT SIDE COMPARTMENTATION** A vertically hinged double door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 58.00" wide x 39.00" high x 11.50" deep. The depth of the compartment will be calculated with the compartment door closed. The clear door opening of this compartment will be 55.00" wide x 39.00" high. Positive door holders will be furnished with this compartment. A full height, vertically hinged, single door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 34.00" wide x 59.00" high x 23.50" deep in the lower 21.00" of the compartment and 11.50" deep in the remaining upper portion. The depth of the compartment will be calculated with the compartment door closed. The compartment interior will be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment will be 31.00" wide x 59.00" high. A positive door holder will be furnished with this compartment. The rear compartment will be designed to provide a superior angle of departure suitable for off-road use. The back wall of the above compartments will be removable to allow access to the interior of the ladder storage area as defined elsewhere in this specification. Main body compartments will be vented. The vents will allow air circulation between compartments and/or to the outside atmosphere. They will be designed and located for optimum performance. **TOOL COMPARTMENT** Located below the compartment behind the rear wheels will be a tool compartment. This compartment will be about 24.75" deep and have a door opening of about 19.00" wide x 7.50" high. It will have a single pan horizontally hinged drop-down door. The door will be constructed from brushed stainless steel and have a black push-to-open latch. **FENDER PANEL STORAGE COMPARTMENT** Two (2) fender panel storage compartments will be provided. They will be located ahead of and behind the rear wheel in the body fender panel. These compartments will be designed to make use of the available space within the fender panel. The compartments will be sized as large as practical to allow for the storage of an air bottle, air pack or other tools or equipment. A drain hole will be provided in the bottom of the compartment. A brushed stainless steel door with a black push-to-open latch will be provided on each compartment. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.
0768326	Doors, ALUMINUM, FLUSH STYLE w/"D" Handle - Side Compartments, Wildland BX3	**DOORS, SIDE COMPARTMENTS** All hinged body side compartment doors will be will be fabricated of 5052-H32 aluminum with a tensile strength range of 31,000 to 38,000 psi. They will be flush style with double pan construction. Doors will have a full interior panel. To provide additional door strength, a "C" section reinforcement will be installed between the outer and interior panels. A closed cell rubber gasket will be installed to provide a weather resisting compartment seal. A stainless steel continuous hinge will be provided on each compartment door. Door lock mechanisms will be protected to prevent fouling of the lock in the event equipment inside shifts onto the lock area. Latches will be recessed with polished stainless steel "D" ring handles. A gasket will be provided between the "D" ring handle and the door. **SCUFFPLATE ON INTERIOR OF COMPARTMENT DOOR(S)** **There will be a a brushed stainless steel scuffplate installed on the inside panel of each door pan that covers the width and height of the door.** **Scuffplates will be located on all main body compartment doors as follows: B1, LS1, LS2, RS1, RS2 and RS3 .**
0615834	Rear Compt, Flush Style Door, Wildland BX3	**COMPARTMENTATION, REAR** A vertically hinged, double door compartment at the rear of the truck will be provided. Interior dimensions of this compartment will be 48.00" wide x 45.00" high x 25.50" deep. Depth of the compartment will be calculated with the compartment door closed. Clear door opening of this compartment will be 30.00" wide x 39.00" high. Each of the vertically hinged compartment doors will be provided with a positive door holder.
0626754	Doors, ALUMINUM, FLUSH STYLE w/"D" Handle - Rear Compartment, Wildland BX3	**DOORS, REAR COMPARTMENT** The rear compartment doors will be will be fabricated of .125", 5052-H32 aluminum with a tensile strength range of 31,000 to 38,000 psi. They will be flush style with double pan construction. Doors will have a full interior panel. To provide additional door strength, a "C" section reinforcement will be installed between the outer and interior panels. The doors will be provided with a closed cell rubber gasket to provide a weather resisting compartment seal. A stainless steel continuous hinge will be provided on each compartment door. Door lock mechanisms will be protected to prevent fouling of the lock in the event equipment inside shifts onto the lock area. Latches will be recessed with polished stainless steel "D" ring handles. A gasket will be provided between the "D" ring handle and the door.
0597111	Not Required, Pull Strap	

0738852	Keyed Locks for Latches, Key Style 1250, Body Compts, Wildland BX3	**KEYED LOCK(S) - BODY COMPARTMENTS** The main body compartment door D-ring latches will be furnished with a keyed lock utilizing key style #1250. This includes compartments: LS1 and LS2, RS1, RS2 and RS3 (pump house compartment) and the rear compartment (B1). Other storage areas that also use the same size D-ring latch will also be the key#1250 locking style. These compartments are: the ladder storage door at the rear of the truck, the gear and equipment storage compartment and water/foam dome cover above the water tank.
0766933	Lights, Body Compt, Pierce LED, Dual Lt Strips, Each Side of Door, BX3	**COMPARTMENT LIGHTING** There will be six (6) compartment(s) with two (2) white 12 volt DC LED compartment light strips. The dual light strips will be centered vertically along each side of the door framing. There will be two (2) light strips per compartment. The dual light strips will be in compartment(s): R1, LS1, LS2, RS1, RS2 and RS3 and the tool/equipment compartment on the right side pump panel. A single LED strip light will be provided in each tool compartment located below each rear/side (LS1/RS1) compartment. Opening the compartment door will automatically turn the compartment lighting on.
0768324	Shelf Tracks, Unpainted, Wildland BX3	**MOUNTING TRACKS** There will be five (5) sets of tracks for mounting shelf(s) in LS1, LS2, RS1, RS2 and B1 . These tracks will be installed vertically to support the adjustable shelf(s), and will be full height of the compartment. The tracks will be unpainted with a natural finish.
0766575	Shelves,Adjustable,500 lb Capacity,Full Width/Depth,Brushed Alum,Wildland BX3,BX	**ADJUSTABLE SHELF** There will be five (5) shelves provided. Each shelf will be constructed of 0.188" aluminum with 2.00" high sides. Each shelf will as wide and as deep as the compartment space will allow. Each shelf will have a brushed finish. Each shelf will have a load capacity of 500 lb. Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track. The shelves will be held in place by 0.12" thick stamped plated brackets and bolts. The location will be in RS1 centered between the floor and the ceiling, in RS2 centered between the floor and the ceiling, in LS1 centered between the floor and ceiling, in LS2 centered between the floor and ceiling and in B1 centered between the floor and ceiling .
0004015	Trim, Alum Treadplate on Lower Body	**LOWER BODY TRIM** Bottom edge of the side compartments will be trimmed with bright aluminum treadplate. Trim will be about 2.00" high. It will not be an integral part of the body construction, which allows easy replacement in the event of damage.
0739426	Fender Crowns, Rear, Rubber, w/Removable Liner, BX3	**BODY FENDER CROWNS** Black rubber fender crowns will be provided around the rear wheel openings. **BODY FENDER LINER** A painted fender liner will be provided. The liners will be removable to aid in the maintenance of rear suspension components.
0766681	Hose, Hard Suction, Provided by Fire Department, NFPA 1906 2016, Wildland	**HARD SUCTION HOSE** NFPA 1906, 2016 edition, section 16.13.2.2.1 references suction hose. Hose is not on the apparatus as manufactured. The fire department will provide suction or supply hose.
0527021	Handrails Located @ Front Body	**HANDRAILS** The handrails will be 1.25" diameter knurled aluminum to provide a positive gripping surface. Chrome plated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces. Drain holes will be provided in the bottom of all vertically mounted handrails.. Handrails will be located on the front of the body in positions needed to meet NFPA requirements.
0531152	Handrails, Rear Bulkhead, Wildland	One (1) vertical handrail, with chrome stanchions will be located on each rear bulkhead.
0758878	Handrail, Rear, Above Hose Bed, BX3	One (1) handrail will be installed above the hose bed.
0044229	No Extension Ladder Req'd	
0074231	No Roof Ladder Req'd	

0773396	Ladders, Encl'd Complete, in RS Body, w/Pike Poles, Wildland BX3	**LADDER STORAGE** A ladder storage area will be provided inside the upper section of the right side compartments. The ladder rack will reduce the depth of the upper section in the side compartments by approximately 12.00". Partitions will be installed inside the compartments to conceal the ladder storage. The area will extend the full length of the body and will be enclosed to protect the ladders and other equipment from road dirt. The ladder will be stored vertically with stainless steel and Dura-Surf slides to aid in loading and unloading of the ladders. Two (2) aluminum pike pole storage tubes will be provided above the ladder storage. Access will be at the rear via a vertically hinged single pan aluminum treadplate door with a locking "D-ring" latch. The ladder storage will accommodate a 20' aluminum extension ladder (Duo Safety model #912 or equivalent) and 2 pike poles (standard or all-purpose head).
0074248	Not Required, Folding Ladder	
0766277	I Zone Bracket, Pair, Located Outboard, Wildland Style	**I-ZONE BRACKETS - WILDLAND STYLE - OUTBOARD** A pair of I-Zone brackets will be provided and mounted at the rear of the apparatus, one each side, outboard on the rear body bulkheads. The brackets will be designed with adequate reinforcement to eliminate flexing of the body (oil canning) and not interfere with rear facing lights while carrying hose. The design of these I-Zone brackets will have a 45 degree receiver and a removable extension piece that fits into the brackets for carrying hose.
0768315	Steps,(4) Cast Products,Model SP2011-1/(2) Model SP2016-1,Rear Body,Wildland BX3	**REAR ACCESS STEPS** A quantity of six (6) wedge style steps will be provided at the rear for access to the hose bed. The first step on each side will be 14.00" wide by 8.00" deep - Cast Products model SP2016-1 or equivalent. The second and third step on each side will be 6.50" wide by 8.00" deep - Cast Products model SP2011-1 or equivalent. Each step will include a handhold and an LED light provided above the step surface.
0762015	Step Access to Running Boards, w/4x4 Chassis, Wildland BX3	**ACCESS to PUMP HOUSE RUNNING BOARDS** Access to the pump house running boards will be via the crew cab access steps. For break over and ground clearance purposes, additional steps below the running boards are not desired.
0766970	Auxiliary Pump, Hydraulic Drive (Price Only)	
0766267	Pump,Auxiliary, Darley,1.5AGH,Hyd PTO Drive,150 GPM, 2016 NFPA 1906,Wildland BX3	**AUXILIARY PUMP** A hydraulic driven Darley 1.5AGH centrifugal pump will be provided for pump and roll operations. The pump will have a 2.00" suction inlet and a 2.00" discharge port. The pump will have a gear type hydraulic motor. The pump case will be vertically split for removal and service of the impeller. A Viton, carbon/ceramic shaft seal will be provided. The pump shaft and wear ring will be stainless steel. A variable displacement piston type hydraulic pump supplying the hydraulic motor on the water pump will be supplied. The displacement of the hydraulic pump will be controlled by a fixed orifice type, load sensing, hydraulic circuit. The hydraulic system will have a properly sized reservoir, cooler, filter and accessory components. The components will be mounted in the vehicle body to facilitate routine maintenance operations. The hydraulic drive design will be certified by manufacturer of the primary hydraulic components as suitable for the intended use and duty. All components of the water pump and drive system will be readily available on the domestic hydraulic market (USA). An auxiliary pump drain will be supplied. **AUXILIARY PUMP PERFORMANCE** The pump will be rated by the pump manufacturer on bench testing to the deliver the following performance at 1000 engine rpm. These numbers will be reduced when installed on the apparatus due to plumbing restrictions and/or the location of this water pump. - 150 gpm @ 80psi - 100 gpm @ 200psi - 35 gpm @ 300psi This pump will also meet NFPA 1906 section 16.2.2.1 for pump and roll performance/requirements. It will deliver 20 gpm @ 80 psi while moving at 2 mph or less.
0626923	Installation Location, Aux Pump, Inside Pump house Area	**AUXILIARY PUMP INSTALLATION** The auxiliary pump will be installed and located within the main pump module.
0788341	Not Required, Fuel Supply, (Hydraulic Drive Pump)	
0626844	Not Required, Exhaust Routing, Aux Pump	

0811624	Discharge Connections, Aux Pump, Standard, BX3	**AUXILIARY PUMP DISCHARGE CONNECTIONS** A discharge manifold will be supplied as required to allow plumbing of the required discharges. This pump will supply water to the foam discharges, left side discharge and the tank fill line. Check valve(s) will be provided to prevent backflows between the main pump and the auxiliary pump.
0786060	Tank to Pump Line, Hyd Aux Pump, 2.00", Separate Tank to Pump Line	**AUXILIARY PUMP -TANK TO PUMP CONNECTION** An independent 2.00" tank to pump piping with a 2.00" valve will be provided for the auxiliary pump. It will not be part of the main pump's tank to pump line nor draw water through the main pump. The design will include a method for anti-swirl protection and prevent pump cavitation. The tank to pump line will run from the pump into the front face of the water tank. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing. A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank. This tank to pump connection will have an electric valve that will open when the Pierce hydraulic pressure controller(s) "ON" switch is activated. The valve will close when the "OFF" switch is activated. The electric tank to pump valve will not be gateable.
0805019	Not Required, Primer for Aux Pump, Gravity Prime, BX3	**AUXILIARY PUMP PRIMING** The auxiliary pump will be installed in such a manner that an additional primer or priming valve is not required. The pump will prime by gravity flow of water from the tank.
0766930	Controls, Hydraulic Aux Pump, Pierce, Dual,In Cab and at Pump Panel,Wildland BX3	**AUXILIARY PUMP GAUGES AND CONTROLS** The auxiliary pump system will be activated by a switch in the cab near the driver's position and on the left pump operator's panel. To control the pump pressure, a Pierce electronic water pressure controller will also be provided in the cab near the driver's position and on the left pump operator's panel. The panel containing the activation switch will also include a digital pressure gauge, pump and system status indicators and the pressure adjustment knob.
0626933	Line, Recirculating, Aux Pump, 499gpm and less, 0.375", Automatic	**AUXILIARY PUMP AUTOMATIC RECIRCULATING LINE** The auxiliary pump will be furnished with a 0.375" automatic pump recirculating line with a check valve. The line will be routed from the discharge side of the auxiliary pump to the water tank. This line will be designed to circulate water continuously from the auxiliary pump back to the tank to help maintain the water pump temperature at a safe level. The recirculating line will be plumbed into the water tank dome. It will include a check valve to facilitate priming and prevent water backflow. The check valve will be installed as close as possible to the water tank dome.
0766268	Engineering Review of Aux Pump System Not Req'd - Wildland BX3	
0773415	Pump House, Side Control, 28", Wildland BX3	**PUMP COMPARTMENT** The pump compartment will be manufactured separate from the hose body and compartments. It will be a fabricated assembly of stainless steel tubing, angles and channels which supports both the fire pump and the side running boards. The pump compartment will have substructure to facilitate the pump mounting. The substructure will be mounted on the chassis frame rails with rubber isolators in a four point pattern to allow for chassis frame flex while in motion. Pump compartment, pump, plumbing, gauge panels, hose body and compartments will be detachable and removable from the chassis and body as a single assembly. **PUMP MOUNTING** Pump will be mounted to the substructure which is attached to the chassis frame rail using the rubber isolators. The mounting allows for vehicle flex while maintaining pump alignment within the pump compartment. **PUMP CONTROL PANELS (Side Control)** All pump controls and gauges will be located at the left side of the apparatus and properly marked. The pump panels will be fastened to the enclosure with screws. The pump module will have a nominal width of 28.00". Brushed stainless steel trim collars will be installed around all inlets and outlets. Valve controls will have locking control rods. **IDENTIFICATION TAGS** All discharge outlets will have color coded identification tags, with each discharge having its own unique color. Color coding will include the labeling of the outlet and the drain for each corresponding discharge.

0769817	Pump, Darley, LSP, 1000 GPM, Single Stage, PTO Drive, Wildland BX3	**PUMP** Pump will be a Darley LSP 1000 gpm midship mounted centrifugal type. It will be driven by power take off (PTO) from the vehicle transmission. Pump will deliver the percentage of rated discharge at pressures indicated below: - 100% of rated capacity at 150 psi net pump pressure. - 70% of rated capacity at 200 psi net pump pressure. - 50% of rated capacity at 250 psi net pump pressure. Pump body will be fine-grained gray iron, bronze fitted. The pump will be easily separated from a one-piece section for convenient servicing when required. The impellers will be high strength bronze alloy accurately balanced and splined to pump shaft for precision fit and durability. Double seal ring design will help to minimize end thrust. Deep groove radial type oversize ball bearings will be provided. The bearings will be protected at the openings from road dirt and water with an oil seal and a water slinger.
0007153	Seal, Mechanical, Darley, Silicon Carbide	**MECHANICAL SEALS** Silicon carbide mechanical seals will be provided. The seals will be spring loaded and self-adjusting. The seals will have a minimum thermal conductivity of 126 W/m*K to run cooler. Seals will have a minimum hardness of 2800 kg/mm2 to be more resistant to wear, and have thermal expansion characteristics of no more than 4.0 X106mm/mm*K to be more resistant to thermal shock.
0014633	Trans, Pump, Darley, PTO, 3 Gear	**PUMP TRANSMISSION** A three gear transmission with helical gears and a 1.375" diameter splined shaft will be provided. The pump transmission will be driven by a hot shift PTO attached to the Allison Transmission.
0603731	Pumping Mode, Stationary and Pump in Motion (Pressure Gauge in Cab Included)	**PUMPING MODE** An interlock system will be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system will be designed to allow stationary pumping and the truck to be in motion while pumping. A digital pump pressure gauge will be supplied in the cab.
0535276	Pump Shift, PTO Pump	**PUMP SHIFT** A pump shift will be provided within easy reach of the driver for engagement of the PTO driven pump. The shift will include the indicator lights as mandated by NFPA. The pump shift control will be illuminated to meet NFPA requirements.
0581602	Transmission Lock-up, Not Req'd, PTO Pump	
0004547	Auxiliary Cooling System	**AUXILIARY COOLING SYSTEM** A supplementary heat exchange cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the engine water. The heat exchanger will be a separate unit. It will be installed in the pump or engine compartment with the control located on the pump operator's control panel. The exchanger will be plumbed to the master drain valve.
0014486	Not Required, Transfer Valve, Single Stage Pump	
0746511	Valve, Relief Intake, TFT	**INTAKE RELIEF VALVE** A Task Force Tips A18 series relief valve will be installed on the suction side of the pump preset at 125 psig . The relief valve will have a working range of 90 psi to 300 psi. The pressure relief valve control will be located behind an access door at the right side pump panel. The outlet will terminate below the frame rails with a 2.50" National Standard hose thread adapter and will have a "do not cap" warning tag.
0794959	Controller, Pressure, Pierce, Pump Boss, PBA300	**PRESSURE CONTROLLER** A Pierce Pump Boss Model PBA300 pressure governor will be provided. A pressure transducer will be installed in the water discharge manifold on the pump. The display panel will be located at the pump operator's panel.
0613850	Primer, Waterous, VPO Motor, (1) VAP Valve, (2) Push Button Controls, PTO Pump	**PRIMER SYSTEM** A Waterous electric pump priming system conforming to standards outlined in the current edition of NFPA 1901 will be furnished with the apparatus. One (1) VPO electric motor driven rotary vane primer will be provided. One (1) VAP vacuum activated priming valve will be plumbed to the main pump. Two (2) momentary push-button controls will be provided, with one located at the pump operator's panel for the main pump and one located in the cab. The push button control system control will operate an electric priming motor and the priming valve will automatically open during priming and close when the primer is deactivated.

0506633	Plate, Test, Main Pump	**TEST PLATE** A main pump test plate will be provided at the left pump operator's panel that states the rated discharges and pressures as determined by the pump certification test.
0694360	Pump Drain, Trident Multi-Port, IPO Std Pump Drain	**PUMP DRAIN** A Trident multi port pump drain will be used in place of the standard pump drain.
0517155	Line, 0.375" Recirculating w/Check Valve, Automatic, NFPA 1906, Wildland	**RECIRCULATING LINE, WITH CHECK VALVE** A 0.375" automatic recirculating line will be run from the discharge side of the main pump to the water tank. This line will be designed to circulate water continuously from the pump back to the tank to help maintain the water pump temperature at a safe level. The recirculating line will be plumbed into the water tank dome. The recirculation line will include a check valve to facilitate priming and prevent water backflow. The check valve will be installed as close as possible to the water tank dome.
0759034	Outlet, Back Pack Pump Filler, Gravity Fed From Tank, BX3	**BACK PACK PUMP FILLER VALVE** A brass, 0.75" quarter turn ball valve with a chrome handle will be supplied for the refill of back pumps. This outlet is gravity fed from the main water tank sump. The valve plumbing will be 0.75" I.D. Aeroquip type hose with swivel fittings. It will be routed to allow smooth flow of water from the tank sump to the valve. The valve outlet will be installed at the rear of the truck below the rear compartment. A 0.75" male garden hose fitting will be provided to allow the connection of a piece of garden hose as needed to fill back pumps, etc. A manual shut off valve will be provided at the tank.
0780364	Manuals, Pump, (2) Total, Electronic Copies	**PUMP MANUALS** There will be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals will be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual will cover pump operation, maintenance, and parts.
0602487	Plumbing, Stainless Steel and Hose, Single Stage Pump, PMFD	**PLUMBING, STAINLESS STEEL AND HOSE** All inlet and outlet lines will be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's will be equipped with brass or stainless steel couplings. All stainless steel hard plumbing will be a minimum of a schedule 10 wall thickness. Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping will be equipped with victaulic or rubber couplings. Plumbing manifold bodies will be ductile cast iron or stainless steel. All piping lines are to be drained through a master drain valve or will be equipped with individual drain valves. All drain lines will be extended with a hose to drain below the chassis frame. All water carrying gauge lines will be of flexible polypropylene tubing. All piping, hose and fittings will have a minimum of a 500 PSI hydrodynamic pressure rating.
0775901	Plumbing and Manifolds, Stainless Steel, w/Foam System	**FOAM SYSTEM PLUMBING** All piping and manifolds that is in contact with the foam concentrate or foam/water solution will be stainless steel. The fittings will be stainless steel or brass. Cast iron pump manifolds will be NOT allowed.
0762334	Inlet, 5.00" - 1000 GPM Pump, Left Side Only, BX3	**MAIN PUMP INLETS** A 5.00" pump manifold inlet will be provided on the left side of the vehicle. The suction inlet will include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.
0017541	Cap, Main Pump Inlet, Rocker Lug, NST, VLH	**MAIN PUMP INLET CAP** The main pump inlets will have National Standard Threads with a rocker lug chrome plated cap. The cap will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0084610	Valves, Akron 8000 series- All	**VALVES** All ball valves will be Akron® Brass. The Akron valves will be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve. Valves will have a **ten (10) year** warranty.
0766918	Valve, Inlet(s) Recess Behind Panel, Wildland BX3	The location of the valve for the auxiliary inlet(s) will be behind the pump panel.
0004700	Control, Inlet, at Valve	**INLET CONTROL** The side auxiliary inlet(s) will incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism will indicate the position of the valve.

0505201	Inlet, Left Side, 2.50", Wildland	**LEFT SIDE INLET** There will be one (1) auxiliary inlet with a Akron 8600 2.50" valve at the left side pump operator's panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet will be provided with a strainer, chrome swivel and plug. If the gated inlet intake valve location on the pump panel is higher than the top of the frame rail, a chrome 30 degree inlet with 2.50" NH (F) swivel will be supplied.
0763478	Inlet, Right Side, 2.50", Auxiliary Inlet, Wildland BX3, BX	**RIGHT SIDE INLET** There will be one (1) auxiliary inlet with a 2.50" valve at the right side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet will be provided with a strainer, chrome swivel and plug.
0505132	Anode, Zinc, Pair, Pump, One (1) on Inlet Side & One (1) on Discharge Side	**ANODE, INLET** One (1) pair of sacrificial Zinc anodes will be provided in the water pump to protect the pump from corrosion. One (1) will be placed in the inlet side of the pump and the other one (1) in the discharge side of the pump.
0723049	Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle	**INLET BLEEDER VALVE** A 0.75" bleeder valve will be provided for each side gated inlet. The valves will be located behind the panel with a "T" swing style handle control extended to the outside of the panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders will be routed below the chassis frame rails.
0520031	Tank to Pump,(1) 3.0" Valve,4.0" Plumbing,In/Open-Out/Closed, Wildland/BX3	**TANK TO PUMP** The booster tank will be connected to the intake side of the pump with 4.00" heavy duty piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line will run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing. The control on the pump panel will be "in" when the valve is open and "out" when the valve is closed. A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.
0006764	Tank ReFill, 2.0"	**TANK FILL** A 2.00" combination tank refill and pump re-circulation line will be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.
0021138	Control, Outlets, At Valve, NFPA 1906 Wildland	**DISCHARGE OUTLET CONTROLS** The discharge outlets will incorporate a quarter-turn ball valve with the control located at the valve. The valve operating mechanism (handle) will indicate the position (open/closed) of the valve.
0768275	Outlet, Left Side, 2.50", w/1000 GPM Pump, Wildland	**LEFT SIDE DISCHARGE OUTLETS** A quantity of One (1) discharge outlet will be provided on the left side pump operator's panel. Each outlet valve will be a 2.50" quarter turn full flow ball valve with a TS-style handle.
0015027	Not Required, Elbow, Left Side Outlets	
0759639	Outlet, Left Side, 2.50" w/2" Plumbing, Adjacent to Deadlay, Wildland BX3	There will be One (1) discharge outlet with a 2.00" valve on the left side of the apparatus, adjacent the deadlays, terminating with a male 2.50" National Standard hose thread adapter. In addition, the discharge will be equipped with a 2.50" (F) x 1.50" (M) NST reducer.
0035094	Not Required, Elbow, Left Side Outlets, Additional	
0024302	Not Required, Outlet, Right Side, Wildland	
0065478	Not Required, Elbow, Right Side Outlets	

0759637	Outlet, Right Side, 2.50" w/2" Plumbing, Adjacent to Deadlay, Wildland BX3	**RIGHT SIDE DISCHARGE OUTLET(S)** There will be One (1) discharge outlet with a 2.00" valve on the right side of the apparatus, adjacent the deadlays, terminating with a male 2.50" National Standard hose thread adapter. In addition, the discharge will be equipped with a 2.50" (F) x 1.50" (M) NST reducer.
0089584	Not Required, Elbow, Right Side Outlets, Additional	
0773401	Outlets,(2),Front1.5"w/2" Plumbing, Valves at Outlet,LS-RS,1906 Wildland BX3	**FRONT DISCHARGES** There will be two (2) 1.50" discharges at the front bumper, located one (1) each side . Plumbing will be a single line to the front bumper and will include a tee that supplies both discharges. Plumbing will consist of 2.00" piping and flexible hose with two (2) 2.00" self-locking one-quarter turn full flow ball valve with "TSC" style handles. Control of each outlet will be at the valve at the front bumper. Installed on the outlets will be 90 degree swivels with 1.50" NPSH thread and chrome caps and chains. There will be Petcock quarter turn drains provided at all low points of the piping. The valves for each front bumper hose basket will be located outboard of the frame rail and mounted below the bumper deck. The discharge swivel locations will provide adequate clearance for the use of 1.50" gated wye's and be designed so as not to interfere with the opening and closing of the hood. The swivels will feature stops to protect the hood. An emergency shut off valve will be provided for this plumbing line in case of damage. The valve will be in an accessible location on the right side of the apparatus near the pump module. This valve will be labeled "Front Discharge On/Off".
0505191	Outlet, Rear, 1.50", w/2" Plumbing, Valve at Outlet, Wildland BX3	**REAR DISCHARGE VALVE** A quantity of One (1) discharge outlet with a 2.00" valve will be provided. The valve will be a 2.00" full flow ball valve controlled at the valve body, and will have a 1.50" NH male thread adapter with chrome cap and chain. It will be installed with proper clearance for spanner wrenches or adapters. The valve will be exterior mounted below the center hose bed.
0045099	Not Required, Elbow, Rear Outlets	
0766836	Outlet, Rear, 2.50", Wildland BX3	**DISCHARGE OUTLET (Rear)** There will be One (1) discharge outlet piped to the rear of the truck, located on the center . Proper clearance will be provided for spanner wrenches or adapters. Plumbing will consist of 2.50" piping along with a 2.50" full flow ball valve with the control at the valve. The discharge outlet(s) will terminate with a 2.50" male National Standard hose thread male adapter.
0655198	Not Required, Elbow, Rear Outlets, 2.50", Additional	
0752097	Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	**DISCHARGE CAPS/ INLET PLUGS** Chrome plated, rocker lug, caps with chain will be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets. Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size. The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.
0002604	Valve, Bleeders, Individual Not Req'd	**PLUMBING SYSTEM DRAIN** The discharges and plumbing will drain through a main pump drain system that accommodates the plumbing system. Individual drains or bleeders for each discharge will not be required.
0773410	Deadlay (1), No Plumbing, Low Mount, 200' of 1.75" Capacity, Divided, BX3	**DEADLAY HOSE BED** One (1) deadlay bed, without plumbing, will be provided at the top/front of the pump compartment. It will be capable of carrying a total of 200' of 1.75" double jacketed fire hose. It will have a divider in the center that allows the storage of 100' of 1.75" hose on each side, for deployment to either side of the truck. The deadlay bed flooring will consist of perforated brushed aluminum. The deadlay will be recess mounted at the front of the pump module to provide optimum accessibility.
0766784	Hose Restraint,Treadplate Top, Vinyl Sides, Wildland BX3	**CROSSLAY HOSE RESTRAINT** An aluminum treadplate cover, hinged at the front will be installed over the top of the deadlay. It will include a latch at each end of the cover to hold it securely in place, and a foam rubber gasket where the cover comes into contact with a painted surface. **CROSSLAY END FLAPS** A red vinyl end flap will be provided over each end of the hose bed. The flaps will be permanently attached to the aluminum cover, and secured with velcro and snaps on the bottom.

0766783	NPSH Reel, Booster, LS, 2/3 H.P. Motor, Over Pump, Wildland BX3	**BOOSTER HOSE REEL ABOVE PUMP** One Hannay electric rewind booster hose reel with 2/3 HP motor will be installed over the pump compartment, on the left side of the apparatus. The exterior finish of the reel will be painted #269 gray from the reel manufacturer. A polished stainless steel roller and guide assembly will be mounted on the reel side of the apparatus. An additional roller assembly will be installed on the side of the truck opposite the reel for use with hose payout to the right side. Discharge control will be provided at the pump operator's panel. Plumbing to the reel will consist of 1.00" hose and piping with a 1.00" valve. The reel will have NPSH threaded couplings.
0005280	Switches, Reel Rewind - (1) Each Pump Panel	Reel motor will be protected from overload with a circuit breaker rated to match the motor. Two (2) electric rewind control switches will be provided, one (1) installed on each pump panel.
0018394	Hose, Booster - 150' of 1.00"/800 PSI, 1" NPSH Coupling	Booster hose, 1.00" diameter and 150 feet, with chrome plated Barway, or equal couplings will be provided. The couplings will have 1" NPSH threads. Working pressure of the booster hose will be a minimum of 800 psi.
0017858	Capacity, Hose Reel 150' of 1"	Capacity of the hose reel will be 150 feet of 1.00" booster hose.
0007428	Nozzle for Booster Reel Not Req'd	

0773416	Foam Sys, Husky 3, Single Agent, Hydraulic Drive, BX3	**FOAM PROPORTIONER** A foam proportioning system will be provided that is an on demand, automatic proportioning, single point, direct injection system suitable for all types of Class A and B foam concentrates, including the high viscosity (6000 cps), alcohol resistant Class B foams. Operation will be based on direct measurement of water flow, and remain consistent within the specified flows and pressures. The system will automatically proportion foam solution at rates from .1 percent to 3.0 percent regardless of variations in water pressure and flow, up to the maximum rated capacity of the foam concentrate pump. The design of the system will allow operation from draft, hydrant, or relay operation. **System Capacity** The system will have the ability to deliver the following minimum foam solution flow rates at accuracies that meet or exceed NFPA requirements at a pump rating of 150 psi. 100 gpm @ 3 percent 300 gpm @ 1 percent 600 gpm @ 0.5 percent Class A foam setting in .1 percent increments from .1 percent to 1 percent. Typical settings of 1 percent, .5 percent and .3 percent (maximum capacity will be limited to the plumbing and water pump capacity). **Control System** The system will be equipped with a digital electronic control display located on the pump operators panel. Push button controls will be integrated into the panel to turn the system on/off, control the foam percentage, and to set the operation modes. The percent of injection will have a preset. This preset can be changed at the fire department as desired. The percent of injection will be able to be easily changed at the scene to adjust to changing demands. Three (3) .50 tall LEDs will display the foam percentage in numeric characters. Three (3) indicator LEDs will also be included, one (1) green, one (1) red, and one (1) yellow. The LEDs will indicate various system operation or error states. The indications will be: Solid Green - System On Solid Red - Valve Position Error Solid Yellow - Priming System Flashing Green - Injecting Foam Flashing Red - Low Tank Level Flashing Yellow - Refilling Tank The control display will house a microprocessor, which receives input from the systems water flow meter while also monitoring the position of the foam concentrate pump. The microprocessor will compare the values of the water flow versus the position/rate of the foam pump, to ensure the proportion rate is accurate. One (1) check valve will be installed in the plumbing to prevent foam from contaminating the water pump. A remote foam system activation switch will be installed in the cab. The switch will include an integral indicator light. **Hydraulic Drive System** The foam concentrate pump will be powered by a hydraulic drive system, which is automatically activated, whenever the foam system is turned on. A system that drives the foam pump via an electric motor will not be acceptable. A large parasitic electric load used to power the foam pump can cause an overload of the chassis electrical system. Hydraulic oil cooler will be provided to automatically prevent overheating of the hydraulic oil, which is detrimental to system components. The oil/water cooler will be designed to allow continuous system operation without allowing hydraulic oil temperature to exceed the oil specifications. The hydraulic oil reservoir will be of four (4) gallons minimum capacity and will also be of sufficient size to minimize foaming and be located to facilitate checking oil level or adding oil without spillage or the need to remove access panels. **Foam Concentrate Pump** The foam concentrate pump will be of positive displacement, self-priming; linear actuated design, driven by the hydraulic system. The pump will be constructed of brass body; chrome plated stainless steel shaft, with a stainless steel piston. In order to increase longevity of the pump, no aluminum will be present in its construction. A relief system will be provided which is designed to protect the drive system components and prevent over pressuring the foam concentrate pump The foam concentrate pump will have minimum capacity for 3 gpm with all types of foam concentrates with a viscosity at or below 6000 cps including protein, fluoroprotein, AFFF, FFFP, or AR-AFFF. The system will deliver only the amount of foam concentrate flow required, without recirculating foam back to the storage tank. Recirculating foam concentrate back to the storage tank can cause agitation and premature foaming of the concentrate, which can result in system failure. The foam concentrate pump will be self-priming and have the ability to draw foam concentrate from external supplies such as drums or pails. **External Foam Concentrate Connection** An external foam pick-up will be provided to enable use of a foam agent that is not stored on the vehicle. The external foam pick-up will be designed to allow continued operation after the on-board foam tank is empty, or the use of foam different than the foam in the foam tank. **Panel Mounted External Pick-Up Connection / Valve** A bronze three (3)-way valve will be provided. The unit will be mounted to the pump panel. The valve unit will function as the foam system tank to pump valve and external suction valve. The external foam pick-up will be one (1) .75" male connection GHT (garden hose thread) with a cap. **Pick-Up Hose** A .75" flexible hose with an end for insertion into foam containers will be provided. The hose will be supplied with a .75" female swivel GHT (garden hose thread) swivel connector. The hose will be shipped loose. **Discharges** The foam system will be plumbed to all valved discharges 2.0" and smaller, which includes the following discharges: Front bumper outlets (would include turret discharge if so equipped), rear 1.50" discharge, right and left side discharges adjacent to the deadlays (used to pre-connect hose in deadlay) and the hose reel(s).

0012126	Not Required, CAF Compressor	
0628070	Refill, Foam Tank, Integral, Husky 3, BX	**REFILL, SINGLE FOAM TANK** The foam system's proportioning pump will be used to fill the foam tank. This will allow use of the auxiliary foam pick-up to pump the foam from pails or a drum on the ground into the foam tank. A foam shut-off switch will be installed in the fill dome of the tank to shut the system down when the tank is full. The fill operation will be controlled by a mode in the foam system controller. While the proportioner pump is filling the tank, the controller will display a flashing yellow LED to indicate that the tank is filling. When the tank is full, as determined by the float switch in the tank dome, the pump will stop and the controller will shut the yellow LED off. If it attempted to use tank fill and the refill valve and suction valve are in the wrong position(s), then a red LED will illuminate to indicate the improper valve position(s). When the valves are positioned properly, then filling will commence.
0578417	Control, Husky 3, Switch and Indicator Light in Cab	**HUSKY CONTROL** A switch and indicator light will be provided inside the cab to control the Husky 3 Foam system to be turned "on" or "off".
0031896	Demonstration, Foam System, Dealer Provided	
0768342	Foam Tank, Separate 20 Gallon, BX3	**FOAM TANK** The foam tank will be separate from the polypropylene water tank. The tank will have a capacity of 20 gallons of foam with the intended use of Class A foam. The brand of foam stored in this tank will be a nationally recognized brand. This tank will not reduce the capacity of the water tank. A screen and breather will be included in the fill dome and lid.
0628071	Drain, 1.00", Foam Tank #1, Foam System, Quarter Turn, BX	**FOAM TANK DRAIN** The foam tank drain will be a 1.00" quarter turn drain valve located inside the pump/plumbing compartment.
0738072	Approval Dwg, Pump Panel(s), Not Required	
0035570	Pump Panel Configuration, No Match Required	**PUMP PANEL CONFIGURATION** The pump panel configuration will be neat and orderly.
0762017	Material, Pump Panels, Brushed Stainless, 1906 Wildland BX3	**PUMP AND GAUGE PANEL** The pump panels will be constructed of stainless steel with a brushed finish.
0766517	Pump Access - Wildland BX3	**PUMP ACCESS** Access to the pump & plumbing will be provided through a removable panel installed on the back wall of the right side forward compartment. Access will also be via a hinged panel installed at the pump operator's position, and from the area above the pump.
0071130	Light, Pump Compt, PMFD	**PUMP COMPARTMENT LIGHT** A compartment light will be provided inside the pump enclosure.
0586382	Gauges, Engine, Included With Pressure Controller	Engine monitoring graduated LED indicators will be incorporated with the pressure controller. Also provided at the pump panel will be the following: - Master Pump Drain Control
0005601	Throttle, Engine, Incl'd w/Press Controller	
0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle,Green	**THROTTLE READY GREEN INDICATOR LIGHT** There will be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode.
0549333	Indicators, Engine, Included with Pressure Controller	
0745568	Indicator Light, Pump Panel, Ok To Pump, Green	**OK TO PUMP INDICATOR LIGHT** There will be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode.

0767294	Hourmeter, Pump/PTO, Wildland BX3, BX	**PUMP HOURMETER** An hourmeter will be provided inside the pump module to record the hours the main PTO driven pump is engaged.
0511078	Gauges, 4.00" Master, Class 1, 30"-0 -600psi	**VACUUM AND PRESSURE GAUGES** The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated ©. The gauges will be a minimum of 4.00" in diameter and will have white faces with black lettering, with a pressure range of 30.00"-0-600#. Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut. The pump pressure and vacuum gauges will be installed adjacent to each other at the pump operator's control panel. Test port connections will be provided at the pump operator's panel. One will be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They will have 0.25 in. standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They will be marked with a label. This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.
0768295	No Discharge Pressure Gauges Required, NFPA 1906 Wildland	
0766488	Gauge,Water and Foam Level,Master w/Mini in Cab, Wildland BX3/BLM	**WATER and FOAM LEVEL GAUGES** An electric water level gauge manufactured by Innovative Controls Inc., the SL Series Tank Level Monitor System will be provided. One (1) master display electric water level gauge will be provided on the pump operator's panel, and one (1) "mini" slave display electric water level gauge will be provided in the cab on the console. A foam level gauge will be integrated into the water level gauge housing. The master display electric water level gauge will register water level by means of fourteen (14) brightly colored LED lights and be provided on the pump operator's panel. The water level indicators will be as follows: Full = Green 3/4 = Yellow 1/2 = Yellow 1/4 = Yellow Empty = Red The mini slave display electric water level gauge will register water level by means of five (5) brightly colored LED lights and be provided in the cab on the console. The water level indicators will be as follows: Full = Green 3/4 = Yellow 1/2 = Yellow 1/4 = Yellow Empty = Red To further alert the pump operator, the refill light will start flashing when the water level drops below the 1/4 mark. The level measurement will be based on the sensing of the electrical conductivity of the water in the tank.
0668618	Not Required, Foam Level Gauge Included With Dual Water & Foam Gauge	
0723261	Lighting, Pump Operator Control Panel Illumination, BX3	**LIGHTING, PUMP PANEL ILLUMINATION** Lighting will be provided for the pump operator's control panel. Illumination will be 12 volt DC white LED lights installed under the cargo extension. The lighting will illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. One (1) pump panel light will come on when the pump is in ok to pump mode.
0773413	Light, Over PS Pump Panel, P25 LED, Wildland BX3	There will be one (1) white LED scene lights with ABS chrome housing, installed above the passenger side pump panel. The lights will be operated from a switch on the pump operator's panel.

0751223	Compartment,Tool/Equipment,Right Side Pump Module,Angled Door Opening,BX3	**COMPARTMENT, TOOL/EQUIPMENT, PUMP PANEL** A compartment, constructed of aluminum, will be installed by the right side pump panel for storage of long handle tools. The main area of the compartment will be approximately 59.00" high (interior) x 14.00" wide (interior) x 13.75" deep. A wedge-shaped section located directly behind the door will be able to contain tall/narrow tools. A vertically hinged door constructed of aluminum will be provided. It will be installed at an angle to maximize the interior space available. It will open 135 degrees for access to the interior. The door will have a D-ring latch for keeping it closed, and a positive door holder will be provided to hold the door in an open position. The interior of the compartment will remain unpainted natural aluminum. On the inside of the compartment, the back wall toward the pump panel will have a large removable panel to allow access to the pump and plumbing behind it.
0766263	Siren, Wln 295SLSA1, 100 or 200 Watt, Wildland BX3	**ELECTRONIC SIREN** A Whelen®, Model 295SLSA1, electronic siren with noise canceling microphone will be provided. This siren to be active when the battery switch is on and that emergency master switch is on.
0637494	Location, Electronic Siren, BX Product	Siren head will be located in the cab within reach of the driver.
0076157	Control, Elec Siren, Horn Ring	**SIREN CONTROL** The electronic siren will be controllable on the siren head and horn ring only. No foot switches will be required. The driver will have the option to control the siren or the chassis horns from the horn button by means of a selector switch located on the instrument panel.
0766262	Speaker, (1) Wln, SA315P, 100 watt, Wildland BX3	**SPEAKER** There will be one (1) speaker provided. Each speaker will be a Whelen model SA315P black nylon composite, 100-watt. Each speaker will be connected to the siren amplifier. A grille to protect the speaker during off-road use will be integrated into the bumper.
0763428	Location, Speaker, Frt Bumper, Recessed, Far Left Side on Angled Corner	The speaker will be recessed in the far left side of the front bumper, in the swept-back section.
0606714	Lightbar, Wln, Freedom IV-Q, 60", RR_R_W__W_R_RR	**FRONT ZONE UPPER WARNING LIGHTS** There will be one (1) 60.00" Whelen Freedom IV LED lightbar mounted on the cab roof. The lightbar will include the following: One (1) red flashing LED module in the driver's side end position. One (1) red flashing LED module in the driver's side front corner position. Open in the driver's side first front position. One (1) red flashing LED module in the driver's side second front position. Open in the driver's side third front position. One (1) white LED module in the driver's side fourth front position. Open in the driver's side fifth front position. Open in the passenger's side fifth front position. One (1) white flashing LED module in the passenger's side fourth front position. Open in the passenger's side third front position. One (1) red flashing LED module in the passenger's side second front position. Open in the passenger's side first front position. One (1) red flashing LED module in the passenger's side front corner position. One (1) red flashing LED module in the passenger's side end position. There will be clear lenses included on the lightbar. There will be a switch installed in the cab on the switch panel to control this lightbar. The two (2) white flashing LED modules will be disabled when the parking brake is applied. The two (2) red flashing LED modules in the front positions may be load managed when the parking brake is applied.
0766470	Lights, Front Zone, Wln M6** LED, Clear Lens, Wildland BX3	**FRONT WARNING LIGHT** There will be two (2) Whelen, Model M6** LED flashing lights provided at the front of the truck. The driver's side front warning light to be red. The passenger's side front warning light to be red. The color of the lenses will be clear. The lights will be mounted with with a flange. The lights will be activated by a switch on the cab instrument panel.
0766458	Lights, Side Zone Lower, Wln M6*C LED, Clear Lens 2pr, BX3	**SIDE ZONE LOWER LIGHTING** There will be four (4) Whelen®, Model M6*C, flashing LED warning lights with chrome trim installed per the following: Two (2) lights, one (1) each side on the bumper extension. The side front lights to be red. Two (2) lights, one (1) each side on the rear corners of the body. The side rear lights to be red. The lights will include a clear lenses. There will be a switch in the cab on the switch panel to control the lights. The lights on the front bumper will be recess mounted to better protect them from damage.

0753267	Lights, Rear Zn Lwr, Wln M6*C, Clear Lens,(Use for 4" Round Tail Lights) BX3	**REAR ZONE LOWER LIGHTING** There will be two (2) Whelen®, Model M6*C, LED flashing warning lights with Model M6FC, chrome flanges located at the rear of the apparatus. The driver's side rear light to be red The passenger's side rear light to be red Both lights will include a lens that is clear. There will be a switch located in the cab on the switch panel to control the lights.
0766447	Lights, Rear/Side Up Zone, Wln M6*C LED, Clear Lens 4lts, Wildland BX3	**WARNING LIGHTS (Rear and Side upper zones)** Four (4) Whelen, model M6*C LED flashing warning lights will be provided at the rear of the apparatus. The side rear upper light(s) on the driver's side to be red. The rear upper light(s) on the driver's side to be red. The rear upper light(s) on the passenger's side to be red. The side rear upper light(s) on the passenger's side to be red. These lights will include a lens that is clear. There will be a switch located in the cab on the switch panel to control the lights.
0006551	Not Required, Lights, Rear Upper Zone Blocking	
0007150	Bag of Nuts and Bolts	**LOOSE EQUIPMENT** The following equipment will be furnished with the completed unit: One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.
0519913	Not Required, Soft Suction Hose	**SOFT SUCTION HOSE** There will be no soft suction hose provided.
0766676	Strainer, Provided by Fire Department, Wildland NFPA 1906 2016 Classification	**STRAINER PROVIDED BY FIRE DEPARTMENT** NFPA 1906, 2016 edition, section 16.2.4.1 references a suction strainer used with suction hose. The strainer is not on the apparatus as manufactured. The fire department will provide the suction strainer.
0766686	Extinguisher, Dry Chemical, Wildland NFPA 1906 2016, Provided by Fire Department	**DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT** NFPA 1906, 2016 edition, section 5.7.2 requires one (1) approved dry chemical portable fire extinguisher with a minimum 3A-40-B:C rating mounted in a bracket fastened to the apparatus. The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.
0766685	Extinguisher, 2.5 Gal, Not Required, NFPA 1906 2016 Wildland Apparatus	

0607712	Paint Process / Environmental Requirements, PMFD	**PAINT PROCESS** The exterior custom cab and/or body painting procedure will consist of a seven (7) step finishing process. A commercial chassis paint process will follow similar processes as determined by the chassis manufacturer. The following procedure will be used by Pierce: Manual Surface Preparation - All exposed metal surfaces on the custom cab and body will be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces will be removed and sanded to a smooth finish. Exterior seams will be sealed before painting. Exterior surfaces that will not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate. Chemical Cleaning and Pretreatment - All surfaces will be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces will be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces will be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion. A final pure water rinse will be applied to all metal surfaces. Surfacer Primer - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective base coat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a critical aesthetic finish. The surfacer primer will be a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded. Finish Sanding - The surfacer primer will be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat. Sealer Primer - The sealer primer is applied prior to the base coat in all areas that have not been previously primed with the surfacer primer. The sealer primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when top coated. Base coat Paint - Two coats of a high performance, two component high solids polyurethane base coat will be applied. The Base coat will be applied to a thickness that will achieve the proper color match. The Base coat will be used in conjunction with a urethane clear coat to provide protection from the environment. Clear Coat - Two (2) coats of clear coat will be applied over the base coat color. The clear coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style doors will be clear coated to match the body. Paint warranty for the roll-up doors will be provided by the roll-up door manufacturer. Our specifications are written to define cyclic corrosion testing, physical strengths, durability and minimum appearance requirements must be met in order for an exterior paint finish to be considered acceptable as a quality finish. Each batch of base coat color will be checked for a proper match before painting of the cab and the body. After the cab and body are painted, the color is verified again to make sure that it matches the color standard. Electronic color measuring equipment will be used to compare the color sample to the color standard entered into the computer. Color specifications are used to determine the color match. A Delta E reading will be used to determine a good color match within each family color. All removable items such as brackets, compartment doors, door hinges, and trim will be removed and separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly will be finish painted before assembly. **Environmental Impact** Contractor will meet or exceed all current State regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions: Topcoats and primers will be chrome and lead free. Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals. Particulate emission collection from sanding operations will have a 99.99 percent efficiency factor. Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter is used, it will have an efficiency rating of 98 percent. Water wash systems will be 99.97 percent efficient. Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean. Paint wastes will be disposed of in an environmentally safe manner. Empty metal paint containers will be recycled to recover the metal. Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse. Additionally, the finished apparatus will not be manufactured with or contain products that have ozone depleting substances. Pierce will, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with the state EPA rules and regulations.
0583882	Paint, 90 Red, Commercial Grade Chassis Finish, PMFD Commercial Chassis	**PAINT** The chassis will be painted by the chassis manufacturer, and will remain the commercial grade finish as provided. The body will be painted the matching color by Pierce. To ensure a good color match between the body and chassis, Pierce has a mutually pre-approved paint color program with the chassis manufacturer. The apparatus will be painted Pierce #90 candy apple red .
0586561	Chassis Cab Paint, #90 Red, by Chassis Manufacturer, Standard	**COMMERCIAL CHASSIS PAINT** The chassis will be painted by the chassis manufacturer. It will remain the color and commercial quality finish as provided. The primary color will be Pierce #90 candy apple red .
0583915	No Two-Tone Paint Req'd	

0582663	Paint, Chassis Frame Assy, Black, by Commerical Chassis Manufacturer	**PAINT CHASSIS FRAME ASSEMBLY** The chassis frame assembly will be painted black by the chassis manufacturer. It will remain the commercial grade finish as provided.
0651188	Paint, Wheels, By Chassis Manufacturer, Single Rear Axle, Commercial	**WHEEL PAINT** The wheels will be painted by the chassis manufacturer to match the main color of the cab.
0651181	Wheels, Silver Accent Stripe on Outer Edge, Single Axle	**WHEELS, ACCENT STRIPE** The exposed outer edge circumference of the wheel will be painted with a silver accent stripe.
0037234	Compartment, Unpainted	**COMPARTMENT INTERIOR FINISH** The interior of the body compartments will be left unpainted and have the natural finish.
0544087	Reflective Band, 6"	**REFLECTIVE BAND** A 6.00" white reflective band will be provided across the front of the vehicle and along the sides of the body.
0007357	Reflective on Front Bumper	**REFLECTIVE VINYL ON FRONT BUMPER** There will be a reflective vinyl band provided across the front bumper.
0766414	Stripe, Chevron, Rear, Reflexite, Wildland BX3	**REAR CHEVRON STRIPING** There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The rear surface, excluding the rear compartment door, will be covered. The colors will be red and L2 fluorescent yellow green . Each stripe will be 6.00" in width. This will meet the requirements of the current edition of NFPA 1906, which states that 50% of the rear surface will be covered with chevron striping.
0065785	Stripe, Reflective, Cab Drs Interior, Commercial Cabs, 4dr	**CAB DOORS REFLECTIVE STRIPE** white reflective striping will be provided on the interior of each cab door. This striping will total a minimum of 96.00 square inches and will meet the NFPA 1901 requirement.
0027286	Not Required, Lettering Specs	
0007472	[Lettering not Requested]	
0766245	Manual, Fire Apparatus Parts, USB, Body Parts Only, Commercial Product	**MANUAL, BODY PARTS ONLY** A custom parts manual for the Pierce® installed parts only will be provided in USB flash drive format with the completed unit. The manual will contain the following: - Job number - Part numbers with full descriptions - Table of contents - Parts section sorted in functional groups reflecting a major system, component, or assembly - Parts section sorted in Alphabetical order - Instructions on how to locate parts The manual will be specifically written for the body model being purchased. It will not be a generic manual for a multitude of different bodies. **SERVICE PARTS INTERNET SITE** The service parts information included in this manual are also available on the Pierce website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.
0766243	Manual on USB Flash Drive, Service, Commercial	**MANUALS, SERVICE** A USB flash drive format service manual supplement containing parts and service information on Pierce® installed components will be provided with the completed unit. The manual will be specifically written for the unit being purchased. It will not be a generic manual for a multitude of different units.
0002902	Manual, Commercial Chassis Operation	**MANUAL, CHASSIS OPERATION** One (1) chassis operation manual will be provided with the completed unit.

0080008	Warranty, Basic, 1 Year, Apparatus, Commercial Chassis, WA0008	**ONE (1) YEAR MATERIAL AND WORKMANSHIP** Each new piece of apparatus will be provided with a minimum one (1) year basic apparatus material and workmanship limited warranty. The warranty will cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service. A copy of the warranty certificate will be submitted with the bid package.
0761945	Warranty, Basic Vehicle, 1 yr, International HV (w/Cummins Engine)	**CHASSIS WARRANTY** The basis chassis warranty will be for a total of **one (1) year exclusive of miles/kilometers.**
0595282	Warranty, Cab Paint, As Provided By Chassis Manufacturer, Commercial	**PAINT WARRANTY** The commercial chassis manufacturer's paint warranty will apply to the paint on the chassis only.
0647720	Warranty, Pierce LED Strip Lights, WA0203	**COMPARTMENT LIGHT WARRANTY** The Pierce 12 volt DC LED strip lights limited warranty certificate, WA0203, is included with this proposal.
0021516	Warranty, 5-Year EVS Transmission, Standard Comm, WA0187	**TRANSMISSION WARRANTY** The transmission will have a **five (5) year/unlimited mileage** warranty covering 100 percent parts and labor. The warranty to be provided by Allison Transmission and not apparatus builder.
0688798	Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	**WATER TANK WARRANTY** A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.
0596025	Warranty, Structure, 10 Year, Body, WA0009	**TEN (10) YEAR STRUCTURAL INTEGRITY** The Pierce apparatus body limited warranty certificate, WA0009, is included with this proposal.
0690936	Warranty, Roll up Doors, Not Required	
0582368	Warranty, Pump, Darley, 6 Year Parts, 3 Year Labor, WA0179	**PUMP WARRANTY** A Darley pump limited warranty certificate, WA0179, is included with this proposal.
0648675	Warranty, 10 Year S/S Pumbing, WA0035	**TEN (10) YEAR PUMP PLUMBING WARRANTY** The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.
0657990	Warranty, Foam System, Husky 3, WA0231	**FOAM SYSTEM WARRANTY** The Husky 3 foam system limited warranty certificate, WA0231, is included with this proposal.
0595820	Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	**TEN (10) YEAR PRO-RATED PAINT AND CORROSION** A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.
0593921	Not Required, Warranty, No Lettering	
0544883	Certification, Cab Integrity, IHC, CD0025	**CAB INTEGRITY** The cab has been tested to and passed the following standards: - ECE Regulation No.29 - SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks.

0545073	Amp Draw Report, NFPA Current Edition	**AMP DRAW REPORT** The bidder will provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system. The manufacturer of the apparatus will provide the following: Documentation of the electrical system performance tests. A written load analysis, which will include the following: The nameplate rating of the alternator. The alternator rating under the conditions specified per: Applicable NFPA 1901 or 1906 (Current Edition). The minimum continuous load of each component that is specified per: Applicable NFPA 1901 or 1906 (Current Edition). Additional loads that, when added to the minimum continuous load, determine the total connected load. Each individual intermittent load. All of the above listed items will be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).
0002758	Amp Draw, NFPA/ULC Radio Allowance	
0000017	FLORIDA DIVISION BODY	
0000015	FLORIDA DIVISION COMMERCIAL CHASSIS	
0004713	ENGINE, OTHER	
0046395	EVS 3000 Series TRANSMISSION	
0018574	DARLEY PUMP	
0028048	FOAM SYSTEM	
0020006	SIDE CONTROL	
0020007	AKRON VALVES	
0020909	ABS SYSTEMS, Commercial	
0658751	PUMPER BASE	

Option List

9/13/2023

Customer:	FLAGSTAFF FIRE DEPARTMENT	**Bid Number:**	769
Representative	McDonald, Ed	**Job Number:**	
Organization:	Hughes Fire Equipment, Inc	**Number of Units:**	1
Requirements Manager:		**Bid Date:**	09/11/2023
Description:	FX3 Wildland, International, 1000 GPM, SF-3204	**Stock Number:**	38647
Body:	WILDLAND BX3, Type 3, NFPA 1906	**Price Level:**	46 (Current: 46)
Chassis:	International HV, 4x4, Wildland BX3	**Lane:**	

Line	Option	Type	Option Description	Qty
1	0765490	SP	Wildland, BX3, International, 1000 GPM Pump (SF-3204)	1
2	0010012		No Boiler Plates requested	1
3	0018257		Commercial chassis & Snorkel products	1
4	0584455		Manufacture Location, Bradenton, Florida	1
5	0584453		RFP Location: Bradenton, Florida	1
6	0588609		Vehicle Destination, US	1
7	0799089		Comply NFPA 1906 Changes Effect Jan 1 , 2016 with Exceptions, Commercial Chassis	1
8	0547534		1906 Wildland Fire Apparatus	1
9	0588619		Not Required, Vehicle Certification	1
10	0511675		Certification, Pump, Wildland	1
11	0537375		Unit of Measure, US Gallons	1
12	0030006		Bid Bond Not Requested	1
13	0816569		Performance Bond, Not Requested, PPI Terms	1
14	0010007		No Approval Drawing Req'd.	1
15	0589819		Electrical Diagrams, Commercial	1
16	0768801		International HV, 4x4, Wildland BX3	1
17	0804699	SP	Model Year 2023	1
18	0765496	SP	Use SF-3203 IHC Chassis Spec (Wildland BX3) [Use Also w/3204]	1
19	0891187		Base Price, International HV, 4x4 Wildland BX3, Effective 2/01/2022 EXP 6/30/22	1
20	0804578	SP	Surcharge, International	1
21	0761935		Overall Height, Wildland BX3 - w/International Chassis - 10' 2"	1
22	0767548		Angle of Departure, Approximately 25 Degrees, Wildland BX3 Condition of Truck - Loaded	1
23	0761289		Angle of Approach,Approximately 30 Degrees, International / Wildland BX3 Condition of Truck - Loaded	1
24	0764212		Wheelbase, 183", International, 4x4, Wildland BX3	1
25	0760045		GVW Rating, 36,000#, Commercial Chassis	1
26	0027644		Frame, Chassis, International	1
27	0686546		Frame Reinforcement, International HV 4x4, "C" Channel	1
28	0742184		Axle,Front,13K Rating,International HV 4x4 w/o Transfer Case PTO, BX3	1
29	0770176		Suspension, Front Spring, 14,000 lb, Commercial	1
30	0073051		Shock Absorbers, Front	1
31	0789186		Brakes, Cam Front, 16.50"x 5.00" Commercial	1
32	0585779		Goodyear Tires	1
33	0772242		Tires, Front, 22.50, Traction Tread, 4x4 (to 14.6k GAWR)	1
34	0683147		Wheel, Steel, 22.50", 4x4	1
35	0764156		Axle, Rear, Meritor, 23K Rating, International HV 4x4, BX3 Wildland	1
36	0772020		S-Cam Style 16.50" x 7.00"	1
37	0767494		Top Speed of Vehicle, Comply w/NFPA, Wildland BX3 Top Speed of Vehicle - 68	1
38	0621638		Suspension, Rear Spring, 23,500 lb w/4500 lb Steel Leaf Aux. IHC	1
39	0772235		Tires, Rear, 22.50, Traction Tread, 4x4 (to 27k GAWR)	1
40	0810393		Wheel, Steel, 22.50" x 8.25", 4x4	1
41	0767493		No Tire Pressure Indicator, Fire Department Omits, Non-NFPA 1906-2016 Compliant	1
42	0012045		Mud Flap, Rear, Pierce Logo	1
43	0767491		Chocks, Wheel, Wildland, NFPA, Provided by Fire Department, NFPA 1906 - 2016	1
44	0544690		Mounting Brackets, Chocks, Provided by Fire Department	1
45	0020881		ABS, Anti-Lock Braking System, Commercial	1
46	0009547		Air Compressor, Brake, 18.7 CFM, Commercial	1

Line	Option	Type	Option Description	Qty
47	0773985		Air Dryer, Brake, w/Heater, Commercial	1
48	0020851		Not Required, Air Inlet	1
49	0728924		Engine, Cummins L9, 360 hp, IHC HV, BX3	1
50	0001247		High Idle w/Electronic Engine, Commercial	1
51	0773963		Auxiliary Brake, Exhaust Brake , VGT Style, With Brake Lights, Commercial	1
52	0120374		Cruise Control, Commercial	1
53	0773981		Air Intake, Engine, w/Ember Separator, OEM Installed, Commercial	1
54	0747960		Exhaust,Horiz,RH Step Mtd DPF/SCR,w/Modification Next toTransfer Case, 4x4 IHC	1
55	0684987		Exhaust Modifications, Commercial Chassis, Horizontal Exhaust	1
56	0071090		Coolant Hoses, Rubber - Commercial Chassis	1
57	0773634		Fuel Tank, 70 Gallon, Left Side, Aluminum, Commercial	1
58	0773952		DEF Tank, Left Side Location, Commercial	1
59	0723716		Fuel Priming Pump, Electronic, Automatic, Cummins, No Swt Req'd	1
60	0552712		Not Required, Shutoff Valve, Fuel Line	1
61	0696186		Cooler, Chassis Fuel, Commercial, Provided by Chassis OEM	1
62	0764176		Chassis Fuel Line Protection, Fire Wrap Lagging, Wildland	1
63	0773950		Trans, Automatic, Allison 3000 EVS, w/(2) PTO Provsions, Commercial	1
64	0771219		Transmission,Stalk Shifter, Column Mounted, 5 Speed, International	1
65	0011475		Transmission Oil Cooler, Internal, Commercial	1
66	0527500		Transfer Case Oil Cooler, 4x4, Commercial	1
67	0733744		Driveline for PTO/Transfer Case or No Pump Installation - Commercial	1
68	0762367		Driveline Pre-Approved, International HV 4x4, Wildland BX3	1
69	0692499		Steering, Power, w/Tilt Column, International	1
70	0607536		Skid Plate and Brush Guard, For Fuel and DEF Tanks, Commercial Chassis	1
71	0761934		Chassis Air Line Protection, Fire Wrap Lagging, Wildland	1
72	0767463		Bumper Extension, 16", Steel Painted, Chicago Style, Commercial Chassis BX3	1
73	0766336		Tray, Hose, Center, 16" Bumper, Wildland BX3	1
			Grating, Bumper extension - Grating, Rubber	
			Capacity, Bumper Tray - 06) 75' of 1.50"	
74	0766330		Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray, BX3	1
			Stay arm, Tray Cover - a) Mech Stay Arm	
75	0766335		Tray, (1) Hose Left Side of 16" Bumper, Wildland BX3	1
			Grating, Bumper extension - Grating, Rubber	
			Capacity, Bumper Tray - 04) 50' of 1.50"	
76	0766331		Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray, Notched, BX3	1
			Stay arm, Tray Cover - a) Mech Stay Arm	
77	0766334		Tray, (1) Hose Right Side of 16" Bumper, Wildland BX3	1
			Grating, Bumper extension - Grating, Rubber	
			Capacity, Bumper Tray - 04) 50' of 1.50"	
78	0766332		Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray, Notched, BX3	1
			Stay arm, Tray Cover - a) Mech Stay Arm	
79	0002283		Tow Hooks, Painted	1
80	0012300		Bracket, License Plate, Frt Bumper Non-Illuminated	1
81	0772084		Standard Hood, SFA, International	1
82	0762462		Cab, 4-door Crew Cab, International HV, BX3	1
83	0024223		Cab Interior, IHC, Gray	1
84	0582768		Grille, Chromed Plastic, Stationary, International	1
85	0762934		Mirrors, C-Loop, Bright Finish Heads, Power Adjust, Heated, International MV/HV	1
86	0762227		Step Package, Under Front Cab Doors, NFPA Compliant, Wildland BX3	1
87	0767312		Compartment,Tool/Brass, Under LH Crew Cab, Max Size, BX3	1
88	0767309		Compartment, Tool, Under RH Crew Cab, Wildland BX3	1
89	0637488		Lights, Cab & Crw Cab Acs Stps, LED, 4 Door Cab, BX Product	1
90	0070598		Daytime Running Lts, Commercial	1
91	0773943		Air Conditioning, Commercial	1
92	0759502		Ember Screen, for AC Filter, Air Intake, International	1
93	0005940		Lights, Engine Compt, (2) Commercial Chassis	1
94	0731748		Console, 4-Door, Switches, Radio and Storage, BX3	1
			Console, Configuration - Without Door/Cover	
			Console, Controls - Aux Pump Control - Right Side	
			Console, Features - Without Turret Joy Stick	

Line	Option	Type	Option Description	Qty
95	0767593		Seating Capacity, Cab, 4-Door, Wildland BX3	5
			Qty, - 05	
96	0073019		Seats, Cab, Air driver w/Fxd Companion Seat - International	1
97	0762355		Seats, 3-man bench - International, Non-NFPA 2016 Compliant	1
98	0551164		Seat Belt Web Length, Commercial Chassis	1
99	0584364		Seat Belts, Red, Commercial Chassis	1
100	0547549		Helmet Storage, Not Required, NFPA 1906 Apparatus	1
101	0767583		Portable Hand Light, Not Required, NFPA 1906 2016 Apparatus	1
102	0584358		Cab Instrumentation, Commercial Chassis	1
103	0767575		Panel, Emergency Switch, on Console, BX3	1
104	0641093		Light, Do not move apparatus, Commercial, BX Program	1
			Alarm, Do Not Move Truck - No Alarm	
105	0005926		Light, Open Door - Commercial Std	1
106	0072620		Wiper control, intermittent feature Commercial	1
107	0759671		Wiring,Spare,4.8 A 12V DC,USB Termination Blue Sea 1045, on Rear of Console, BX3	2
			Qty, - 02	
			12vdc power from - Battery direct	
108	0762221		Auxiliary Power Outlet (12V) and USB Port, Commercial Chassis	1
109	0762644		Radio, AM/FM Stereo, w/Weather Band & Clock, International, BX3	1
			Speakers, AM/FM Radio - Standard Speakers with Radio System (Commercial)	
110	0622928		Not Available, Vehicle Information Center, Multiplex System, Commercial Chassis	1
111	0734854		Collision Mitigation, Not Requested	1
112	0764276		Vehicle Data Recorder, Single Module, w/o Seat Belt Monitor, Wildland BX3	1
113	0763435		Two-Way Radio Accommodation Package - Wildland/BX3	1
114	0612323		Weldon V-MUX, Electrical System, International Chassis, BX3	1
115	0770583		Electrical System, International HV, Wildland BX3	1
116	0762337		Single Start, (3) Grp 31, 660 CCA each, Ext/Crew Cab, International	1
117	0768600		Battery Relocation Not Required - International HV and 4x4	1
118	0897716		Battery Location, Top of Crew Cab Step Compartment, Left Side	1
119	0072685		Selector, Single Start Battery, Commercial Chassis	1
120	0767193		Charger, Sngl Sys, IOTA, DSL 45, 45 amp, BX3, BX	1
121	0764272		Location, Charger, in Cab Behind Crew Cab Seat, BX3	1
122	0530960		Not Required, Remote Battery Charger Indicator	1
123	0767064		Shoreline, 20A 120V, Kussmaul Auto Eject, for Battery Charger, BX3	1
			Color, Kussmaul Cover - d) yellow	
			Qty, Shoreline - 1	
124	0767063		Shoreline Location, BX3	1
			Location, Shoreline(s) - DS Step Pkg Comm Crew	
125	0607607		Alternator, 325 amp Leece-Neville, International	1
126	0634181		Load Manager, Inc w/MUX Electrical System , BX Program	1
127	0762588		Cab Lighting, LED Clearance/Marker/Fender Turn Signals, International HV	1
128	0669538		Lights, Clearance/Marker/ID, Rear, P25 LED 7Lts, Pumper/Tanker/PUC	1
129	0619776		Lights, Tail, Truck-Lite 4.00" Round Grommet Mount, LED Lights, Wildland BX3	1
130	0689409		Lights, Backup, Truck-Lite Model 44350C, LED, Grommmet Mount	1
131	0889577		Bracket, License Plate & Light, P25 LED, Stainless Brkt	1
			Color, Trim - Chrome Housing	
132	0589905		Alarm, Back-up Warning, PRECO 1040	1
133	0767028		Lights, Perimeter Cab, Amdor AY-LB-12HW012 LED 4Dr, NFPA 1906 BX3	1
134	0769559		Lights, Perimeter Pump House, Amdor AY-LB-12HW012 LED 2lts	1
135	0766637		Lights, Perimeter Body, Amdor AY-LB-12HW012 LED 2lts, Rear Step, BX3	1
			Switch, Lt Control 1 DC,1 - Park Brake	
			Switch, Lt Control 2 DC,2 - a) DS Switch Panel	
			EXCLUDED: [Control, Perimeter Lts]. - DS Switch Panel and Parking Brake Applied	
136	0764260		Lights, Step, LED, BX3, Prk Brk	1
			Control, Scene Lts - Park Brake	
137	0764940		Light, Wln, 12V PCPSM2C Pioneer LED Fld/Spt, Surface Mnt 1st, LEFT Side, BX3	1
			Qty, - 01	
			Switch, Lt Control 1 DC,1 - a) DS Switch Panel	
			Switch, Lt Control 2 DC,2 - DS Pump Panel	
			Color, Wln Lt Housing - Chrome Flange	

Line	Option	Type	Option Description	Qty
137			Location, 12/24 Volt Lights - DS Body, Forward, 1lt	
138	0759407		Light, Wln, 12V PCPSM2C Pioneer LED Fld/Spt, Surface Mnt 1st, RIGHT Side, BX3	1
			Qty, - 01 Switch, Lt Control 1 DC,1 - a) DS Switch Panel Switch, Lt Control 2 DC,2 - DS Pump Panel Color, Wln Lt Housing - Chrome Flange Location, 12/24 Volt Lights - PS Body, Forward, 1lt	
139	0603539		Not Required, Deck Lights, Rear, 1906 Wildland or Other Hose Bed & Rear Lighting	1
140	0766626		Lights, Hose Bed, Cover, Dual LED Light Strips, BX3	1
			Control, Hose Bed Lts - Auto Cover Sw	
141	0763429		Lights, Walk Surf, Additional Not Req'd, Hose Bed Light Adequate, BX3	1
142	0804230		WILDLAND BX3, Type 3, NFPA 1906	1
143	0773467		Water Tank, Poly, 500 Gallon, Wildland BX3	1
144	0003405		Overflow, 4.00" Water Tank, Poly	1
145	0766960		Foam Tank, Separate, Required	1
146	0553725		Restraint, Water Tank, Heavy Duty, Special Type Tank, 4x4, or Export	1
147	0768625		Tank Fill, Direct, Rear, 2.50", Wildland	1
			Qty, - 01 Location, driver's/passenger's/center - Centered Adapter, Elbow - PLUG	
148	0773432		Hose Bed, Wildland BX3	1
149	0762116		Hose Bed Capacity, 500' of 2.50" Hose, Wildland BX3	1
150	0073494		Not Required, Divider, Hose Bed	1
151	0751228		Covers, Hose Bed, Alum Treadplate, 4-Section, Wildland BX3	1
152	0761425		Flap, Rear of Alum Hose Bed Cover, Two Piece, Vinyl, w/Seat Belt Buckles, BX3	1
			Color, Vinyl Cover - c) black	
153	0768124		Top of Truck Gear and Equipment Storage, BX3	1
154	0768331		Running Boards, Wildland BX3	1
155	0766413		Tailboard, w/Hinged Drop-Down Step, Wildland BX3	1
156	0607673		Wall, Rear, Aluminum Treadplate, Wildland BX3	1
157	0766412		Tow Eyes, 1906 Wildland BX3/BLM	1
158	0773465		Construction, Compartment, Stainless Steel, Wildland BX3	1
159	0773598		LS, Flush Style Door, Full-Depth, Wildland BX3	1
160	0773597		RS, Flush Style Door, Full Depth, w/Ladder Storage, Wildland BX3	1
161	0768326		Doors, ALUMINUM, FLUSH STYLE w/"D" Handle - Side Compartments, Wildland BX3	1
			Scuffplate, Material/Finish - S/S, Brushed Location, Compartment, Predefined - B1, LS1, LS2, RS1, RS2 and RS3 FX3 Body Door Scuffplates - Inside	
162	0615834		Rear Compt, Flush Style Door, Wildland BX3	1
163	0626754		Doors, ALUMINUM, FLUSH STYLE w/"D" Handle - Rear Compartment, Wildland BX3	1
164	0597111		Not Required, Pull Strap	1
165	0738852		Keyed Locks for Latches, Key Style 1250, Body Compts, Wildland BX3	1
166	0766933		Lights, Body Compt, Pierce LED, Dual Lt Strips, Each Side of Door, BX3	6
			Qty, - 06 Location, Compartment Lights - R1, LS1, LS2, RS1, RS2 and RS3	
167	0768324		Shelf Tracks, Unpainted, Wildland BX3	5
			Qty, Shelf Track - 05 Location, Shelf Track - LS1, LS2, RS1, RS2 and B1	
168	0766575		Shelves,Adjustable,500 lb Capacity,Full Width/Depth,Brushed Alum,Wildland BX3,BX	5
			Qty, Shelf - 05 Location, Shelves/Trays, Predefined - RS1-Centered, RS2-Centered, LS1-Centered, LS2-Centered and B1-Centered	
169	0004015		Trim, Alum Treadplate on Lower Body	1
170	0739426		Fender Crowns, Rear, Rubber, w/Removable Liner, BX3	1
			Material Finish, Fender Liner - Painted - Program Truck	
171	0766681		Hose, Hard Suction, Provided by Fire Department, NFPA 1906 2016, Wildland	1
172	0527021		Handrails Located @ Front Body	1
173	0531152		Handrails, Rear Bulkhead, Wildland	1
174	0758878		Handrail, Rear, Above Hose Bed, BX3	1
175	0044229		No Extension Ladder Req'd	1

Line	Option	Type	Option Description	Qty
176	0074231		No Roof Ladder Req'd	1
177	0773396		Ladders, Encl'd Complete, in RS Body, w/Pike Poles, Wildland BX3	1
178	0074248		Not Required, Folding Ladder	1
179	0766277		I Zone Bracket, Pair, Located Outboard, Wildland Style	1
180	0768315		Steps,(4) Cast Products,Model SP2011-1/(2) Model SP2016-1,Rear Body,Wildland BX3	1
181	0762015		Step Access to Running Boards, w/4x4 Chassis, Wildland BX3	1
182	0766970		Auxiliary Pump, Hydraulic Drive (Price Only)	1
183	0766267		Pump,Auxiliary, Darley,1.5AGH,Hyd PTO Drive,150 GPM, 2016 NFPA 1906,Wildland BX3	1
184	0626923		Installation Location, Aux Pump, Inside Pump house Area	1
185	0788341		Not Required, Fuel Supply, (Hydraulic Drive Pump)	1
186	0626844		Not Required, Exhaust Routing, Aux Pump	1
187	0811624		Discharge Connections, Aux Pump, Standard, BX3	1
188	0786060		Tank to Pump Line, Hyd Aux Pump, 2.00", Separate Tank to Pump Line	1
189	0805019		Not Required, Primer for Aux Pump, Gravity Prime, BX3	1
190	0766930		Controls, Hydraulic Aux Pump, Pierce, Dual,In Cab and at Pump Panel,Wildland BX3	1
191	0626933		Line, Recirculating, Aux Pump, 499gpm and less, 0.375", Automatic	1
192	0766268		Engineering Review of Aux Pump System Not Req'd - Wildland BX3	1
193	0773415		Pump House, Side Control, 28", Wildland BX3	1
194	0769817		Pump, Darley, LSP, 1000 GPM, Single Stage, PTO Drive, Wildland BX3	1
195	0007153		Seal, Mechanical, Darley, Silicon Carbide	1
196	0014633		Trans, Pump, Darley, PTO, 3 Gear	1
197	0603731		Pumping Mode, Stationary and Pump in Motion (Pressure Gauge in Cab Included)	1
198	0535276		Pump Shift, PTO Pump	1
199	0581602		Transmission Lock-up, Not Req'd, PTO Pump	1
200	0004547		Auxiliary Cooling System	1
201	0014486		Not Required, Transfer Valve, Single Stage Pump	1
202	0746511		Valve, Relief Intake, TFT	1
			Pressure Setting - 125 psig	
203	0794959		Controller, Pressure, Pierce, Pump Boss, PBA300	1
204	0613850		Primer, Waterous, VPO Motor, (1) VAP Valve, (2) Push Button Controls, PTO Pump	1
205	0506633		Plate, Test, Main Pump	1
206	0694360		Pump Drain, Trident Multi-Port, IPO Std Pump Drain	1
207	0517155		Line, 0.375" Recirculating w/Check Valve, Automatic, NFPA 1906, Wildland	1
208	0759034		Outlet, Back Pack Pump Filler, Gravity Fed From Tank, BX3	1
209	0780364		Manuals, Pump, (2) Total, Electronic Copies	1
210	0602487		Plumbing, Stainless Steel and Hose, Single Stage Pump, PMFD	1
211	0775901		Plumbing and Manifolds, Stainless Steel, w/Foam System	1
212	0762334		Inlet, 5.00" - 1000 GPM Pump, Left Side Only, BX3	1
213	0017541		Cap, Main Pump Inlet, Rocker Lug, NST, VLH	1
214	0084610		Valves, Akron 8000 series- All	1
215	0766918		Valve, Inlet(s) Recess Behind Panel, Wildland BX3	1
216	0004700		Control, Inlet, at Valve	1
217	0505201		Inlet, Left Side, 2.50", Wildland	1
218	0763478		Inlet, Right Side, 2.50", Auxiliary Inlet, Wildland BX3, BX	1
219	0505132		Anode, Zinc, Pair, Pump, One (1) on Inlet Side & One (1) on Discharge Side	1
220	0723049		Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle	1
221	0520031		Tank to Pump,(1) 3.0" Valve,4.0" Plumbing,In/Open-Out/Closed, Wildland/BX3	1
222	0006764		Tank ReFill, 2.0"	1
223	0021138		Control, Outlets, At Valve, NFPA 1906 Wildland	1
224	0768275		Outlet, Left Side, 2.50", w/1000 GPM Pump, Wildland	1
			Qty, Discharges - 01	
225	0015027		Not Required, Elbow, Left Side Outlets	1
226	0759639		Outlet, Left Side, 2.50" w/2" Plumbing, Adjacent to Deadlay, Wildland BX3	1
			Qty, Discharges - 01	
227	0035094		Not Required, Elbow, Left Side Outlets, Additional	1
228	0024302		Not Required, Outlet, Right Side, Wildland	1
229	0065478		Not Required, Elbow, Right Side Outlets	1
230	0759637		Outlet, Right Side, 2.50" w/2" Plumbing, Adjacent to Deadlay, Wildland BX3	1
			Qty, Discharges - 01	

Line	Option	Type	Option Description	Qty
231	0089584		Not Required, Elbow, Right Side Outlets, Additional	1
232	0773401		Outlets,(2),Front1.5"w/2" Plumbing, Valves at Outlet,LS-RS,1906 Wildland BX3	1
			Location, Outlet - c) one (1) each side	
			Fitting, Outlet - 1.50" NPSH thread	
			Drain, Front Outlet - Parker	
233	0505191		Outlet, Rear, 1.50", w/2" Plumbing, Valve at Outlet, Wildland BX3	1
			Qty, Discharges - 01	
			Location, Outlet - d) center	
234	0045099		Not Required, Elbow, Rear Outlets	1
235	0766836		Outlet, Rear, 2.50", Wildland BX3	1
			Qty, Discharges - 01	
			Location, Outlet - d) center	
236	0655198		Not Required, Elbow, Rear Outlets, 2.50", Additional	1
237	0752097		Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	1
238	0002604		Valve, Bleeders, Individual Not Req'd	1
239	0773410		Deadlay (1), No Plumbing, Low Mount, 200' of 1.75" Capacity, Divided, BX3	1
			Qty, Deadlays - 1	
240	0766784		Hose Restraint,Treadplate Top, Vinyl Sides, Wildland BX3	1
			Color, Vinyl Cover - a) red	
			Restraint Location - Front (towards front of truck)	
241	0766783		NPSH Reel, Booster, LS, 2/3 H.P. Motor, Over Pump, Wildland BX3	1
			Finish, Reel - Painted Gray	
242	0005280		Switches, Reel Rewind - (1) Each Pump Panel	1
243	0018394		Hose, Booster - 150' of 1.00"/800 PSI, 1" NPSH Coupling	1
244	0017858		Capacity, Hose Reel 150' of 1"	1
245	0007428		Nozzle for Booster Reel Not Req'd	1
246	0773416		Foam Sys, Husky 3, Single Agent, Hydraulic Drive, BX3	1
247	0012126		Not Required, CAF Compressor	1
248	0628070		Refill, Foam Tank, Integral, Husky 3, BX	1
249	0578417		Control, Husky 3, Switch and Indicator Light in Cab	1
250	0031896		Demonstration, Foam System, Dealer Provided	1
251	0768342		Foam Tank, Separate 20 Gallon, BX3	1
			Type of Foam - Class "A"	
252	0628071		Drain, 1.00", Foam Tank #1, Foam System, Quarter Turn, BX	1
253	0738072		Approval Dwg, Pump Panel(s), Not Required	1
254	0035570		Pump Panel Configuration, No Match Required	1
255	0762017		Material, Pump Panels, Brushed Stainless, 1906 Wildland BX3	1
256	0766517		Pump Access - Wildland BX3	1
257	0071130		Light, Pump Compt, PMFD	1
258	0586382		Gauges, Engine, Included With Pressure Controller	1
259	0005601		Throttle, Engine, Incl'd w/Press Controller	1
260	0739224		Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle,Green	1
261	0549333		Indicators, Engine, Included with Pressure Controller	1
262	0745568		Indicator Light, Pump Panel, Ok To Pump, Green	1
263	0767294		Hourmeter, Pump/PTO, Wildland BX3, BX	1
264	0511078		Gauges, 4.00" Master, Class 1, 30"-0-600psi	1
265	0768295		No Discharge Pressure Gauges Required, NFPA 1906 Wildland	1
266	0766488		Gauge,Water and Foam Level,Master w/Mini in Cab, Wildland BX3/BLM	1
267	0668618		Not Required, Foam Level Gauge Included With Dual Water & Foam Gauge	1
268	0723261		Lighting, Pump Operator Control Panel Illumination, BX3	1
269	0773413		Light, Over PS Pump Panel, P25 LED, Wildland BX3	1
			Qty, - 1	
270	0751223		Compartment,Tool/Equipment,Right Side Pump Module,Angled Door Opening,BX3	1
271	0766263		Siren, Wln 295SLSA1, 100 or 200 Watt, Wildland BX3	1
272	0637494		Location, Electronic Siren, BX Product	1
273	0076157		Control, Elec Siren, Horn Ring	1
274	0766262		Speaker, (1) Wln, SA315P, 100 watt, Wildland BX3	1
			Qty, Speakers - 1	
			Connection, Speaker - siren head	
275	0763428		Location, Speaker, Frt Bumper, Recessed, Far Left Side on Angled Corner	1
276	0606714		Lightbar, Wln, Freedom IV-Q, 60", RR_R_W__W_R_RR	1
			Filter, Whl Freedom Ltbrs - No Filters	

Line	Option	Type	Option Description	Qty
277	0766470		Lights, Front Zone, Wln M6** LED, Clear Lens, Wildland BX3	1
			Flange Kit - w)with flange	
			Color, Lens, LED's - c)clear	
			Color, Lt DS Front - Red	
			Color, Lt PS Front - Red	
278	0766458		Lights, Side Zone Lower, Wln M6*C LED, Clear Lens 2pr, BX3	1
			Location, Lights Front Side - b)each side bumper	
			Color, Lt Side Front - Red	
			Color, Lt Side Rear - Red	
			Location, Lights Rear Side - Rear Corners of Body	
279	0753267		Lights, Rear Zn Lwr, Wln M6*C, Clear Lens,(Use for 4" Round Tail Lights) BX3	1
			Color, Lt DS Rear - r) DS Rear Lt Red	
			Color, Lt PS Rear - r) PS Rear Lt Red	
280	0766447		Lights, Rear/Side Up Zone, Wln M6*C LED, Clear Lens 4lts, Wildland BX3	1
			Color, Lt, Side Rear Upper DS - Side Rear Upper Red	
			Color, Lt, Side Rear Upper PS - Side Rear Upper Red	
			Color, Lt, Rear Upper DS - r) DS Rear Upper Red	
			Color, Lt, Rear Upper PS - r) PS Upper Rear Red	
281	0006551		Not Required, Lights, Rear Upper Zone Blocking	1
282	0007150		Bag of Nuts and Bolts	1
			Qty, Bag Nuts and Bolts - 1	
283	0519913		Not Required, Soft Suction Hose	1
284	0766676		Strainer, Provided by Fire Department, Wildland NFPA 1906 2016 Classification	1
285	0766686		Extinguisher, Dry Chemical, Wildland NFPA 1906 2016, Provided by Fire Department	1
286	0766685		Extinguisher, 2.5 Gal, Not Required, NFPA 1906 2016 Wildland Apparatus	1
287	0607712		Paint Process / Environmental Requirements, PMFD	1
288	0583882		Paint, 90 Red, Commercial Grade Chassis Finish, PMFD Commercial Chassis	1
			Paint Color, Commercial, Std - #90 Candy Apple Red	
289	0586561		Chassis Cab Paint, #90 Red, by Chassis Manufacturer, Standard	1
			Paint Color, Commercial, Std - #90 Candy Apple Red	
290	0583915		No Two-Tone Paint Req'd	1
291	0582663		Paint, Chassis Frame Assy, Black, by Commerical Chassis Manufacturer	1
292	0651188		Paint, Wheels, By Chassis Manufacturer, Single Rear Axle, Commercial	1
293	0651181		Wheels, Silver Accent Stripe on Outer Edge, Single Axle	1
294	0037234		Compartment, Unpainted	1
295	0544087		Reflective Band, 6"	1
			Color, Reflect Band - A - a) white	
296	0007357		Reflective on Front Bumper	1
297	0766414		Stripe, Chevron, Rear, Reflexite, Wildland BX3	1
			Color, Reflexite Band - B - L2 Fluorescent Lime	
298	0065785		Stripe, Reflective, Cab Drs Interior, Commercial Cabs, 4dr	1
			Color, Reflective - a) white	
299	0027286		Not Required, Lettering Specs	1
300	0007472		[Lettering not Requested]	1
301	0766245		Manual, Fire Apparatus Parts, USB, Body Parts Only, Commercial Product	1
302	0766243		Manual on USB Flash Drive, Service, Commercial	1
303	0002902		Manual, Commercial Chassis Operation	1
304	0080008		Warranty, Basic, 1 Year, Apparatus, Commercial Chassis, WA0008	1
305	0761945		Warranty, Basic Vehicle, 1 yr, International HV (w/Cummins Engine)	1
306	0595282		Warranty, Cab Paint, As Provided By Chassis Manufacturer, Commercial	1
307	0647720		Warranty, Pierce LED Strip Lights, WA0203	1
308	0021516		Warranty, 5-Year EVS Transmission, Standard Comm, WA0187	1
309	0688798		Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	1
310	0596025		Warranty, Structure, 10 Year, Body, WA0009	1
311	0690936		Warranty, Roll up Doors, Not Required	1
312	0582368		Warranty, Pump, Darley, 6 Year Parts, 3 Year Labor, WA0179	1
313	0648675		Warranty, 10 Year S/S Pumbing, WA0035	1
314	0657990		Warranty, Foam System, Husky 3, WA0231	1
315	0595820		Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	1
316	0593921		Not Required, Warranty, No Lettering	1
317	0544883		Certification, Cab Integrity, IHC, CD0025	1

Line	Option	Type	Option Description	Qty
318	0545073		Amp Draw Report, NFPA Current Edition	1
319	0002758		Amp Draw, NFPA/ULC Radio Allowance	1
320	0000017		FLORIDA DIVISION BODY	1
321	0000015		FLORIDA DIVISION COMMERCIAL CHASSIS	1
322	0004713		ENGINE, OTHER	1
323	0046395		EVS 3000 Series TRANSMISSION	1
324	0018574		DARLEY PUMP	1
325	0028048		FOAM SYSTEM	1
326	0020006		SIDE CONTROL	1
327	0020007		AKRON VALVES	1
328	0020909		ABS SYSTEMS, Commercial	1
329	0658751		PUMPER BASE	1

Option List

9/13/2023

Customer:	Summit Fire Medical District	**Bid Number:**	758
Representative	McDonald, Ed	**Job Number:**	
Organization:	Hughes Fire Equipment, Inc	**Number of Units:**	1
Requirements Manager:		**Bid Date:**	09/20/2023
Description:	BX3 Wildland, Freightliner, 1000 GPM, SF-3202	**Stock Number:**	37582
Body:	WILDLAND BX3, Type 3, NFPA 1906	**Price Level:**	44 (Current: 46)
Chassis:	Freightliner M2-106, 4x4, Wildland BX3	**Lane:**	

Line	Option	Type	Option Description	Qty
1	0765493	SP	Wildland, BX3, Freightliner, 1000 GPM Pump (SF-3202)	1
2	0766594		Boiler Plates,1906, Wildland	1
			Fire Department/Customer - Flagstaff Fire Department Operating/In conjunction W-Service Center - Operating Miles - 25 Miles Number of Fire Dept/Municipalities - 25 Bidder/Sales Organization - Hughes Fire Equipment Delivery - Delivery representative Dealership/Sales Organization, Service - Hughes Fire Equipment	
3	0018257		Commercial chassis & Snorkel products	1
4	0584455		Manufacture Location, Bradenton, Florida	1
5	0584453		RFP Location: Bradenton, Florida	1
6	0588609		Vehicle Destination, US	1
7	0799089		Comply NFPA 1906 Changes Effect Jan 1 , 2016 with Exceptions, Commercial Chassis	1
8	0547534		1906 Wildland Fire Apparatus	1
9	0588619		Not Required, Vehicle Certification	1
10	0511675		Certification, Pump, Wildland	1
11	0537375		Unit of Measure, US Gallons	1
12	0030006		Bid Bond Not Requested	1
13	0816569		Performance Bond, Not Requested, PPI Terms	1
14	0010007		No Approval Drawing Req'd.	1
15	0589819		Electrical Diagrams, Commercial	1
16	0773668		Freightliner M2-106, 4x4, Wildland BX3	1
17	0893566		Model Year 2024	1
18	0768599	SP	Use SF-3201 Freightliner Chassis Spec (Wildland BX3) [Use Also w/3202]	1
19	0720765		Base Price,FLR M2-106,4x4,Wildland BX3, Effective 5/18/2021 - EXPIRED 11/23/2021	1
20	0802041	SP	Surcharge, Freightliner, Effective 05/30/2022 Build Date	1
21	0767550		Overall Height, Wildland BX3 - w/Freightliner Chassis - 10' 6"	1
22	0767548		Angle of Departure, Approximately 25 Degrees, Wildland BX3	1
			Condition of Truck - Loaded	
23	0751234		Angle of Approach,Approximately 23 Degrees, Freightliner / Wildland BX3	1
			Condition of Truck - Loaded	
24	0773610		Wheelbase, 177", Freightliner 4x4, Wildland BX3	1
25	0773641		GVW Rating, 35,000#, Commercial Chassis	1
26	0579898		Frame, Chassis, Freightliner, 120 KSI	1
27	0582814		Frame Reinforcement, 1/4" Inner Liner, Freightliner	1
28	0686245		Axle, Front Driving, 12K, Freightliner 4x4, w/MTC4210 XL (No PTO)	1
29	0773475		Suspension, Front Spring, 12,000 lb, Commercial	1
30	0073051		Shock Absorbers, Front	1
31	0789186		Brakes, Cam Front, 16.50"x 5.00" Commercial	1
32	0585775		MichelinTires	1
33	0772242		Tires, Front, 22.50, Traction Tread, 4x4 (to 14.6k GAWR)	1
34	0683147		Wheel, Steel, 22.50", 4x4	1
35	0765526		Axle, Rear, 23K, Freightliner M2-106 4x4, BX3	1
36	0772020		S-Cam Style 16.50" x 7.00"	1
37	0767494		Top Speed of Vehicle, Comply w/NFPA, Wildland BX3	1
			Top Speed of Vehicle - 68	
38	0773477		Suspension, Rear Spring, 23,000 lb Commercial	1
39	0649953		Oil, Synthetic Gear, Meritor 4x4, Front and Rear Axles, Freightliner M2-106	1
40	0008102		Dust Shields, Front and Rear Brakes, Commercial Chassis	1

Line	Option	Type	Option Description	Qty
41	0772235		Tires, Rear, 22.50, Traction Tread, 4x4 (to 27k GAWR)	1
42	0810393		Wheel, Steel, 22.50" x 8.25", 4x4	1
43	0767493		No Tire Pressure Indicator, Fire Department Omits, Non-NFPA 1906-2016 Compliant	1
44	0749971	SP	Carrier, Spare Tire, Under Rear Substructure, BX3, Non-NFPA 1906	1
45	0012045		Mud Flap, Rear, Pierce Logo	1
46	0767491		Chocks, Wheel, Wildland, NFPA, Provided by Fire Department, NFPA 1906 - 2016	1
47	0544690		Mounting Brackets, Chocks, Provided by Fire Department	1
48	0020881		ABS, Anti-Lock Braking System, Commercial	1
49	0009547		Air Compressor, Brake, 18.7 CFM, Commercial	1
50	0773985		Air Dryer, Brake, w/Heater, Commercial	1
51	0020851		Not Required, Air Inlet	1
52	0728926		Engine, Cummins L9, 360 hp, FL M2-106, BX3	1
53	0755088		Engine Surcharge, Cummins/Freightliner	1
54	0001247		High Idle w/Electronic Engine, Commercial	1
55	0773963		Auxiliary Brake, Exhaust Brake , VGT Style, With Brake Lights, Commercial	1
56	0779576		Fuel/Water Separator,Detroit,w/Hand Primer,H2O Sensor w/Preheater, M2-106/108SD	1
57	0773981		Air Intake, Engine, w/Ember Separator, OEM Installed, Commercial	1
58	0773636		Exhaust System, Horizontal, RH Step Mounted DPF/SCR, Commercial	1
59	0684987		Exhaust Modifications, Commercial Chassis, Horizontal Exhaust	1
60	0061579		Coolant Hoses, Gates Blue Stripe, FL M2	1
61	0773634		Fuel Tank, 70 Gallon, Left Side, Aluminum, Commercial	1
62	0773952		DEF Tank, Left Side Location, Commercial	1
63	0723716		Fuel Priming Pump, Electronic, Automatic, Cummins, No Swt Req'd	1
64	0552712		Not Required, Shutoff Valve, Fuel Line	1
65	0023745		Cooler, Chassis Fuel, Pierce Installed	1
66	0764176		Chassis Fuel Line Protection, Fire Wrap Lagging, Wildland	1
67	0773950		Trans, Automatic, Allison 3000 EVS, w/(2) PTO Provsions, Commercial	1
68	0742564	SP	Transmission, Shifter, Push Button, 6 Speed, Freightliner BX3 w/L9 Engine	1
			Trans, ratio - 3000 EVS, 6Spd	
69	0011475		Transmission Oil Cooler, Internal, Commercial	1
70	0527500		Transfer Case Oil Cooler, 4x4, Commercial	1
71	0733744		Driveline for PTO/Transfer Case or No Pump Installation - Commercial	1
72	0773640		Driveline Pre-Approved, Freightliner M2-106 4x4, Wildland BX3	1
73	0773977		Steering, Power w/Tilt/Telescope Column, Commercial	1
74	0607536		Skid Plate and Brush Guard, For Fuel and DEF Tanks, Commercial Chassis	1
75	0761934		Chassis Air Line Protection, Fire Wrap Lagging, Wildland	1
76	0751213		Winch, Warn, 15000 lb. Fixed, Front, Synthetic Rope, Polished Fairlead, BX3	1
			Stay arm, Tray Cover - a) Mech Stay Arm	
77	0751239		Bumper Extension, 19", Steel Painted, Chicago Style, Commercial Chassis, BX3	1
78	0751237		Tray, (1) Hose Left Side of 19" Bumper, Wildland BX3	1
			Grating, Bumper extension - Grating, Rubber	
			Capacity, Bumper Tray - 06) 75' of 1.50"	
79	0766331		Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray, Notched, BX3	1
			Stay arm, Tray Cover - a) Mech Stay Arm	
80	0751236		Tray, (1) Hose Right Side of 19" Bumper, Wildland BX3	1
			Grating, Bumper extension - Grating, Rubber	
			Capacity, Bumper Tray - 06) 75' of 1.50"	
81	0766332		Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray, Notched, BX3	1
			Stay arm, Tray Cover - a) Mech Stay Arm	
82	0002283		Tow Hooks, Painted	1
83	0012300		Bracket, License Plate, Frt Bumper Non-Illuminated	1
84	0767590		Cab, 4-door, Crew Cab High-Roof, Freightliner, M2-106, Wildland BX3	1
85	0769892		Cab Interior, Gray, w/Convenience Package, 4-Door Crew Cab, Freightliner	1
86	0668972		Grille, Chromed Plastic, w/Exterior Appearance Pkg, Freightliner	1
87	0548159		Mirrors, West Coast, 8"Convex, Heated, Remote,Bright,PS Aux, Freightliner	1
88	0616224		Steps, Cab, as Supplied by Freightliner (Stainless Steel)	1
89	0767309		Compartment, Tool, Under RH Crew Cab, Wildland BX3	1
90	0767312		Compartment,Tool/Brass, Under LH Crew Cab, Max Size, BX3	1
91	0637488		Lights, Cab & Crw Cab Acs Stps, LED, 4 Door Cab, BX Product	1
92	0070598		Daytime Running Lts, Commercial	1

Line	Option	Type	Option Description	Qty
93	0689675		DELETE Rear Cab Window, Freightliner M2-106/112/114SD	1
94	0773943		Air Conditioning, Commercial	1
95	0759495		Ember Screen, for AC Filter, Air Intake, Pierce Provided, Commercial Chassis	1
96	0005940		Lights, Engine Compt, (2) Commercial Chassis	1
97	0731748		Console, 4-Door, Switches, Radio and Storage, BX3	1
			Console, Configuration - Without Door/Cover	
			Console, Controls - Aux Pump Control - Right Side	
			Console, Features - Without Turret Joy Stick	
98	0726718		DECLINED - Side Roll Protection, Freightliner	1
99	0767593		Seating Capacity, Cab, 4-Door, Wildland BX3	5
			Qty, - 05	
100	0582132		Seats, Cab, Air Driver w/911 Air Susp Passenger, Non-SCBA, Freightliner	1
101	0764145		Seats, 3-man bench, No Seat Occupied Sensor, FLR	1
102	0597773		Seat Belt Web Length, NFPA Compliant, Commercial Chassis	1
103	0581771		Seat Belts, Orange, Freightliner	1
104	0547549		Helmet Storage, Not Required, NFPA 1906 Apparatus	1
105	0767583		Portable Hand Light, Not Required, NFPA 1906 2016 Apparatus	1
106	0584358		Cab Instrumentation, Commercial Chassis	1
107	0767575		Panel, Emergency Switch, on Console, BX3	1
108	0641093		Light, Do not move apparatus, Commercial, BX Program	1
			Alarm, Do Not Move Truck - No Alarm	
109	0005926		Light, Open Door - Commercial Std	1
110	0072620		Wiper control, intermittent feature Commercial	1
111	0759671		Wiring,Spare,4.8 A 12V DC,USB Termination Blue Sea 1045, on Rear of Console, BX3	2
			Qty, - 02	
			12vdc power from - Battery direct	
112	0762221		Auxiliary Power Outlet (12V) and USB Port, Commercial Chassis	1
113	0637217		Radio, AM/FM/Weather Band, Bluetooth, USB/ Aux Input, J1939,Freightliner	1
114	0622928		Not Available, Vehicle Information Center, Multiplex System, Commercial Chassis	1
115	0734854		Collision Mitigation, Not Requested	1
116	0606231		Not Required, Vehicle Data Recorder and Seat Belt Monitor, Export/ULC	1
117	0763435		Two-Way Radio Accommodation Package - Wildland/BX3	1
118	0696434		Antenna Mount, Commercial Chassis, Cable Routed to Console	2
			Qty, - 02	
119	0622749		Weldon V-MUX, Electrical System, Freightliner Chassis, BX-Product	1
120	0773471		Electrical System, Freightliner M2-106, BX3 Wildland	1
121	0768646		Single Start, (3) Batteries, 2250-2280 CCA, w/Jump Studs, FLR M2-106, BX3	1
122	0756893		Battery Relocation by Pierce, FLR M2-106, 4-Door Cab, 4x4, BX3/BLM	1
123	0897716		Battery Location, Top of Crew Cab Step Compartment, Left Side	1
124	0072685		Selector, Single Start Battery, Commercial Chassis	1
125	0767195		Charger, Sngl Sys, Kussmaul, 1200, 091-187-12-Remote, 40 Amp, BX3, BX	1
126	0764272		Location, Charger, in Cab Behind Crew Cab Seat, BX3	1
127	0642406		Location, Bat Chrg Ind, Driver's Crew Step Area	1
128	0767064		Shoreline, 20A 120V, Kussmaul Auto Eject, for Battery Charger, BX3	1
			Color, Kussmaul Cover - d) yellow	
			Qty, Shoreline - 1	
129	0767063		Shoreline Location, BX3	1
			Location, Shoreline(s) - DS Step Pkg Comm Crew	
130	0621234		Alternator, 300 amp, Delco, 40SI, FLR	1
131	0634181		Load Manager, Inc w/MUX Electrical System , BX Program	1
132	0773739		Cab Lighting, LED Marker Lights, Commercial	1
133	0669538		Lights, Clearance/Marker/ID, Rear, P25 LED 7Lts, Pumper/Tanker/PUC	1
134	0619776		Lights, Tail, Truck-Lite 4.00" Round Grommet Mount, LED Lights, Wildland BX3	1
135	0689409		Lights, Backup, Truck-Lite Model 44350C, LED, Grommmet Mount	1
136	0664481		Bracket, License Plate & Light, P25 LED	1
137	0589905		Alarm, Back-up Warning, PRECO 1040	1
138	0767028		Lights, Perimeter Cab, Amdor AY-LB-12HW012 LED 4Dr, NFPA 1906 BX3	1
139	0769559		Lights, Perimeter Pump House, Amdor AY-LB-12HW012 LED 2lts	1
140	0766637		Lights, Perimeter Body, Amdor AY-LB-12HW012 LED 2lts, Rear Step, BX3	1
			Switch, Lt Control 1 DC,1 -	
			Switch, Lt Control 2 DC,2 -	

Line	Option	Type	Option Description	Qty
140			EXCLUDED: [Control, Perimeter Lts]. - DS Switch Panel and Parking Brake Applied	
141	0764260		Lights, Step, LED, BX3, Prk Brk	1
			Control, Scene Lts - Park Brake	
142	0759407		Light, Wln, 12V PCPSM2C Pioneer LED Fld/Spt, Surface Mnt 1st, RIGHT Side, BX3	1
			Qty, - 01	
			Switch, Lt Control 1 DC,1 - a) DS Switch Panel	
			Switch, Lt Control 2 DC,2 - DS Pump Panel	
			Color, Wln Lt Housing - Chrome Flange	
			Location, 12/24 Volt Lights - PS Body, Forward, 1lt	
143	0764940		Light, Wln, 12V PCPSM2C Pioneer LED Fld/Spt, Surface Mnt 1st, LEFT Side, BX3	1
			Qty, - 01	
			Switch, Lt Control 1 DC,1 - a) DS Switch Panel	
			Switch, Lt Control 2 DC,2 - DS Pump Panel	
			Color, Wln Lt Housing - Chrome Flange	
			Location, 12/24 Volt Lights - DS Body, Forward, 1lt	
144	0772726		Light, Visor, Wln, 12V PCH2* Pioneer LED Fld/Spt, Brow Mt, Commercial, BX	1
			Switch, Lt Control 1 DC,1 - a) DS Switch Panel	
			Switch, Lt Control 2 DC,2 - e) No Control	
			Color, Wln Lt Housing - White Paint	
145	0603539		Not Required, Deck Lights, Rear, 1906 Wildland or Other Hose Bed & Rear Lighting	1
146	0766626		Lights, Hose Bed, Cover, Dual LED Light Strips, BX3	1
			Control, Hose Bed Lts - Auto Cover Sw	
147	0763429		Lights, Walk Surf, Additional Not Req'd, Hose Bed Light Adequate, BX3	1
148	0804230		WILDLAND BX3, Type 3, NFPA 1906	1
149	0773467		Water Tank, Poly, 500 Gallon, Wildland BX3	1
150	0003405		Overflow, 4.00" Water Tank, Poly	1
151	0766960		Foam Tank, Separate, Required	1
152	0553725		Restraint, Water Tank, Heavy Duty, Special Type Tank, 4x4, or Export	1
153	0768625		Tank Fill, Direct, Rear, 2.50", Wildland	1
			Qty, - 01	
			Location, driver's/passenger's/center - Centered	
			Adapter, Elbow - PLUG	
154	0773432		Hose Bed, Wildland BX3	1
155	0762116		Hose Bed Capacity, 500' of 2.50" Hose, Wildland BX3	1
156	0073494		Not Required, Divider, Hose Bed	1
157	0751228		Covers, Hose Bed, Alum Treadplate, 4-Section, Wildland BX3	1
158	0761425		Flap, Rear of Alum Hose Bed Cover, Two Piece, Vinyl, w/Seat Belt Buckles, BX3	1
			Color, Vinyl Cover - c) black	
159	0768124		Top of Truck Gear and Equipment Storage, BX3	1
160	0768331		Running Boards, Wildland BX3	1
161	0766413		Tailboard, w/Hinged Drop-Down Step, Wildland BX3	1
162	0607673		Wall, Rear, Aluminum Treadplate, Wildland BX3	1
163	0766412		Tow Eyes, 1906 Wildland BX3/BLM	1
164	0773465		Construction, Compartment, Stainless Steel, Wildland BX3	1
165	0773598		LS, Flush Style Door, Full-Depth, Wildland BX3	1
166	0773597		RS, Flush Style Door, Full Depth, w/Ladder Storage, Wildland BX3	1
167	0768326		Doors, ALUMINUM, FLUSH STYLE w/"D" Handle - Side Compartments, Wildland BX3	1
			Scuffplate, Material/Finish - S/S, Brushed	
			Location, Compartment, Predefined - B1, LS1, LS2, RS1, RS2 and RS3	
			FX3 Body Door Scuffplates - Inside	
168	0615834		Rear Compt, Flush Style Door, Wildland BX3	1
169	0626754		Doors, ALUMINUM, FLUSH STYLE w/"D" Handle - Rear Compartment, Wildland BX3	1
170	0597111		Not Required, Pull Strap	1
171	0738852		Keyed Locks for Latches, Key Style 1250, Body Compts, Wildland BX3	1
172	0766933		Lights, Body Compt, Pierce LED, Dual Lt Strips, Each Side of Door, BX3	6
			Qty, - 06	
			Location, Compartment Lights - R1, LS1, LS2, RS1, RS2 and RS3	
173	0768324		Shelf Tracks, Unpainted, Wildland BX3	5
			Qty, Shelf Track - 05	
			Location, Shelf Track - LS1, LS2, RS1, RS2 and B1	

Line	Option	Type	Option Description	Qty
174	0766575		Shelves,Adjustable,500 lb Capacity,Full Width/Depth,Brushed Alum,Wildland BX3,BX	5
			Qty, Shelf - 05	
			Location, Shelves/Trays, Predefined - RS1-Centered, RS2-Centered, LS1-Centered, LS2-Centered and B1-Centered	
175	0004015		Trim, Alum Treadplate on Lower Body	1
176	0739426		Fender Crowns, Rear, Rubber, w/Removable Liner, BX3	1
			Material Finish, Fender Liner - Painted - Program Truck	
177	0766681		Hose, Hard Suction, Provided by Fire Department, NFPA 1906 2016, Wildland	1
178	0527021		Handrails Located @ Front Body	1
179	0531152		Handrails, Rear Bulkhead, Wildland	1
180	0758878		Handrail, Rear, Above Hose Bed, BX3	1
181	0044229		No Extension Ladder Req'd	1
182	0074231		No Roof Ladder Req'd	1
183	0773396		Ladders, Encl'd Complete, in RS Body, w/Pike Poles, Wildland BX3	1
184	0074248		Not Required, Folding Ladder	1
185	0766277		I Zone Bracket, Pair, Located Outboard, Wildland Style	1
186	0768315		Steps,(4) Cast Products,Model SP2011-1/(2) Model SP2016-1,Rear Body,Wildland BX3	1
187	0762015		Step Access to Running Boards, w/4x4 Chassis, Wildland BX3	1
188	0766970		Auxiliary Pump, Hydraulic Drive (Price Only)	1
189	0766267		Pump,Auxiliary, Darley,1.5AGH,Hyd PTO Drive,150 GPM, 2016 NFPA 1906,Wildland BX3	1
190	0626923		Installation Location, Aux Pump, Inside Pump house Area	1
191	0788341		Not Required, Fuel Supply, (Hydraulic Drive Pump)	1
192	0626844		Not Required, Exhaust Routing, Aux Pump	1
193	0787477		Discharge Connections, Aux Pump, Standard, w/Foam System	1
			Discharge, Outlet Locations - Foam Discharges	
194	0786060		Tank to Pump Line, Hyd Aux Pump, 2.00", Separate Tank to Pump Line	1
195	0802862	SP	Not Required, Primer for Aux Pump, Gravity Prime	1
196	0766930		Controls, Hydraulic Aux Pump, Pierce, Dual,In Cab and at Pump Panel,Wildland BX3	1
197	0626933		Line, Recirculating, Aux Pump, 499gpm and less, 0.375", Automatic	1
198	0766268		Engineering Review of Aux Pump System Not Req'd - Wildland BX3	1
199	0773415		Pump House, Side Control, 28", Wildland BX3	1
200	0769817		Pump, Darley, LSP, 1000 GPM, Single Stage, PTO Drive, Wildland BX3	1
201	0007153		Seal, Mechanical, Darley, Silicon Carbide	1
202	0014633		Trans, Pump, Darley, PTO, 3 Gear	1
203	0603731		Pumping Mode, Stationary and Pump in Motion (Pressure Gauge in Cab Included)	1
204	0535276		Pump Shift, PTO Pump	1
205	0581602		Transmission Lock-up, Not Req'd, PTO Pump	1
206	0004547		Auxiliary Cooling System	1
207	0014486		Not Required, Transfer Valve, Single Stage Pump	1
208	0746511		Valve, Relief Intake, TFT	1
			Pressure Setting - 125 psig	
209	0794959		Controller, Pressure, Pierce, Pump Boss, PBA300	1
210	0613850		Primer, Waterous, VPO Motor, (1) VAP Valve, (2) Push Button Controls, PTO Pump	1
211	0506633		Plate, Test, Main Pump	1
212	0694360		Pump Drain, Trident Multi-Port, IPO Std Pump Drain	1
213	0517155		Line, 0.375" Recirculating w/Check Valve, Automatic, NFPA 1906, Wildland	1
214	0759034		Outlet, Back Pack Pump Filler, Gravity Fed From Tank, BX3	1
215	0780364		Manuals, Pump, (2) Total, Electronic Copies	1
216	0602487		Plumbing, Stainless Steel and Hose, Single Stage Pump, PMFD	1
217	0775901		Plumbing and Manifolds, Stainless Steel, w/Foam System	1
218	0762334		Inlet, 5.00" - 1000 GPM Pump, Left Side Only, BX3	1
219	0017541		Cap, Main Pump Inlet, Rocker Lug, NST, VLH	1
220	0084610		Valves, Akron 8000 series- All	1
221	0766918		Valve, Inlet(s) Recess Behind Panel, Wildland BX3	1
222	0004700		Control, Inlet, at Valve	1
223	0505201		Inlet, Left Side, 2.50", Wildland	1
224	0763478		Inlet, Right Side, 2.50", Auxiliary Inlet, Wildland BX3, BX	1
225	0505132		Anode, Zinc, Pair, Pump, One (1) on Inlet Side & One (1) on Discharge Side	1

Line	Option	Type	Option Description	Qty
226	0723049		Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle	1
227	0520031		Tank to Pump,(1) 3.0" Valve,4.0" Plumbing,In/Open-Out/Closed, Wildland/BX3	1
228	0006764		Tank ReFill, 2.0"	1
229	0021138		Control, Outlets, At Valve, NFPA 1906 Wildland	1
230	0768275		Outlet, Left Side, 2.50", w/1000 GPM Pump, Wildland	1
			Qty, Discharges - 01	
231	0015027		Not Required, Elbow, Left Side Outlets	1
232	0759639		Outlet, Left Side, 2.50" w/2" Plumbing, Adjacent to Deadlay, Wildland BX3	1
			Qty, Discharges - 01	
233	0035094		Not Required, Elbow, Left Side Outlets, Additional	1
234	0024302		Not Required, Outlet, Right Side, Wildland	1
235	0065478		Not Required, Elbow, Right Side Outlets	1
236	0759637		Outlet, Right Side, 2.50" w/2" Plumbing, Adjacent to Deadlay, Wildland BX3	1
			Qty, Discharges - 01	
237	0089584		Not Required, Elbow, Right Side Outlets, Additional	1
238	0773401		Outlets,(2),Front1.5"w/2" Plumbing, Valves at Outlet,LS-RS,1906 Wildland BX3	1
			Location, Outlet - c) one (1) each side	
			Fitting, Outlet - 1.50" NPSH thread	
			Drain, Front Outlet - Parker	
239	0505191		Outlet, Rear, 1.50", w/2" Plumbing, Valve at Outlet, Wildland BX3	1
			Qty, Discharges - 01	
			Location, Outlet - d) center	
240	0045099		Not Required, Elbow, Rear Outlets	1
241	0766836		Outlet, Rear, 2.50", Wildland BX3	1
			Qty, Discharges - 01	
			Location, Outlet - d) center	
242	0655198		Not Required, Elbow, Rear Outlets, 2.50", Additional	1
243	0752097		Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	1
244	0002604		Valve, Bleeders, Individual Not Req'd	1
245	0773410		Deadlay (1), No Plumbing, Low Mount, 200' of 1.75" Capacity, Divided, BX3	1
			Qty, Deadlays - 1	
246	0766784		Hose Restraint,Treadplate Top, Vinyl Sides, Wildland BX3	1
			Color, Vinyl Cover - a) red	
			Restraint Location - Front (towards front of truck)	
247	0766783		NPSH Reel, Booster, LS, 2/3 H.P. Motor, Over Pump, Wildland BX3	1
			Finish, Reel - Painted Gray	
248	0005280		Switches, Reel Rewind - (1) Each Pump Panel	1
249	0018394		Hose, Booster - 150' of 1.00"/800 PSI, 1" NPSH Coupling	1
250	0017858		Capacity, Hose Reel 150' of 1"	1
251	0007428		Nozzle for Booster Reel Not Req'd	1
252	0773416		Foam Sys, Husky 3, Single Agent, Hydraulic Drive, BX3	1
253	0012126		Not Required, CAF Compressor	1
254	0628070		Refill, Foam Tank, Integral, Husky 3, BX	1
255	0578417		Control, Husky 3, Switch and Indicator Light in Cab	1
256	0031896		Demonstration, Foam System, Dealer Provided	1
257	0768342		Foam Tank, Separate 20 Gallon, BX3	1
			Type of Foam - Class "A"	
258	0628071		Drain, 1.00", Foam Tank #1, Foam System, Quarter Turn, BX	1
259	0738072		Approval Dwg, Pump Panel(s), Not Required	1
260	0035570		Pump Panel Configuration, No Match Required	1
261	0762017		Material, Pump Panels, Brushed Stainless, 1906 Wildland BX3	1
262	0766517		Pump Access - Wildland BX3	1
263	0071130		Light, Pump Compt, PMFD	1
264	0586382		Gauges, Engine, Included With Pressure Controller	1
265	0005601		Throttle, Engine, Incl'd w/Press Controller	1
266	0739224		Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle,Green	1
267	0745568		Indicator Light, Pump Panel, Ok To Pump, Green	1
268	0767294		Hourmeter, Pump/PTO, Wildland BX3, BX	1
269	0511078		Gauges, 4.00" Master, Class 1, 30"-0-600psi	1
270	0768295		No Discharge Pressure Gauges Required, NFPA 1906 Wildland	1
271	0766488		Gauge,Water and Foam Level,Master w/Mini in Cab, Wildland BX3/BLM	1
272	0668618		Not Required, Foam Level Gauge Included With Dual Water & Foam Gauge	1

Line	Option	Type	Option Description	Qty
273	0723261		Lighting, Pump Operator Control Panel Illumination, BX3	1
274	0773413		Light, Over PS Pump Panel, P25 LED, Wildland BX3	1
			Qty, - 1	
275	0751223		Compartment,Tool/Equipment,Right Side Pump Module,Angled Door Opening,BX3	1
276	0766263		Siren, Wln 295SLSA1, 100 or 200 Watt, Wildland BX3	1
277	0637494		Location, Electronic Siren, BX Product	1
278	0076157		Control, Elec Siren, Horn Ring	1
279	0766262		Speaker, (1) Wln, SA315P, 100 watt, Wildland BX3	1
			Qty, Speakers - 1	
			Connection, Speaker - siren head	
280	0763428		Location, Speaker, Frt Bumper, Recessed, Far Left Side on Angled Corner	1
281	0606714		Lightbar, Wln, Freedom IV-Q, 60", RR_R_W__W_R_RR	1
			Filter, Whl Freedom Ltbrs - No Filters	
282	0766470		Lights, Front Zone, Wln M6** LED, Clear Lens, Wildland BX3	1
			Flange Kit - w)with flange	
			Color, Lens, LED's - c)clear	
			Color, Lt DS Front - Red	
			Color, Lt PS Front - Red	
283	0766458		Lights, Side Zone Lower, Wln M6*C LED, Clear Lens 2pr, BX3	1
			Location, Lights Front Side - b)each side bumper	
			Color, Lt Side Front - Red	
			Color, Lt Side Rear - Red	
			Location, Lights Rear Side - Rear Corners of Body	
284	0753267		Lights, Rear Zn Lwr, Wln M6*C, Clear Lens,(Use for 4" Round Tail Lights) BX3	1
			Color, Lt DS Rear - r) DS Rear Lt Red	
			Color, Lt PS Rear - r) PS Rear Lt Red	
285	0766447		Lights, Rear/Side Up Zone, Wln M6*C LED, Clear Lens 4lts, Wildland BX3	1
			Color, Lt, Side Rear Upper DS - Side Rear Upper Red	
			Color, Lt, Side Rear Upper PS - Side Rear Upper Red	
			Color, Lt, Rear Upper DS - r) DS Rear Upper Red	
			Color, Lt, Rear Upper PS - r) PS Upper Rear Red	
286	0006551		Not Required, Lights, Rear Upper Zone Blocking	1
287	0007150		Bag of Nuts and Bolts	1
			Qty, Bag Nuts and Bolts - 1	
288	0519913		Not Required, Soft Suction Hose	1
289	0766676		Strainer, Provided by Fire Department, Wildland NFPA 1906 2016 Classification	1
290	0766686		Extinguisher, Dry Chemical, Wildland NFPA 1906 2016, Provided by Fire Department	1
291	0766685		Extinguisher, 2.5 Gal, Not Required, NFPA 1906 2016 Wildland Apparatus	1
292	0607712		Paint Process / Environmental Requirements, PMFD	1
293	0583882		Paint, 90 Red, Commercial Grade Chassis Finish, PMFD Commercial Chassis	1
			Paint Color, Commercial, Std - #90 Candy Apple Red	
294	0586561		Chassis Cab Paint, #90 Red, by Chassis Manufacturer, Standard	1
			Paint Color, Commercial, Std - #90 Candy Apple Red	
295	0583915		No Two-Tone Paint Req'd	1
296	0582663		Paint, Chassis Frame Assy, Black, by Commerical Chassis Manufacturer	1
297	0651188		Paint, Wheels, By Chassis Manufacturer, Single Rear Axle, Commercial	1
298	0651181		Wheels, Silver Accent Stripe on Outer Edge, Single Axle	1
299	0037234		Compartment, Unpainted	1
300	0544087		Reflective Band, 6"	1
			Color, Reflect Band - A - a) white	
301	0007357		Reflective on Front Bumper	1
302	0766414		Stripe, Chevron, Rear, Reflexite, Wildland BX3	1
			Color, Reflexite Band - B - L2 Fluorescent Lime	
303	0065785		Stripe, Reflective, Cab Drs Interior, Commercial Cabs, 4dr	1
			Color, Reflective - a) white	
304	0027286		Not Required, Lettering Specs	1
305	0007472		[Lettering not Requested]	1
306	0766245		Manual, Fire Apparatus Parts, USB, Body Parts Only, Commercial Product	1
307	0766243		Manual on USB Flash Drive, Service, Commercial	1
308	0002902		Manual, Commercial Chassis Operation	1
309	0080008		Warranty, Basic, 1 Year, Apparatus, Commercial Chassis, WA0008	1
310	0681678		Warranty, Basic Vehicle, 3 yrs or 100,000 Miles, Freightliner	1

Line	Option	Type	Option Description	Qty
311	0595282		Warranty, Cab Paint, As Provided By Chassis Manufacturer, Commercial	1
312	0647720		Warranty, Pierce LED Strip Lights, WA0203	1
313	0021516		Warranty, 5-Year EVS Transmission, Standard Comm, WA0187	1
314	0688798		Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	1
315	0596025		Warranty, Structure, 10 Year, Body, WA0009	1
316	0690936		Warranty, Roll up Doors, Not Required	1
317	0582368		Warranty, Pump, Darley, 6 Year Parts, 3 Year Labor, WA0179	1
318	0648675		Warranty, 10 Year S/S Pumbing, WA0035	1
319	0657990		Warranty, Foam System, Husky 3, WA0231	1
320	0595820		Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	1
321	0593921		Not Required, Warranty, No Lettering	1
322	0544897		Certification, Cab Integrity, Freightliner, CD0022	1
323	0545073		Amp Draw Report, NFPA Current Edition	1
324	0002758		Amp Draw, NFPA/ULC Radio Allowance	1
325	0000017		FLORIDA DIVISION BODY	1
326	0000015		FLORIDA DIVISION COMMERCIAL CHASSIS	1
327	0004713		ENGINE, OTHER	1
328	0046395		EVS 3000 Series TRANSMISSION	1
329	0018574		DARLEY PUMP	1
330	0028048		FOAM SYSTEM	1
331	0020006		SIDE CONTROL	1
332	0020007		AKRON VALVES	1
333	0020909		ABS SYSTEMS, Commercial	1
334	0658751		PUMPER BASE	1

Type 3 Wildland Engine:

7. C.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Tyrone Johnson, Recreation Supervisor
Co-Submitter:	Amy Hagin
Date:	09/26/2023
Meeting Date:	10/03/2023

TITLE:

Consideration and Approval of Contract: This agreement is between the City of Flagstaff and the Flagstaff Youth Hockey Association (FYHA). The Agreement outlines the responsibilities for both parties including the rental of ice time at the City of Flagstaff Jay Lively Activity Center.

STAFF RECOMMENDED ACTION:

1. Approve the license agreement between the City of Flagstaff and the Flagstaff Youth Hockey Association with anticipated revenue of approximately $60,000.
2. Authorize the City Manager to execute the necessary documents.

Executive Summary:

The agreement between the City of Flagstaff and the Flagstaff Youth Hockey Association outlines the details for renting ice at the Jay Lively Activity Center for games, practices, hockey camps, and clinics.

Financial Impact:

During the last license agreement period of October 1, 2022 to October 1, 2023, the Flagstaff Youth Hockey Association paid the City of Flagstaff $54,629 for use of the Jay Lively Activity Center. The estimated revenue for this year's agreement is $60,000 and is subject to change based on real time rental and usage of the Activity Center.

Policy Impact:

None

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

Priority Based Budget Key Community Priorities and Objectives

Provide amenities and activities that support a healthy lifestyle (SP)3.4/ (SP)4.1/ (SP)4.4/ (RP)CC.5/LU.1-2/ LU.6/ LU.10/ LU.11/ LU.18/ T.3-7/ REC.1/ OS.1**

Carbon Neutrality Plan

N/A.

Regional Plan

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.

Has There Been Previous Council Decision on This:

Yes. Similar license agreements have been approved in previous years when the revenue is projected to exceed $50,000.

Options and Alternatives:

1. Approve the License Agreement as presented
2. Direct staff to revise the License Agreement
3. Not approve the License Agreement

Background/History:

License Agreements are coordinated each year between user groups and Jay Lively Activity Center staff with the approval of the City Attorney's office and the Risk Manager. Most of these agreements are under $50,000 in revenue to the City and do not require Council approval. Due to the level of revenue anticipated with this agreement ($60,000), the City Attorney's Office recommends City Council approval.

Key Considerations:

Flagstaff Youth Hockey Association (FYHA) is in good standing and continues to pay their invoices in a timely manner.

Expanded Financial Considerations:

The Flagstaff Youth Hockey Association (FYHA) paid the City of Flagstaff a total of $54,629 for license year October 2022 to October 2023. Schedule changes, cancelations and additions of ice time are expected throughout the year and will be addressed in the actual rental fee invoices at that time.

Community Benefits and Considerations:

Approving the contract allows youth and coaches to continue utilizing ice time for games, practices, hockey camps and clinics.

Community Involvement:

The City of Flagstaff Jay Lively Activity Center staff continue to work closely with all user groups to divide usable ice time in a fair and equitable manner.

Attachments: License Agreement

City of Flagstaff Recreation Services
211 W. Aspen Ave.
Flagstaff, AZ 86001
Phone: (928) 213-2300

Jay L. Lively Activity Center Ice Rink License Agreement

This License Agreement ("Agreement") is entered into by the City of Flagstaff ("City") and **Flagstaff Youth Hockey Association (FYHA)**("Licensee") to allow Licensee to rent ice time at the Jay L. Lively Activity Center Ice Rink.

RECITALS

A. The City operates an ice rink facility ("Ice Rink") at the Jay Lively Activity Center, located at 1650 N. Turquoise Drive, Flagstaff, AZ 86001 ("Ice Arena");

B. The Licensee desires to rent ice time at the Ice Arena for a fee, and the City desires to make ice time at the Ice Arena available for rent;

C. The City and the Licensee desire to enter into this Agreement for the use of the Ice Rink under the terms and conditions set forth below.

In consideration of the mutual covenants contained in this Agreement, the City and Licensee agree as follows:

TERMS AND CONDITIONS

1. **Ice Rink and Facilities**. The City hereby agrees to license to Licensee use of the Ice Rink at the Ice Arena for a fee. Licensee shall have exclusive use of the Ice Rink during the periods of time that Licensee schedules use of the Ice Rink in accordance with Section 5 below. In addition to the Ice Rink, Licensee shall be permitted to use all of the Ice Arena facilities, including locker rooms, bathrooms, and the referee's room. Licensee shall also be permitted to use two (2) hockey goals and nets, if needed, which will be provided by the City. The Ice Arena will be open forty-five minutes prior to scheduled periods of use. Licensee can request that the Ice Arena be made available earlier for an additional fee.

2. **Term of Agreement**. This Agreement shall become effective as of the last signature date set forth below and terminate on June 30, 2024.

3. **Fee**. Licensee agrees to pay the City at a rate of **$ 83.74 per hour** plus tax for use of the Ice Rink and facilities at the Ice Arena. Fees due to the City from Licensee for scheduled periods of use will be invoiced to Licensee and shall be payable prior to such use. **If Licensee fails to make timely payments, it will forfeit its scheduled use of the Ice Rink.** The hourly fee may be changed periodically by the Flagstaff City Council. The City reserves the right to charge spectator fees in accordance with the fee schedule adopted by City Recreation Services.

4. **Rules of Use**. The following rules must be followed at all times. Failure to follow the rules may result in termination of this Agreement and forfeiture of Licensee's scheduled use of the Ice Rink. The extent of the forfeited ice time will be at the sole discretion of City staff.

a) Licensee, Licensee's members, and Licensee's guests must follow Ice Arena and Ice Rink rules, regulations, and conditions of use posted by the City at all times. Rules, regulations, and conditions of use posted by the City are made at the City's sole discretion and are subject to change at any time. For hockey related activities, full protective gear must be always worn on the ice. This includes but is not limited to skates, shin guards/pads, hockey pants/girdle, shoulder

pads/chest protector, elbow pads, gloves/blocker and helmet.

b) Licensee is responsible for monitoring all persons who are members of Licensee's organization or guests of the Licensee, including visiting teams and their guests using the Ice Arena and Ice Rink during Licensee's scheduled periods of use.

c) Alcohol is not allowed in the Ice Arena. Use of alcohol or any other illegal substances by Licensee, Licensee's guests, visiting teams, or guests of visiting teams will result in forfeiture of the scheduled ice time. If a violation is discovered after Licensee's use of the facilities, Licensee will forfeit future scheduled ice time.

d) The Ice Arena is a tobacco-free environment. Use of any tobacco product in the Ice Arena is prohibited.

e) Fighting, the use of offensive language, and shaking, pounding, or standing on the ice rink boards is strictly prohibited.

f) Locker rooms shall be left in a clean and orderly manner. Licensee will be charged at a rate of $20.00 per hour if locker rooms or other areas require additional cleaning, repair, or replacement as a result of the activities of Licensee, Licensee's guests, visiting teams, or guests of visiting teams. Licensee is responsible for all damages that occur to the Ice Rink or Ice Arena facilities during its scheduled periods of use.

g) No more than 500 spectators are permitted for events and hockey games at the Ice Arena. The City reserves the right to change the number of allowable spectators at any time and for any reason. The City will be responsible for counting the number of spectators entering the Ice Arena.

h) For Licensee-sponsored events at the Ice Arena that will be attended by 100 or more spectators, the Licensee must arrange for police personnel to provide public safety and security services at the event. For events with expected attendance of 100 to 200 spectators, one police officer must be provided. For events with expected attendance of 201 to 400 spectators, two police officers must be provided. For events with expected attendance of 401 to 500 spectators, three police officers must be provided. Licensee shall be responsible for paying all costs associated with providing police personnel under this section. If the Licensee is unable to provide police personnel for its event, the City reserves the right to limit the number of spectators at the event to a safe amount.

5. **Scheduling Periods of Use**. The Licensee must schedule ice time at least thirty (30) days in advance by contacting City staff at the Ice Arena. Nothing contained in this Agreement shall be construed to guarantee that requested periods of use will be available for Licensee. Confirmation of scheduled ice time will be by written invoice issued by the City. All changes to scheduled ice times must be approved by City staff at the Ice Arena. Additional ice time may be scheduled without thirty (30) days advance notice, if available. The City reserves the right to schedule the Ice Rink for other uses at any time the ice is not scheduled for use by Licensee.

6. **Cancellations**. All cancellations of scheduled ice time must be made sixty (60) days prior to the canceled date to receive a full refund. All cancellations made forty-five (45) to fifty-nine (59) days prior to the canceled date will be refunded at 50%. Cancellations made less than forty-four (44) days prior to the canceled date will not be refunded. All scheduled ice time must be paid for by the Licensee whether or not the ice time is actually used. The City may reschedule use of the Ice Rink after receiving notice of cancellation and will attempt to fill all open times. If the City is able to reschedule use of the Ice Rink, the Licensee will receive credit for the time period that was rescheduled.

7. **Facility and Security Deposit**. The City requires a deposit for facility use and security, which may be used to pay for damage to the Ice Rink or Ice Arena facilities caused by the Licensee, Licensee's guests, visiting teams, or guests of visiting teams, or to cover unpaid facility-use fees. The Facility and Security Deposit will be 10% of the total monthly fee for the amount of time booked by Licensee or $500.00, whichever is less. The Facility and Security Deposit is due when ice time is scheduled.

8. **Conditions of Facility**. Rental of the Ice Rink is "as is." The City is under no obligation to modify the Ice Rink or to obtain additional equipment for Licensee's use. Licensee acknowledges that it has inspected the Ice Rink and Licensee is satisfied with its physical condition and its suitability for its intended use. If the Ice Rink or any portion of it is closed or not suitable for use for any reason, including but not limited to maintenance issues, equipment failures, staffing shortages, events of war, natural disasters, acts of terrorism, government acts or orders, epidemics, pandemics, public health emergencies, and other acts of God, then this Agreement shall terminate or be suspended and Licensee waives any claim against the City for damages by reason of the termination or suspension, except that any payments for unused ice time shall be refunded by the City to Licensee.

9. **Termination**. Either party may terminate this Agreement upon thirty (30) days written notice for any reason or no reason. The City also reserves the right to immediately terminate this Agreement if Licensee, Licensee's guests, visiting teams, or guests of visiting teams are in violation of any part of this Agreement during the Licensee's scheduled periods of use.

10. **Liability**. The City shall not be held liable for any accident, theft, or any other loss to the Licensee or any article in the possession of the Licensee.

11. **Indemnification**. Licensee agrees to indemnify, defend, save, and hold harmless the City, its officers, officials, agents, and employees from and against any and all claims, demands, actions, liabilities, damages, losses, or expenses, including court costs, attorney's fees, and costs of claim processing, investigation and litigation (hereinafter collectively referred to as "Claims") that arise out of any actual or alleged bodily injury to any person (including death) or property damage caused, in whole or in part, by the acts, errors, omissions, or negligence of the Licensee or any of Licensee's directors, officers, agents, employees, or volunteers in connection with or incident to Licensee's use of the Ice Rink and the Ice Arena facilities. This indemnity provision shall survive the termination, cancellation, or revocation, whether in whole or in part, of this Agreement.

In consideration for the use and occupancy of the Ice Rink, the Licensee agrees to waive all rights of subrogation against the City, its officers, officials, agents and employees for losses arising from the use, occupancy or condition of the Ice Rink.

12. **Insurance**. The Licensee shall procure and maintain for the duration of the Term of this Agreement insurance against claims for injury to persons or damage to property, which may arise from or in connection with the Licensee's use and occupancy of the Ice Arena, including the acts of its agents, representatives, employees, or subcontractors. The minimum scope and minimum limits of insurance are as follows: Commercial General Liability Insurance (Occurrence Form) in the amount of $1,000,000 per occurrence and $2,000,000 aggregate. These insurance requirements are minimum requirements and in no way limit the indemnity covenants contained herein. The City does not represent or warrant that these minimum limits are sufficient to protect the Licensee from liabilities that may arise out of its activities, and Licensee is free to purchase additional insurance as it may determine is necessary. A certificate of insurance verifying the required insurance coverage identified above shall name the City, its agents, representatives, directors, officials, employees, and officers, as additional insureds and be accompanied by the required endorsement. Such evidence of additional insured status shall be subject to the approval of the Risk Management Division of the City of Flagstaff. The absence of acceptable insurance and endorsement will be grounds for termination of this Agreement.

13. **Jurisdiction and Venue**. This Agreement will be governed by the laws of the State of Arizona without regard to any conflicts of laws principles. Any proceeding or litigation arising out of or relating to this Agreement will be conducted in Coconino County, Arizona. Licensee hereby submits itself to the original jurisdiction of the courts located within Coconino County, Arizona. Each party waives any objection it may now or hereafter have to venue or to convenience of forum.

14. **Conflict of Interest**. The Parties agree that this Agreement may be cancelled for conflict of interest in accordance with Arizona Revised Statutes § 38-511.

15. **Severability**. If any section, subsection, subdivision, paragraph, sentence, clause, or phrase of this Agreement, or any part thereof, is for any reason held to be unconstitutional or invalid or ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this Agreement or any part thereof.

16. **Applicable Laws**. Licensee shall comply with all applicable laws, ordinances, rules, regulations, and executive orders of the federal, state, and local government that may affect the performance of this Agreement.

17. **Assignment Prohibited**. This Agreement and any rights or benefits described herein may not be assigned by either party.

18. **Entire Agreement**. This Agreement constitutes the entire agreement between the Parties and any modification or amendment of this Agreement must be in writing and signed by both Parties.

The signatories below acknowledge and represent that they are authorized to execute this Agreement on their behalf or on behalf of the organization they represent.

City of Flagstaff
211 W. Aspen
Flagstaff, AZ 86001

City Manager

Date

Attest:

City Clerk
Approved as to Form:

City Attorney

Flagstaff Youth Hockey Association (FYHA)
PO Box 2903
Flagstaff, AZ 86003

Signatory's Name (Please Print)

Signature

Date

7. D.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Shannon Anderson, Senior Deputy City Manager
Co-Submitter:	Randy Tracy, Human Resources & Risk Management Director
Date:	09/26/2023
Meeting Date:	10/03/2023

TITLE:

Consideration and Approval of Contract: First Amendment to the Employee Staffing Agreement with Educational Services, LLC for a phased retirement program through a Mohave Cooperative Purchase Contract 21N-ESI3-0318 in an amount not to exceed $400,000 annually, plus applicable taxes.

STAFF RECOMMENDED ACTION:

1. Approve the First Amendment to the Employee Staffing Agreement with Educational Services, LLC and grant the City Manager authority to renew the agreement on annual basis for up to five years in an annual amount not to exceed $400,000, plus applicable taxes; and
2. Authorize the City Manager to execute all necessary documents.

Executive Summary:

The phased retirement program offered by Educational Services, LLC (ESI) is a tool for succession planning within the municipal organization. It allows City employees with extensive lengths of employment additional time to share their knowledge with other City personnel prior to leaving the organization and/or to finish high priority projects.

Many times, the transfer of knowledge does not occur prior to retirement because the employee's retirement date may have come earlier than expected or the employee has been too busy with day-to-day operations to focus on the transfer of knowledge. This additional amount of time dedicated to the transfer of knowledge is incredibly important to the success of the municipal organization and service to the community.

All employees eligible for retirement with Arizona State Retirement System (ASRS) and demonstrating above average performance would be eligible for the phased retirement program under ESI. In the request, the employee specifies what transfer of knowledge would occur and/or what high priority projects would be completed within the contract period. There must be a recommendation from the Immediate Supervisor and an agreement between the Immediate Supervisor, Division Director, Deputy City Manager and the employee regarding the projects and/or succession steps that will be completed. The contract period would range from three months to a year with the ability to extend for a maximum of one more year. A division may request an extension if a recruitment process was not successful, there were changes in the budget situation, or a project has experienced unexpected or uncontrollable delays. ESI provides phased retirement services to cities, counties, and state agencies throughout Arizona. This concept allows retirement eligible staff to retire from ASRS and return as a worker to their same position

in the City or another one for which they are qualified. This opportunity is available under the current ASRS Return to Work rules. The worker would be compensated seventy-five percent of their existing salary, sick leave, a reduced number of vacation hours, and pay for all City recognized holidays.

The City recognizes savings of thirty to forty percent per worker due to the reduction in the employee's salary and related benefits and the elimination of group insurance. The savings remains in each division's budget to offset the exiting employee's retirement payout first and then may be used for other budgetary expenses.

Financial Impact:

This Employee Staffing Agreement provides the City with the opportunity to retain key personnel while saving money. The City will pay seventy-five percent of the employee's salary plus seventeen percent of employee gross salary to cover payroll liabilities (i.e. FICA, worker compensation and unemployment, etc.) and the administrative fee. The City will save on employee related expenses and group insurance for each employee resulting in the minimum savings of thirty percent for each employee leased back through the phased retirement program.

Policy Impact:

None.

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 internal and external customer service.

Has There Been Previous Council Decision on This:

The City Council approved an Employee Staffing Agreement with ESI on June 7, 2022.

Options and Alternatives:

1. Award the First Amendment to the Employee Staffing Agreement for phased retirement services using the Mohave Cooperative Purchase Contract 21N-ESI3-0318 LLC and grant the City Manager authority to renew the agreement on annual basis for up to five years in an annual amount not to exceed $400,000, an applicable taxes; or
2. Do not award the First Amendment to the Employee Staffing Agreement for phased retirement services; or
3. Advise staff to conduct a formal solicitation process in lieu of utilizing the Mohave Cooperative Purchase Contract.

Background/History:

The City has offered a phased retirement program since 2011 and various divisions and sections have been using this program over the years. The Purchasing Section reviewed various cooperative purchasing contracts and identified the Mohave Cooperative Services Purchase Contract 21N-ESI3-0318 as the most appropriate option to the City for the Employee Staffing Agreement. This first amendment to Contract # 21N-ESI3-0318 renews the agreement for one year, as of the Effective Date.

Community Benefits and Considerations:

The community benefits from the transfer of institutional knowledge and the completion of high priority projects. The phased retirement program provides valuable transition time, so the City may retain the worker's knowledge and expertise through transferring this information to another employee within the municipal organization. Utilizing the worker's knowledge and expertise to finalize high priority projects provides a positive benefit to the community in terms of time and outcome.

Attachments: Amendment
Contract

First Amendment to Employee Staffing Agreement

This First Amendment to the Employee Staffing Agreement ("First Amendment") is entered into in the State of Arizona by and between **City of Flagstaff** ("Client"), and Educational Services, LLC, an Arizona limited liability company ("ESI") (each individually a "Party" and collectively, the "Parties"), effective as of July 1, 2023 ("Effective Date").

RECITALS

WHEREAS, the Parties entered into an Employee Staffing Agreement dated July 1, 2022 ("Agreement");

WHEREAS, all capitalized terms not otherwise defined in this First Amendment have the definitions set forth in the Agreement;

WHEREAS, the Term of the Agreement ends on June 30, 2023 but may be may be renewed annually upon mutual agreement of the Parties (with each one-year renewal being a successive "Term"); and

WHEREAS, as of the Effective Date, the Parties wish to renew the Term for one additional year.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth herein, the receipt and sufficiency of which are hereby acknowledged, the Parties agree that the foregoing recitals are incorporated as if fully set forth herein, and further agree as follows:

1. Term of the Agreement: The Term of the Agreement is renewed for one year, as of the Effective Date.

2. Survival. All other provisions of the Agreement remain in full force and effect.

IN WITNESS THEREOF, the Parties have executed this First Amendment acknowledging and agreeing to its terms and conditions as of the Effective Date.

"Client"	EDUCATIONAL SERVICES, LLC
_____	_____
By:_____	By: W. Andy Shirk
Its:_____	Its: President & CEO

1/30/2023

Modification of Contract
(Contract Extension)
(Page 1 of 3)

Jocelyn Phok
Educational Services, LLC (formerly Educational Services, Inc)
14614 N. Kierland Blvd. Suite N230
Scottsdale, AZ 85254

RE: Contract # 21N-ESI3-0318 modification of contract through an extension of contract is made by, and between, Educational Services, LLC (formerly Educational Services, Inc) and Mohave Educational Services Cooperative (Mohave).

In accordance with its terms and conditions, Mohave requests to extend contract 21N-ESI3-0318 for a period of one (1) year, beginning 3/18/2023. The extension shall be under the same terms and conditions contained therein.

Provide your agreement to extend by completing the appropriate information below and on the following pages. If the contract is extended, Educational Services, LLC (formerly Educational Services, Inc) agrees to provide products or prices as per 21N-1215.

By signing this Modification of Contract, you hereby certify to the best of your knowledge and belief that your firm complies with Byrd Anti-Lobbying Amendment 31 U.S. Code § 1352, 2 CFR § 200.450 and Federal Acquisition Regulation 52.203-11

We agree to **modify** and **extend** the contract as specified above, abiding by the current terms and conditions, and any attached clarifications.

Signature _____ Title Director of Operations

Typed/Printed Name Jocelyn Phok Date 2/1/2023

Upon your signed, executed Modification of Contract through a Contract Extension, you shall be bound to sell the materials and/or services offered to and accepted by Mohave in accordance with the solicitation, including all terms, conditions, specifications, amendments and any accepted written exceptions.

Nancy L. Colbaugh

Nancy Colbaugh, CPPB
Contracts Manager
Mohave Educational Services Cooperative, Inc.
625 East Beale Street | Kingman, AZ 86401
Phone 928-718-3228 | Fax 928-718-3232

If all pages of this notice are not received at Mohave's Kingman office on, or before, 3/18/2023, orders shall be held without processing. Email or fax completed extension to contracts@mesc.org or 928-718-3232.

To terminate the contract effective 3/18/2023, email or fax a notice of your request to cancel the contract to contracts@mesc.org or 928-718-3232. You agree to complete any authorized work or orders received prior to that date. Renewals not received within 14 days following 3/18/2023 may result in cancellation of the contract. However, any authorized orders received prior to this date, shall be completed under this contracts terms and conditions.

8. A.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Rick Tadder, Management Services Director
Date:	09/26/2023
Meeting Date:	10/03/2023

TITLE:

Consideration and Approval of Budget Adjustment: Fiscal Year 2023-24 Budget Adjustment for Housing Incentive Program Funds with possible allocation of incentive funds for affordable housing within Block 1 of the Timber Sky Final Block Plat.

STAFF RECOMMENDED ACTION:

1. Approve the transfer of budget appropriations from the General Fund Contingency account to the Housing and Community Services Fund's Affordable Housing Incentives program in the amount of $1,100,000.
2. Direct City Manager and staff to approve the allocation of incentive funds (waiver and/or reimbursement of applicable fees as set forth in the Incentive Policy for Affordable Housing) for affordable housing to be constructed in Block 1 of the Timber Sky Final Block Plat.

Executive Summary:

City staff is recommending transferring funds to enhance our funding for the Incentive Policy for Affordable Housing program. City staff has identified $1,100,000 in the General Fund Contingency account that may be transferred for this purpose. Because these resources in the Fiscal Year 2023-24 exist in separate city divisions and city funds, we recommend Council adopt the recommended Fiscal Year 2023-24 Budget Adjustment.

The City has received a request for funding to support the affordable rental units included as part of the Timber Sky development (specifically Block 1 of the Timber Sky Final Block Plat). If approved by Council, the reallocated funds will be set aside for this Timber Sky rental project. Should that project not move forward as anticipated, we will return to Council for further direction regarding the reallocated funds.

Additionally, it is anticipated that the Affordable Housing Incentive Fund will continue to see budgetary allocations in future years to incentivize similar projects.

Financial Impact:

The approval of the FY 2023-24 Budget Adjustment will reduce General Fund budget appropriations and increase the Housing and Community Services Fund budget appropriations. This action does not make any financial commitment to use or obligate these funds.

Per state statutes, the City is not allowed to increase our total budget after adoption, therefore we recommend transferring budget authority for a net zero impact to the total adopted budget. In addition, by authorizing this transfer of budget appropriations, the City will be reducing future capacity for other

expenditures in the General Fund by this amount.

- Decrease General Fund account 001-99-000-0000-0-4277 by $1,100,000
- General Fund Revenue Transfer to Housing and Community Services Fund 001-00-000-0000-0-7021 by $1,100,000
- Increase Housing Fund account 021-05-106-0362-4-4290 by $1,100,000.
- Housing and Community Services Fund Revenue Transfer from General Fund 021-00-000-0000-0-6001 by $1,100,000

Policy Impact:

City Council has the responsibility to adopt an annual budget and this action would reallocate resources as adopted in June 2023.

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

Priority Based Budget Key Community Priorities and Objectives

Livable Community: Support the development of attainable and accessible housing

Regional Plan

Neighborhoods, Housing, & Urban Conservation: Goal NH.3. Make available a variety of housing types at different price points,
to provide housing opportunity for all economic sectors.

Previous Council Decision on This:

None

Options and Alternatives:

- Approve the FY 2023-24 Budget Adjustment as recommended.
- Adjust and approve the FY 2023-24 Budget Adjustment.
- Do not approve the FY 2023-24 Budget Adjustment and 1) direct staff to seek other resources within the Community Development Section or 2) do not provide funds to the Affordable Housing Incentives program and consider as part of the FY 2024-25 budget allocations.

Background/History:

As part of the Fiscal Year 2023-24 Adopted Budget, Council approved a contingency set aside in the General Fund. A portion of this contingency amount includes $1.1 million related to our Public Safety Personnel Retirement Plan (PSPRS) set aside related to our PSPRS Contingency Reserve Policy to be available in the current year in case the annual actuarial report demonstrates our pension plans are less than 100% funded. The Police and Fire plans were an average of 105% funded as of 6/30/2022. Staff has determined that the PSPRS Plan has performed well last fiscal year and we do not see a need to utilize the $1.1 million to send to PSPRS this fiscal year.

The Affordable Housing Incentive Program was provided $130,000 in new funding for the Fiscal Year 2023-24 Adopted Budget. This year we have received several inquiries to utilize the Incentive Policy for Affordable Housing for development that isn't lining up with the traditional fiscal year budget process. Staff has discussed our abilities to increase this funding in the current fiscal year to potentially assist with affordable housing in our community. Instead of waiting for the FY 2024-25 budget adoption process to add funds to the program, staff is seeking Council's approval of this item to increase the program.

Key Considerations:

The City Council has declared a Housing Emergency and this funding can help address that declaration.

Attachments:

8. B.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To: The Honorable Mayor and Council

From: Alaxandra Pucciarelli, Current Planning Manager

Date: 09/26/2023

Meeting Date: 10/03/2023

TITLE:

Consideration and Adoption of Ordinance No. 2023-21: An Ordinance of the City Council of the City of Flagstaff, extending and increasing the corporate limits of the City pursuant to the provisions of Title 9, Chapter 4, Arizona Revised Statutes, by annexing approximately 1.82 acres of land located at 2445 S. Woody Mountain Road, which certain land is contiguous to the existing corporate limits of the City of Flagstaff, and establishing city zoning for said land as Rural Residential (RR); providing for severability, authority for clerical corrections, and establishing an effective date.

STAFF RECOMMENDED ACTION:

1) Read Ordinance No. 2023-21 by title only for the final time
2) City Clerk reads Ordinance No. 2023-21 by title only (if approved above)
3) Adopt Ordinance No. 2023-21

Executive Summary:

An Annexation request from Vintage Partners and Liv Communities, LLC of approximately 1.82 acres located at 2445 S. Woody Mountain Road. The property is identified as a portion of Coconino County Assessor's Parcel Number 112-01-712 which is approximately 13.01 acres and the adjacent S Woody Mountain Road right-of-way . This annexation request is the first part of a two-part request. The second part of the request is a Direct to Ordinance Zoning Map Amendment to rezone from RR to High Density Residential (HR).

Financial Impact:

The purpose of this annexation is to develop the entire parcel under the City's HR zoning. Currently, the site has access directly onto either City or ADOT maintained roadways. The property may be served with adjacent City water and sewer. No additional maintenance costs will be incurred through the annexation of this County property.

Policy Impact:

None

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

PBB Priorities/Objectives

- Utilize existing long-range plan(s) that identify the community's future infrastructure needs and all associated costs.
- Grow and strengthen a more robust, diverse, and resilient economy.

Regional Plan

- Goal LU.7.2 – Require unincorporated properties to be annexed prior to provision of City services, or that a pre-annexation agreement is executed when deemed appropriate.
- Policy WR.4.3 – Development requiring public utility services will be located within the Urban Growth Boundary.
- Page III-10:
    - The proposed annexation should not be detrimental to the majority of persons or property in the surrounding area or the community in general.
    - Annexation must demonstrate a favorable benefit to the taxpayers of the City.

Carbon Neutrality Plan

- DD-2: Create inclusive networks for walking and biking that are continuous, attractive, safe, comprehensive, and convenient for people of all ages.

Has There Been Previous Council Decision on This:

None

Options and Alternatives:

1. Approve the annexation with the conditions as recommended by the Planning and Zoning Commission.
2. Approve the annexation with additional conditions, modified conditions, or deleted conditions.
3. Deny the annexation for non-compliance with the Regional Plan, Zoning Code, and/or Arizona Revised Statutes.

Background/History:

The applicant is requesting to annex approximately 1.82 acres at the intersection of W Route 66 and S Woody Mountain Road. The area subject to the annexation is a portion of parcel 112-01-712 and the adjacent Woody Mountain Road ROW. This parcel is currently vacant and was at one time heavily forested before the Woody Fire in 2006. The parcel is located within the Resource Protection Overlay (RPO) zone and still maintains forest resources towards the southern portion of the property. The parcel is located within the Urban Growth Boundary and this small portion of the overall parcel is within County jurisdiction.

This annexation is the first of a two-step process. The second being a Direct to Ordinance Zoning Map Amendment request to zone the parcel to the HR zone for the construction of a 214-unit for-rent multi-family residential development, associated parking, landscaping, outdoor amenities, clubhouse, and fitness building. The Zoning Map Amendment application is being processed concurrently with this application but will not become effective until after the annexation has been completed. A full Zoning Map Amendment policy analysis can be found in that staff report

Key Considerations:

Annexations are adopted by the City Council via ordinance. Ordinance No. 2023-21 annexes 1.82 acres located at 2445 S. Woody Mountain Road and the adjoining right-of-way into the City of Flagstaff.

Community Benefits and Considerations:

Community benefits and considerations related to this request are addressed in more detail in the attached Planning and Zoning Commission Staff Report, dated July 10, 2023. Annexing this property provides for additional residential development opportunities in western Flagstaff.

Community Involvement:

The applicant held two neighborhood meetings regarding this case and the Zoning Map Amendment on December 12, 2022 and February 6, 2023. Both meetings were held virtually. Per the meeting sign-in, approximately 18 individuals attended the first meeting and 4 attended the second meeting. A Citizen Participation Report is attached and includes responses to any questions, comments and concerns presented. The meetings included a presentation from the applicant and a question-and-answer session. Comments on the project included the topics of traffic and the lack of commercial development.

Notice of the Planning and Zoning Commission meeting 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 Planning & Zoning Commission met on Wednesday, July 26, 2023 at 4 pm. No members of the public commented on this item. The Commission recommended approval of the annexation by a unanimous vote (6-members present).

Public hearings before the City Council are conducted in conjunction with requests for annexation. 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. The notices were also provided to the County Assessor, County Community Development Department, and the Chair of the Board of Supervisors.

Attachments:

Ord. 2023-21
Staff Report
Application
Legal Description
Project Narrative
Public Hearing Legal notice
Public Participation Report
Site Plan
Civil Plans
Landscape Plan
Arch floor plans
Building Elevations Part1
Building Elevations Part2
Presentation

ORDINANCE NO. 2023-21

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF FLAGSTAFF, ARIZONA EXTENDING AND INCREASING THE CORPORATE LIMITS OF THE CITY OF FLAGSTAFF, COCONINO COUNTY, STATE OF ARIZONA, PURSUANT TO THE PROVISIONS OF TITLE 9, CHAPTER 4, ARIZONA REVISED STATUTES, BY ANNEXING CERTAIN LAND TOTALING APPROXIMATELY 1.82 ACRES LOCATED AT 2445 SOUTH WOODY MOUNTAIN ROAD, WHICH LAND IS CONTIGUOUS TO THE EXISTING CORPORATE LIMITS OF THE CITY OF FLAGSTAFF, AND ESTABLISHING CITY ZONING FOR SAID LAND AS RURAL RESIDENTIAL, RR, WITH A RESOURCE PROTECTION OVERLAY, RPO

RECITALS:

WHEREAS, petitioner owns parcel APN 112-01-712, consisting of 13.01 acres of land, 1.82 acres of which, plus the adjacent right-of-way located within Coconino County, Arizona as property adjacent to the boundaries of the City of Flagstaff, and described in Exhibit A attached to and made a part hereof; and

WHEREAS, a petition in writing ("Petition") accompanied by a map or plot of said Property, having been filed and presented to the Mayor and Council of the city of Flagstaff, Arizona, signed by the owners of one-half or more in value of the real property and more than one-half of the persons owning real and personal property as would be subject to taxation by the City of Flagstaff in the event of annexation of the territory and land hereinafter described, which said territory is contiguous to the City of Flagstaff and not now embraced within its corporate limits, asking that the Property be annexed to the city of Flagstaff, and that the corporate limits of the City of Flagstaff be extended and increased so as to embrace the same, and

WHEREAS, The Mayor and Council of the City of Flagstaff, Arizona, are desirous of complying with said Petition and extending and increasing the corporate limits of the City of Flagstaff to include said territory, as described in Exhibit A; and

WHEREAS, said Petition set forth a true and correct description of all the exterior boundaries of the entire area proposed to be annexed to the City of Flagstaff, and had attached thereto at all times an accurate map of the territory desired to be annexed; and

WHEREAS, no alterations increasing or reducing the territory sought to be annexed have been made after said Petition had been signed by an owner of real and personal property in such territory; and

WHEREAS, the provisions of Section 9-471, Arizona Revised Statutes, and amendments thereto have been fully observed; and

WHEREAS, proper and sufficient certification and proof of the foregoing facts are now on file in the office of the City Clerk of the City of Flagstaff, Arizona, together with a true and correct copy of the original Petition referred to herein, which is on file in the office of the Coconino County Recorder; and

WHEREAS, the development of the Property will be controlled by the conditions of approval of the annexation application, other relevant provisions of the Zoning Code, and various other City codes regulating the development of the Property; and

WHEREAS, the Council finds that the proposed annexation for the Property has been considered by the Planning and Zoning Commission and that the City staff and the Commission have each recommended that the Council proceed with the annexation at this time; and

WHEREAS, the Council has reviewed the Staff Summary Report, which discusses the proposed annexation, and now finds that the annexation of the Property would be consistent with the objectives and policies of the Flagstaff Area Regional Plan 2030 ratified May 20, 2014 ("Regional Plan"); that the annexation of the Property would not be detrimental to the majority of the persons or property in the surrounding area or to the community in general; and the Council specifically further finds that the annexation of the Property and the existing and proposed uses thereon will further the objectives of the Regional Plan.

ENACTMENTS:

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF FLAGSTAFF AS FOLLOWS:

SECTION 1. That the following described territory be, and the same hereby is, annexed to the City of Flagstaff, and that the present corporate limits be, and the same hereby are, extended and increased to include the following described territory contiguous to the present City of Flagstaff corporate limits:

See attached Exhibit A which is incorporated herein by this reference.

SECTION 2. That the territory described in Exhibit A is annexed to the City of Flagstaff subject to the following condition:

That a copy of this Ordinance, together with an accurate map of the territory hereby annexed to the City of Flagstaff, certified by the Mayor of said City of Flagstaff, be forthwith filed and recorded in the office of the County Recorder of Coconino County, Arizona.

SECTION 3. That pursuant to the provisions of Section 9-471(M), Arizona Revised Statues, upon this Ordinance becoming final under the provisions of Section 9-471(D), Arizona Revised Statutes, the municipal zoning designation for the Property under the Zoning Code shall be:

1. The portion of APN 112-01-712, will be located within the Rural Residential (RR) zoning district and be designated with a Resource Protection Overlay (RPO).

SECTION 4. The Community Development Department of the City of Flagstaff is hereby directed to enter such changes and amendments as may be necessary upon the Zoning Map of said Zoning Code in compliance with the ordinance.

SECTION 5. That the Flagstaff City Clerk shall provide a copy of the adopted annexation ordinance to the Clerk of the Coconino County Board of Supervisors within sixty (60) days of the annexation becoming final.

SECTION 6. Severability

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 7. Clerical Corrections

The City Clerk is hereby authorized to correct typographical and grammatical errors, as well as errors of wording and punctuation, as necessary related to this ordinance as amended herein, and to make formatting changes as needed for purposes of clarity and form, or consistency, within thirty (30) days following adoption by the City Council.

SECTION 8. 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 3rd day of October, 2023.

_____
MAYOR

ATTEST:

_____
CITY CLERK

APPROVED AS TO FORM:

_____
CITY ATTORNEY

Exhibits:
Legal Description

PLANNING AND DEVELOPMENT SERVICES DIVISION
ANNEXATION REPORT

PZ-21-00271-04

DATE: July 10, 2023
MEETING DATE: July 26, 2023
REPORT BY: Alaxandra Pucciarelli

REQUEST:
An Annexation request from Vintage Partners and Liv Communities, LLC of approximately 1.82 acres located at 2445 S. Woody Mountain Road. The property is identified as a portion of Coconino County Assessor's Parcel Number 112-01-712 which is approximately 13.01 acres. This annexation request is the first part of a two-part request. The second part of the request is a Direct to Ordinance Zoning Map Amendment.

STAFF RECOMMENDATION:
Staff recommends the Planning and Zoning Commission, in accordance with the findings presented in this report, forward the Annexation request to the City Council with a recommendation for approval.

PRESENT LAND USE:
The subject site consists of undeveloped land in the General (G) Zone under Coconino County jurisdiction and adjacent Right-of-Way (ROW).

PROPOSED LAND USE:
If this annexation is approved, the property will be designated with Rural Residential (RR) zoning. The accompanying zoning map amendment will change the zoning on the property from the RR Zone to the High Density Residential (HR) zone for the construction of a 214-unit for-rent multi-family residential development, associated parking, landscaping, outdoor amenities, clubhouse, and fitness building.

NEIGHBORHOOD DEVELOPMENT:
See the attached area context map.

North: Public Works Yard owned by the City of Flagstaff in the Public Facility (PF) Zone; Professional River Outfitters in the General Commercial (CG-10,000) Zone under Coconino County jurisdiction.
East: Woody Mountain Campground & RV Park in the RR Zone and the G Zone under Coconino County jurisdiction; Single-Family homes in the HR Zone (Presidio in the Pines).
South: Multi-family development under construction in the Medium Density Residential (MR) Zone (Sky Cottages).
West: Vacant Land in the HR Zone (Timber Sky).

I. Project Information

The applicant is requesting to annex approximately 1.82 acres at the intersection of W Route 66 and S Woody Mountain Road. The area subject to the annexation is a portion of parcel 112-01-712 and the adjacent Woody Mountain Road ROW. This parcel is currently vacant and was at one time heavily forested before the Woody Fire in 2006. The parcel is located within the Resource Protection Overlay (RPO) zone and still maintains forest resources towards the southern portion of the property. The parcel is located within the Urban Growth Boundary and this small portion of the overall parcel is within County jurisdiction.

This annexation is the first of a two-step process. The second being a Direct to Ordinance Zoning Map Amendment request to zone the parcel to the HR zone for the construction of a 214-unit for-rent multi-family residential development, associated parking, landscaping, outdoor amenities, clubhouse, and fitness building. The Zoning Map Amendment application is being processed concurrently with this application but will not become effective until after the annexation has been completed. A full Zoning Map Amendment policy analysis can be found in that staff report.

Zoning Requirements

As was noted above, if annexed, the property will need to be brought into the City as a zone similar to the existing County zoning. In this case, the City's RR zone best matches the County's G zone. Arizona statute requires that once annexed, the zoning is to remain in place for a period of 30 days. As a result, an ordinance modifying the zoning code must include an effective date 30 plus days after the annexation ordinance becomes effective.

II. Required Findings

The Commission shall find that the requested annexation complies with Section 9-471 of the Arizona Revised Statutes; the applicable goals and policies set forth in the City's General Plan (Flagstaff Regional Plan 2030), and Flagstaff Zoning Code Division 10-20.90: Annexations.

A. Arizona State Statue Compliance

Arizona Revised Statute 9-471 sets forth the standards for properties that can be annexed, along with required processes and procedures for cities and towns to annex real property. This statute allows cities and towns to annex property that is contiguous to the exterior boundaries of the city or town into which it will be annexed. Subsection S of ARS 9-471 states that a parcel is considered contiguous if it meets these requirements: 1) the territory is owned by one person, 2) the city or town and the owner of the real property agree to the annexation, and 3) the territory adjoins the exterior boundary of the annexing city or town for at least three hundred feet. The parcel subject to this annexation request meets this requirement.

State statutes only allow the City to adopt a zoning classification that permits densities and intensities no greater than those permitted by the County immediately before the annexation. The current county zoning requires ten-acre minimum lot size. The closest city zoning district is the RR permitting a density of one dwelling unit per acre.

B. City of Flagstaff Regional Plan 2030 Compliance

All proposed annexations shall be evaluated as to whether the application is consistent with the policies of the General Plan. The proposed annexation should not be detrimental to the majority of the persons or property in the surrounding area or the community in general (Regional Plan, pg. III-10). The City's basic position regarding annexation is that the annexation must demonstrate a favorable benefit to the taxpayers of the City.

This property is located within the Urban Growth Boundary (UGB) per the Regional Plan. Thus, for the annexation application, staff is not required to analyze all of the Regional Plan goals and policies—just the basic annexation policies as outlined here. The UGB includes all the lands and future land uses that have been included in the City's Arizona Department of Water Resources (ADWR) 100-year adequate water supply designation. The following Regional Plan policies are considered by staff to be the most pertinent to the annexation:

- Policy LU.7.2: Require unincorporated properties to be annexed prior to the provision of City services, or that a pre-annexation agreement is executed when deemed appropriate.
- Policy WR.4.3: Development requiring public utility services will be located within the Urban Growth Boundary.

The proposed development, which will be partially located on the currently unincorporated parcel, will require City water and sewer services once annexed. The proposed annexation is consistent with the relevant goals and policies of the Flagstaff Regional Plan 2030.

C. Public Facilities and Service Impact Analysis

i. Traffic/Right-of-Way Impact

The specific objectives of the Traffic Impact Analysis are:

- To determine whether the planned street system in the vicinity of the site is adequate to accommodate the increased traffic that results from the proposed development;
- To recommend additional street improvements or traffic control devices, where necessary, to mitigate the additional site-generated traffic; and,

- To evaluate the internal site circulation and provide recommendations if necessary.

The scope of a Traffic Impact Analysis (TIA) is generally determined by the estimated peak hour trips generated by a development, per the Engineering Standards. The estimated peak hour trips for this development is 89 trips during the AM peak hour and 113 trips during the PM peak hour. According to the Standards, a level one analysis was appropriate. The consulting engineer analyzed the intersections of S Woody Mountain Road and W Route 66, Alvin Clark Blvd and W Route 66, Woody Mountain Road and Patio Del Presidio, Woody Mountain Road and Presidio Drive, Flagstaff Public Works Driveway and W Route 66, and Northwestern Street and W Route 66.

Transportation Improvements

The applicant is responsible for the following roadway improvements, as shown in the TIA dated June 9, 2023, and outlined in the Development Agreement:

- Dedication of any necessary right(s) of way and easement(s) and construction of off-site Roadway Improvements along both S Woody Mountain Road and W Route 66 as shown on Site Plan.
- A new northbound left turn lane at the driveway access point on S Woody Mountain Road.
- Extending the northbound left and right-turn lane storage at the intersection of Woody Mountain and Route 66.
- Extending the median north on Woody Mountain and adding a left-turn lane into the site driveway.
- A new eastbound right turn lane, at the intersection of Woody Mountain and Route 66.

The report indicates that a traffic signal, located at the intersection of S Woody Mountain and W Route 66 is warranted in the future. The developer is obligated to pay a proportional share contribution for the cost of the signal, based on the percentage of peak hour traffic volumes, and the estimated cost of a signal.

The project site is not serviced by transit. This area is identified in the Flagstaff Area Regional Land Use and Transportation Plan for future service, but there are no current plans to service the property. Pedestrian and bicycle access to the subject property is limited. There are currently no sidewalks along W Route 66 to the east of this project. Bike lanes are provided along S Woody Mountain Road up to W Route 66 but only a striped shoulder exists on W Route 66 to Woodlands Village Boulevard. It is possible for both pedestrians and bicycles to gain access through the Presidio in the Pines development into Boulder Pointe and beyond.

ii. Water and Wastewater Impact Analysis

A Water and Sewer Impact Analysis (WSIA) was completed by the City on December 20, 2013, for a similar land use on the property. On September 20, 2022, the City issued a letter waiving the requirement for a WSIA as part of this application. 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. Offsite sewer improvements are required and are defined in the wastewater section below. It is the developer's responsibility to design and construct all on-site and connecting water infrastructure per the City of Flagstaff Engineering Standards.

Water

Water to the site will be provided by an 8-inch water main loop within the project site connecting to a new 8-inch PVC water main in the northeast corner of Sky Cottages and to an existing 12-inch DIP water main in Woody Mountain Road.

Wastewater

Sewer will be provided by two 8-inch sewer main branches throughout the project site connecting to a new sewer manhole near the northeast corner of Sky Cottages. The project requires a 12-inch offsite sewer main. The offsite sewer improvements will be completed with the construction of the Sky Cottages.

If the construction of the sewer improvements is not completed by the adjacent development, then the applicant shall be responsible to construct offsite sewer improvements. The sewer improvements must be completed and accepted by the City prior to the issuance of the first Certificate of Occupancy for the Project. The sewer improvements shall be designed and constructed in accordance with the City Engineering Standards and ADEQ requirements.

iii. Stormwater Analysis

The site is located in the South Fork of Clay Wash watershed.

- The north portion of the site drains to the east/northeast to an existing 24-inch CMP at the intersection of S Woody Mountain Road and W Route 66. The existing storm drain system along W Route 66 ultimately discharges into the South Fork Clay Wash.
- The south portion of the site drains to the east/southeast to an existing 4-foot by 3-foot concrete box culvert which conveys the stormwater to an existing storm drain system within Presidio in the Pines. This existing storm drain system also discharges into South Fork Clay Wash.

The project's overarching drainage concept is to provide peak flow stormwater discharge mitigation (detention) for the 10-year and 100-year storms, stormwater runoff volume mitigation (LID ROCV), improvement to the water quality of site discharges (LID), and retention of the runoff volume increase for the 100-year 24-hour storm per the approved Drainage Impact Analysis prepared on August 30, 2022. There are no proposed offsite stormwater improvements required with the inclusion of onsite retention for increase runoff volumes.

The Water Quality Improvements consisting of sediment capture components will be incorporated with the use of Low Impact Development (LID) Integrated Management Practices (IMPs) including sediment trapping isolator rows within the sub-surface, extended detention basin (EDB) storage systems . The increase in volume of stormwater runoff discharged from the site will be mitigated by additional retention volume provided within aforementioned EDB's.

iv. Schools

The proposed development of the subject site is not anticipated to affect the local school district.

v. Fire Protection:

The site will be served by Fire Station No. 1, located at 1972 S. Thompson Drive. The site is within the desired response time.

D. CITIZEN PARTICIPATION:

Notice of the Planning and Zoning Commission meeting 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 and the Zoning Map Amendment on December 12, 2022 and February 6, 2023. Both meetings were held virtually. Per the meeting sign-in, approximately 18 individuals attended the first meeting and 4 attended the second meeting. A Citizen Participation Report is attached and includes responses to any questions, comments and concerns presented. The meetings included a presentation from the applicant and a question-and-answer session. Comments on the project included the topics of traffic and the lack of commercial development.

RECOMMENDATION:

Staff recommends that the Planning & Zoning Commission, in accordance with the findings presented in this report, forward the annexation request to the City Council with a recommendation of approval.

Attachments:

- Application
- Legal Description
- Project Narrative

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

ANX

Date Received	**Application for Annexation**	File Number

Property Owner(s) Title VP 66 & Woody Mountain, LLC	**Phone** (480) 231-0814	**Email** walter@vintagevp.com
Mailing Address 2502 E. Camelback Road, No. 214		**City, State, Zip** Phoenix, AZ 85016
Applicant Title Vintage Partners 2.0, LLC	**Phone**	**Email**
Mailing Address 2502 E. Camelback Road, No. 214		**City, State, Zip** Phoenix, AZ 85016
Project Representative Title Lindsay C. Schube / Gammage & Burnham, PLC	**Phone** (602) 256-4471	**Email** lschube@gblaw.com
Mailing Address 40 N. Central Avenue, 20th Fl.		**City, State, Zip** Phoenix, AZ 85004

Site Address 2701 S. Woody Mountain Road	**Parcel number(s)** 112-01-019B	**Subdivision, Tract & Lot Number** @Liv Subdivision, Lot 2
Existing Zoning District General - 10 ac. min. (Coconino County)	**Existing Regional Plan Land Use Category** Future Urban Activity Center (U7)	
Proposed Zoning District High-Density Residential - Resource Protection Overlay	**Proposed Regional Plan Land Use Category** Future Urban Activity Center (U7)	
Present Use Undeveloped	**Proposed Use** Multi-Family Residential	

Summarize Reason for Request (Attach additional sheets if necessary):

See enclosed narrative.

Note:
Indicate how the annexation will not be detrimental to the majority of persons or properties in the surrounding area, or to the community in general. If a modification to the Regional Land Use and Transportation Plan or a Zoning Map Amendment is requested, clearly state the reasons for such changes (a separate application is required).

Property Owner Signature	Date	Applicant Signature	Date
	9-2-22	LCSchube	9/1/2022

For City Use

Date Filed:	**Fee Receipt Number:**	**Amount:**	**Date:**
Type of Request: ☐ Annexation		☐ Continued	
Publication and Posting Date(s):		**File Number:**	

Action by Planning and Zoning Commission:	Action by City Council
Hearing Date:	**Hearing Date:**
☐ Approved ☐ Continued ☐ Denied	☐ Approved ☐ Continued ☐ Denied

Staff Assignments	Planning	Engineering	Fire	Stormwater	Utilites/PW

EXHIBIT ‘A’

LEGAL DESCRIPTION

ANNEXATION

A parcel of land being a portion of ‘Lot 2’ and a portion of the South Woody Mountain Road Right-of-Way as shown on the Final Plat for @LIV according to Instrument Number 3955182, Official Records of Coconino County (herein referred to as R1), lying within Section 19, Township 21 North, Range 7 East, of the Gila and Salt River Meridian, Coconino County, Arizona, described as follows:

Commencing at the northwest corner of said ‘Lot 2’, said point being in common with the southerly Right-of-Way line of West Route 66 as shown on R1, from which a point on the west line of ‘Lot 1’ as shown on R1 bears South 00°42'05" West, 1107.36 feet (Basis of Bearing, R1);

Thence along the northerly line of said ‘Lot 2’, and along said Right-of-Way line, South 85°16'49" East, 450.83 feet to the **TRUE POINT OF BEGINNING;**

Thence continuing along said northerly line, and said Right-of-Way line, South 85°16'49" East, 332.12 feet to the centerline of said South Woody Mountain Road as shown on R1;

Thence along said centerline, South 00°20'18" East, 224.57 feet to a point on the East-West midsection line of said Section 19;

Thence leaving said centerline, and along said midsection line, South 89°46'36" West, 331.24 feet;

Thence leaving said midsection line, North 00°14'47" West, 253.18 feet to the **TRUE POINT OF BEGINNING;**

Containing 1.815 Acres, more or less.

See Exhibit ‘B’ attached hereto and made a part hereof.

This legal description was prepared by Aaron D. Borling, RLS 48756,
on behalf of and at the request of Shephard-Wesnitzer, Inc., Flagstaff, AZ.

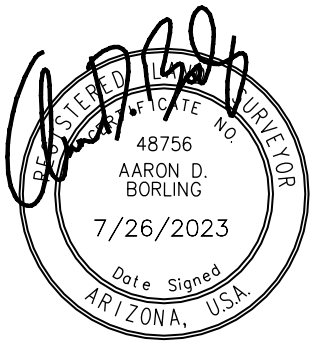
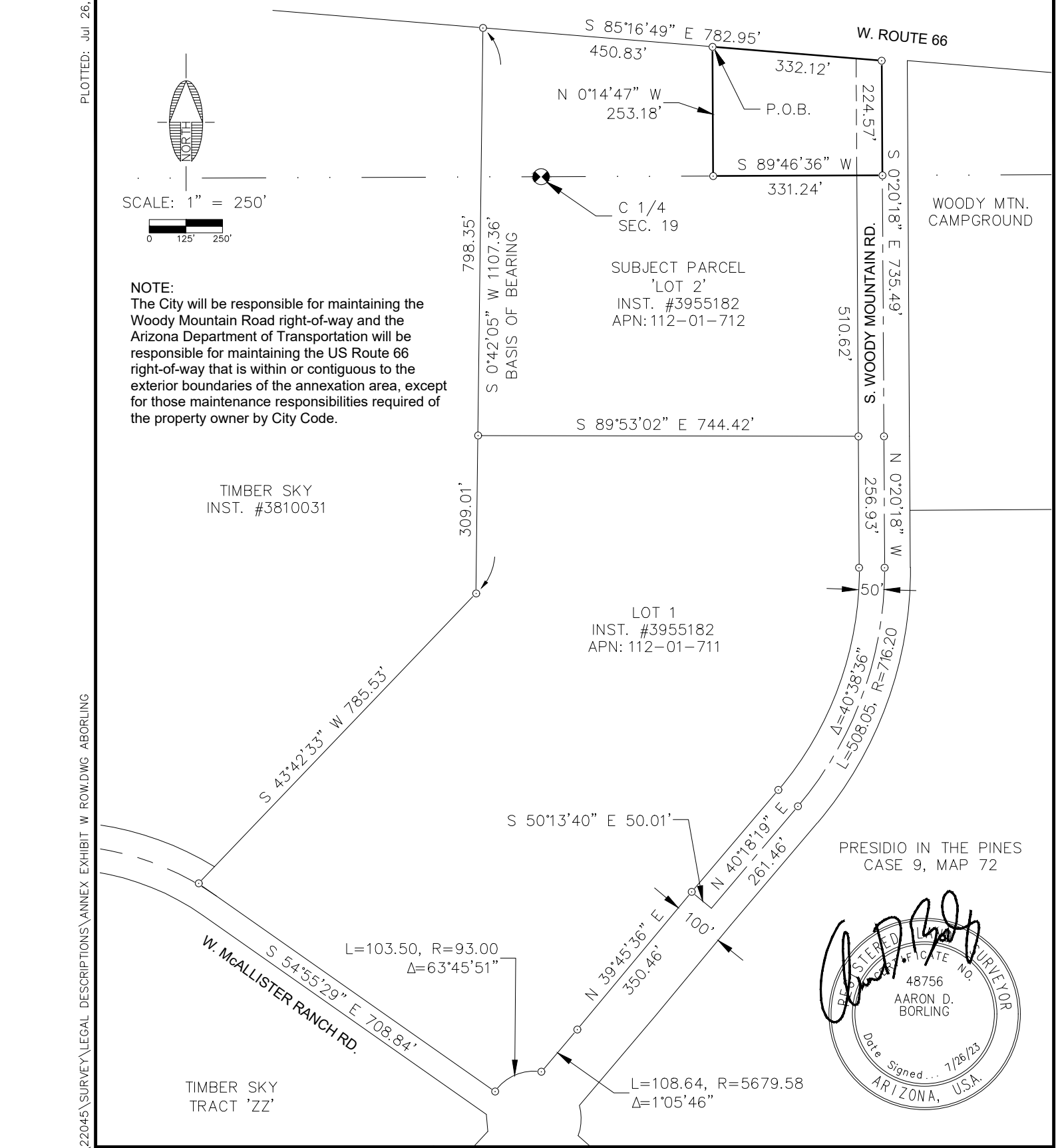


EXHIBIT 'B'

A PARCEL OF LAND LOCATED IN SECTION 19, TOWNSHIP 21 NORTH, RANGE 7 EAST, OF THE GILA AND SALT RIVER MERIDIAN, COCONINO COUNTY, ARIZONA



NOTE:
The City will be responsible for maintaining the Woody Mountain Road right-of-way and the Arizona Department of Transportation will be responsible for maintaining the US Route 66 right-of-way that is within or contiguous to the exterior boundaries of the annexation area, except for those maintenance responsibilities required of the property owner by City Code.

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
48756
AARON D.
BORLING
Date Signed... 7/26/23
ARIZONA, U.S.A.

Shephard Wesnitzer, Inc.
110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

JOB NO.	22045
DATE	JUL 23
SCALE	1"=250'
DRAWN	RPR
DESIGN	
CHECKED	ADB

LIV TIMBER SKY — FLAGSTAFF, ARIZONA

LEGAL EXHIBIT

SHEET 2 OF 2

PLOTTED: Jul 26, 2023-3:36pm
FILE: P:\2022\22045\SURVEY\LEGAL DESCRIPTIONS\ANNEX EXHIBIT W ROW.DWG ABORLING

GAMMAGE & BURNHAM, PLC
ATTORNEYS AT LAW
40 NORTH CENTRAL AVENUE
20TH FLOOR
PHOENIX, ARIZONA 85004

TELEPHONE (602) 256-0566
FACSIMILE (602) 256-4475

WRITER'S DIRECT LINE
(602) 256-4471

July 30, 2023

Ms. Alaxandra Pucciarelli
City of Flagstaff
Community Development Department
211 West Aspen Avenue
Flagstaff, Arizona 86001

Re: Request for Annexation of approximately 1.815 acres of property generally located at the southwest corner of US Route 66 & Woody Mountain Road.

Dear Alax:

Introduction.

VP 66 & Woody Mountain LLC ("Vintage") is proposing to annex 1.815 acres ("Annexation Area") of property generally located at the southwest corner of US Route 66 & Woody Mountain Road (see Legal Description). Vintage is the owner of the west approximately 1.555 acres of the Annexation Area; the remainder is right-of-way. The approximate 1.555 acres is part of a larger approximately 13-acre property, known as Coconino County Assessor Parcel Number 112-01-712. Vintage is proposing to develop the 13 acres with multi-family residences ("Project"). Vintage requests that the City annex the Annexation Area.

Compliance with A.R.S. § 9-471.

A.R.S. § 9-471 sets forth the qualifications and required processes for the annexation of real property. As requested by the City, the following addresses compliance with Subsections H. and I. of A.R.S. § 9-471, allowing the City to annex the Annexation Area:

H. Territory is not contiguous for the purposes of subsection A, paragraph 1 of this section unless:

1. It adjoins the exterior boundary of the annexing city or town for at least three hundred feet.

Response: **Complies.** The south and west boundaries of the Annexation Area adjoin the City by more than 575-feet, as depicted on the Legal Description.

2. It is, at all points, at least two hundred feet in width, excluding rights-of-way and roadways.

Response: **Complies.** The 1.815 acres is approximately 330-feet east-to-west and between 224 and 253-feet north-to-south.

3. The distance from the existing boundary of the annexing city or town where it adjoins the annexed territory to the furthest point of the annexed territory from that boundary is not more than twice the maximum width of the annexed territory.

Response: **Complies.** The distance from the City boundary where it adjoins the Annexation Area to the furthest point of the Annexation Area is boundary is not more than twice the maximum width of the Annexation Area, as depicted on the Legal Description.

I. A city or town shall not annex territory if, as a result of that annexation, unincorporated territory is completely surrounded by the annexing city or town or a combination of the annexing city or town and other cities or towns.

Response: **Complies.** Annexation of the Annexation Area does not result in unincorporated Coconino County being completely surrounding by the City.

Regional Plan.

The City's 2030 Regional Plan ("Regional Plan") designates the Annexation Area as Urban Future. Additionally, the Annexation Area is also located within Urban Activity Center U6. The Annexation Area is located within the City's Urban Growth Boundary.

Infrastructure & Facilities.

Water & Sewer. Water and sewer will be provided by the City. Adequate water and sewer capacity exists to serve the Project.

Traffic. US Route 66 and Woody Mountain Road provide adequate vehicular access to serve the Project.

Material Management. Refuse will be provided to serve the Project.

* * *

Should you have any questions or require additional information, please do not hesitate to contact me at **(602) 256-4471** or **lschube@gblaw.com**. Thank you.

Sincerely,

GAMMAGE & BURNHAM

By
Lindsay C. Schube

LCS/nas

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the Flagstaff City Council will hold a public hearing for an Annexation on Tuesday, September 5, 2023, at 3:00 pm at City Hall Council Chambers (211 W Aspen Ave).
Flagstaff City Council will then hold a public hearing for a Zoning Map Amendment and Annexation on Tuesday, September 19, 2023, at 3:00 pm at City Hall Council Chambers (211 W Aspen Ave).
A virtual option will be provided for these meetings.

NOTICE IS HEREBY GIVEN that the Flagstaff City Council will consider a Development Agreement associated with the cases referenced above on Tuesday, October 3, 2023, at 3:00 pm at City Hall Council Chambers (211 W Aspen Ave). A virtual option will be provided for this meeting.

A. Explanation of Matters to be Considered:
ZONING MAP AMENDMENT: A proposed amendment to the Official City of Flagstaff Zoning Map to rezone the entirety of the subject property, which is approximately 13.01 acres (this includes the 1.55 acres being annexed in Case No. PZ-21-00271-04), from RR zoning with the RPO to High Density Residential (HR) zoning with the RPO. The purpose of the rezone is to support the requested use of a multi-family development. Reference City of Flagstaff Case No.: PZ-21-00271-05.

ANNEXATION: A proposed annexation of approximately 1.82 acres of land to the City of Flagstaff. The annexation is a request to incorporate the remaining portion of the subject parcel into the City limit. The parcel is owned by Vintage Partners and Woody Mountain LLC. The current Coconino County Zoning is G - General Zone. If this annexation is approved, the property will be designated the Rural Residential (RR) zone and a Resource Protection Overlay (RPO) to facilitate the development of Liv Timber Sky, a 214-unit multi-family development. Reference City of Flagstaff Case No.: PZ-21-00271-04.

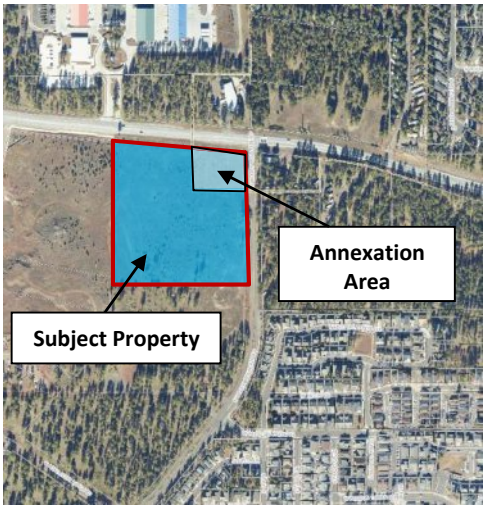
B. How to Participate:
Interested parties may file comments in writing regarding the applications or may appear and be heard at the hearing date set forth above. Maps and information regarding the applications are available at the City of Flagstaff, Planning and Development Services Division, 211 West Aspen Avenue.

A virtual public comment platform will be available for all meetings. All meetings will be live-streamed on the city's website. Please see the corresponding agenda for additional information on how to participate virtually. Agendas can be found at this link:

https://www.flagstaff.az.gov/328/Meetings

C. General Description of the Affected Area:
Approximately 1.82 acres (annexation) and 13.01 acres total (rezoning) located at the southwest corner of the intersection of Route 66 and S Woody Mountain Rd, portion of Coconino County Assessor's Parcel Number 112-01-712, SW 1/4 of the NE 1/4 of Section 19, T21N R7E, of the G&SRM, City of Flagstaff, Coconino County, Arizona.

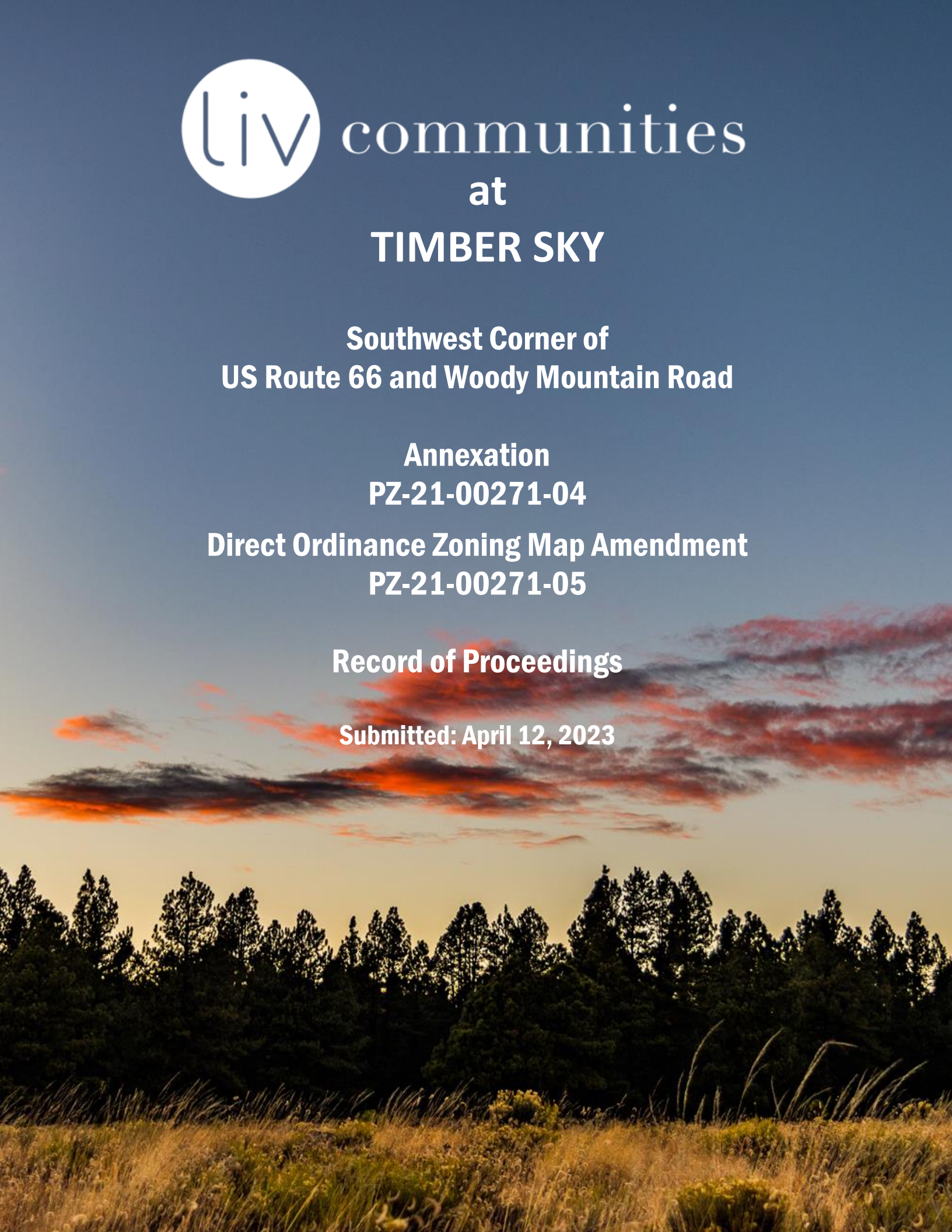
PROPOSED ANNEXATION AND REZONING MAP



ADDRESS: **2445 S Woody Mountain Road**
APN: 112-01-712
ACRES: Approximately 1.82 acres (annexation); 13.01 acres total (rezoning) Coconino County

FOR FURTHER INFORMATION, CONTACT:
Bethan X. Heng
Planning & Development Services
211 West Aspen Avenue
Flagstaff, Arizona 86001
(928) 213-2603
Email: Bethan.Heng@flagstaffaz.gov

Publish: August 19, 2023



liv communities

at

TIMBER SKY

Southwest Corner of
US Route 66 and Woody Mountain Road

Annexation
PZ-21-00271-04

Direct Ordinance Zoning Map Amendment
PZ-21-00271-05

Record of Proceedings

Submitted: April 12, 2023

1. INTRODUCTION

In accordance with Section 10-20.30.060.F of the Zoning Code, VP 66 & Woody Mountain LLC d/b/a as Vintage Partners ("Vintage") and Liv Communities ("Liv") (collectively, "Applicant") are submitting this Record of Proceedings related to the proposed development of the approximate 13.86 acres located at the southwest corner of US Route 66 and Woody Mountain Road ("Property").

We filed application case no. PZ-21-00271-04 to Annex the approximate 1.555 acres ("1.5 Acres") located at the southwest corner of US Route 66 & Woody Mountain Road (cross-hatched below). We also filed application case no. PZ-21-00271-05 to rezone the Property (including the 1.5 Acres) from RR—RPO (Rural Residential—Resource Protection Overlay) to HR—RPO (High-Density Residential—Resource Protection Overlay) ("Application") to allow for the development of Liv Timber Sky, a 214-unit, multi-family residential community.

2. NEIGHBORHOOD MEETINGS

In accordance with Section 10-20.30.060.A, the Applicant held two neighborhood meetings.

Neighborhood Meeting Notification. On November 23, 2022, a notice of neighborhood meetings was mailed by first class to properties 300-feet; property owners' associations and homeowner's associations within a 1,000-foot radius; and individuals, groups, etc. on the City's "Registry of Persons and

Groups" as provided by the City (collectively, "Affected Party or Affected Parties"). The letter set forth the purpose and substance of the proposed application, the time, date, and virtual meeting weblink for the neighborhood meetings, and contact information for the Applicant/Representative and the assigned City Planner.

Site Posting Notification. On November 23, 2021, one notification sign was installed on the Property near the intersection of US Route 66 & Woody Mountain Road. The sign set forth the purpose and substance of the proposed application, the time, date, and virtual meeting weblink for the neighborhood meetings, and contact information for the Applicant/Representative and the assigned City Planner. The sign included a tube containing copies of the neighborhood meetings notification letter. See **Tab A** — First Neighborhood Meeting Notification Letter, Mailing List, and Neighborhood Meeting Certification.

Voluntary Neighborhood Meeting Notification. On January 13, 2023, the Applicant mailed a voluntary notice of neighborhood meeting reminder by first class to Affected Parties and individuals that registered for the first neighborhood meeting and provided their address and/or email. See **Tab B** — Voluntary Second Neighborhood Meeting Reminder and Mailing List.

First Neighborhood Meeting Summary. The first neighborhood meeting was held on December 12, 2022 from 6:00 to 7:25 PM. The meeting was held via the Zoom virtual meeting platform. The meeting consisted of an overview of the meeting procedures and instructions for asking questions, a formal presentation, and

concluded with questions & answers and comments. Approximately 13 members of the public registered for and attended the meeting. See **Tab C** — First Virtual Neighborhood Meeting Attendee List.

The Development Team provided a formal presentation, which included presentation of an aerial map, site plan, perspective renderings, building elevations, landscaping, and public civic space area, an overview of the applications and requests, conformance with the Regional Plan, as well as discussion regarding the project's response to the City's Climate Action & Adaptation Plan and the City's Housing Crisis. The Development Team responded to questions and comments regarding: signalization of the intersection of US Route 66 & Woody Mountain Road; traffic; density; building height; commercial users; partnership with Habitat for Humanity; student housing; the site plan; and conformance with the Regional Plan.

Second Neighborhood Meeting Summary. The second neighborhood meeting was held on February 6, 2023 from 6:00 — 6:40 PM. The meeting was held via the Zoom virtual meeting platform. The meeting consisted of an overview of the meeting procedures and instructions for asking questions, a formal presentation, and concluded with questions & answers and comments. Approximately 4 members of the public registered for and attended the meeting. See **Tab D** — Second Virtual Neighborhood Meeting Attendee List.

The Development Team provided a presentation similar to the first neighborhood meeting, as well as addressed traffic and traffic control at the intersection of US Route 66 & Woody Mountain Road. The Development Team responded to questions regarding traffic, access, and signalization of the intersection of US Route 66 & Woody Mountain Road. The Applicant reaffirmed its commitment to install the traffic signal at the intersection, which those participating in the meeting were pleased to hear.

3. NEIGHBORHOOD MEETING SUMMARY LETTER

In accordance with Section 10-20.30.060.F.4, the Applicant mailed a written summary those who registered for the neighborhood meeting(s) and provided their address and/or email. See **Tab E** — Neighborhood Meetings Summary Letter.

4. PUBLIC HEARING NOTIFICATION

Once scheduled for public hearing, the Applicant shall install signs on the Property advising of dates, times, and other pertinent details related to the hearings. In addition, a notification letter will be sent via first class mail to the Affected Parties and residents that registered for and provided their email and/or mailing address for the virtual neighborhood meetings. The public hearing notification letter will include a description of the request and application case number, location and acreage, a conceptual site plan and renderings for the project, details regarding the scheduled public hearings and contact information for the Applicant/Representative and City Planner.

TAB A

First Neighborhood Meeting Notification Letter
Mailing List
Neighborhood Meeting Certification

November 23, 2022

Dear Property Owner, Resident, Neighborhood Association, or Interested Citizen,

VP 66 & Woody Mountain LLC d/b/a as Vintage Partners, in partnership with Liv Communities is proposing to develop the approximate 13.86 acres located at the southwest corner of US Route 66 and Woody Mountain Road ("Property"). Vintage Partners is responsible for developing forward thinking and award-winning projects throughout the State for more than 30 years, including the highly successful Timber Sky master-planned community—the finest Dark Skies compliant master-planned community in the State. In addition, Vintage Partners is in the process of developing Sky Cottages located at the northwest corner of McAllister Ranch and Woody Mountain Roads (directly south of the Property). See enclosed Context Map. Liv Communities is an experienced multi-family and generational housing residential developer and management company that designs communities to promote eco-friendly, social, and healthy lifestyles for their residents. Liv's Arizona development portfolio currently includes 12 communities in the State.

We recently filed application case no. PZ-21-00271-04 to Annex the approximate 1.9 acres located at the southwest corner of US Route 66 & Woody Mountain Road. See enclosed Annexation Map. In addition, we filed application case no. PZ-21-00271-05 to rezone the Property (including the 1.9 acres) from RR-RPO (Rural Residential, Resource Protection Overlay) to HR-RPO (High Density Residential, Resource Protection Overlay) to allow for the development of a market rate, 214 multi-family residential dwelling unit community at a density of approximately 16.45 dwelling units per acre. The 2030 Regional Plan designates the Property as Urban-Future land use—the proposed use and density comply with this designation. Dwelling units will consist of 1, 2, and 3 bedroom units spread throughout a series of 2-story carriage units and 3-story buildings. Amenities are planned to include a centrally located resident amenity area, open space area, clubhouse, fitness center, spa, bbq area and ramadas, fire pit and seating area, pickleball court, and dog park. In addition, civic (public) space, which includes seating, landscaping, and hardscape, is planned at the northeast corner of the Property. See enclosed Site Plan and Building Elevations.

We have scheduled **two virtual neighborhood meetings** to discuss the proposed applications.

VIRTUAL NEIGHBORHOOD MEETING NO. 1: December 12, 2022 from 6:00 – 7:00 PM

VIRTUAL NEIGHBORHOOD MEETING NO. 2: February 6, 2023 from 6:00 – 7:00 PM

Meeting details for BOTH virtual neighborhood meeting are as follows:

Meeting:	Liv Timber Sky—Virtual Neighborhood Meeting
Location:	Meeting to be held virtually in Zoom.
Link:	https://www.gblaw.com/livtimbersky/
Date and Time:	As stated above.

Instructions for Access to Virtual Neighborhood Meetings. The neighborhood meetings will be held on the Zoom video conferencing platform, which can be accessed through your internet browser or through the Zoom app on your mobile device via the above link. For registration assistance, please contact Taylor Manemann at (602) 256-4454 or tmanemann@gblaw.com.

Please note, to access the meetings, you will be required to register. Meeting registration information will be part of the public record and shared with the City. We will also use this information to keep you informed of future meetings and hearings via email, as well as traditional mail. At the beginning of the neighborhood meetings, we will provide a brief overview of the meeting procedures and instructions for asking questions once the formal presentation has concluded.

A follow-up notification letter will be mailed in mid-January 2023 to remind you of the SECOND virtual neighborhood meeting.

Please be advised that future meetings and hearings before the Planning & Zoning Commission and City Council will be scheduled to review this case. Specific meeting and hearing dates have not yet been set. An additional notification letter will be provided identifying the date, time, and location of these meetings and hearings.

The City Planner assigned to this case is Ms. Genevieve Pearthree, Senior Planner. Ms. Pearthree can be reached at (928) 213-2603 or Genevieve.Pearthree@flagstaffaz.gov. She can answer your questions regarding the City's review and hearing process. Should you have any questions in the meantime or are unable to attend either or both of the virtual neighborhood meetings and would like more information, please do not hesitate to contact me at (602) 459-9929 or walter@vintagevp.com.

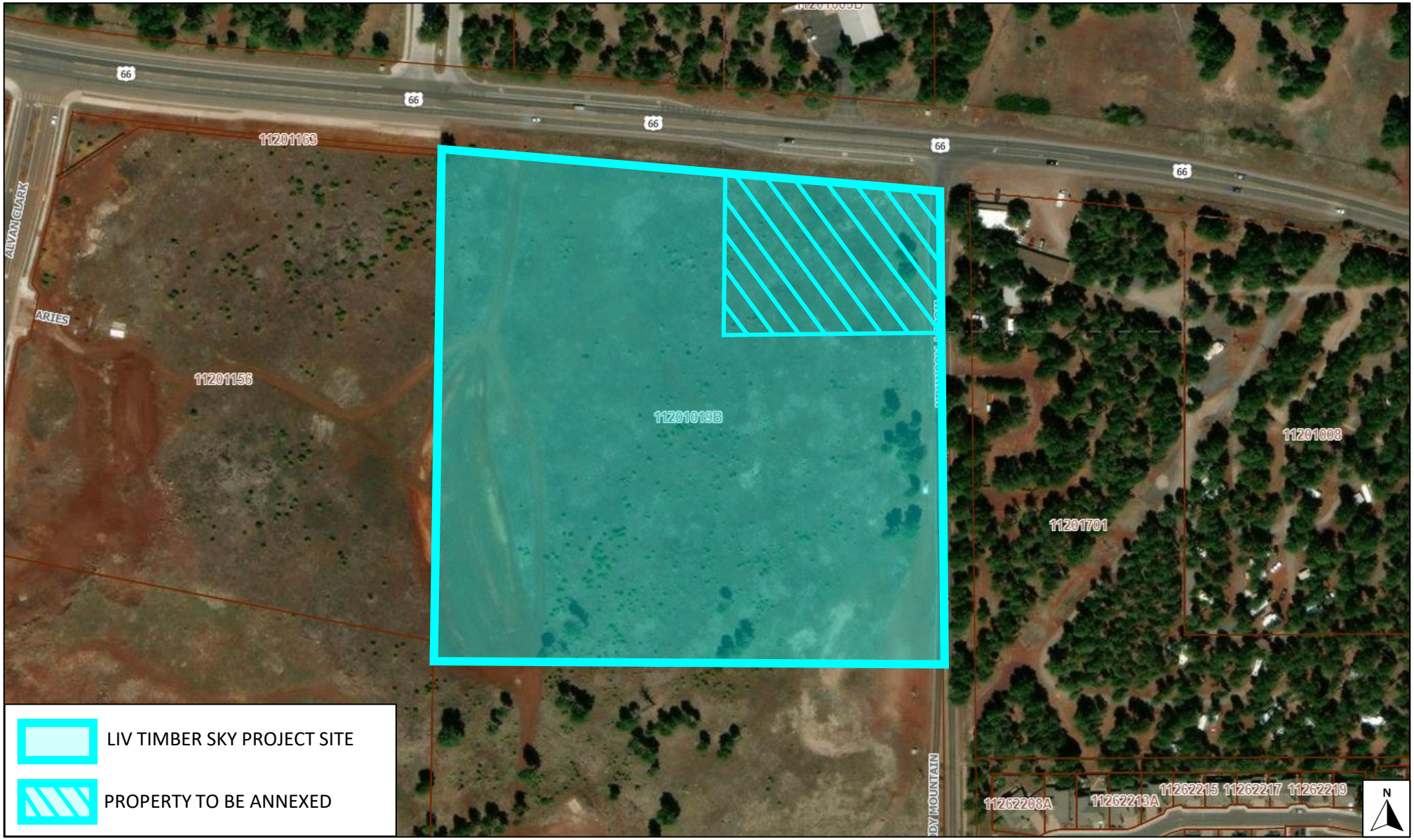
Sincerely,

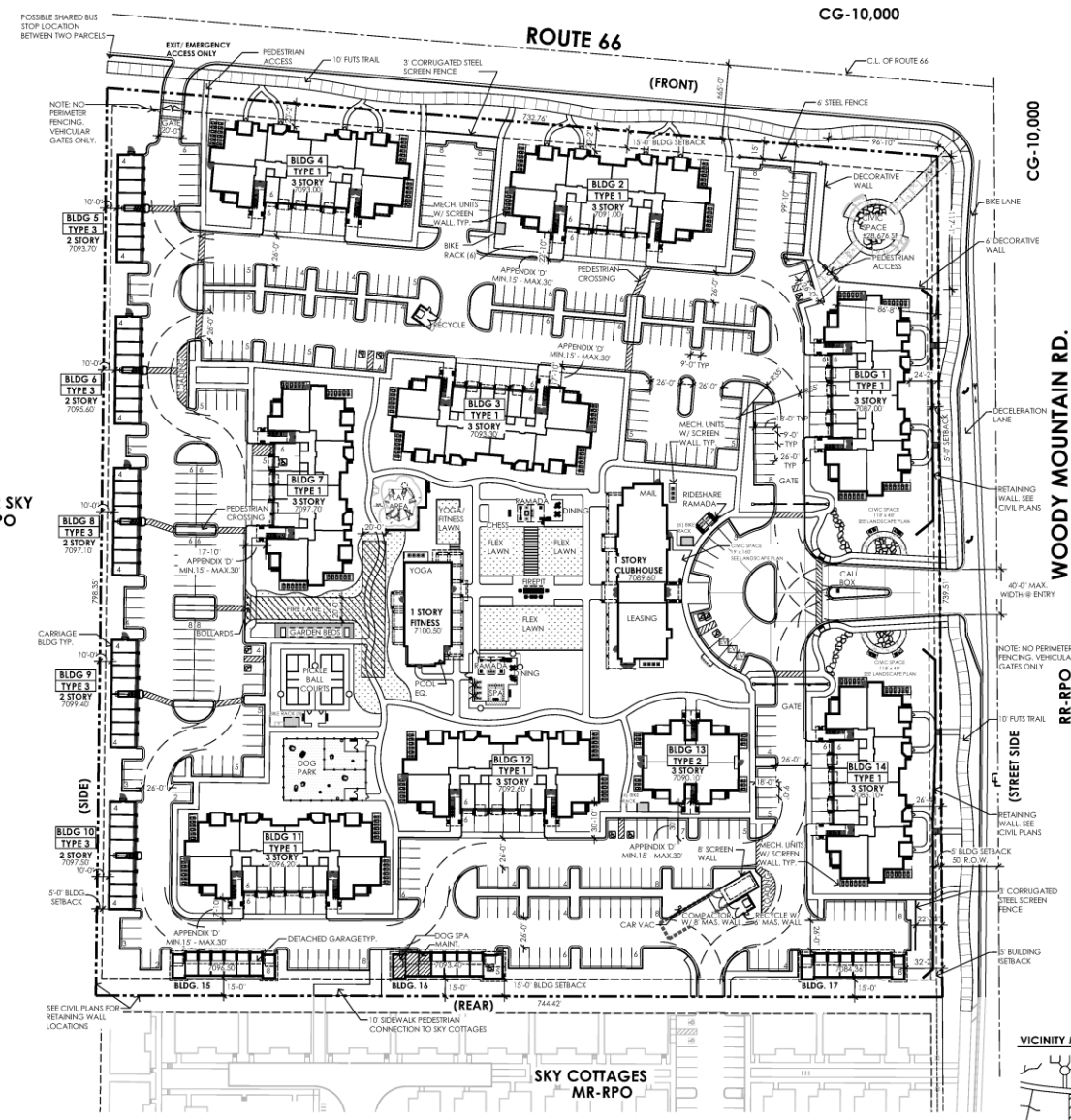
Walter Crutchfield
Vintage Partners

CONTEXT MAP

Timber Sky
Liv Timber Sky
Sky Cottages at Timber Sky
66
40
ALTAIR
ALTAIR
ARIES
ALVANGUARK
ADORA
VEGA
ROCKWOOD
UNNAMED
M GALLISTER RANCH
PUTNAM
CORONADO
ZEPHER
ROCKSUND
RAILROAD SPRINGS
PATIO DEL PRESIDIO
PRESIDIO
MISSION TIMBER
KISTLE
WOODY MOUNTAIN
N

ANNEXATION MAP





DEVELOPMENT TEAM:

DEVELOPER:
LIV COMMUNITIES
1600 S. BEACON BLVD.
SUITE 260
GRAND HAVEN, MI 49417
616-846-6900

ARIZONA OFFICE:
8950 SOUTH 52ND STREET
SUITE 115
TEMPE, AZ 85284
480-739-9240

VINTAGE PARTNERS
2502 E. CAMELBACK RD.
SUITE 214
PHOENIX, AZ 85016
602-459-9929

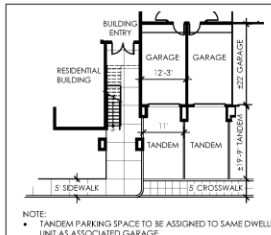
ARCHITECTURE:
TODD & ASSOCIATES
4019 N. 44TH STREET
PHOENIX, AZ 85018
602-952-8280

LANDSCAPE ARCHITECTURE:
NORRIS DESIGN
901 E. MADISON STREET
PHOENIX, AZ 85034
602-254-9600

CIVIL ENGINEER:
SHEPARD-WESNITZER, INC.
110 DALE AVENUE
FLAGSTAFF, AZ 86001
928-773-0354

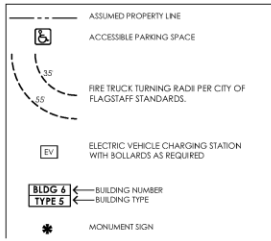
ZONING ATTORNEY:
GAMMAGE & BURNHAM
40 N. CENTRAL AVENUE
20TH FLOOR
PHOENIX, AZ 85004
602-256-0566

DETAIL AT TYPICAL ATTACHED GARAGE

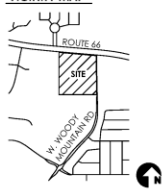


NOTE:
- TANDEM PARKING SPACE TO BE ASSIGNED TO SAME DWELLING UNIT AS ASSOCIATED GARAGE.
- TANDEM PARKING SPACE COUNT HAS NOT BEEN COUNTED TOWARD THE REQUIRED PARKING.

LEGEND



VICINITY MAP



BUILDING S.F. (GROSS)

BUILDING / LEVEL	CONST. TYPE	OCC.
BLDG TYPE 1:		
1ST FLR. 10,250 S.F.	V-A	R-2
2ND FLR. 10,233 S.F.		
3RD FLR. 10,233 S.F.		
SUBTOTAL 30,716 S.F. (x 8 = 245,728 S.F.)		
BLDG TYPE 2:		
1ST FLR. 4,574 S.F.	V-A	R-2
2ND FLR. 4,574 S.F.		
3RD FLR. 4,574 S.F.		
SUBTOTAL 13,722 S.F. (x 1 = 13,722 S.F.)		
BLDG TYPE 3:		
1ST FLR. 2,299 S.F.	V-A	R-2
2ND FLR. 2,185 S.F.		
SUBTOTAL 4,484 S.F. (x 5 = 22,420 S.F.)		
TOTAL RESIDENTIAL:		**281,870 S.F.**
CLUBHOUSE:		
1ST FLR. 6,511 S.F.	V-B	A-3 / B
SUBTOTAL 6,511 S.F. (x 1 = 6,511 S.F.)		
FITNESS:		
1ST FLR. 3,753 S.F.	V-B	A-3
SUBTOTAL 3,753 S.F. (x 1 = 3,753 S.F.)		
DETACHED GARAGES:		
TYPE 1: 2,012 S.F.	V-B	U
SUBTOTAL 2,012 S.F. (x 2 = 4,024 S.F.)		
TYPE 2: 2,148 S.F.	V-B	U
SUBTOTAL 2,148 S.F. (x 1 = 2,148 S.F.)		
TOTAL ALL BUILDINGS:		**298,306 S.F.**

CODE COMPLIANCE:
THE FLAGSTAFF CITY COUNCIL HAS ADOPTED THE FOLLOWING BUILDING CODES WITH AMENDMENTS:
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2017 NFPA 70 / NATIONAL ELECTRICAL CODE
1997 UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS
2018 INTERNATIONAL RESIDENTIAL CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
1997 UNIFORM ADMINISTRATIVE CODE
1997 UNIFORM HOUSE CODE
ICC A117-1-2017 ACCESSIBLE & USABLE BUILDINGS & FACILITIES

SITE DATA:

SITE ADDRESS:
2701 South Woody Mountain Road

APN:
112-01-019B
Note: as of January 1, 2023, this parcel number will be changed to APN 112-01-712

SITE AREA:
GROSS AREA: 13.01 ACRES (567,020 SF)
NET AREA: 13.01 ACRES (567,020 SF)

LOT COVERAGE:
MAX. ALLOWED: 50% (0.50 x 567,020 SF = 283,510 SF)
PROVIDED: 23% (130,737 SF)

LOT COVERAGE CALCULATIONS:

BUILDING 1	11,461 S.F. x 8 =	91,688 S.F.
BUILDING 2	5,780 x 1 =	5,780 S.F.
CARRIAGE	2,277 S.F. x 5 =	11,385 S.F.
CLUBHOUSE	9,249 S.F.	9,249 S.F.
FITNESS	5,930 S.F.	5,930 S.F.
GARAGES	2,035 x 3 =	6,105 S.F.
RAMADAS	600 S.F.	600 S.F.

COMMON OPEN SPACE: (SEE LANDSCAPE OPEN SPACE PLAN)
REQUIRED: 15% (±85,053 SF)
PROVIDED: 16% (±91,109 SF)

CIVIC OPEN SPACE: (SEE LANDSCAPE OPEN SPACE PLAN)
REQUIRED: 5% (±28,351 SF)
PROVIDED: 5% (±28,360 SF)

ZONING:
EXISTING ZONING: COF: Rural Residential - Resource Protection Overlay (RR-RPO) (±11.31 ac.)
CC: General - 10 Ac. Minimum (±1.70 ac.)
PROPOSED: COF: High Density Residential - Resource Protection Overlay (HR-RPO)(± 13.01 ac.)

HEIGHT:
ALLOWED: 60'-0" (65'-0" ALLOWED WITH 6:12 PITCHED ROOFS)
PROVIDED: 3 STORIES - ± 50'-0" / 2 STORIES - ± 30'-0" (AT FINISH GRADE)
(Building height shall be measured vertically from top of any point of a structure or building element, including the top of parapet, top of mansard roof, screened wall or pitched roof to the natural grade directly benefits one point measured under the finished grade abutting the bldg. or structure is below the natural grade.)

UNIT MIX:

1 BEDROOM/ 1 BATH	48 D.U.	(22.4%)
2 BEDROOM/ 2 BATH	118 D.U.	(55.2%)
3 BEDROOM/ 2 BATH	48 D.U.	(22.4%)
TOTAL	**214 D.U.**	**(100%)**

CONSTRUCTION TYPE:
PROPOSED: TYPE V-A/V-B, SPRINKLERED (RESIDENTIAL APARTMENT BLDGS.)

DENSITY:
MAXIMUM ALLOWED: 29 D.U./GROSS ACRE (MAX. WITH RPO, INSIDE PEDESTRIAN SHED OF AN ACTIVITY CENTER)
PROVIDED: ±16.44 D.U./GROSS ACRE

PARKING:
REQUIRED PARKING:
1 BEDROOM/1 BATH (48 D.U. x 1.50 P.S./D.U.) = 72 P.S.
2 BEDROOM/2 BATH (118 D.U. x 2.00 P.S./D.U.) = 236 P.S.
3 BEDROOM/2 BATH (48 D.U. x 2.00 P.S./D.U.) = 96 P.S.
GUEST (2 & 3 BEDROOM - (166 D.U. x 0.25) = 42 P.S.
TOTAL REQUIRED PARKING: 446 P.S.

REQUIRED ACCESSIBLE PARKING:
REQUIRED: PER CITY OF FLAGSTAFF TABLE 10-50.80.080.B:
401-500 TOTAL P.S. = 10 ACC. P.S.
PROVIDED: 10 PARKING SPACES (9 SURFACE, 1 GARAGE)

PROVIDED PARKING:
SURFACE PARKING 390 P.S. (INCLUDES 340 SURFACE P.S., 3 EV CHARGING STATIONS & 47 TANDEM P.S.)
ATTACHED GARAGES 47 P.S.
CARRIAGE BUILDING GARAGES 40 P.S.
DETACHED GARAGE 21 P.S.
TOTAL PROVIDED PARKING 498 P.S.
INCLUDES 10 ACCESSIBLE P.S: 9 SURFACE, 1 GARAGE

GENERAL PARKING DIMENSIONS:
PARKING SPACE: 9' x 18' WITH 1.5' OVERHANG
AISLE WIDTH: 26' FIRE CODE (APPENDIX D)
LANDSCAPE ISLAND RATIO: 8 P.S. PER 1 LANDSCAPE ISLAND

BICYCLE PARKING:
REQUIRED: 5% OF REQUIRED PARKING = 5% x 446 = 22
PROVIDED: 24 BICYCLE PARKING SPACES

BUILDING SETBACK:

	REQUIRED	PROVIDED
- FRONT (ROUTE 66)	15'	±19' - BUILDING
		15' - FENCE (6')
- STREET SIDE (WOODY MTN RD)	5'	±24' - BUILDING
- SIDE (WEST PROPERTY LINE)	5'	10' - BUILDING
- REAR (SOUTH PROPERTY LINE)	15'	15' - DETACHED GARAGE

FIRE CODE:
CITY OF FLAGSTAFF FIRE DEPARTMENT HAS ADOPTED APPENDIX D WITHIN THE 2018 FIRE CODE WHICH REQUIRES THE FOLLOWING:
1. WHERE THE VERTICAL DISTANCE BETWEEN THE GRADE PLANE AND THE HIGHEST ROOF SURFACE EXCEEDS 30', APPROVED AERIAL FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED.
2. AERIAL FIRE APPARATUS ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 26'.
3. FIRE APPARATUS ACCESS ROUTES SHALL BE LOCATED NOT LESS THAN 15' AND NOT GREATER THAN 30' FROM THE BUILDING AND SHALL BE POSITIONED PARALLEL TO ONE ENTIRE SIDE OF THE BUILDING. THE SIDE OF THE BUILDING ON WHICH THE AERIAL FIRE APPARATUS ACCESS ROAD IS POSITIONED SHALL BE APPROVED BY THE FIRE CODE OFFICIAL.

FIRE TRUCK TURNING RADIUS:
INSIDE: 35'
OUTSIDE: 55'

ARCHITECTURAL SITE PLAN

0' 25' 50' 100'
SCALE: 1" = 50'-0"

PROJECT NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES
8950 S 52ND ST. SUITE 115
TEMPE, AZ 85284

SEAL
REGISTERED ARCHITECT CERTIFICATE NO. 13467 GARY D. TODD 11/18/22 ONLY VALID WHEN SIGNED

CONTACT
TODD + ASSOCIATES
CRITICAL THINKING / CREATIVE DESIGN
ARCHITECTURE. PLANNING. LANDSCAPE ARCHITECTURE.
4019 N. 44TH ST. / PHOENIX, AZ 85018
602-952-8280 / TODDASSOC.COM
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PHASE
09-22-2022
SITE PLAN REVIEW SUBMITTAL #1

11-23-2022
SITE PLAN REVIEW SUBMITTAL #2

DATA
Proj Mgr.
Dwn By:

ARCHITECTURAL SITE PLAN

A1.1.1

REAR ELEVATION

LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR		SWATCH
A	Fiber Cement Siding Body 1	MFG.:	Allura Lap Siding - Horizontal Panels Traditional Texture	
		COLOR:	Maple	
B	Fiber Cement Siding Body 2	MFG.:	Allura Lap Siding - Vertical Panels Traditional Texture	
		COLOR:	Slate	
C	Fiber Cement Fascia	MFG.:	Allura - Plycem Fiber Cement Trim	
		COLOR:	Sterling Gray	
		LRV:	48.20	
D	Fiber Cement Trim	MFG.:	Allura - Plycem Fiber Cement Trim	
		COLOR:	Autumn Red	
		LRV:	12.60	
E	Stone Veneer	MFG.:	Coronado - Getty Stone	
		COLOR:	Embassy Blend	
F	Shingle Roof	MFG.:	GAF Timberline - Ultra HD Shingles	
		COLOR:	Charcoal	
G	Metal Roof	MFG.:	MBCI - Slimline Roof Panel	
		COLOR:	Signature 300 "Slate Gray"	
		LRV:	18.76	
H	Metal Railing	MFG.:	Sherwin Williams	
		COLOR:	SW 7578 "Borscht"	
		LRV:	6	

CLUBHOUSE ELEVATIONS

0" 4" 8" 16"

SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

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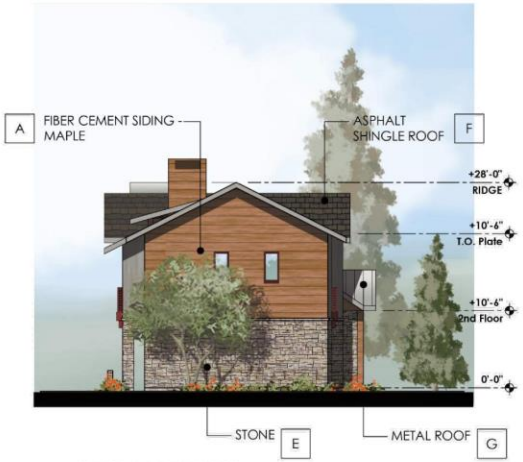
Dwn By:

CLUBHOUSE ELEVATIONS

A3.4.2

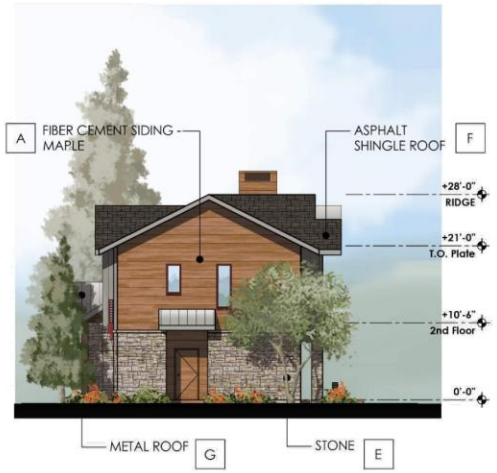


RIGHT ELEVATION

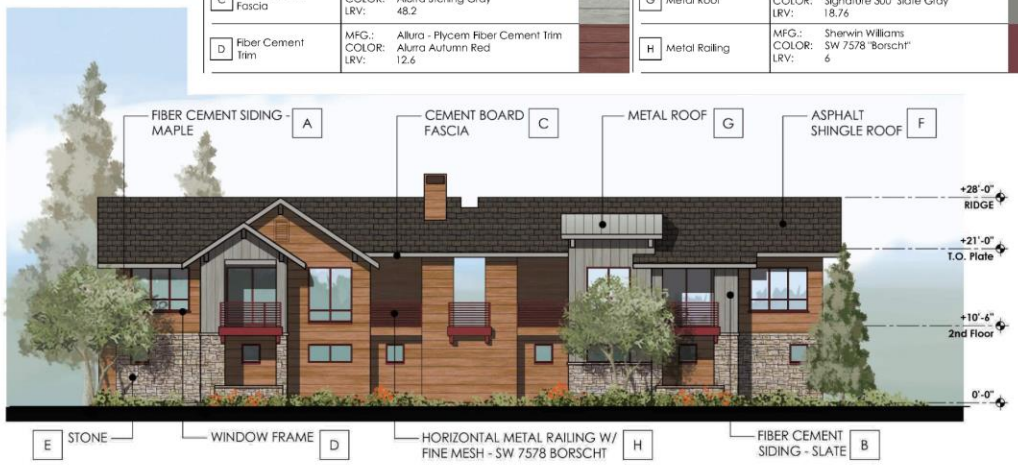
FRONT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	



LEFT ELEVATION



REAR ELEVATION

TYPE 3 ELEVATIONS

0" 4" 8" 16"
SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES
8950 S 52ND ST. SUITE 115
TEMPE, AZ 85284

SEAL
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CERTIFICATE NO.
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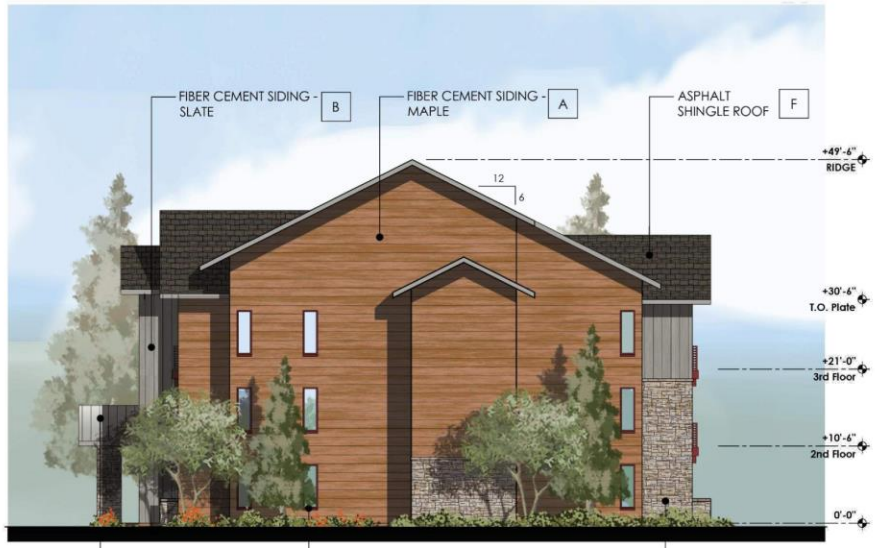
Dwn By:

BUILDING TYPE 3 ELEVATIONS

A3.3.1

REAR ELEVATION



LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
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B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	

TYPE 1 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

8950 S 52ND ST. SUITE 115
TEMPE, AZ 85284

SEAL

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11-23-2022
SITE PLAN REVIEW
SUBMITTAL #2

DATA

Proj Mgr.
Dwn By:

BUILDING TYPE 1 ELEVATIONS

A3.1.2

Property Owners within 300-feet					
Property Owner Name	**Mailing Address**	**City**	**Sate**	**ZIP**	**APN**
DUNN SHELLY R	2864 W PICO DEL MONTE CIR	FLAGSTAFF	AZ	86001	11262212A
ESTERLY BRIAN & ROSETTA	24361 N 73RD ST	SCOTTSDALE	AZ	85255	11262208A
FLAGSTAFF CITY OF	211 W ASPEN AVE	FLAGSTAFF	AZ	86001	11201002
HELIN BUILDING LLC	1800 N HEREFORD DR	FLAGSTAFF	AZ	86001	11201003A 11201003B
PRESIDIO IN THE PINES HOMEOWNER'S ASSOC INC	323 S RIVER RUN RD NO 1	FLAGSTAFF	AZ	86001	11262473B
TIMBER SKY COMMUNITY ASSOCIATION	2502 E CAMELBACK RD NO 214	PHOENIX	AZ	85016	11201163
VAN HOY FAMILY REVOCABLE TRUST DTD 01-16-02	14194 W SMOKETREE DR	SURPRISE	AZ	85387	11262207
VP 66 & WOODY MOUNTAIN LLC	2502 E CAMELBACK RD NO 214	PHOENIX	AZ	85016	11201156 11201157
WALKER WINSTON W & MARY M	13450 N KACHINA DR	ORO VALLEY	AZ	85755	11262210A
WOODY MOUNTAIN CAMPGROUND	1425 W FOREST MEADOWS	FLAGSTAFF	AZ	86001	11201701
HOAs and Neighborhood Associations within 1,000-feet					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	
RAILROAD SPRINGS 66 LLLP	1016 W UNIVERSITY AVE NO 203	FLAGSTAFF	AZ	86001	
PRESIDIO IN THE PINES HOMEOWNER'S ASSOC INC	323 S RIVER RUN RD NO 1	FLAGSTAFF	AZ	86001	
TIMBER SKY COMMUNITY ASSOCIATION	2502 E CAMELBACK RD NO 214	PHOENIX	AZ	85016	
Registry of Persons and Groups					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	**Email**
Friends of Flagstaff's Future	P.O. Box 23462	Flagstaff	AZ	86002	info@friendsofflagstaff.org
Friends of Flagstaff's Future ATTN: Michele A. James	P.O. Box 23462	Flagstaff	AZ	86002	
Northern Arizona Building Association	1500 East Cedar Avenue, Suite 86	Flagstaff	AZ	86004	tbociung@nazba.org
Northern Arizona Association of Realtors ATTN: Jeffrey Herd	1515 East Cedar Avenue, Suite C-4	Flagstaff	AZ	86004	naarflag@nazrealtor.com
Tish Bogan-Ozmun	5271 Mt. Pleasant Drive	Flagstaff	AZ	86004	tishflagstaff@gmail.com
Marilyn Weissman	1055 East Apple Way	Flagstaff	AZ	86001	Missymoet@aol.com
Nat White	1120 North Rockridge Road	Flagstaff	AZ	86001	white@lowell.edu
Charlie Silver	720 West Aspen Avenue	Flagstaff	AZ	86001	Cws720@gmail.com
Betsy McKellar	330 S Ash Lane	Flagstaff	AZ	86004	
David Carpenter	1109 W Beal Road	Flagstaff	AZ	86001	dc@hopeaz.com
Arizona Army National Guard, AZAA-FMO ATTN: Dorenda Coleman	5636 E McDowell Rd, M5330	Phoenix	AZ	85008	dorenda.j.coleman.nfg@mail.mil
US Navy, Intergovernmental Branch. ATTN: Mary Beth Dreusike	850 Pacific Highway Building 1 – 5th Floor, Suite 513	San Diego	CA	92132	marybeth.dreusike@navy.mil
Celia Barotz	3354 N Crest Street	Flagstaff	AZ	86001	cbarotz@gmail.com
Norm Wallen	3716 N Grandview	Flagstaff	AZ	86004	normwallenflg@gmail.com
Coconino County Community Development ATTN: Jay Christelman	2500 N Fort Valley Rd. Bldg 1	Flagstaff	AZ	86001-1287	jchristelman@coconino.az.gov
Tyler Denham	800 W Forest Meadows St, Apt 119	Flagstaff	AZ	86001	tyler.b.denham@gmail.com
Coconino County Community Development ATTN: Jess McNeely	2500 N Fort Valley Rd. Bldg 1	Flagstaff	AZ	86001-1287	wmcneely@coconino.az.gov
Flagstaff Lodging, Restaurant & Tourism Association ATTN: Steve Finch	PO Box 30622	Flagstaff	AZ	86003	sfinch@flrta.org
Rachel Bass	3083 W. Easterday Lane	Flagstaff	AZ	86001	rsilverton@gmail.com
Other Interested Parties					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	**Email**
City of Flagstaff Community Development ATTN: Genevieve Pearthree	211 W. Aspen Ave	Flagstaff	AZ	86001	gpearthree@flagstaffaz.gov
Gammage & Burnham, PLC ATTN: Nick Sobraske	40 N Central, 20th Floor	Phoenix	AZ	85004	nsobraske@gblaw.com

Neighborhood Meeting Certification

I, Gammage & Burnham, PLC c/o Lindsay C. Schube, the authorized representative of VP 66 & Woody Mountain LLC, do hereby attest that the neighborhood meeting for Project No. PZ-21-00271-05 and PZ-21-00271-04 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 11/22/2022 and accepted by the City of Flagstaff on 12/8/2022.
- ☑ 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.
- ☑ Notices of the neighborhood meeting were sent via first class mail on 11/23/2022 to all property owners within 1,000 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.
- ☑ A total of 1 neighborhood meeting notification sign(s) were installed on 11/23/2022 at the following location(s):
  - o Near the intersection of US Route 666 & Woody Mountain Road
  - o _____
  - o _____
- ☑ A written summary of the meetings, known as a Citizen Participation Report, was submitted to the City of Flagstaff on 4/12/2023.
- ☑ Copies of the Citizen Participation Report were sent via first class mail on 4/11/2023 to all persons who recorded their names on the neighborhood meeting sign-in sheet.

Authorized Representative of the Applicant:

Lindsay C. Schube

Signature:

LCSchube

TAB B

Voluntary Second Neighborhood Meeting Reminder
Mailing List

January 13, 2023

Dear Property Owner, Resident, Neighborhood Association, or Interested Citizen,

You are receiving this follow-up letter as a courtesy reminder that Vintage Partners is hosting a second virtual neighborhood meeting for the Liv Timber Sky development proposal on the approximate 13.86 acres located at the southwest corner of US Route 66 and Woody Mountain Road ("Property"). VP 66 & Woody Mountain LLC d/b/a as Vintage Partners, in partnership with Liv Communities, is proposing to develop a new, market-rate multi-family residential development on the Property.

We recently filed application case no. PZ-21-00271-04 to Annex the approximate 1.9 acres located at the southwest corner of US Route 66 & Woody Mountain Road. See enclosed Annexation Map. In addition, we filed application case no. PZ-21-00271-05 to rezone the Property (including the 1.9 acres) from RR-RPO (Rural Residential, Resource Protection Overlay) to HR-RPO (High Density Residential, Resource Protection Overlay). Approval of these applications will allow for the development of a 214 multi-family residential dwelling unit community at a density of approximately 16.45 dwelling units per acre. The 2030 Regional Plan designates the Property as Urban-Future land use—the proposed use and density comply with this designation. Dwelling units will consist of 1, 2, and 3 bedroom units spread throughout a series of 2-story carriage units and 3-story buildings. Amenities are planned to include a centrally located resident amenity area, open space area, clubhouse, fitness center, spa, bbq area and ramadas, fire pit and seating area, pickleball court, and dog park. In addition, civic (public) space, which includes seating, landscaping, and hardscape, is planned at the northeast corner of the Property. See enclosed Site Plan and Building Elevations.

The second virtual neighborhood meeting to discuss the development proposal is scheduled as follows:

Meeting:	Liv Timber Sky—Virtual Neighborhood Meeting
Location:	Meeting to be held virtually in Zoom.
Registration Link:	**https://www.gblaw.com/livtimbersky/**
Date and Time:	February 6, 2023 at 6:00 PM

Instructions for Access to Virtual Neighborhood Meetings. The neighborhood meetings will be held on the Zoom video conferencing platform, which can be accessed through your internet browser or through the Zoom app on your mobile device via the above link. For registration assistance, please contact Taylor Manemann at **(602) 256-4454** or **tmanemann@gblaw.com**.

Please note, to access the meeting, you will be required to register. Meeting registration information will be made part of the public record and shared with the City. We will also use this information to keep you informed of future meetings and/or hearings via email, as well as traditional mail. At the beginning of the neighborhood meeting, we will provide a brief overview of the meeting procedures and instructions for asking questions once the formal presentation has concluded.

Please be advised that future hearings before the Planning & Zoning Commission and City Council will be scheduled to review this case. Specific dates have not yet been set. An additional notification letter will be provided identifying the date, time, and location of these meetings and hearings.

The City Planner assigned to this case is Ms. Genevieve Pearthree, Senior Planner. Ms. Pearthree can be reached at (928) 213-2603 or Genevieve.Pearthree@flagstaffaz.gov. She can answer your questions regarding the City's review and hearing process. Should you have any questions in the meantime or are unable to attend this neighborhood meeting and would like more information, please do not hesitate to contact me at (602) 459-9929 or walter@vintagevp.com.

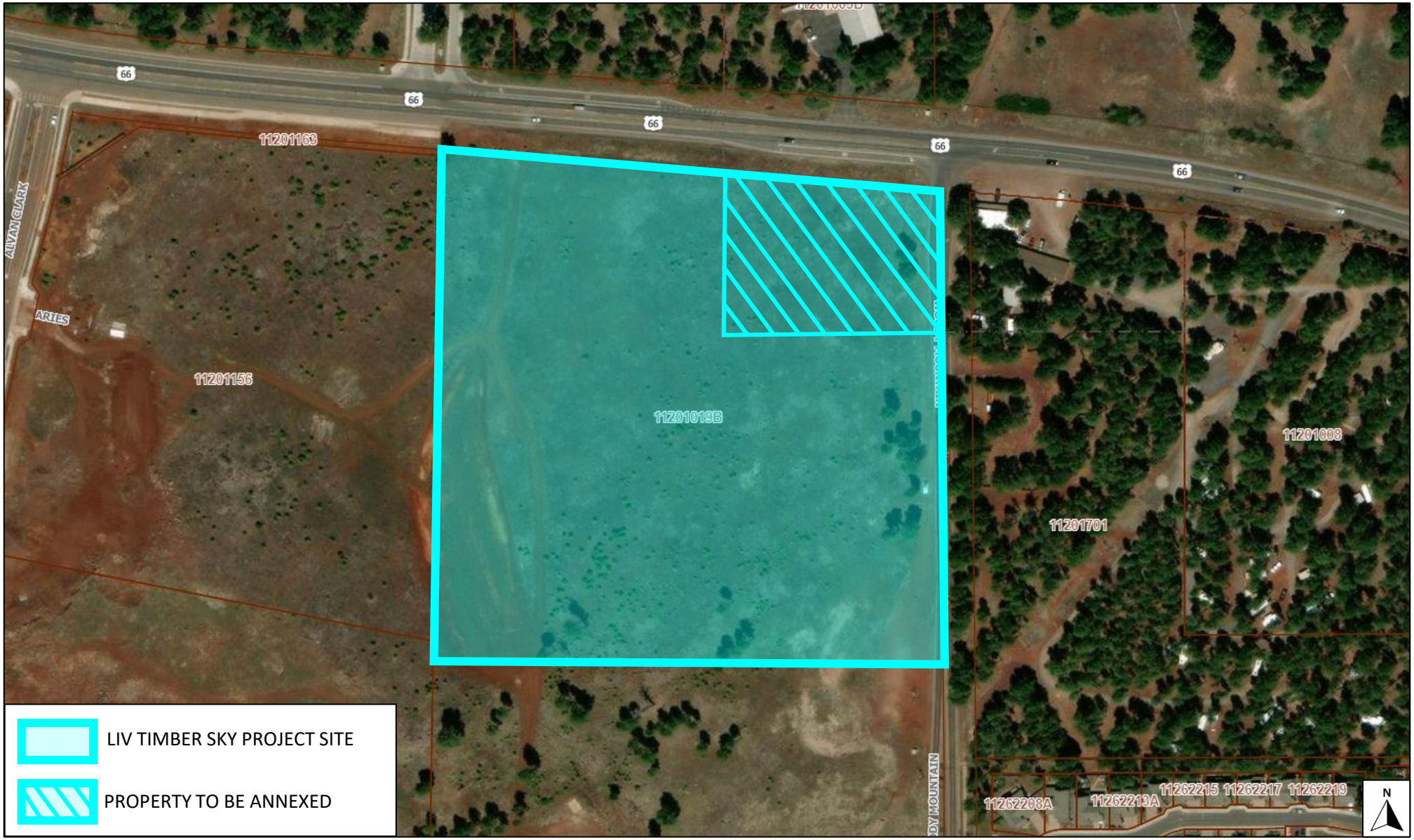
Sincerely,

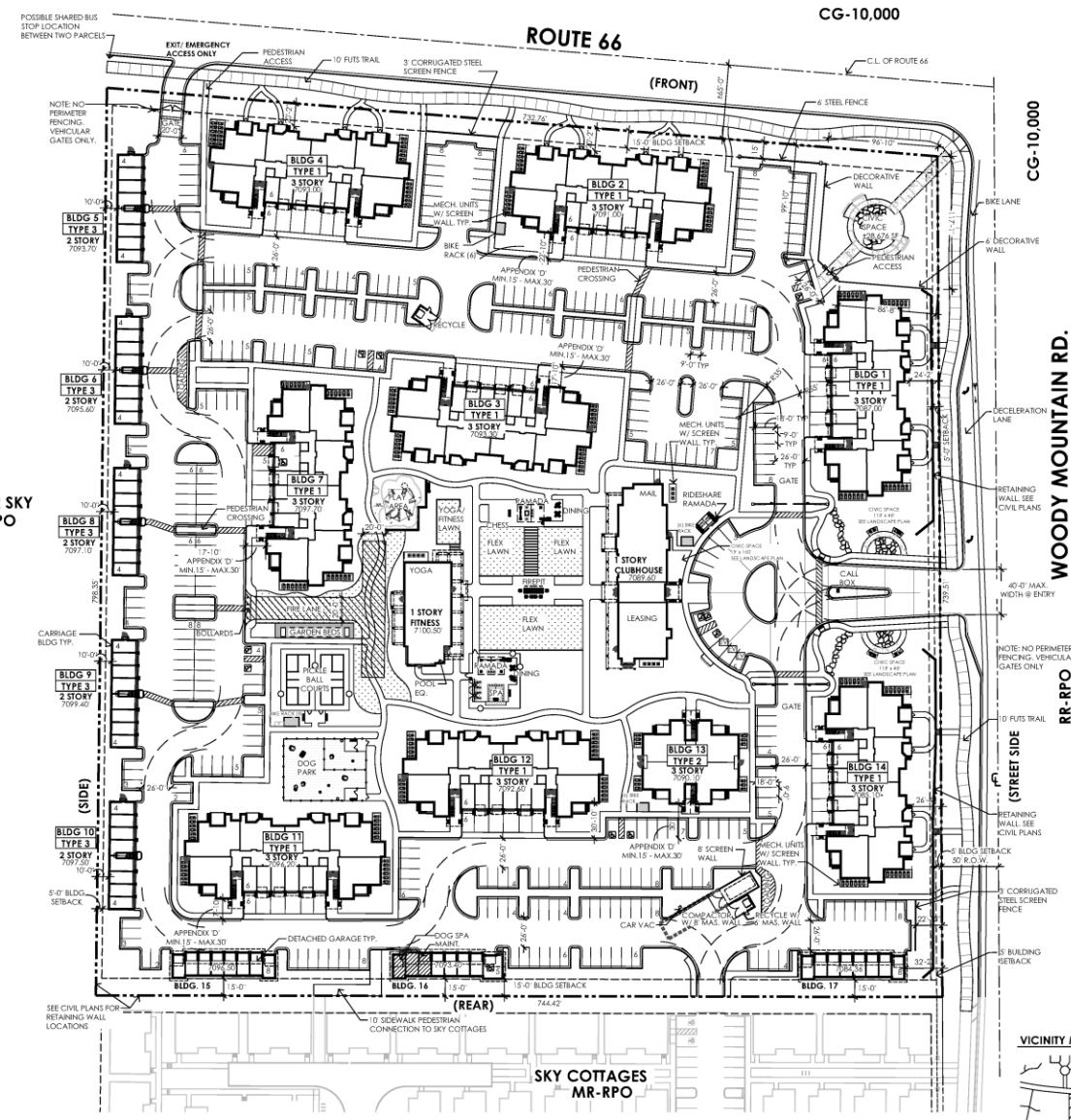
Walter Crutchfield
Vintage Partners

CONTEXT MAP

Timber Sky
Liv Timber Sky
Sky Cottages at Timber Sky
66
40
ALTAIR
ALTAIR
ARIES
ALVANGUARK
ADORA
VEGA
ROCKWOOD
UNNAMED
M GALLISTER RANCH
PUTNAM
CORONADO
ZEPHER
ROCKSUND
RAILROAD SPRINGS
PATIO DEL PRESIDIO
PRESIDIO
MISSION TIMBER
KISTLE
WOODY MOUNTAIN
N

ANNEXATION MAP





DEVELOPMENT TEAM:

DEVELOPER:
LIV COMMUNITIES
1600 S. BEACON BLVD.
SUITE 260
GRAND HAVEN, MI 49417
616-846-6900

ARIZONA OFFICE:
8950 SOUTH 52ND STREET
SUITE 115
TEMPE, AZ 85284
480-739-9240

VINTAGE PARTNERS
2502 E. CAMELBACK RD.
SUITE 214
PHOENIX, AZ 85016
602-459-9929

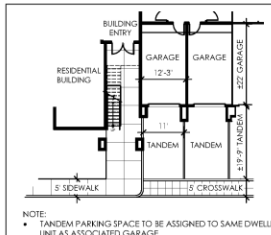
ARCHITECTURE:
TODD & ASSOCIATES
4019 N. 44TH STREET
PHOENIX, AZ 85018
602-952-8280

LANDSCAPE ARCHITECTURE:
NORRIS DESIGN
901 E. MADISON STREET
PHOENIX, AZ 85034
602-254-9600

CIVIL ENGINEER:
SHEPARD-WESNITZER, INC.
110 DALE AVENUE
FLAGSTAFF, AZ 86001
928-773-0354

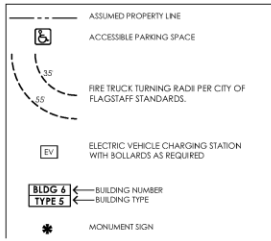
ZONING ATTORNEY:
GAMMAGE & BURNHAM
40 N. CENTRAL AVENUE
20TH FLOOR
PHOENIX, AZ 85004
602-256-0566

DETAIL AT TYPICAL ATTACHED GARAGE

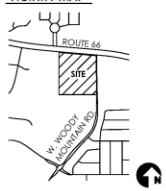


NOTE:
- TANDEM PARKING SPACE TO BE ASSIGNED TO SAME DWELLING UNIT AS ASSOCIATED GARAGE.
- TANDEM PARKING SPACE COUNT HAS NOT BEEN COUNTED TOWARD THE REQUIRED PARKING.

LEGEND



VICINITY MAP



BUILDING S.F. (GROSS)

BUILDING / LEVEL	CONST. TYPE	OCC.
BLDG TYPE 1:		
1ST FLR. 10,250 S.F.	V-A	R-2
2ND FLR. 10,233 S.F.		
3RD FLR. 10,233 S.F.		
SUBTOTAL 30,716 S.F. (x 8 = 245,728 S.F.)		
BLDG TYPE 2:		
1ST FLR. 4,574 S.F.	V-A	R-2
2ND FLR. 4,574 S.F.		
3RD FLR. 4,574 S.F.		
SUBTOTAL 13,722 S.F. (x 1 = 13,722 S.F.)		
BLDG TYPE 3:		
1ST FLR. 2,299 S.F.	V-A	R-2
2ND FLR. 2,185 S.F.		
SUBTOTAL 4,484 S.F. (x 5 = 22,420 S.F.)		
TOTAL RESIDENTIAL:		**281,870 S.F.**
CLUBHOUSE:		
1ST FLR. 6,511 S.F.	V-B	A-3 / B
SUBTOTAL 6,511 S.F. (x 1 = 6,511 S.F.)		
FITNESS:		
1ST FLR. 3,753 S.F.	V-B	A-3
SUBTOTAL 3,753 S.F. (x 1 = 3,753 S.F.)		
DETACHED GARAGES:		
TYPE 1: 2,012 S.F.	V-B	U
SUBTOTAL 2,012 S.F. (x 2 = 4,024 S.F.)		
TYPE 2: 2,148 S.F.	V-B	U
SUBTOTAL 2,148 S.F. (x 1 = 2,148 S.F.)		
TOTAL ALL BUILDINGS:		**298,306 S.F.**

CODE COMPLIANCE:
THE FLAGSTAFF CITY COUNCIL HAS ADOPTED THE FOLLOWING BUILDING CODES WITH AMENDMENTS:
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2017 NFPA 70 / NATIONAL ELECTRICAL CODE
1997 UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS
2018 INTERNATIONAL RESIDENTIAL CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
1997 UNIFORM ADMINISTRATIVE CODE
1997 UNIFORM HOUSE CODE
ICC A117-1-2017 ACCESSIBLE & USABLE BUILDINGS & FACILITIES

SITE DATA:

SITE ADDRESS:
2701 South Woody Mountain Road

APN:
112-01-019B
Note: as of January 1, 2023, this parcel number will be changed to APN 112-01-712

SITE AREA:
GROSS AREA: 13.01 ACRES (567,020 SF)
NET AREA: 13.01 ACRES (567,020 SF)

LOT COVERAGE:
MAX. ALLOWED: 50% (0.50 x 567,020 SF = 283,510 SF)
PROVIDED: 23% (130,737 SF)

LOT COVERAGE CALCULATIONS:

BUILDING 1	11,461 S.F. x 8 =	91,688 S.F.
BUILDING 2	5,780 x 1 =	5,780 S.F.
CARRIAGE	2,277 S.F. x 5 =	11,385 S.F.
CLUBHOUSE	9,249 S.F.	9,249 S.F.
FITNESS	5,930 S.F.	5,930 S.F.
GARAGES	2,035 x 3 =	6,105 S.F.
RAMADAS	600 S.F.	600 S.F.

COMMON OPEN SPACE: (SEE LANDSCAPE OPEN SPACE PLAN)
REQUIRED: 15% (±85,053 SF)
PROVIDED: 16% (±91,109 SF)

CIVIC OPEN SPACE: (SEE LANDSCAPE OPEN SPACE PLAN)
REQUIRED: 5% (±28,351 SF)
PROVIDED: 5% (±28,360 SF)

ZONING:
EXISTING ZONING: COF: Rural Residential - Resource Protection Overlay (RR-RPO) (±11.31 ac.)
CC: General - 10 Ac. Minimum (±1.70 ac.)
PROPOSED: COF: High Density Residential - Resource Protection Overlay (HR-RPO)(± 13.01 ac.)

HEIGHT:
ALLOWED: 60'-0" (65'-0" ALLOWED WITH 6:12 PITCHED ROOFS)
PROVIDED: 3 STORIES - ± 50'-0" / 2 STORIES - ± 30'-0" (AT FINISH GRADE)
(Building height shall be measured vertically from top of any point of a structure or building element, including the top of parapet, top of mansard roof, screened wall or pitched roof to the natural grade directly benefits one point measured under the finished grade abutting the bldg. or structure is below the natural grade.)

UNIT MIX:

1 BEDROOM/ 1 BATH	48 D.U.	(22.4%)
2 BEDROOM/ 2 BATH	118 D.U.	(55.2%)
3 BEDROOM/ 2 BATH	48 D.U.	(22.4%)
TOTAL	**214 D.U.**	**(100%)**

CONSTRUCTION TYPE:
PROPOSED: TYPE V-A/V-B, SPRINKLERED (RESIDENTIAL APARTMENT BLDGS.)

DENSITY:
MAXIMUM ALLOWED: 29 D.U./GROSS ACRE (MAX. WITH RPO, INSIDE PEDESTRIAN SHED OF AN ACTIVITY CENTER)
PROVIDED: ±16.44 D.U./GROSS ACRE

PARKING:
REQUIRED PARKING:
1 BEDROOM/1 BATH (48 D.U. x 1.50 P.S./D.U.) = 72 P.S.
2 BEDROOM/2 BATH (118 D.U. x 2.00 P.S./D.U.) = 236 P.S.
3 BEDROOM/2 BATH (48 D.U. x 2.00 P.S./D.U.) = 96 P.S.
GUEST (2 & 3 BEDROOM - (166 D.U. x 0.25) = 42 P.S.
TOTAL REQUIRED PARKING: 446 P.S.

REQUIRED ACCESSIBLE PARKING:
REQUIRED: PER CITY OF FLAGSTAFF TABLE 10-50.80.080.B:
401-500 TOTAL P.S. = 10 ACC. P.S.
PROVIDED: 10 PARKING SPACES (9 SURFACE, 1 GARAGE)

PROVIDED PARKING:
SURFACE PARKING 390 P.S. (INCLUDES 340 SURFACE P.S., 3 EV CHARGING STATIONS & 47 TANDEM P.S.)
ATTACHED GARAGES 47 P.S.
CARRIAGE BUILDING GARAGES 40 P.S.
DETACHED GARAGE 21 P.S.
TOTAL PROVIDED PARKING 498 P.S.
INCLUDES 10 ACCESSIBLE P.S: 9 SURFACE, 1 GARAGE

GENERAL PARKING DIMENSIONS:
PARKING SPACE: 9' x 18' WITH 1.5' OVERHANG
AISLE WIDTH: 26' FIRE CODE (APPENDIX D)
LANDSCAPE ISLAND RATIO: 8 P.S. PER 1 LANDSCAPE ISLAND

BICYCLE PARKING:
REQUIRED: 5% OF REQUIRED PARKING = 5% x 446 = 22
PROVIDED: 24 BICYCLE PARKING SPACES

BUILDING SETBACK:

	REQUIRED	PROVIDED
- FRONT (ROUTE 66)	15'	±19' - BUILDING
		15' - FENCE (6')
- STREET SIDE (WOODY MTN RD)	5'	±24' - BUILDING
- SIDE (WEST PROPERTY LINE)	5'	10' - BUILDING
- REAR (SOUTH PROPERTY LINE)	15'	15' - DETACHED GARAGE

FIRE CODE:
CITY OF FLAGSTAFF FIRE DEPARTMENT HAS ADOPTED APPENDIX D WITHIN THE 2018 FIRE CODE WHICH REQUIRES THE FOLLOWING:
1. WHERE THE VERTICAL DISTANCE BETWEEN THE GRADE PLANE AND THE HIGHEST ROOF SURFACE EXCEEDS 30', APPROVED AERIAL FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED.
2. AERIAL FIRE APPARATUS ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 26'.
3. FIRE APPARATUS ACCESS ROUTES SHALL BE LOCATED NOT LESS THAN 15' AND NOT GREATER THAN 30' FROM THE BUILDING AND SHALL BE POSITIONED PARALLEL TO ONE ENTIRE SIDE OF THE BUILDING. THE SIDE OF THE BUILDING ON WHICH THE AERIAL FIRE APPARATUS ACCESS ROAD IS POSITIONED SHALL BE APPROVED BY THE FIRE CODE OFFICIAL.

FIRE TRUCK TURNING RADIUS:
INSIDE: 35'
OUTSIDE: 55'

ARCHITECTURAL SITE PLAN

0' 25' 50' 100'
SCALE: 1" = 50'-0"

PROJECT NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES
8950 S 52ND ST. SUITE 115
TEMPE, AZ 85284

SEAL
REGISTERED ARCHITECT CERTIFICATE NO. 13467 GARY D. TODD 11/18/22 ONLY VALID WHEN SIGNED

CONTACT
TODD + ASSOCIATES
CRITICAL THINKING / CREATIVE DESIGN
ARCHITECTURE. PLANNING. LANDSCAPE ARCHITECTURE.
4019 N. 44TH ST. / PHOENIX, AZ 85018
602-952-8280 / TODDASSOC.COM
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09-22-2022
SITE PLAN REVIEW SUBMITTAL #1

11-23-2022
SITE PLAN REVIEW SUBMITTAL #2

DATA
Proj Mgr.
Dwn By:

ARCHITECTURAL SITE PLAN

A1.1.1

REAR ELEVATION

LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR		SWATCH
A	Fiber Cement Siding Body 1	MFG.:	Allura Lap Siding - Horizontal Panels Traditional Texture	
		COLOR:	Maple	
B	Fiber Cement Siding Body 2	MFG.:	Allura Lap Siding - Vertical Panels Traditional Texture	
		COLOR:	Slate	
C	Fiber Cement Fascia	MFG.:	Allura - Plycem Fiber Cement Trim	
		COLOR:	Sterling Gray	
		LRV:	48.20	
D	Fiber Cement Trim	MFG.:	Allura - Plycem Fiber Cement Trim	
		COLOR:	Autumn Red	
		LRV:	12.60	
E	Stone Veneer	MFG.:	Coronado - Getty Stone	
		COLOR:	Embassy Blend	
F	Shingle Roof	MFG.:	GAF Timberline - Ultra HD Shingles	
		COLOR:	Charcoal	
G	Metal Roof	MFG.:	MBCI - Slimline Roof Panel	
		COLOR:	Signature 300 "Slate Gray"	
		LRV:	18.76	
H	Metal Railing	MFG.:	Sherwin Williams	
		COLOR:	SW 7578 "Borscht"	
		LRV:	6	

CLUBHOUSE ELEVATIONS

0" 4" 8" 16"

SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES
8950 S 52ND ST. SUITE 115
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GARY D. TODD
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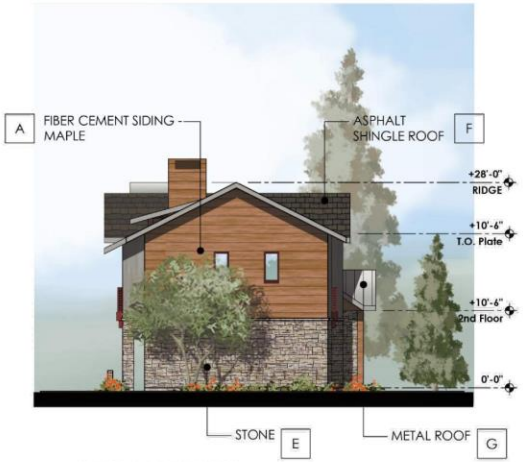
CLUBHOUSE ELEVATIONS

A3.4.2

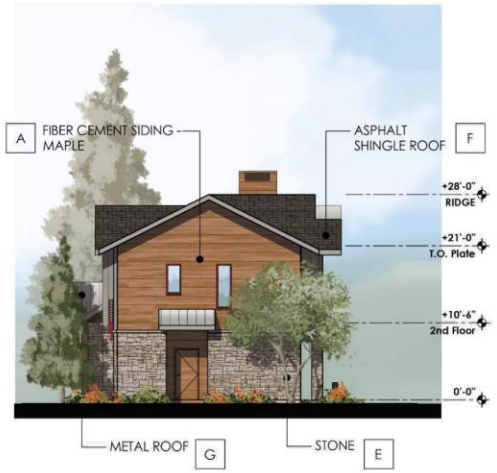


RIGHT ELEVATION

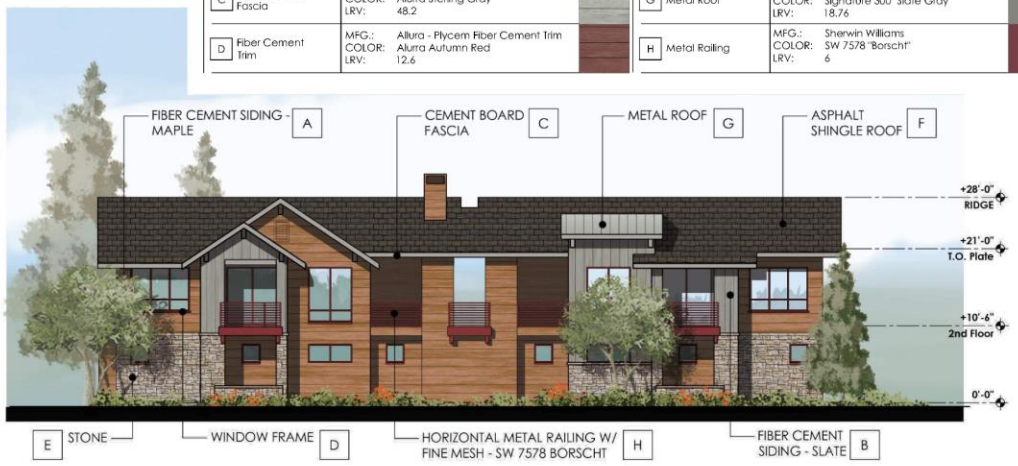
FRONT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	



LEFT ELEVATION



REAR ELEVATION

TYPE 3 ELEVATIONS

0" 4" 8" 16"
SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

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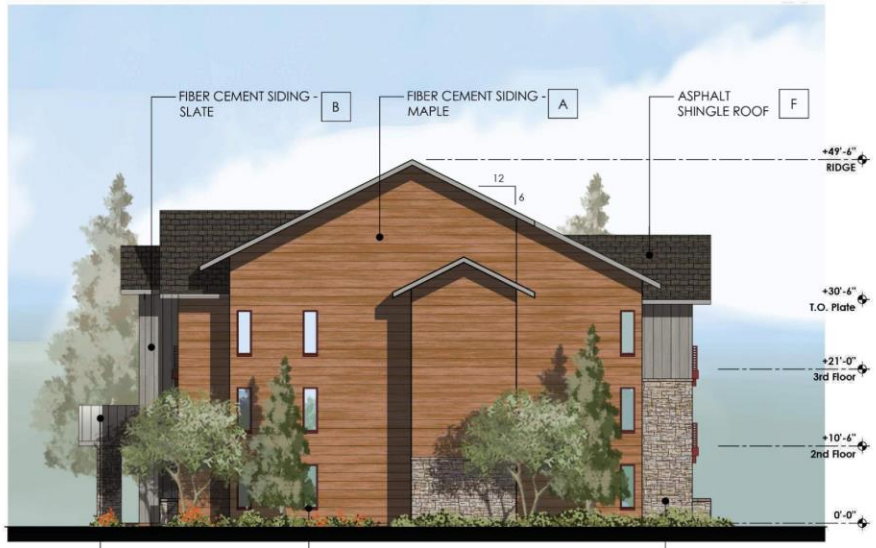
BUILDING TYPE 3 ELEVATIONS

A3.3.1

REAR ELEVATION



LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	

TYPE 1 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

8950 S 52ND ST. SUITE 115
TEMPE, AZ 85284

SEAL

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CERTIFICATE NO.
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SUBMITTAL #1

11-23-2022
SITE PLAN REVIEW
SUBMITTAL #2

DATA

Proj Mgr.
Dwn By:

BUILDING TYPE 1 ELEVATIONS

A3.1.2

Property Owners within 300-feet					
Property Owner Name	**Mailing Address**	**City**	**Sate**	**ZIP**	**APN**
DUNN SHELLY R	2864 W PICO DEL MONTE CIR	FLAGSTAFF	AZ	86001	11262212A
ESTERLY BRIAN & ROSETTA	24361 N 73RD ST	SCOTTSDALE	AZ	85255	11262208A
FLAGSTAFF CITY OF	211 W ASPEN AVE	FLAGSTAFF	AZ	86001	11201002
HELIN BUILDING LLC	1800 N HEREFORD DR	FLAGSTAFF	AZ	86001	11201003A 11201003B
PRESIDIO IN THE PINES HOMEOWNER'S ASSOC INC	323 S RIVER RUN RD NO 1	FLAGSTAFF	AZ	86001	11262473B
TIMBER SKY COMMUNITY ASSOCIATION	2502 E CAMELBACK RD NO 214	PHOENIX	AZ	85016	11201163
VAN HOY FAMILY REVOCABLE TRUST DTD 01-16-02	14194 W SMOKETREE DR	SURPRISE	AZ	85387	11262207
VP 66 & WOODY MOUNTAIN LLC	2502 E CAMELBACK RD NO 214	PHOENIX	AZ	85016	11201156 11201157
WALKER WINSTON W & MARY M	13450 N KACHINA DR	ORO VALLEY	AZ	85755	11262210A
WOODY MOUNTAIN CAMPGROUND	1425 W FOREST MEADOWS	FLAGSTAFF	AZ	86001	11201701
HOAs and Neighborhood Associations within 1,000-feet					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	
RAILROAD SPRINGS 66 LLLP	1016 W UNIVERSITY AVE NO 203	FLAGSTAFF	AZ	86001	
PRESIDIO IN THE PINES HOMEOWNER'S ASSOC INC	323 S RIVER RUN RD NO 1	FLAGSTAFF	AZ	86001	
TIMBER SKY COMMUNITY ASSOCIATION	2502 E CAMELBACK RD NO 214	PHOENIX	AZ	85016	
Registry of Persons and Groups					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	**Email**
Friends of Flagstaff's Future	P.O. Box 23462	Flagstaff	AZ	86002	info@friendsofflagstaff.org
Friends of Flagstaff's Future ATTN: Michele A. James	P.O. Box 23462	Flagstaff	AZ	86002	
Northern Arizona Building Association	1500 East Cedar Avenue, Suite 86	Flagstaff	AZ	86004	tbociung@nazba.org
Northern Arizona Association of Realtors ATTN: Jeffrey Herd	1515 East Cedar Avenue, Suite C-4	Flagstaff	AZ	86004	naarflag@nazrealtor.com
Tish Bogan-Ozmun	5271 Mt. Pleasant Drive	Flagstaff	AZ	86004	tishflagstaff@gmail.com
Marilyn Weissman	1055 East Apple Way	Flagstaff	AZ	86001	Missymoet@aol.com
Nat White	1120 North Rockridge Road	Flagstaff	AZ	86001	white@lowell.edu
Charlie Silver	720 West Aspen Avenue	Flagstaff	AZ	86001	Cws720@gmail.com
Betsy McKellar	330 S Ash Lane	Flagstaff	AZ	86004	
David Carpenter	1109 W Beal Road	Flagstaff	AZ	86001	dc@hopeaz.com
Arizona Army National Guard, AZAA-FMO ATTN: Dorenda Coleman	5636 E McDowell Rd, M5330	Phoenix	AZ	85008	dorenda.j.coleman.nfg@mail.mil
US Navy, Intergovernmental Branch. ATTN: Mary Beth Dreusike	850 Pacific Highway Building 1 – 5th Floor, Suite 513	San Diego	CA	92132	marybeth.dreusike@navy.mil
Celia Barotz	3354 N Crest Street	Flagstaff	AZ	86001	cbarotz@gmail.com
Norm Wallen	3716 N Grandview	Flagstaff	AZ	86004	normwallenflg@gmail.com
Coconino County Community Development ATTN: Jay Christelman	2500 N Fort Valley Rd. Bldg 1	Flagstaff	AZ	86001-1287	jchristelman@coconino.az.gov
Tyler Denham	800 W Forest Meadows St, Apt 119	Flagstaff	AZ	86001	tyler.b.denham@gmail.com
Coconino County Community Development ATTN: Jess McNeely	2500 N Fort Valley Rd. Bldg 1	Flagstaff	AZ	86001-1287	wmcneely@coconino.az.gov
Flagstaff Lodging, Restaurant & Tourism Association ATTN: Steve Finch	PO Box 30622	Flagstaff	AZ	86003	sfinch@flrta.org
Rachel Bass	3083 W. Easterday Lane	Flagstaff	AZ	86001	rsilverton@gmail.com

First Neighborhood Meeting Attendees/Registrants					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	**Email**
Lori McCorry	2462 W. Clement Cir	Flagstaff	AZ	86001	dl1664@bellsouth.net
Bryan Deley	2914 S Presidio de Calabasas	Flagstaff	AZ	86001	bdeley@tricom-solutions.com
Crystal Graziano	2433 W Bruce Balle Dr	Flagstaff	AZ	86001	crystal.graziano@nau.edu
H & K Mountain	2462 South Polaris Way	Flagstaff	AZ	86001	highlandmary@gmail.com
Leah Rosenfeld	2921 W Paz De Avenida	Flagstaff	AZ	86001	Ldr5020@gmail.com
Richard Pogue	2924 S Camel Dr	Flagstaff	AZ	86001	poguera@gmail.com
Brent Ballard	10838 N 10th Place	Phoenix	AZ	85020	arizonalifestyle@aol.com
Martha Johnson	2845 W. Pico del Monte Circle	Flagstaff	AZ	86001	mej0017@gmail.com
Robert Davis	2912 W Paz de Avenida	Flagstaff	AZ	86001	radavis15@mac.com
Nancy & Bruce Helin	1800 N Hereford Dr	Flagstaff	AZ	86001	bnhelin@msn.com
Dennis Bellamy	2542 W Pollo Circle	Flagstaff	AZ	86001	slammer737@gmail.com
Chris Hedlund	2524 W Josselyn Dr	Flagstaff	AZ	85001	ched12345@aol.com
Axel Anderson	2502 E Camelback Rd #214, Phoenix, AZ 85016	Phoenix	AZ	85016	axel.e.anderson@gmail.com
Barry and Susanna Lutz and Maxwell	3340 S Skye Way	Flagstaff	AZ	86005	maxwell.lutz@gmail.com
John Gartin	2461 W Pollo Cir	Flagstaff	AZ	86001	johnggartin@gmail.com
Neal Kenmore	2562 W Josselyn Dr	Flagstaff	AZ	86001	beartrap4junk@gmail.com
Christina George	2959 S Pepita Dr	Flagstaff	AZ	86001	Christina.george610@gmail.com
Other Interested Parties					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	**Email**
City of Flagstaff Community Development ATTN: Genevieve Pearthree	211 W. Aspen Ave	Flagstaff	AZ	86001	gpearthree@flagstaffaz.gov
Gammage & Burnham, PLC ATTN: Nick Sobraske	40 N Central, 20th Floor	Phoenix	AZ	85004	nsobraske@gblaw.com

TAB C

First Virtual Neighborhood Meeting Attendee List

December 12, 2022 First Virtual Neighborhood Meeting Attendees				
Registrants Name	**Address**	**City**	**State**	**ZIP**
Bryan Deley	2914 S Presidio de Calabasas	Flagstaff	AZ	86001
Crystal Graziano	2433 W Bruce Balle Dr	Flagstaff	AZ	86001
Kevin Mountain	2462 South Polaris Way	Flagstaff	AZ	86001
Leah Rosenfeld	2921 W Paz De Avenida	Flagstaff	AZ	86001
Lori McCorry	2462 W. Clement Cir	Flagstaff	AZ	86001
Mary Highland	2462 South Polaris Way	Flagstaff	AZ	86001
Barry and Susanna Lutz and Maxwell	3340 S Skye Way	Flagstaff	AZ	86005
Brent Ballard	2948 S Camel Dr	Flagstaff	AZ	86001
Bruce Helin	1800 N Hereford Dr	Flagstaff	AZ	86001
Chris Hedlund	2524 W Josselyn Dr	Flagstaff	AZ	85001
Christina George	2959 S Pepita Dr	Flagstaff	AZ	86001
Dennis Bellamy	2542 W Pollo Circle	Flagstaff	AZ	86001
John Gartin	2461 W Pollo Cir	Flagstaff	AZ	86001
Martha Johnson	2845 W. Pico del Monte Circle	Flagstaff	AZ	86001
Nancy Helin	1800 N Hereford Dr	Flagstaff	AZ	86001
Neal Kenmore	2562 W Josselyn Dr	Flagstaff	AZ	86001
Richard Pogue	2924 S Camel Dr	Flagstaff	AZ	86001
Robert Davis	2912 W Paz de Avenida	Flagstaff	AZ	86001

TAB D

Second Virtual Neighborhood Meeting Attendee List

February 6, 2023 Second Virtual Neighborhood Meeting Attendees				
Registrants Name	**Address**	**City**	**State**	**ZIP**
Nancy Helin	2800 W Rt 66	Flagstaff	AZ	86001
Bruce Helin	2800 W Rt 66	Flagstaff	AZ	86001
Robert Davis	2912 W Paz de Avenida	Flagstaff	AZ	86001
David Danker	2400 S Luginbuhl St	Flagstaff	AZ	86001

TAB E

Neighborhood Meetings Summary Letter

April 11, 2023

Dear Property Owner, Resident, Neighborhood Association, or Interested Citizen:

Thank you for your interest in Liv Timber Sky, the development proposal at the southwest corner of US Route 66 & Woody Mountain Road (the "Property"). You are receiving this letter because you attended either or both of the neighborhood meetings for this project. In accordance with the City's requirements for neighborhood meeting proceedings, please find enclosed a summary of the two virtual neighborhood meetings.

Should you have any questions, please do not hesitate to contact me at (602) 256-4471 or lschube@gblaw.com. Thank you, again.

Sincerely,

GAMMAGE & BURNHAM, PLC

Lindsay C. Schube

LIV TIMBER SKY—Summary of Neighborhood Meetings

Southwest corner of US Route 66 & Woody Mountain Road
Case Nos.: PZ-21-00271-04 and -05

Neighborhood Meeting

Vintage Partners and the Development Team held two virtual neighborhood meetings. The first meeting was held on December 12, 2022; the second meeting was held on February 6, 2023. The format for both meetings included a formal presentation followed by questions, comments, and discussion. In general, the formal presentation included an overview of the: (1) applications; (2) site plan; (3) building elevations, architecture, and materials; (4) existing and proposed zoning; (5) Regional Plan land use designation; (6) open space and amenities; and (7) process.

Questions, Comments, and Discussion

Generally, the participants in both meetings were supportive of the use and complimentary of the proposed site plan and architecture. The participants acknowledged a lack of housing in Flagstaff and the need for a diversity of housing opportunities for the community.

Participants primarily commented on the existing traffic at the intersection of US Route 66 & Woody Mountain Road. Vintage Partners has offered to install a traffic light at this intersection for years. The Development Team responded by explaining that a traffic impact analysis was being reviewed by the City and ADOT, which determined that with development of Liv Timber Sky, installation of the traffic signal is warranted. The Development Team further explained to participants that there are benefits of a traffic signal, including increased safety and efficiencies.

Participants that live in Timber Sky or Presidio also inquired about commercial uses at the hard corner of US Route 66 & Woody Mountain Road. The Development Team explained that these uses generally generate more traffic (compared to the proposed multi-family residential use). Instead, the Development Team is planning for civic space open to the public at the hard corner. During the second neighborhood meeting, Vintage Partners announced to participants that it has purchased property at the southeast corner of US Route 66 & Woody Mountain Road (opposite of Liv Timber Sky), and is looking into redevelopment with some commercial uses, which may include the possibility of service uses (e.g., restaurant, retail, etc.). The Development Team expressed that the southeast corner of US Route 66 & Woody Mountain Road is a better location for commercial uses.

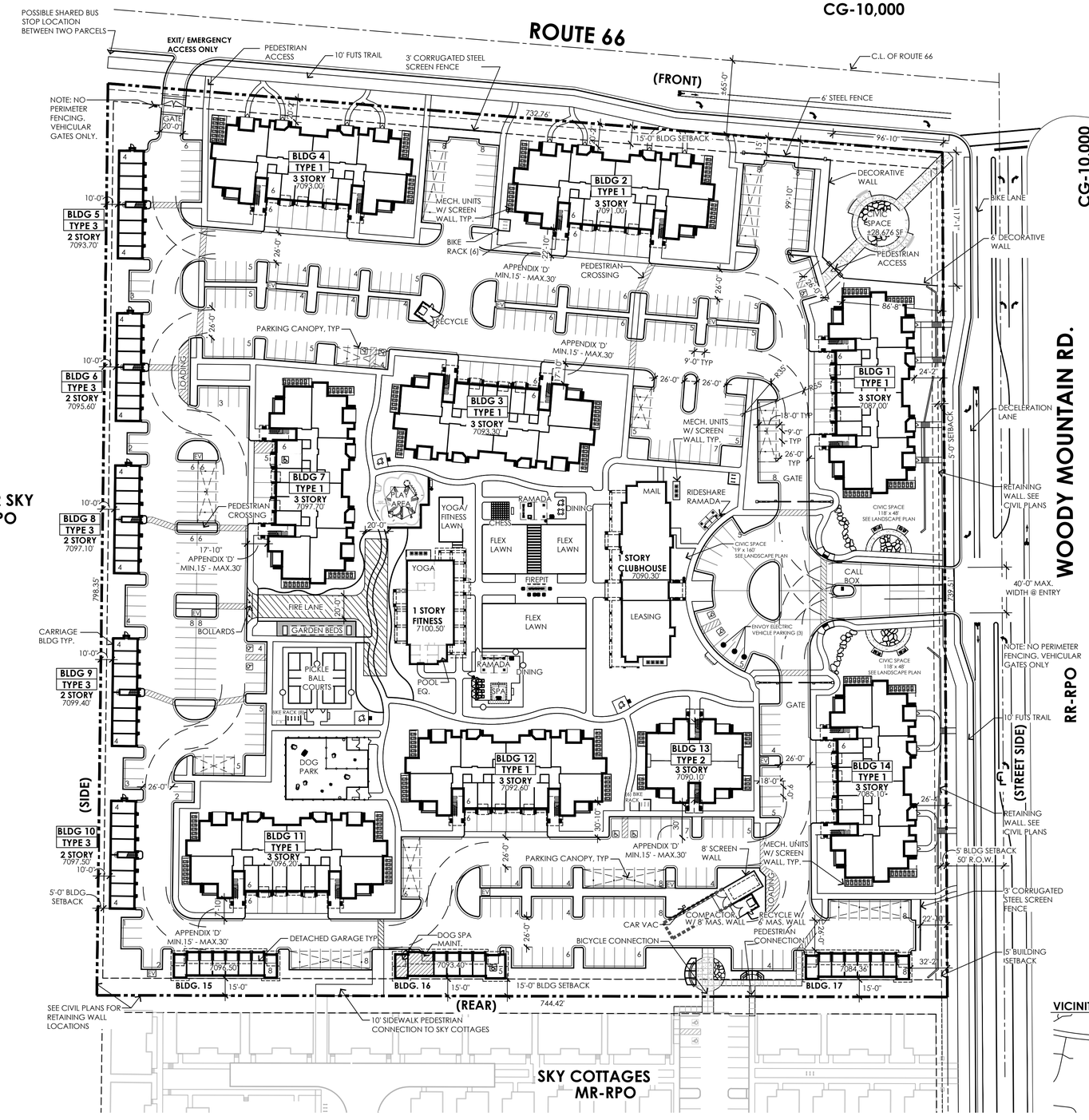
Other topics participants inquired about included vehicular access and circulation for the development proposal, density and conformance with the Regional Plan, and possibility of student housing.

A participant inquired about revising the development proposal to provide a right-out only access driveway along US Route 66. In response to this comment, Vintage Partners agreed it would revise the development proposal, provided it was acceptable to both the City and ADOT. The Development Team continues to work with the City and ADOT to see if this is acceptable. However, the Development Team cannot commit to the access point.

The City's Regional Plan designates the Property an Urban Activity Center (U7) with the intent of promoting increased density. This designation calls for a minimum of 13 dwelling units per acre (du/ac) with no maximum density. Vintage Partners acknowledges the delicate balance of meeting the requirements of the Regional Plan, while respecting the community desires. As such, Liv Timber Sky is proposed at a low density, while ensuring compliance with the Regional Plan, with 214 multi-family units at approximately

16.45 du/ac. At this density, the Development Team believes it has found the balance between providing the density desired by the Regional Plan, while balancing the community's interest.

Liv Timber Sky has been designed to attract families and young professionals in the City. Student housing developments have specific programming elements and amenities, such as pool and spa, clubhouse, game room, study room, fitness center, and lobby, as well as units with 4- and 5-bedroom units. Liv Timber Sky features none of these student-targeted amenities. Rather, at Liv Timber Sky, there is a focus on open space and recreation, pedestrian connectivity, and the natural environment.



DEVELOPMENT TEAM:

DEVELOPER:
LIV COMMUNITIES
1600 S. BEACON BLVD.
SUITE 260
GRAND HAVEN, MI 49417
616-846-6900

ARIZONA OFFICE:
8950 SOUTH 52ND STREET
SUITE 115
TEMPE, AZ 85284
480-739-9240

VINTAGE PARTNERS
2502 E. CAMELBACK RD.
SUITE 214
PHOENIX, AZ 85016
602-459-9929

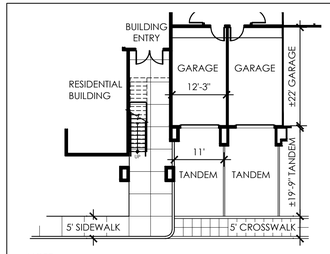
ARCHITECTURE:
TODD & ASSOCIATES
4019 N. 44TH STREET
PHOENIX, AZ 85018
602-952-8280

LANDSCAPE ARCHITECTURE:
NORRIS DESIGN
901 E. MADISON STREET
PHOENIX, AZ 85034
602-254-9600

CIVIL ENGINEER:
SHEPARD-WESNITZER, INC.
110 DALE AVENUE
FLAGSTAFF, AZ 86001
928-773-0354

ZONING ATTORNEY:
GAMMAGE & BURNHAM
40 N. CENTRAL AVENUE
20TH FLOOR
PHOENIX, AZ 85004
602-256-0566

DETAIL AT TYPICAL ATTACHED GARAGE



NOTE:
- TANDEM PARKING SPACE TO BE ASSIGNED TO SAME DWELLING UNIT AS ASSOCIATED GARAGE.
- TANDEM PARKING SPACE COUNT HAS NOT BEEN COUNTED TOWARD THE REQUIRED PARKING.

LEGEND

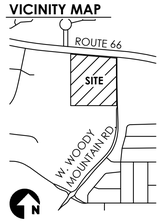
- PARKING CANOPY
- ASSUMED PROPERTY LINE
- ACCESSIBLE PARKING SPACE
- FIRE TRUCK TURNING RADII PER CITY OF FLAGSTAFF STANDARDS. (35', 55')
- EV — DUAL PORT ELECTRIC VEHICLE CHARGING STATION WITH BOLLARDS AS REQUIRED
- BLDG 6 / TYPE 5 — BUILDING NUMBER / BUILDING TYPE
- * — MONUMENT SIGN

BUILDING S.F. (GROSS)

BUILDING / LEVEL		CONST. TYPE	OCC.
BLDG TYPE 1:			
1ST FLR.	10,250 S.F.	V-A	R-2
2ND FLR.	10,233 S.F.		
3RD FLR.	10,233 S.F.		
SUBTOTAL	30,716 S.F. (x 8 = 245,728 S.F.)		
BLDG TYPE 2:			
1ST FLR.	4,574 S.F.	V-A	R-2
2ND FLR.	4,574 S.F.		
3RD FLR.	4,574 S.F.		
SUBTOTAL	13,722 S.F. (x 1 = 13,722 S.F.)		
BLDG TYPE 3:			
1ST FLR.	2,299 S.F.	V-A	R-2
2ND FLR.	2,185 S.F.		
SUBTOTAL	4,484 S.F. (x 5 = 22,420 S.F.)		
TOTAL RESIDENTIAL:		**281,870 S.F.**	
CLUBHOUSE:			
1ST FLR.	6,511 S.F.	V-B	A-3 / B
SUBTOTAL	6,511 S.F. (x 1 = 6,511 S.F.)		
FITNESS:			
1ST FLR.	3,753 S.F.	V-B	A-3
SUBTOTAL	3,753 S.F. (x 1 = 3,753 S.F.)		
DETACHED GARAGES:			
TYPE 1:	2,012 S.F.	V-B	U
SUBTOTAL	2,012 S.F. (x 2 = 4,024 S.F.)		
TYPE 2:	2,148 S.F.	V-B	U
SUBTOTAL	2,148 S.F. (x 1 = 2,148 S.F.)		
TOTAL ALL BUILDINGS:		**298,306 S.F.**	

CODE COMPLIANCE:
THE FLAGSTAFF CITY COUNCIL HAS ADOPTED THE FOLLOWING BUILDING CODES WITH AMENDMENTS:
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2017 NFPA 70 / NATIONAL ELECTRICAL CODE
1997 UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS
2018 INTERNATIONAL RESIDENTIAL CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
1997 UNIFORM ADMINISTRATIVE CODE
1997 UNIFORM HOUSE CODE
ICC A117-1-2017 ACCESSIBLE & USABLE BUILDINGS & FACILITIES

VICINITY MAP



SITE DATA:

SITE ADDRESS:
2701 South Woody Mountain Road

APN:
112-01-712

SITE AREA:
GROSS AREA: 13.01 ACRES (567,020 SF)
NET AREA: 13.01 ACRES (567,020 SF)

LOT COVERAGE:
MAX. ALLOWED: 50% (0.50 x 567,020 SF = 283,510 SF)
PROVIDED: 23% (130,737 SF)

LOT COVERAGE CALCULATIONS:

BUILDING 1	11,461S.F. x 8 =	91,688 S.F.
BUILDING 2	5,780 x 1 =	5,780 S.F.
CARRIAGE	2,277 S.F. x 5 =	11,385 S.F.
CLUBHOUSE	9,249 S.F.	9,249 S.F.
FITNESS	5,930 S.F.	5,930 S.F.
GARAGES	2,035 x 3 =	6,105 S.F.
RAMADAS	600 S.F.	600 S.F.

COMMON OPEN SPACE: (SEE LANDSCAPE OPEN SPACE PLAN)
REQUIRED: 15% (±85,053 SF)
PROVIDED: 16% (±91,109 SF)

CIVIC OPEN SPACE: (SEE LANDSCAPE OPEN SPACE PLAN)
REQUIRED: 5% (±28,351 SF)
PROVIDED: 5% (±28,360 SF)

ZONING:
EXISTING ZONING: COF: Rural Residential - Resource Protection Overlay (RR-RPO) (±11.31 ac.)
CC: General - 10 Ac. Minimum (±1.70 ac.)
PROPOSED: COF: High Density Residential - Resource Protection Overlay (HR-RPO)(± 13.01 ac.)

HEIGHT:
ALLOWED: 60'-0" (65'-0" ALLOWED WITH 6:12 PITCHED ROOFS)
PROVIDED: 3 STORIES - ± 50'-0" / 2 STORIES - ± 30'-0" (AT FINISH GRADE)
(Building height shall be measured vertically from top of any point of a structure or building element, including the top of parapet, top of mansard roof, screened wall or pitched roof to the natural grade directly benefits one point measured under the finished grade abutting the bldg. or structure is below the natural grade.)

UNIT MIX:

1 BEDROOM/ 1 BATH	48 D.U.	(22.4%)
2 BEDROOM/ 2 BATH	118 D.U.	(55.2%)
3 BEDROOM/ 2 BATH	48 D.U.	(22.4%)
TOTAL	**214 D.U.**	**(100%)**

CONSTRUCTION TYPE:
PROPOSED: TYPE V-A/V-B, SPRINKLERED (RESIDENTIAL APARTMENT BLDGS.)

DENSITY:
MAXIMUM ALLOWED: 29 D.U./GROSS ACRE (MAX. WITH RPO, INSIDE PEDESTRIAN SHED OF AN ACTIVITY CENTER)
PROVIDED: ±16.44 D.U./GROSS ACRE

PARKING:
REQUIRED PARKING:

1 BEDROOM/1 BATH (48 D.U. x 1.50 P.S./D.U.) =	72 P.S.
2 BEDROOM/2 BATH (118 D.U. x 2.00 P.S./D.U.) =	236 P.S.
3 BEDROOM/2 BATH (48 D.U. x 2.00 P.S./D.U.) =	96 P.S.
GUEST (2 & 3 BEDROOM - 166 D.U. x 0.25) =	42 P.S.
TOTAL REQUIRED PARKING:	**446 P.S.**

REQUIRED ACCESSIBLE PARKING:
REQUIRED, PER CITY OF FLAGSTAFF TABLE 10-50.80.080.B:
401-500 TOTAL P.S. = 10 ACC. P.S.
PROVIDED: 10 PARKING SPACES (9 SURFACE, 1 GARAGE)

PROVIDED PARKING:

SURFACE PARKING	314 P.S. (INCLUDES 267 SURFACE P.S., & 47 TANDEM P.S.)
CARPORTS	70 P.S.
ATTACHED GARAGES	47 P.S.
CARRIAGE BUILDING GARAGES	40 P.S.
DETACHED GARAGE	21 P.S.
TOTAL PROVIDED PARKING	**492 P.S.**

INCLUDES 10 ACCESSIBLE P.S; 7 SURFACE, 2 CARPORT, 1 GARAGE

PROVIDED EV CHARGING:
SURFACE/CARPORT CHARGING 9 DUAL-PORT CHARGERS
GARAGE CHARGING 108 GARAGE 220V OUTLETS

GENERAL PARKING DIMENSIONS:
PARKING SPACE: 9' x 18' WITH 1.5" OVERHANG
AISLE WIDTH: 26' FIRE CODE (APPENDIX D)
LANDSCAPE ISLAND RATIO: 8 P.S. PER 1 LANDSCAPE ISLAND

BICYCLE PARKING:
REQUIRED: 5% OF REQUIRED PARKING = 5% x 446 = 22
PROVIDED: 26 BICYCLE PARKING SPACES

BUILDING SETBACK:

	REQUIRED	PROVIDED
- FRONT (ROUTE 66)	15'	±19' - BUILDING 15' - FENCE (6')
- STREET SIDE (WOODY MTN RD)	5'	±24' - BUILDING
- SIDE (WEST PROPERTY LINE)	5'	10' - BUILDING
- REAR (SOUTH PROPERTY LINE)	15'	15' - DETACHED GARAGE

FIRE CODE:
CITY OF FLAGSTAFF FIRE DEPARTMENT HAS ADOPTED APPENDIX D WITHIN THE 2018 FIRE CODE WHICH REQUIRES THE FOLLOWING:
1. WHERE THE VERTICAL DISTANCE BETWEEN THE GRADE PLANE AND THE HIGHEST ROOF SURFACE EXCEEDS 30', APPROVED AERIAL FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED.
2. AERIAL FIRE APPARATUS ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 26'.
3. FIRE APPARATUS ACCESS ROUTES SHALL BE LOCATED NOT LESS THAN 15' AND NOT GREATER THAN 30' FROM THE BUILDING ANDSHALL BE POSITIONED PARALLEL TO ONE ENTIRE SIDE OF THE BUILDING. THE SIDE OF THE BUILDING ON WHICH THE AERIAL FIRE APPARATUS ACCESS ROAD IS POSITIONED SHALL BE APPROVED BY THE FIRE CODE OFFICIAL.

FIRE TRUCK TURNING RADIUS:
INSIDE: 35'
OUTSIDE: 55'

ARCHITECTURAL SITE PLAN

0" 25' 50' 100'
SCALE: 1" = 50'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY
FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES
8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

SEAL
REGISTERED ARCHITECT CERTIFICATE NO. 13467 GARY D. TODD 5/1/23 Date Signed ARIZONA, USA

CONTACT
TODD + ASSOCIATES
CRITICAL THINKING / CREATIVE DESIGN
ARCHITECTURE. PLANNING. LANDSCAPE ARCHITECTURE.
4019 N. 44TH ST. / PHOENIX, AZ 85018
602-952-8280 / TODDASSOC.COM

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PHASE
09-22-2022
SITE PLAN REVIEW SUBMITTAL #1
11-23-2022
SITE PLAN REVIEW SUBMITTAL #2
01-05-2023
SITE PLAN REVIEW SUBMITTAL #3
02-16-2023
SITE PLAN REVIEW SUBMITTAL #4
05-11-2023
SITE PLAN REVIEW SUBMITTAL #5

ARCHITECTURAL SITE PLAN
A1.1.1

PLOTTED: May 11, 2023–8:23am

CIVIL SITE PLAN
FOR
LIV TIMBER SKY
FLAGSTAFF, ARIZONA

LOCATED IN SECTION 19, TOWNSHIP 21 NORTH, RANGE 7 EAST GILA AND SALT RIVER MERIDIAN, COCONINO COUNTY, FLAGSTAFF, ARIZONA

PROPERTY DEVELOPER:

LIV COMMUNITIES, LLC.
8950 S. 52ND STREET, SUTIE 115
TEMPE, AZ 85284
CONTACT: BETH HEATH
(480) 750–7269

VINTAGE PARTNERS 2.0, LLC.
2502 E. CAMELBACK ROAD, SUITE 214
PHOENIX, AZ 85016
CONTACT: MARK ORTMAN
(602) 459–9929

PROPERTY OWNER:

LIV SC FLAGSTAFF, LLC
8950 S. 52ND STREET, SUTIE 115
TEMPE, AZ 85284
CONTACT: BETH HEATH
(480) 750–7269

VP66 & WOODY MOUNTAIN, LLC.
2502 E. CAMELBACK ROAD, SUITE 214
PHOENIX, AZ 85016
CONTACT: WALTER CRUTCHFIELD
(480) 231–0814

PROJECT ARCHITECT

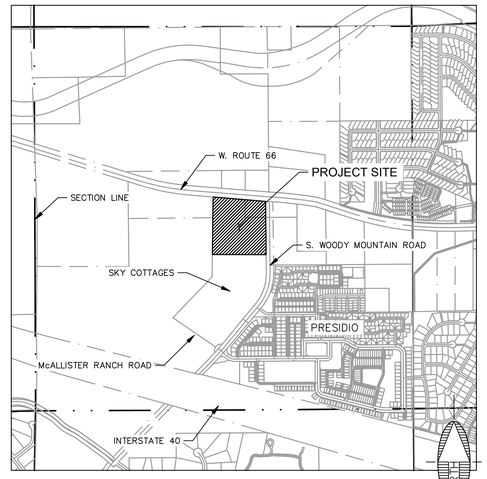
TODD & ASSOCIATES
4019 N. 44TH ST.
PHOENIX, AZ 85018
CONTACT: SCOTT PIEART
(602) 952–8280

PROJECT ENGINEER:

SHEPHARD–WESNITZER INC.
110 WEST DALE AVE
FLAGSTAFF, AZ 86001
CONTACT: STEPHEN IRWIN, PE
(928) 773–0354

PROJECT INFORMATION

SITE ADDRESS:	2701 S. WOODY MOUNTAIN ROAD FLAGSTAFF, AZ 86001
APN:	112–01–712
AREA:	NET: 13.01 ACRES (567,020 SF) GROSS: 13.01 ACRES (567,020 SF)
EXISTING ZONING:	COF: RURAL RESIDENTIAL – RESOURCE PROTECTION OVERLAY (RR–RPO)(+/– 11.45 ACRES) CC: GENERAL– 10 ACRE MINIMUM(+/– 1.56 ACRES)
PROPOSED ZONING:	COF: HIGH DENSITY RESIDENTIAL – RESOURCE PROTECTION OVERLAY (HR–RPO)(+/– 13.01 ACRES)



VICINITY MAP
N.T.S.

LEGEND

- ROW
- EASEMENT
- LOT LINE
- SETBACK
- 6"SS — GRAVITY SEWER LINE
- 6"W — PUBLIC WATER LINE
- G — EX. GAS
- UGE — EX. UNDERGROUND ELEC
- W — EX. WATER LINE
- SS — EX. SEWER LINE
- FIRE HYDRANT
- GATE VALVE
- EX SEWER MANHOLE
- EXISTING FLOW ARROW

FEMA DESIGNATION:

THIS PROJECT IS LOCATED WITHIN ZONE X OF FEMA FIRM MAP #04005C6812G, EFFECTIVE SEPTEMBER 2, 2010. ZONE X IS DESCRIBED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

SOURCE OF PROJECT INFORMATION:

BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY ALTA/ACSM LAND TITLE SURVEY BY WOODSON ENGINEERING AND SURVEY, INC. DATED NOVEMBER 14, 2014. SUPPLEMENTAL TOPOGRAPHY AND TREE SURVEY PREPARED BY SHEPHARD–WESNITZER, INC. DATED NOVEMBER 2020 AND APRIL 2022.

RESOURCE PRESERVATION:

THE PROJECT FALLS WITHIN THE CITY OF FLAGSTAFF RESOURCE PROTECTION OVERLAY ZONE AND THERE ARE RESOURCE WITHIN THE PROJECT THAT REQUIRE PRESERVATION.

BASIS OF BEARING:

NORTH 89–34–20 EAST, 2655.62' FROM THE NORTHWEST CORNER OF SECTION 24 TO THE NORTH QUARTER CORNER OF SECTION 24, TOWNSHIP 21 NORTH, RANGE 7 EAST OF THE GILA AND SALT RIVER MERIDIAN, COCONINO COUNTY, ARIZONA, ACCORDING TO AN ALTA SURVEY PREPARED BY SHEPHARD–WESNITZER, INC. IN MAY 2003, INSTRUMENT NUMBER 3203783, OFFICIAL RECORDS OF COCONINO COUNTY, ARIZONA.

IMPERVIOUS AREA:

LID AND RETENTION ARE REQUIRED AND WILL BE PROVIDED IN UNDERGROUND CHAMBER SYSTEMS.

Impervious Area & LID Analysis

						LID Required Depth (ft)
						0.0833
Basin ID	Existing Basin Area (sf)	Proposed Basin Area (sf)	Existing Basin Impervious Area for LID (sf)	Proposed Basin Impervious Area for LID (sf)	Net Impervious Area (sf)	Required LID Volume (cf)
B1	560,512	542,918	33,378	241,891	275,269	22,939
B2	289,990	307,584	4,232	160,380	164,612	13,718
TOTAL	850,502	850,502	37,610	402,271	439,881	36,657

1. Gross required 1" LID volume is for impervious area including proposed half street improvements (Woody Mtn and Route 66), onsite drive aisles, parking, sidewalks, and buildings.

PRELIMINARY
NOT FOR CONSTRUCTION, BIDDING OR RECORDING

C.O.F. #PZ-21-00271-02

FLAGSTAFF ARIZONA
LIV TIMBER SKY
CIVIL SITE PLAN

JOB NO:	22045
DATE:	MAY 23
SCALE:	AS SHOWN
DRAWN:	HAS
DESIGN:	KMF
CHECKED:	SDI

NO.	DESCRIPTION	DATE	BY
REVISIONS			

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.6934 fax
www.swoz.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.
SP01

SHT NO. 1 OF 2

FILE: P:\2022\22045\DRAWINGS\SITE PLANS\22045 – SITE PLAN.DWG EXEISER

PLOTTED: May 11, 2023–8:23am

APN: 112–01–002
OWNER: FLAGSTAFF CITY OF

APN: 112–01–003A
OWNER: HELIN BUILDING LLC

APN: 112–01–003B
OWNER: HELIN BUILDING LLC

CLEAR VIEW ZONE
D3: 515 FT

WEST ROUTE 66

PROPOSED UNDERGROUND LID/RETENTION BASIN
REQUIRED RETENTION VOLUME= 45,515 CF
PROVIDED RETENTION VOLUME= 47,500 CF

TERMINATION OF PROPOSED RETAINING WALL

N 85°16'49" W 782.95'
450.83'

EXISTING AND PROPOSED STORMWATER DISCHARGE LOCATION

281.93'

50.19'

APN: 112–01–156
OWNER: VP 66& WOODY MOUNTAIN LLC

BLDG 4
FFE: 7093.00
PROPOSED CATCH BASIN (TYP.)

BLDG 2
FFE: 7091.00

BLDG 5
FFE: 7093.70

PROPOSED STORM DRAIN MANHOLE (TYP.)

PROPOSED STORM DRAIN (TYP.)

N 0°14'47" W
253.18'

CITY OF FLAGSTAFF
COCONINO COUNTY

18" PINE

12" PINE

24" PINE

PROPOSED RETAINING WALL (MAX. HEIGHT 4 FT)

BLDG 6
FFE: 7095.60

BLDG 1
FFE: 7086.87

S 89°46'36" W 331.24'
281.24'

50.00'

APN: 112–01–701
OWNER: WOODY MOUNTAIN CAMPGROUND

CLEAR VIEW ZONE
D1: 410 FT

COCONINO COUNTY
CITY OF FLAGSTAFF

1
CP02

RIDGE LINE

BLDG 3
FFE: 7093.30

S 0°42'05" W 798.35'

BLDG 7
FFE: 7097.70

N 0°20'18" W 735.49'
510.62'
N 0°20'18" W 739.51'
510.92'

BLDG 8
FFE: 7097.10

20" PINE

18" PINE
13" PINE

FITNESS BLDG
FFE: 7100.50

CLUBHOUSE
FFE: 7090.30

14" PINE

SOUTH WOODY MOUNTAIN ROAD

16" PINE
18" PINE
16" PINE
18" PINE
18" PINE

APN: 112–01–712
OWNER: VP66 & WOODY MOUNTAIN LLC

PROPOSED RETAINING WALL (MAX. HEIGHT 4 FT)

APN: 112–01–701
OWNER: WOODY MOUNTAIN CAMPGROUND

BLDG 9
FFE: 7099.40

18" PINE
18" PINE

APN: 112–01–157
OWNER: VP 66 & WOODY MOUNTAIN LLC

BLDG 12
FFE: 7092.60

BLDG 13
FFE: 7090.10

20" PINE
18" PINE
20" PINE

CLEAR VIEW ZONE
D2: 550 FT

BLDG 10
FFE: 7097.50

BLDG 11
FFE: 7096.20

BLDG 14
FFE: 7085.10

PROPOSED UNDERGROUND LID/RETENTION BASIN
REQUIRED RETENTION VOLUME= 38,102 CF
PROVIDED RETENTION VOLUME= 40,000 CF

EXISTING AND PROPOSED STORMWATER DISCHARGE LOCATION

20" PINE

24" PINE
18" PINE

FFE: 7096.50

FFE: 7093.40

FFE: 7084.36

20" PINE
22" PINE

N 89°53'02" W 794.41'

744.42'

50.00'

2
CP02

PROPOSED RETAINING WALL (MAX. HEIGHT 11FT)

PROPOSED RETAINING WALL (MAX. HEIGHT 6FT)

TERMINATION OF PROPOSED RETAINING WALL

SKY COTTAGES
APN: 112–01–019A
OWNER: LIV SC FLAGSTAFF, LLC

PROPOSED STORMWATER CONNECTION AT EXISTING STORM DRAIN LATERAL

PRESIDIO IN THE PINES SUBDIVISION
APN: 112–62–473B
OWNER: PRESIDIO IN THE PINES HOME OWNER'S ASSOC INC

SCALE 1" : 60'
0 30 60

DRIVEWAY CLEAR VIEW ZONE CALCULATIONS

ID #	MAJOR STREET	MANEUVER DIRECTION	DESIGN SPEED (V_{MAJOR})[1]	TIME GAP $t_{g\,(unadjusted)}$[2]	Grade ≤ 3%	MULTIPLE LANE CROSSINGS	NO. OF LANES[4]	TIME GAP $t_{g(adjusted)}$[2]	INTERSECTION SIGHT DISTANCE (ISD[3])	STOPPING SIGHT DISTANCE (SSD)
D1	Woody Mountain Road	Right	40	6.5	Yes	No	2	7.0	410	305
D2	Woody Mountain Road	Left	40	7.5	Yes	Yes	3	9.0	550	305
D3	Route 66	Right	50	6.5	Yes	No	2	7.0	515	425

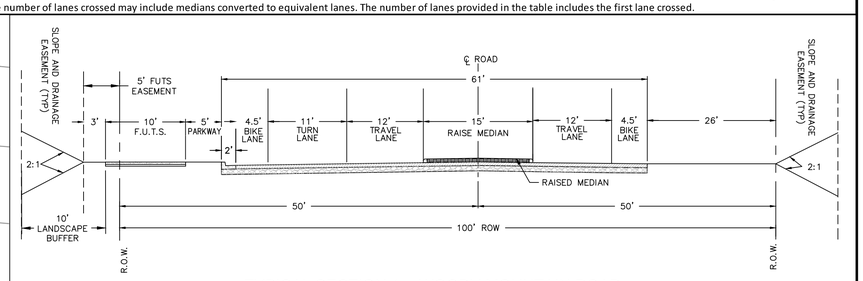
Notes:

(1) The major road speed limits (V_{MAJOR} in MPH) are based on existing conditions in the project vicinity.

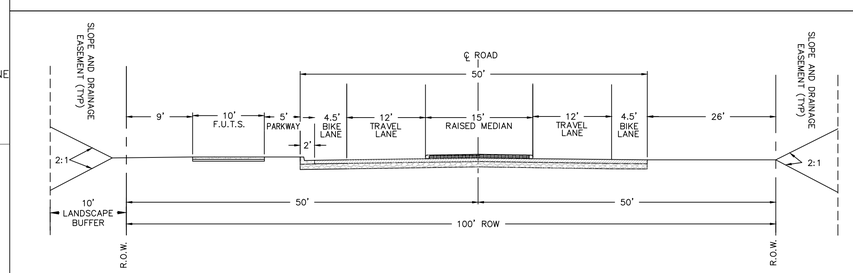
(2) The time gap values, adjusted ($t_{g\,(adjusted)}$ in seconds) and unadjusted ($t_{g\,(unadjusted)}$ in seconds), are based on the current site plan and the *AASHTO-Geometric Design of Highways and Streets* Exhibits 9-54 and 9-57. The first lane crossed does not warrant an adjustment to the time gap.

(3) The intersection site distance (ISD in feet) calculations are based on Equation 9-1 in the *AASHTO-Geometric Design of Highways and Streets*. Equation 9-1: $ISD=1.47*V_{MAJOR}*t_g$

(4) The number of lanes crossed may include medians converted to equivalent lanes. The number of lanes provided in the table includes the first lane crossed.



TYPICAL SECTION 1 - WOODY MOUNTAIN ROAD
(MINOR ARTERIAL PER MODIFIED C.O.F. STD. DTL. 10-09-032)
N.T.S.



TYPICAL SECTION 2 - WOODY MOUNTAIN ROAD
(MINOR ARTERIAL PER MODIFIED C.O.F. STD. DTL. 10-09-032)
N.T.S.

LEGEND

EXISTING TREE TO BE REMOVED

EXISTING TREE TO BE SAVED

EXISTING TREE WITHIN WOODY MTN ROW OR AFFECTED BY ROW IMPROVEMENTS

NOTES:
1. EXISTING SLOPES ON THE SITE DO NOT EXCEED 16.99%.
2. EXISTING TREES WITHIN ROW OR AFFECTED BY ROW IMPROVEMENTS DO NOT APPLY TO CALCULATION PER CITY OF FLAGSTAFF CITY CODE SECTION 10-50.90.020 (B).
3. SITE IS NOT WITHIN A RURAL OR URBAN FLOODPLAIN.

TOTAL ONSITE TREE RESOURCES

TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER EXISTING	0	0	1	11	0
POINTS	1	2	4	8	20
SUM OF POINTS	0	0	4	88	0
				SUBTOTAL TREE POINTS=	92

POST-DEVELOPMENT TREES

TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER EXISTING	0	0	0	6	0
POINTS	1	2	4	8	20
SUM OF POINTS	0	0	0	48	0
				TOTAL TREE POINTS=	92
				TOTAL PRESERVED TREE POINTS=	48
				REQUIRED PRESERVATION RATE=	50%
				PRESERVATION RATE=	**52.2%**

NOTE:
1) PER CITY OF FLAGSTAFF ZONING CODE SECTION 10-50.90.060 RESIDENTIAL ZONES PRESERVATION RATE IS 50%.

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING OR RECORDING

C.O.F. #PZ-21-00271-02

FLAGSTAFF ARIZONA

LIV TIMBER SKY

GRADING AND DRAINAGE

JOB NO: 22045
DATE: MAY 23
SCALE: AS SHOWN
DRAWN: HAS
DESIGN: KMF
CHECKED: SCI

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swoz.com

Shephard Wesnitzer, Inc.

NO.	DESCRIPTION	DATE	BY
	REVISIONS		

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.
SP02

SHT NO. 2 OF 2

FILE: P:\2022\22045\DRAWINGS\SITE PLANS\22045 – SITE ANALYSIS AND NRPP.DWG EXEISER

SITE AMENITIES SCHEDULE

DESCRIPTION	QTY.	MANUFACTURER	CONTACT	MODEL NUMBER	COLOR/FINISH	NOTES
BIKE RACK	13	DUMOR SITE FURNISHINGS www.dumor.com OR APPROVED EQUAL	JUSTIN GALION EXERPLAY, INC. (800)457-5444	BIKE RACK 292-00/S-2	ARGENTO	SURFACE MOUNTED. CONTRACTOR SHALL READ AND UNDERSTAND THE INSTRUCTIONS PROVIDED ON THE MANUFACTURER'S WEBSITE PRIOR TO WORK ASSOCIATED WITH INSTALLING THE EQUIPMENT. CONSULT OWNER'S REPRESENTATIVE FOR FINAL LOCATIONS PRIOR TO INSTALL.
BENCH	13	DUMOR SITE FURNISHINGS www.dumor.com OR APPROVED EQUAL	JUSTIN GALION EXERPLAY, INC. (800)457-5444	BENCH 472-60I-2AR/S-2	SEATING: IPE STEEL FRAME: ARGENTO	SURFACE MOUNTED. CONTRACTOR SHALL READ AND UNDERSTAND THE INSTRUCTIONS PROVIDED ON THE MANUFACTURER'S WEBSITE PRIOR TO WORK ASSOCIATED WITH INSTALLING THE EQUIPMENT. CONSULT OWNER'S REPRESENTATIVE FOR FINAL LOCATIONS PRIOR TO INSTALL.
TRASH RECEPTACLE	5	DUMOR SITE FURNISHINGS www.dumor.com OR APPROVED EQUAL	JUSTIN GALION EXERPLAY, INC. (800)457-5444	287-32SH 32 GALLON STEEL RECEPTACLR WITH SHIELD, SIDE DEPOSIT	ARGENTO	SURFACE MOUNTED. CONTRACTOR SHALL READ AND UNDERSTAND THE INSTRUCTIONS PROVIDED ON THE MANUFACTURER'S WEBSITE PRIOR TO WORK ASSOCIATED WITH INSTALLING THE EQUIPMENT. CONSULT OWNER'S REPRESENTATIVE FOR FINAL LOCATIONS PRIOR TO INSTALL.
FIXED TABLE AND CHAIR SET	2 2	DUMOR SITE FURNISHINGS www.dumor.com OR APPROVED EQUAL	JUSTIN GALION EXERPLAY, INC. (800)457-5444	TABLE 296-42-40I/S-2 42" DIA STEEL TABLE, 4 SEATS, IPE TABLE 296-42-30I/S-2 42" DIA ADA STEEL TABLE, 3 SEATS, IPE	SEATING: IPE STEEL FRAME: ARGENTO SEATING: IPE STEEL FRAME: ARGENTO	SURFACE OR EMBEDMENT MOUNTED PER PLAN. CONTRACTOR SHALL READ AND UNDERSTAND THE INSTRUCTIONS PROVIDED ON THE MANUFACTURER'S WEBSITE PRIOR TO WORK ASSOCIATED WITH INSTALLING THE EQUIPMENT. CONSULT OWNER'S REPRESENTATIVE FOR FINAL LOCATIONS PRIOR TO INSTALL.
PET WASTE STATION	2	DOG WASTE DEPOT www.dogwastedepot.com OR APPROVED EQUAL	DOG WASTE DEPOT www.dogwastedepot.com (800)678.1612	DOG WASTE STATION MODEL: Depot-006-B-GRN	GREEN	EMBEDMENT MOUNTED PER PLAN. CONTRACTOR SHALL READ AND UNDERSTAND THE INSTRUCTIONS PROVIDED ON THE MANUFACTURER'S WEBSITE PRIOR TO WORK ASSOCIATED WITH INSTALLING THE EQUIPMENT. CONSULT OWNER'S REPRESENTATIVE FOR FINAL LOCATIONS PRIOR TO INSTALL.
PLAYGROUND ASSEMBLY	1	LANDSCAPE STRUCTURES www.landscapestructures.com OR APPROVED EQUAL	JUSTIN GALION EXERPLAY, INC. (800)457-5444	MODEL: 220495A	COLOR SCHEME "BO"	PLAYGROUND EQUIPMENT TO BE INSTALLED BY A LICENSED PROFESSIONAL PER MANUFACTURER'S INSTRUCTIONS.
GARDEN TROUGH	8	BEHLEN COUNTRY www.behlencountry.com OR APPROVED EQUAL	BEHLEN COUNTRY ON-LINE SALES TEAM	226 GALVANIZED ROUND END TANK SKU# 50130048	CORRUGATED STEEL	TANK TO SIT ON FINISH GRADE AND DECOMPOSED GRANITE PAD TO BE PLACED AROUND BASE OF TANK TO ANCHOR TANK IN PLACE. CONTRACTOR SHALL READ AND UNDERSTAND THE INSTRUCTIONS PROVIDED ON THE MANUFACTURER'S WEBSITE PRIOR TO WORK ASSOCIATED WITH INSTALLING THE EQUIPMENT. CONSULT OWNER'S REPRESENTATIVE FOR FINAL LOCATIONS PRIOR TO INSTALL.
CHESS/CHECKER BOARD	32 32	MESA PRECAST www.mesaprecast.com OR APPROVED EQUAL MESA PRECAST www.mesaprecast.com OR APPROVED EQUAL	MESA PRECAST (480)968-5400 MESA PRECAST (480)968-5400	MODEL FC-20-4 MODEL FC-20-4	INTEGRAL COLOR - DAVIS GRAPHITE INTEGRAL COLOR - DAVIS PEWTER	
STUMP JUMP DOG PARK EQUIPMENT	3	Dog On It Parks® dog-on-it-parks.com	Dog On It Parks® dog-on-it-parks.com 877-348-3647	NATUREDOG BIG STUMP JUMP (1) AND LITTLE STUMP JUMP (2)		SURFACE MOUNT, INSTALL PER MANUFACTURES RECOMMENDATIONS
LOG TUNNEL DOG PARK EQUIPMENT UGH	1	Dog On It Parks® dog-on-it-parks.com	Dog On It Parks® dog-on-it-parks.com 877-348-3647	NATUREDOG THROUGH THE LOG		SURFACE MOUNT, INSTALL PER MANUFACTURES RECOMMENDATIONS
BIKE REPAIR STATION	1	DERO DERO.COM	DERO DERO.COM (888) 337-6729	AIR KIT PRIME	POWDER COAT - IRON GRAY	SURFACE MOUNT, INSTALL PER MANUFACTURES RECOMMENDATIONS

MATERIALS SCHEDULE

DESCRIPTION	MANUFACTURER	CONTACT	TYPE / FINISH	NOTES
STANDARD GRAY CONCRETE FLATWORK	N/A	N/A	STANDARD GRAY, MEDIUM BROOM FINISH WITH STANDARD MAG TOOLED SCORE JOINTS	REFER TO CIVIL DRAWINGS FOR MORE INFORMATION
ENHANCED CONCRETE FLATWORK	DAVIS COLORS www.daviscolors.com OR APPROVED EQUAL	DAVIS COLORS www.daviscolors.com 323-265-8323	INTEGRALLY COLORED STANDARD DAVIS COLOR: OMAHA TAN 5084 OR APPROVED EQUAL, MEDIUM BROOM FINISH	REFER TO CIVIL DRAWINGS FOR MORE INFORMATION
DECOMPOSED GRANITE	FLAGSTAFF LANDSCAPE PRODUCTS OR APPROVED EQUAL	FLAGSTAFF LANDSCAPE PRODUCTS 6500 HISTORIC ROUTE 66 E FLAGSTAFF, AZ 86004 FLAGLANDSCAPE.COM	1" TABLE MESA BROWN ROCK MULCH, CLEAN/SCREENED	3" DEPTH MIN. W/ NO WEED BARRIER
STABILIZED DECOMPOSED GRANITE	FLAGSTAFF LANDSCAPE PRODUCTS OR APPROVED EQUAL	FLAGSTAFF LANDSCAPE PRODUCTS 6500 HISTORIC ROUTE 66 E FLAGSTAFF, AZ 86004 FLAGLANDSCAPE.COM	STABILIZED 1/4" MINUS MADISON GOLD DECOMPOSED GRANITE	4" DEPTH MIN. W/ NO WEED BARRIER - SEE DETAIL 8/L-300 FOR MORE INFORMATION
BOULDERS	NORTHERN ARIZONA SANDSTONE northernarizonasandstone.com OR APPROVED EQUAL	NORTHERN ARIZONA SANDSTONE northernarizonasandstone.com (928) 862-0216	MOSS 5'x5'x5', 4'x4'x4', 3'x3'x3'	CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT TO APPROVE BOULDERS PRIOR TO FINAL PLACEMENT. SEE DETAIL 9/L-300 FOR MORE DETAIL
STONE VENEER	CORONADO STONE	www.coronado.com (602)732-6558	MODEL: GETTY STONE COLOR: EMBASSY BLEND	INSTALL PER ARCHITECT'S SPECIFICATIONS. STONE VENEER AND GROUT SHALL MATCH STONE VENEER ON BUILDING.
STEEL EDGER	COLMET www.colmet.corp OR APPROVED EQUAL	www.colmet.corp	3/16" THICK, 4" DEPTH, POWDER COATED BROWN	
CONCRETE LANDSCAPE EDGER	N/A	N/A	STANDARD GRAY OR OMAHA TAN 5084 MEDIUM BROOM FINISH WITH STANDARD MAG TOOLED SCORE JOINTS	
ENGINEERED WOOD FIBER	ZEAGER BROS. INC ZEAGER.COM OR APPROVED EQUAL	ZEAGER BROS. INC ZEAGER.COM 800-346-8524	12" DEPTH	
FLAGSTONE	NORTHERN ARIZONA SANDSTONE northernarizonasandstone.com OR APPROVED EQUAL	NORTHERN ARIZONA SANDSTONE northernarizonasandstone.com (928) 862-0216	2"-4" MOSS SELECT	INSTALL PER SUPPLIERS SPECIFICATIONS. GROUT SHALL MATCH STONE VENEER ON BUILDING.
GRASSPAVE	INVISIBLE STRUCTURES INVISIBLESTRUCTURES.COM	BORDER CONSTRUCTION SPECIALTIES (602) 437-1900 WWW.BORDERCORP.COM	GRASSPAVE2	INSTALL PER MANUFACTURER SPECIFICATIONS WITH FESCUE TURF.
ARTIFICIAL TURF	FOREVERLAWN® FOREVERLAWN.COM	FOREVER LAWN DANTE ANGELO RAFFIN DANTE@FOREVERLAWN.COM 330.499.8873	K9 GRASS	INSTALL PER MANUFACTURER SPECIFICATIONS.
POOL COPING	BELGARD	KELLY O'SHAUGHNESSY 480-433-0564	STYLE: LAGUNA POOL COPING COLOR: BELLA	INSTALL PER MANUFACTURER SPECIFICATIONS.
SPA HANDRAIL	SRSMITH	www.srsmith.com	SPA RAIL	INSTALL PER MANUFACTURER SPECIFICATIONS.
SPA WATERLINE TILE AND WATER WALL FACING TILE	MSI STONE	www.srsmith.com	STYLE:AKAYA COPPER INTERLOCKING GLASS TILE	INSTALL PER MANUFACTURER SPECIFICATIONS.
SPA INTERIOR FINISH	PEBBLETEC OR APPROVED BY CLIENT	N/A	COLOR: BLUE LAGOON	INSTALL PER MANUFACTURER SPECIFICATIONS.
WATERWALL CAP	ANASAZI STONE	www.anasazistone.com	TYPE: QUARTZITE COLOR: BLACK GOLD	INSTALL PER SUPPLIERS SPECIFICATIONS. GROUT SHALL MATCH STONE VENEER ON BUILDING.
WATER WALL SCUPPER	BOBE WATER AND FIRE	www.bobewaterandfire.com	MODEL: WEDGE WS-12 COLOR: STAINLESS STEEL QUANTITY: 3	INSTALL PER SUPPLIERS SPECIFICATIONS.

CHECKED BY: AB,CS
DRAWN BY: DP,KW

NORRIS DESIGN
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Suite 260
Flagstaff, AZ 86001
P 928.233.3021
www.norris-design.com

TIMBER SKY
LIV - TIMBER SKY
FLAGSTAFF, AZ

OWNER:
VINTAGE PARTNERS
C/O WALTER CRUTCHFIELD
2502 E. CAMELBACK RD.
SUITE 214
602.459.9931

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
36936
CHRIS STEBE
Date Signed
ARIZONA, USA
EXPIRES 12/31/2022

NOT RELEASED FOR CONSTRUCTION

DATE:
4/20/2021 1ST CONCEPT PLAN SUBMITTAL
6/9/2022 2ND CONCEPT PLAN SUBMITTAL
08/29/22 1ST SITE PLAN SUBMITTAL
11/22/22 2ND SITE PLAN RESUBMITTAL
01/05/23 3RD SITE PLAN RESUBMITTAL
02/15/23 4TH SITE PLAN RESUBMITTAL

SHEET TITLE:
MATERIALS & AMENITIES SCHEDULES

LA-100B

SITE LANDSCAPE CALCULATIONS

ITEM	REQUIRED	PROVIDED	NOTES
R.O.W. - WOODY MOUNTAIN ROAD (TOTAL LINEAR FEET: 740 (including driveway); TOTAL LANDSCAPE AREA: 11,108 SF)			
TREES: 1 PER 45 LINEAR FEET (2" CAL MIN.**) SHRUBS: 25% (3 GAL MIN) GROUNDCOVER: 25%	16 2,777SF 2,777 SF	17 2,779 SF 2,781 SF	
R.O.W. - W. ROUTE 66 (TOTAL LINEAR FEET: 733 (including driveway); TOTAL LANDSCAPE AREA: 12,170 SF)			
TREES: 1 PER 45 LINEAR FEET (2" CAL MIN.**) SHRUBS: 25% (3 GAL MIN) GROUNDCOVER: 25%	16 3,043 SF 3,043 SF	16 3,046 SF 3,081 SF	
STREET BUFFER - WOODY MOUNTAIN ROAD (TOTAL LINEAR FEET: 740 (including driveway))			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	30 60 60	30* 60 60	TOTAL INCLUDES 29 NURSERY TREES AND 1 EXISTING TREE @18" CALIPER. PLANT QUANTITIES CALCULATION OVERLAPS WITH BUILDING 2 & 4 BUILDING FOUNDATION FOR 374 FEET.
STREET BUFFER - W. ROUTE 66 (TOTAL LINEAR FEET: 733 (including driveway))			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	29 58 58	29 63 58	PLANT QUANTITIES CALCULATION OVERLAPS WITH BUILDING 2 & 4 BUILDING FOUNDATION FOR 374 FEET.
PARKING AREA (TOTAL PARKING SPACES: 390)			
TREES: 2 PER 8 PARKING SPACES (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE MINIMUM LANDSCAPED AREA: (30 SF PER SPACE)	98 196 196 11,700 SF	98* 294 202 29,045 SF	TOTAL INCLUDES 95 NURSERY TREES AND 3 EXISTING TREES (1 @ 18" CALIPER, 1 @ 20" CALIPER, 1 @ 24" CALIPER)
PERIPHERAL BUFFER (TOTAL LINEAR FEET: 1,518)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	61 122 122	61 124 122	
BUILDING FOUNDATION - CLUBHOUSE (TOTAL LINEAR FEET: 461)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	18 36 36	19 87 40	
BUILDING FOUNDATION - FITNESS (TOTAL LINEAR FEET: 266)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	11 22 22	12 64 31	
BUILDING FOUNDATION - RESIDENCE BUILDING 1 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	11 22 22	11 48 35	PLANT QUANTITIES CALCULATION OVERLAPS WITH WOODY MOUNTAIN ROAD STREET BUFF FOR 187 FEET.
BUILDING FOUNDATION - RESIDENCE BUILDING 2 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	11 22 22	15 42 30	PLANT QUANTITIES CALCULATION OVERLAPS WITH ROUTE 66 STREET BUFF FOR 187 FEET.
BUILDING FOUNDATION - RESIDENCE BUILDING 3 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	18 36 36	18 73 37	
BUILDING FOUNDATION - RESIDENCE BUILDING 4 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	11 22 22	11 37 28	PLANT QUANTITIES CALCULATION OVERLAPS WITH ROUTE 66 STREET BUFF FOR 187 FEET.
BUILDING FOUNDATION - RESIDENCE BUILDING 7 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	18 36 36	18 69 38	
BUILDING FOUNDATION - RESIDENCE BUILDING 11 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	18 36 36	18 63 37	
BUILDING FOUNDATION - RESIDENCE BUILDING 12 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	18 36 36	18 55 37	
BUILDING FOUNDATION - RESIDENCE BUILDING 13 (TOTAL LINEAR FEET: 300)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	12 24 24	12 46 24	
BUILDING FOUNDATION - RESIDENCE BUILDING 14 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	11 22 22	15* 56 34	TOTAL INCLUDES 14 NURSERY TREES AND 1 EXISTING TREE @ 18" CALIPER. PLANT QUANTITIES CALCULATION OVERLAPS WITH WOODY MOUNTAIN ROAD STREET BUFF FOR 187 FEET.
BUILDING FOUNDATION - BUILDINGS 5, 6, 8, 9, & 10 (TOTAL LINEAR FEET: 705)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	1 2 2	1 3 4	PLANT QUANTITIES CALCULATION OVERLAPS WITH PLANT IN THE PERIPHERAL BUFF & PARKING LANDSCAPE FOR 682 FEET.
BUILDING FOUNDATION - DETACHED GARAGES (TOTAL LINEAR FEET: 414)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	2 4 4	2 5 4	PLANT QUANTITIES CALCULATION OVERLAPS WITH PLANT IN THE PERIPHERAL BUFF & PARKING LANDSCAPE FOR 370 FEET.

* EACH EXISTING TREE THAT IS 6"-10" IN DIAMETER AT BREAST HEIGHT (DBH) MAY SUBSTITUTE FOR THE REQUIREMENT OF ONE LANDSCAPE TREE. EACH EXISTING TREE THAT IS 10"-18" DBH MAY SUBSTITUTE FOR THE REQUIREMENT OF TWO LANDSCAPE TREES. EACH EXISTING TREE THAT IS 18" DBH MAY SUBSTITUTE FOR THE REQUIREMENT OF THREE LANDSCAPE TREES. FOR EACH EXISTING TREE RETAINED IN A LANDSCAPE AREA, THE REQUIREMENT FOR SHRUBS AND GROUNDCOVERS ASSOCIATED WITH THAT TREE WILL BE WAIVED. (CITY OF FLAGSTAFF LANDSCAPING STANDARDS SECTION 10-50.60.050.A)

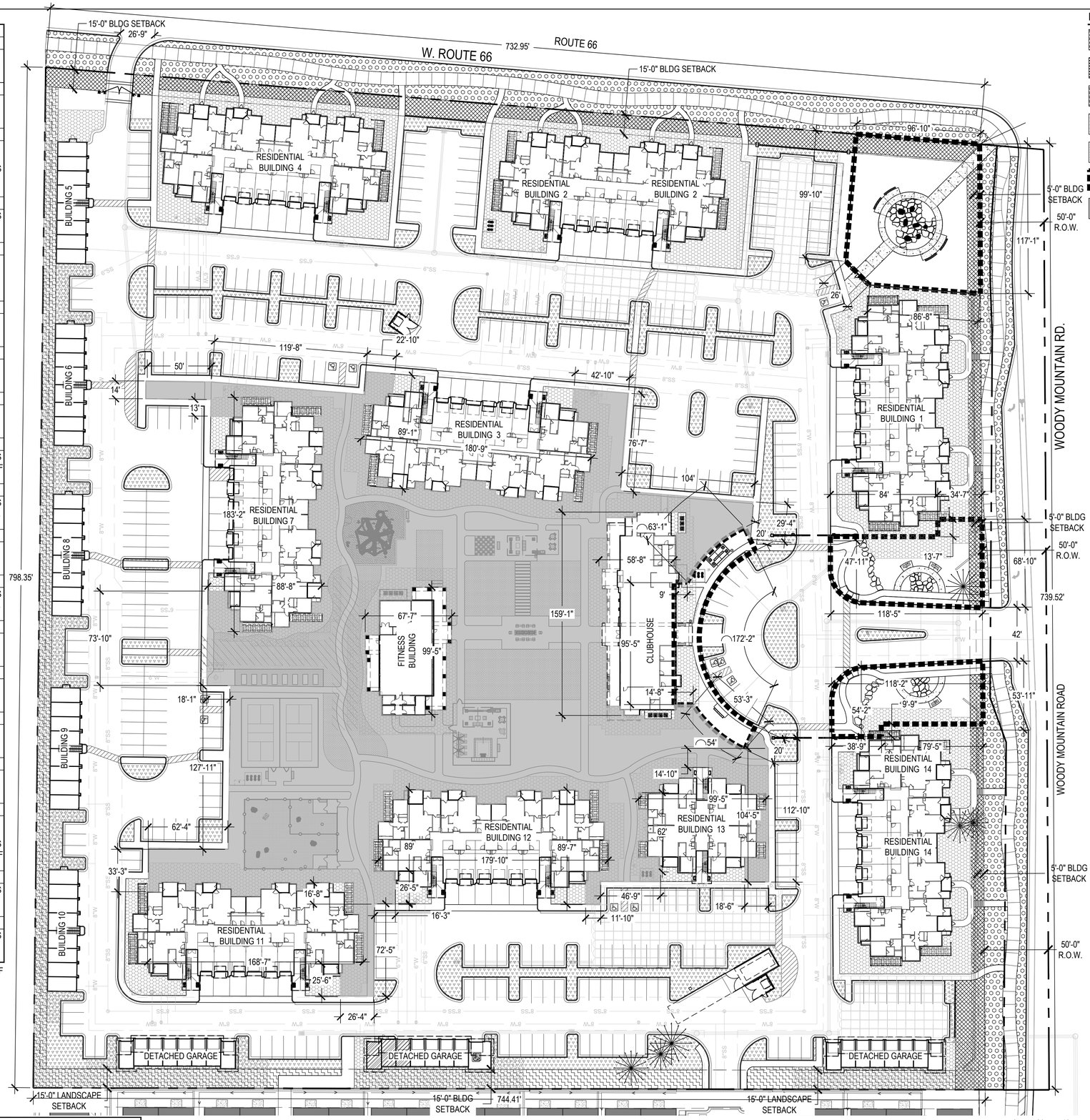
** FOR ON SITE PLANTS, EACH PROPOSED NATIVE TREE TO BE 15 GAL MIN., EACH PROPOSED NON-NATIVE TREE TO BE 6' TALL OR 2" CAL MIN. FOR OFF SITE PLANTS, PROPOSED SINGLE TRUNK TREES TO BE 2" CAL MIN. AND CONIFER TREES TO BE 6' TALL. (CITY OF FLAGSTAFF CHAPTER 13-18 LANDSCAPING STANDARDS FOR RIGHTS-OF-WAY DIVISIONS: 13-18-003)

OVERALL LANDSCAPE CALCULATIONS				
	ON SITE		RIGHTS-OF-WAY	
	REQUIRED	PROPOSED	REQUIRED	PROPOSED
TREE	378	460	32	33
SHRUB	756	1,743	5,820 SF	5,820 SF
GC	756	1,049	5,820 SF	5,862 SF

OPEN SPACE TREES, PLANTS AND GROUNDCOVER QUANTITIES ARE NOT INCLUDED IN THIS OVERALL LANDSCAPE CALCULATION.

SITE DEVELOPMENT REQUIREMENTS	GROSS / NET AREA: 13.01 ac (567,020 sf)	
	REQUIRED	PROVIDED
PEDESTRIAN AMENITY SPACE/CIVIC SPACE	28,351 sf (5.0% of TOTAL AREA)	28,360 sf
OPEN SPACE	85,053 sf (15.0% of TOTAL AREA)	91,109 sf

OASIS CALCULATION
PROPOSED: 18,400 SF (3.24% OF TOTAL AREA) - TURF: 14,947 SF; ARTIFICIAL TURF: 3,453 SF
MAX ALLOWABLE AREA: 28,357 SF (5% OF TOTAL AREA)



LEGEND

- RIGHT OF WAY
- STREET BUFFER
- PERIPHERAL BUFFER
- BUILDING FOUNDATION
- PARKING LOT LANDSCAPING
- CIVIC SPACE
- OPEN SPACE

CHECKED BY: AB,CS
DRAWN BY: DP,KW

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CERTIFICATE NO.
36936
CHRIS STEBE
Date Signed
ARIZONA, USA
EXPIRES 12/31/2024

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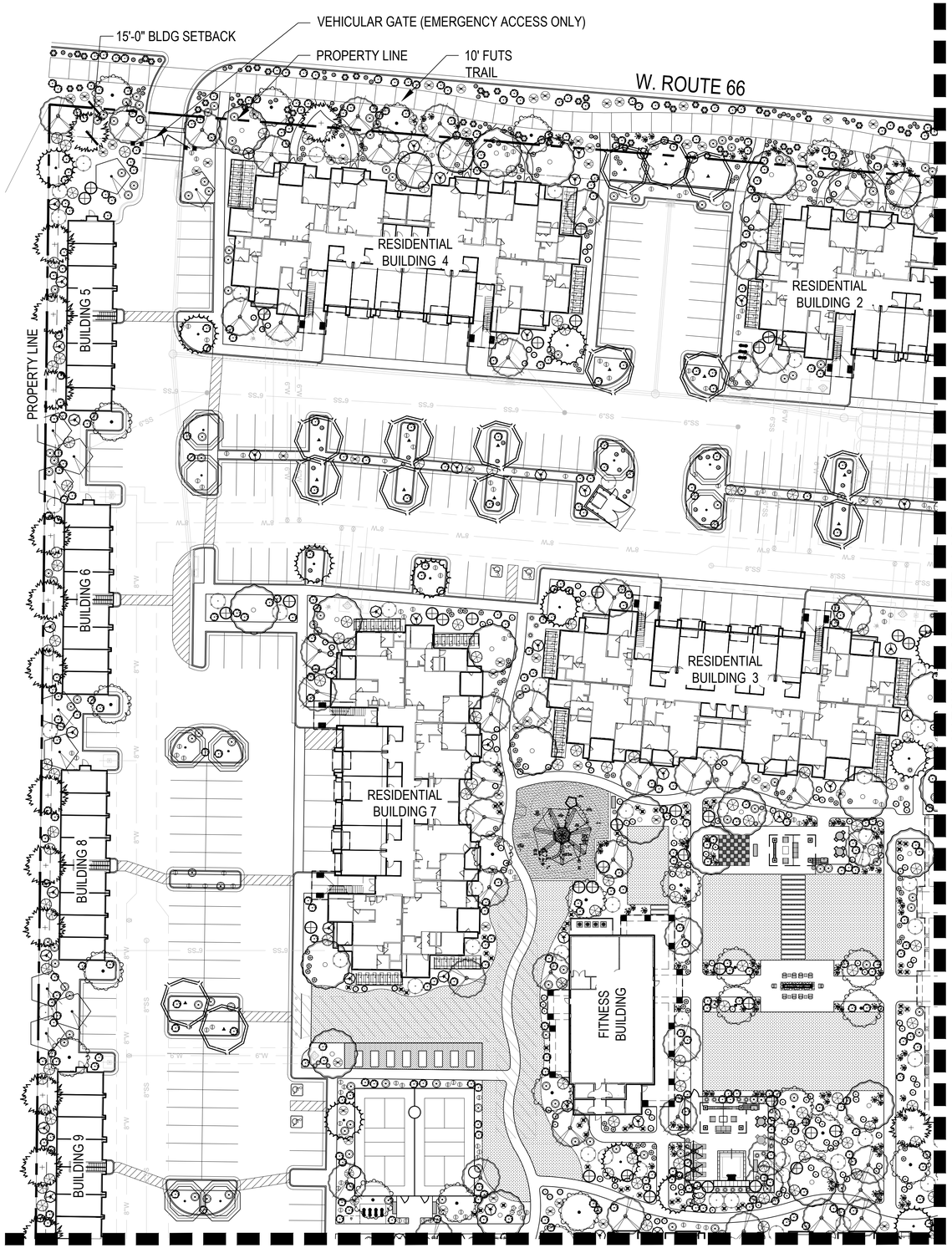
SHEET TITLE:
LANDSCAPE CALCULATIONS

LA-100C



NORTH

0 15 30 60

SCALE 1" = 30'

TOPDRESS SCHEDULE

TYPE 1 - DECOMPOSED GRANITE
ALL PERIMETER LANDSCAPE AREAS
SOURCE: FLAGSTAFF LANDSCAPE PRODUCTS OR APPROVED EQUAL
SIZE: 1" CLEAN/SCREENED
COLOR: TABLE MESA BROWN

TYPE 2 - ENGINEERED WOOD FIBER
SOURCE: ZEAGER BROS. INC
TYPE: WOOD CARPET

TYPE 3 - TURF
TYPE: FESCUE SOD

TYPE 4 - TURF WITH GRASS PAVE 2
TYPE: FESCUE SOD
VEHICULAR RATED

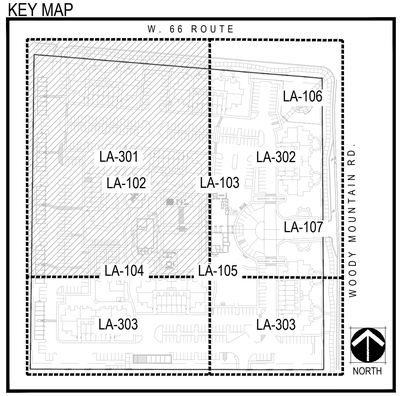
TYPE 5 - ARTIFICIAL TURF - DOG PARK
SUPPLIER: FOREVER LAWN
TYPE: K9 GRASS OR APPROVED EQUAL

TYPE 6 - STABALIZED DG
SUPPLIER: FLAGSTAFF LANDSCAPE PRODUCTS OR APPROVED EQUAL
SIZE: 1/4" MINUS
COLOR: MADISON GOLD

TYPE 7 - BOULDERS
SOURCE: FLAGSTAFF LANDSCAPE PRODUCTS OR APPROVED EQUAL
SIZE: SEE HARDSCAPE PLAN FOR BOULDER SIZES

NOTES:
1. CONTRACTOR TO PROVIDE SAMPLES OF ALL TOPDRESS MATERIALS TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
2. INSTALL 2" DEPTH OF DECOMPOSED GRANITE IN ALL PLANTING AREAS.

KEY MAP



PLANT LEGEND

EXISTING TREES	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	EXISTING TREE TO REMAIN					6	
DECIDUOUS CANOPY	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Acer x freemanii Autumn Blaze Maple	2" CAL, B&B	45` H x 30` W	NAT.	AS SHOWN	39	
	Gleditsia triacanthos inermis `Skyline` TM Skyline Thornless Honey Locust	2" CAL, B&B	45` H x 35` W	NAT.	AS SHOWN	27	
	Populus x acuminata Lanceleaf Poplar	2" CAL, B&B	50` H X 40` W	NAT.	AS SHOWN	23	3
DECIDUOUS ORNAMENTAL	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Cercis occidentalis Western Redbud	2.5" CAL, B&B	15`H X 15`W			106	7
	Populus tremuloides Quaking Aspen	2" CAL, B&B	50`H X 20`W	Y	AS SHOWN	24	7
	Prunus americana American Plum	2.5" CAL, B&B	20`H X 20`W	NAT.		21	
	Robinia x ambigua 'Purple Robe' Pink Flowering Locust	2.5" CAL, B&B	30`H X 20`W	NAT.		59	13
EVERGREEN TREES	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Juniperus scopulorum Rocky Mountain Juniper	6` HT, B&B	15`H X 6`W	Y	AS SHOWN	97	
	Picea pungens `Glauca` Colorado Blue Spruce	6` HT, B&B	40`H X 20`W	NAT.	AS SHOWN	21	
	Pinus ponderosa Ponderosa Pine	6` HT, B&B	60`H X 25`W	Y	AS SHOWN	37	3
DECIDUOUS SHRUBS - LARGE 7`-9`	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Cornus stolonifera Red Twig Dogwood	5 gal	8`H X 8`W	NAT.		140	17
DECIDUOUS SHRUBS - MEDIUM 5`-7`	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Caryopteris x clandonensis Blue Mist Spirea	5 gal	3`H X 6`W	NAT.		255	
	Prunus besseyi `Pawnee Buttes` Pawnee Buttes Sandcherry	5 gal	2` H X 6` W	Y		136	68
	Rhus trilobata `Autumn Amber` * Autumn Amber Sumac	5 gal	2` H X 6` W	NAT.		52	
DECIDUOUS SHRUBS - SMALL 2`-5`	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Euonymus alatus 'Compactus' Compact Burning Bush	5 gal	3`H X 3`W	Y		85	
	Perovskia abrotanoides * Russian Sage	5 gal	4` H X 4` W	NAT.		332	57
	Potentilla fruticosa `Gold Drop` Gold Drop Potentilla	3 gal	3` H X 3` W	Y		353	5
EVERGREEN SHRUBS	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Arctostaphylos x coloradoensis `Panchito` Panchito Manzanita	2 gal	1` H X 3` W	Y		161	
	Mahonia aquifolium Oregon Grape	5 gal	1`H X 6`W	NAT.			112
ORNAMENTAL GRASSES	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Bouteloua gracilis 'Blonde Ambition' *** Blonde Ambition Blue Grama Grass	3 gal	3` H X 3` W	Y		110	59
	Muhlenbergia rigens Deer Grass	1 gal	4` H X 4` W	Y		58	
	Panicum virgatum 'Shenandoah' Shenandoah Switch Grass	1 gal	3` H X 3` W	Y		31	
	Schizachyrium scoparium Little Bluestem	1 gal	3` H X 3` W	Y		60	
PERENNIALS & GROUNDCOVERS	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Achillea tomentosa Woolly Yarrow	1 gal	6" H X 12" W	Y		9	25
	Cerastium tomentosum Snow In Summer	1 gal	1` H X 3` W	NAT.		225	13
	Festuca glauca Blue Fescue	1 gal	12"H X 12"W	NAT.		94	130
	Juniperus horizontalis 'Blue Chip' Blue Chip Juniper	5 gal	1`H X 6`W	NAT.		705	201
ACCENT PERENNIALS	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Gaillardia pulchella * Annual Gaillardia	5 gal	16"H X 16"W	Y		16	

*POLLINATOR FRIENDLY PLANT SPECIES
***POLLINATOR NESTING PLANT SPECIES

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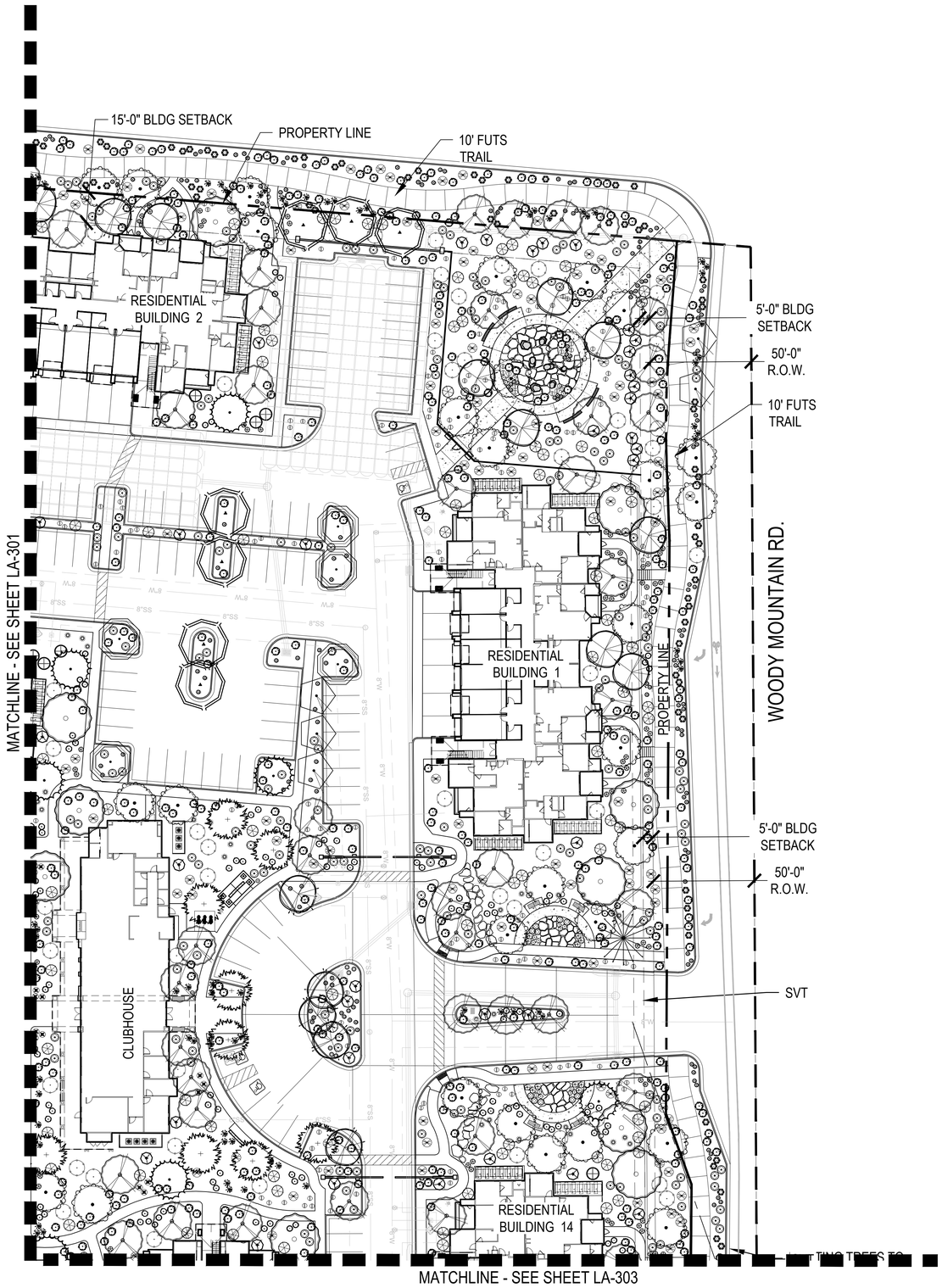
SHEET TITLE:
LANDSCAPE PLAN

LA-301

CHECKED BY: AB,CS
DRAWN BY: DP,KW



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NOTES:
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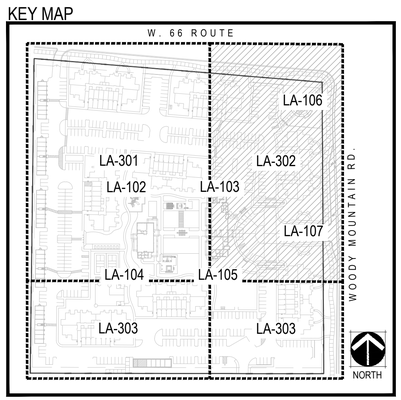
KEY MAP



PLANT LEGEND

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	EXISTING TREE TO REMAIN					6	
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	Populus x acuminata Lanceleaf Poplar	2" CAL, B&B	50` H X 40` W	NAT.	AS SHOWN	23	3
DECIDUOUS ORNAMENTAL	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
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	Prunus americana American Plum	2.5" CAL, B&B	20`H X 20`W	NAT.		21	
	Robinia x ambigua 'Purple Robe' Pink Flowering Locust	2.5" CAL, B&B	30`H X 20`W	NAT.		59	13
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	Prunus besseyi `Pawnee Buttes` Pawnee Buttes Sandcherry	5 gal	2` H X 6` W	Y		136	68
	Rhus trilobata `Autumn Amber` * Autumn Amber Sumac	5 gal	2` H X 6` W	NAT.		52	
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	Mahonia aquifolium Oregon Grape	5 gal	1`H X 6`W	NAT.			112
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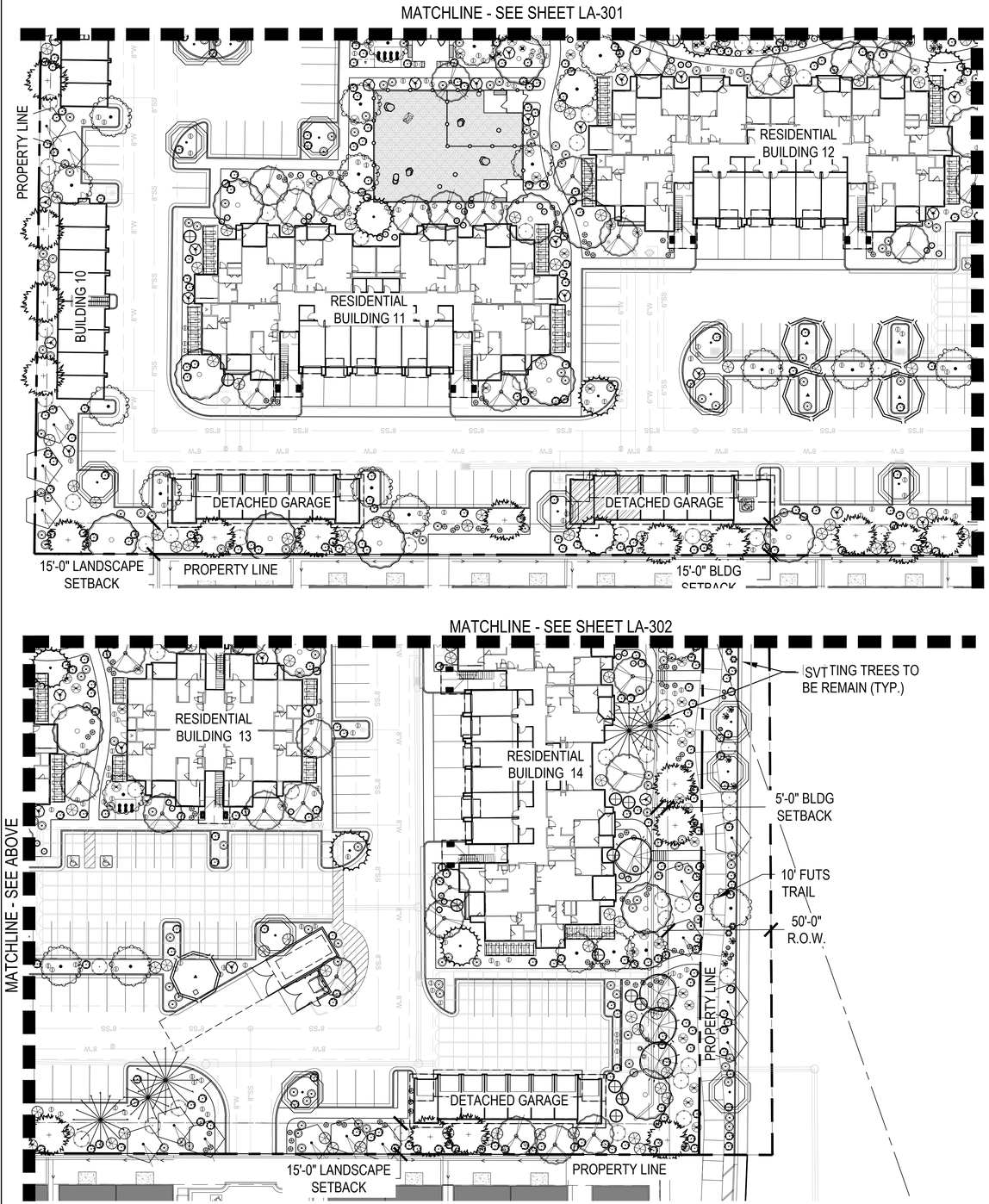
SHEET TITLE:
LANDSCAPE PLAN

811

LA-302

CHECKED BY: AB,CS
DRAWN BY: DP,KW



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	Prunus americana American Plum	2.5" CAL, B&B	20`H X 20`W	NAT.		21	
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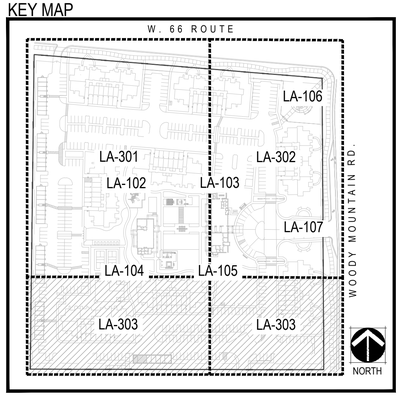
DECIDUOUS SHRUBS - SMALL 2`-5`	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Euonymus alatus 'Compactus' Compact Burning Bush	5 gal	3`H X 3`W	Y		85	
	Perovskia abrotanoides * Russian Sage	5 gal	4` H X 4` W	NAT.		332	57
	Potentilla fruticosa `Gold Drop` Gold Drop Potentilla	3 gal	3` H X 3` W	Y		353	5
EVERGREEN SHRUBS	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Arctostaphylos x coloradoensis `Panchito` Panchito Manzanita	2 gal	1` H X 3` W	Y		161	
	Mahonia aquifolium Oregon Grape	5 gal	1`H X 6`W	NAT.			112
ORNAMENTAL GRASSES	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Bouteloua gracilis 'Blonde Ambition' *** Blonde Ambition Blue Grama Grass	3 gal	3` H X 3` W	Y		110	59
	Muhlenbergia rigens Deer Grass	1 gal	4` H X 4` W	Y		58	
	Panicum virgatum 'Shenandoah' Shenandoah Switch Grass	1 gal	3` H X 3` W	Y		31	
	Schizachyrium scoparium Little Bluestem	1 gal	3` H X 3` W	Y		60	
PERENNIALS & GROUNDCOVERS	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Achillea tomentosa Woolly Yarrow	1 gal	6" H X 12" W	Y		9	25
	Cerastium tomentosum Snow In Summer	1 gal	1` H X 3` W	NAT.		225	13
	Festuca glauca Blue Fescue	1 gal	12"H X 12"W	NAT.		94	130
	Juniperus horizontalis 'Blue Chip' Blue Chip Juniper	5 gal	1`H X 6`W	NAT.		705	201
ACCENT PERENNIALS	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Gaillardia pulchella * Annual Gaillardia	5 gal	16"H X 16"W	Y		16	

*POLLINATOR FRIENDLY PLANT SPECIES
***POLLINATOR NESTING PLANT SPECIES

KEY MAP



CHECKED BY: AB,CS
DRAWN BY: DP,KW

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Suite 260
Flagstaff, AZ 86001
P 928.233.3021
www.norris-design.com

TIMBER SKY
LIV - TIMBER SKY
FLAGSTAFF, AZ

OWNER:
VINTAGE PARTNERS
C/O WALTER CRUTCHFIELD
2502 E. CAMELBACK RD.
SUITE 214
602.459.9931

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
36936
CHRIS STEBE
STATE OF ARIZONA, USA
EXPIRES 12/31/2022

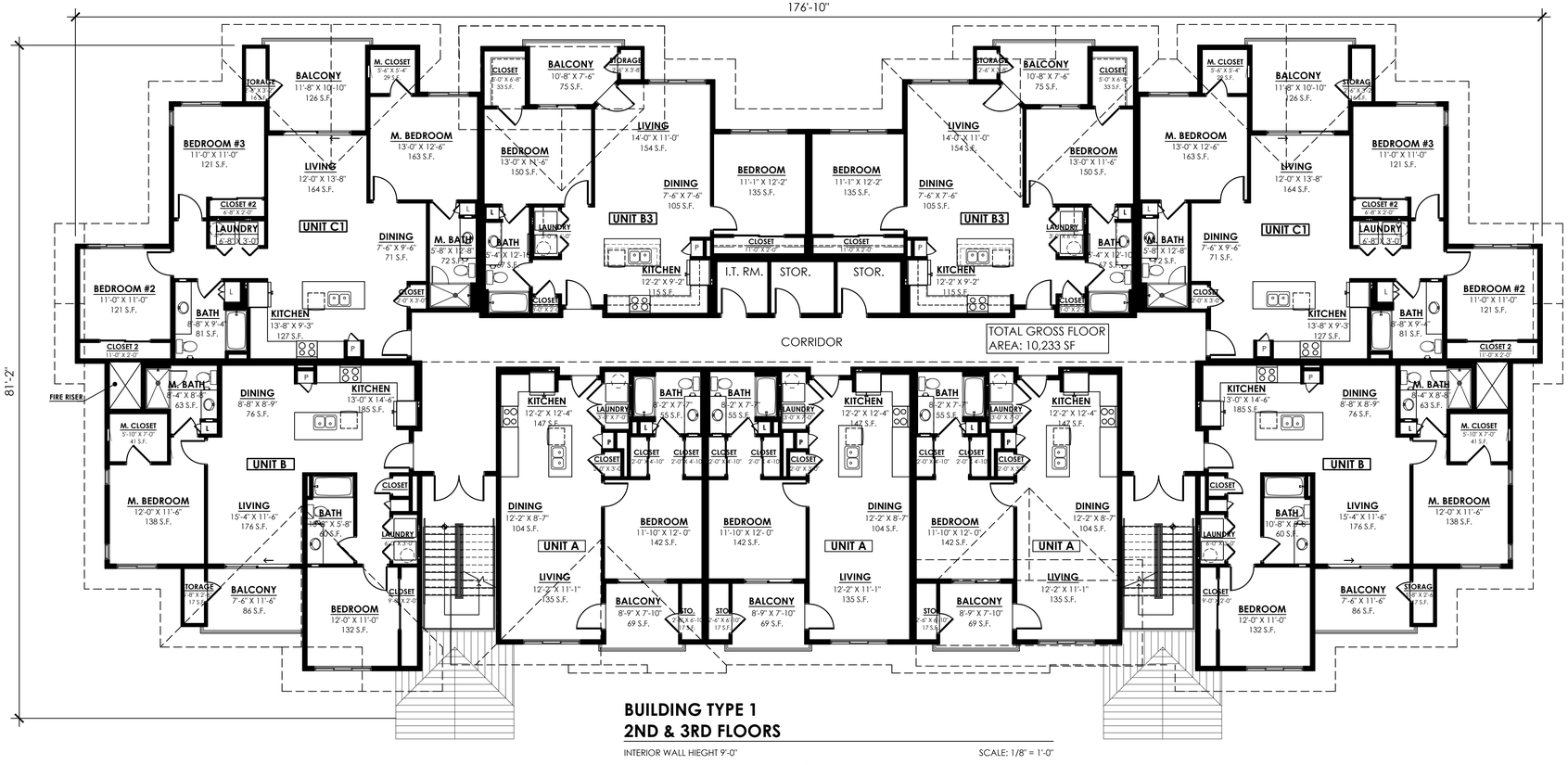
CONSTRUCTION

DATE:
4/20/2021 1ST CONCEPT PLAN SUBMITTAL
6/9/2022 2ND CONCEPT PLAN SUBMITTAL
08/29/22 1ST SITE PLAN SUBMITTAL
11/22/22 2ND SITE PLAN RESUBMITTAL
01/05/23 3RD SITE PLAN RESUBMITTAL
02/15/23 4TH SITE PLAN RESUBMITTAL

SHEET TITLE:
LANDSCAPE PLAN

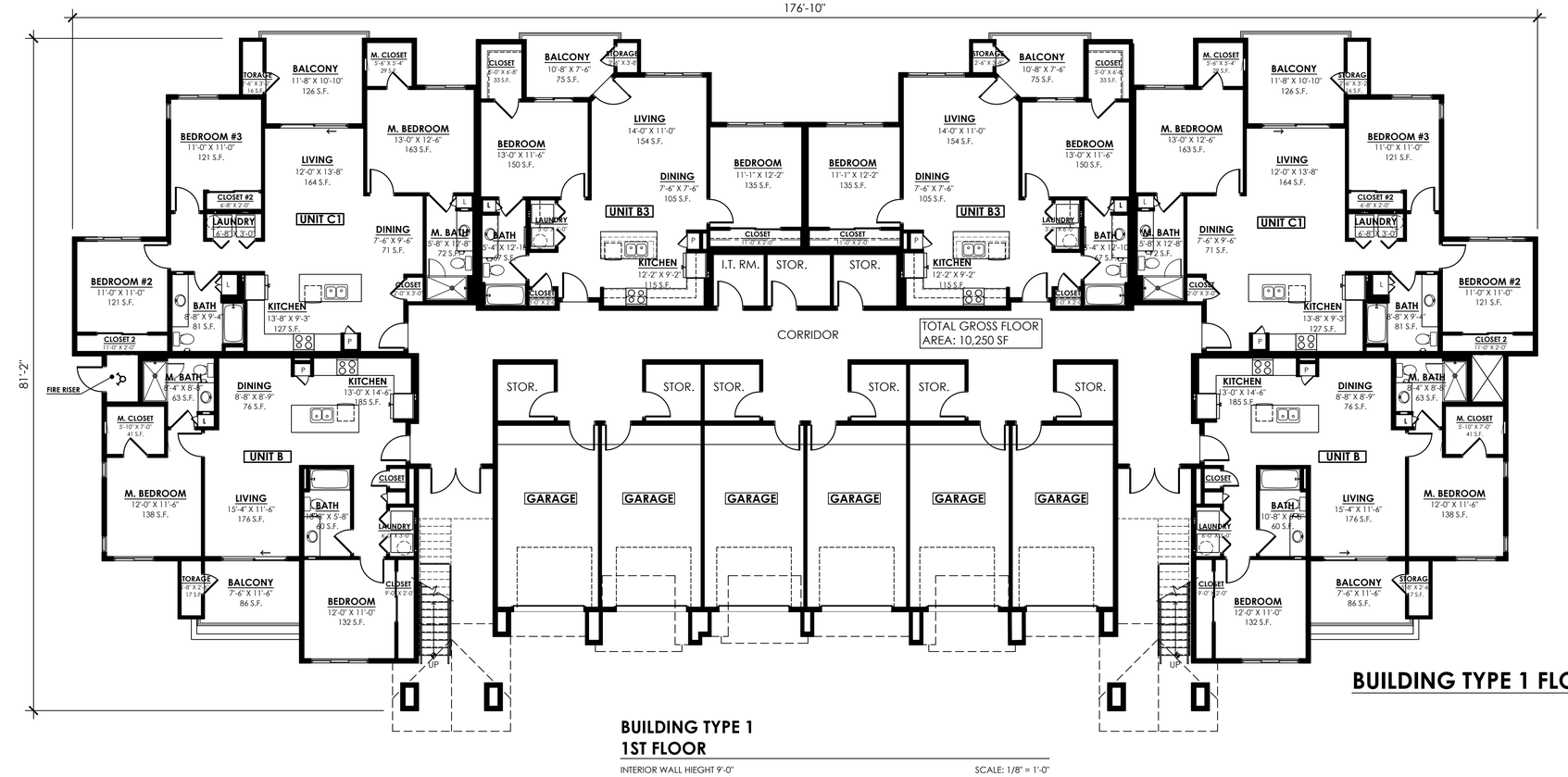
811

LA-303



BUILDING TYPE 1
2ND & 3RD FLOORS

INTERIOR WALL HIEGHT 9'-0" SCALE: 1/8" = 1'-0"



BUILDING TYPE 1
1ST FLOOR

INTERIOR WALL HIEGHT 9'-0" SCALE: 1/8" = 1'-0"

BUILDING TYPE 1 FLOOR PLANS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

SEAL

REGISTERED ARCHITECT
CERTIFICATE NO.
13467
GARY D.
TODD
11/18/22
Date Signed
RENEWAL 6-30-24

CONTACT

TODD + ASSOCIATES
CRITICAL THINKING / CREATIVE DESIGN
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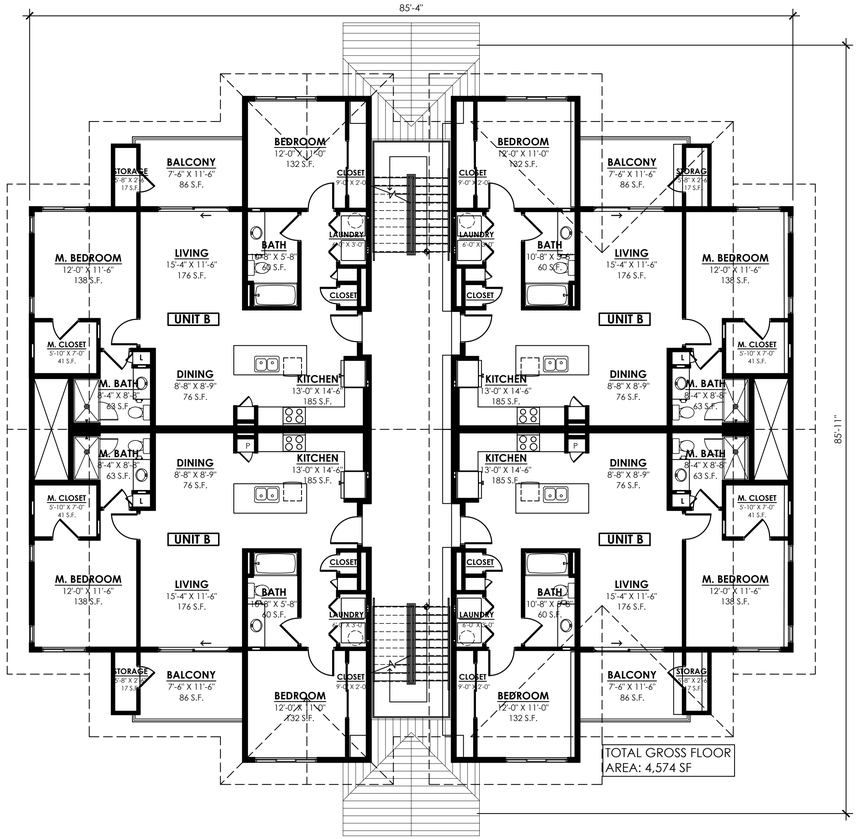
SUBMITTAL #1

11-23-2022
SITE PLAN REVIEW
SUBMITTAL #2

Proj Mgr.
Dwn By:

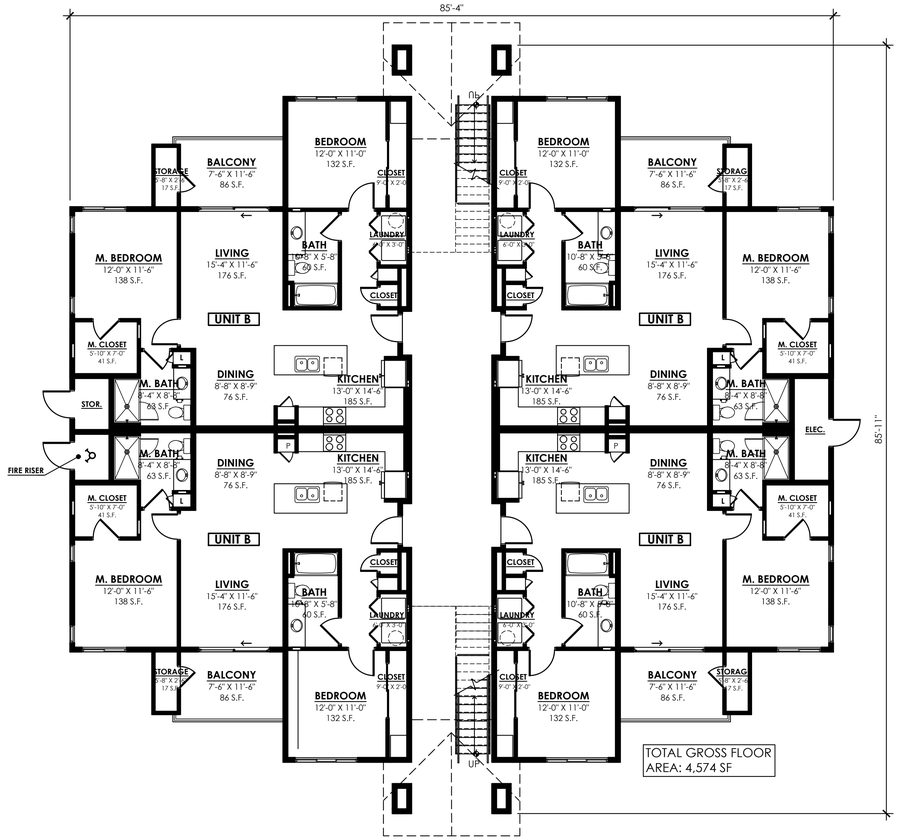
BUILDING TYPE 1
FLOOR PLANS

A2.1.1



BUILDING TYPE 2
2ND & 3RD FLOORS

INTERIOR WALL HIEGHT 9'-0" SCALE: 1/8" = 1'-0"



BUILDING TYPE 2
1ST FLOOR

INTERIOR WALL HIEGHT 9'-0" SCALE: 1/8" = 1'-0"

BUILDING TYPE 2 FLOOR PLANS

0" 4' 8' 16'
SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
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TIMBER SKY

FLAGSTAFF, AZ

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LIV COMMUNITIES

8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

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REGISTERED ARCHITECT CERTIFICATE NO. 13467 GARY D. TODD 11/18/22 Date Signed AZ
RENEWAL 06-30-23

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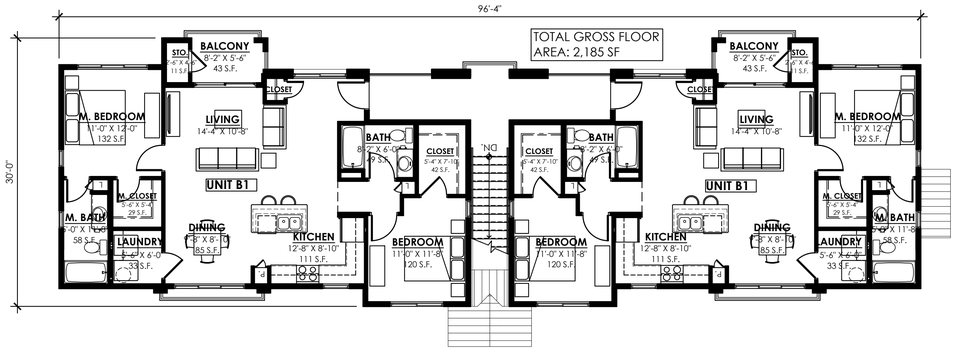
BUILDING TYPE 2 FLOOR PLANS

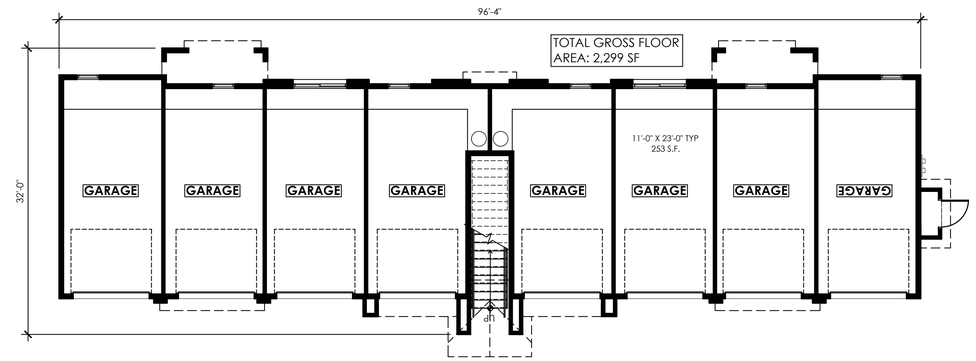
A2.2.1



BUILDING TYPE 3
2ND FLOOR

INTERIOR WALL HIEGHT 9'-0"

SCALE: 1/8" = 1'-0"



BUILDING TYPE 3
1ST FLOOR

INTERIOR WALL HIEGHT 9'-0"

SCALE: 1/8" = 1'-0"

BUILDING TYPE 3 FLOOR PLANS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

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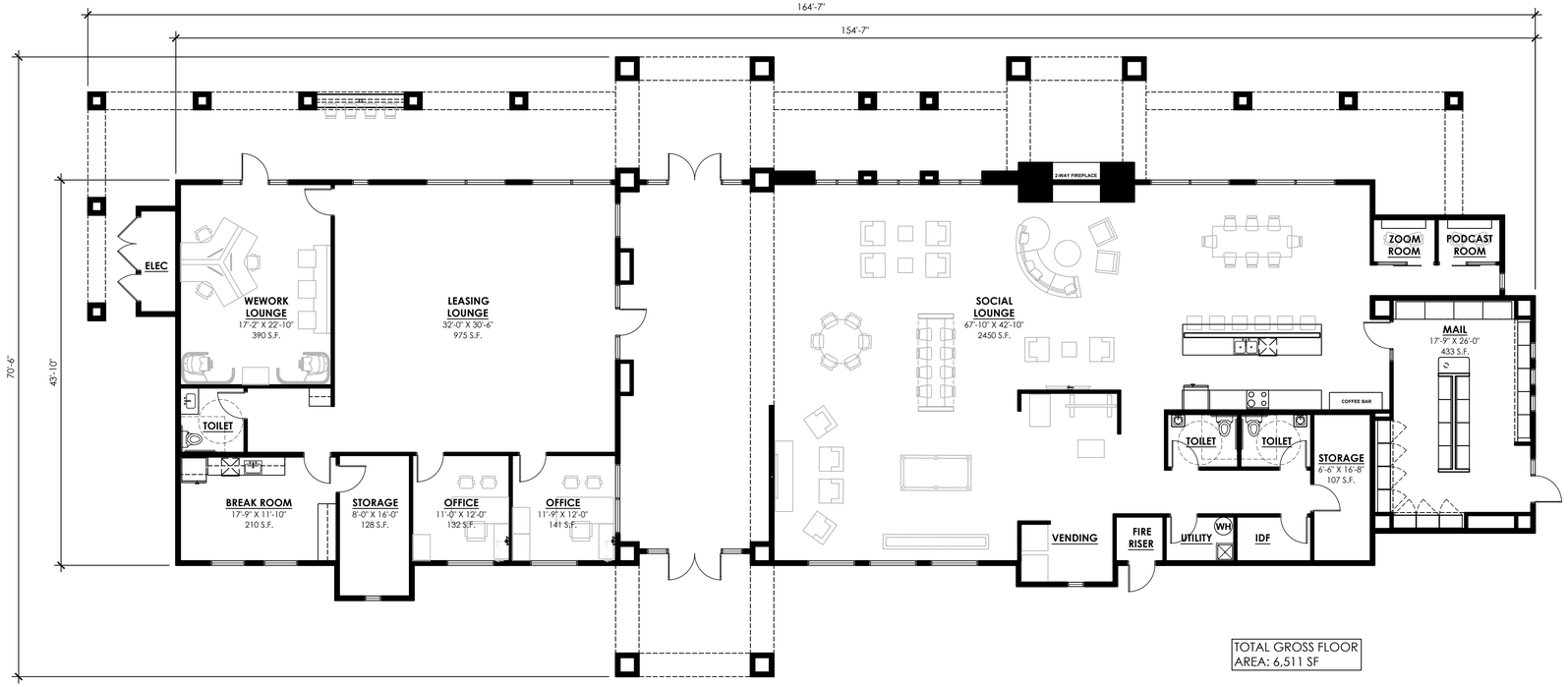
BUILDING TYPE 3
FLOOR PLANS

A2.3.1



CLUBHOUSE FLOOR PLAN

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

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11/18/22
Date Signed
ARIZONA U.S.A.

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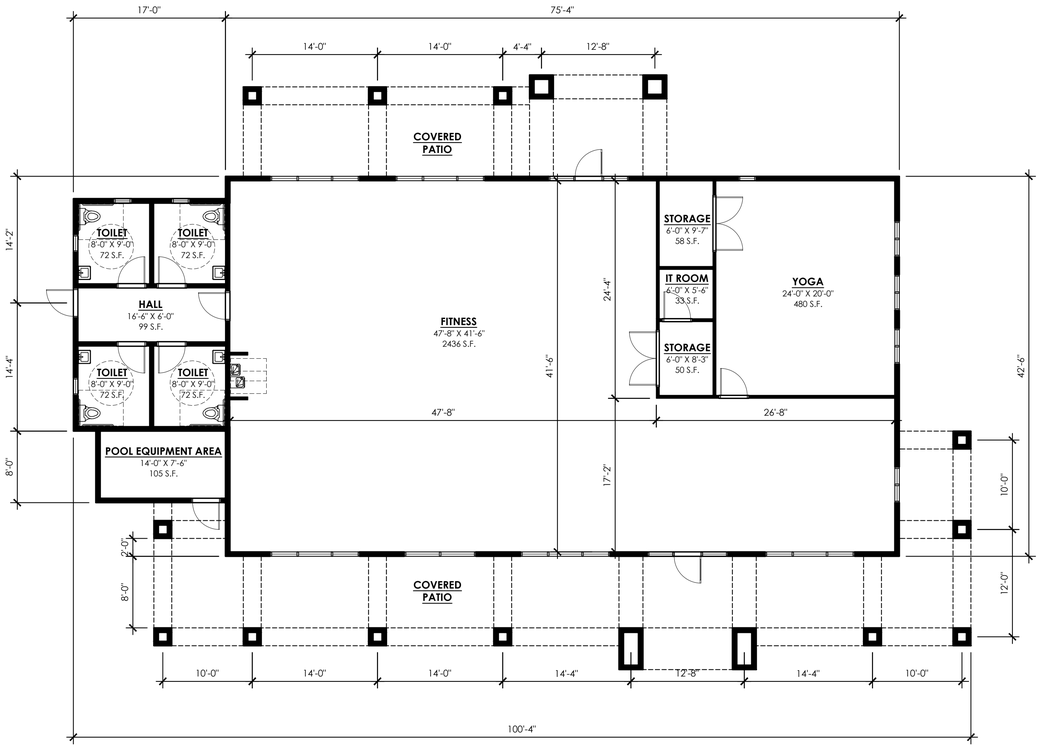
CLUBHOUSE FLOOR PLAN

A2.4.1



TOTAL GROSS FLOOR AREA: 3,760 SF

FITNESS FLOOR PLAN

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

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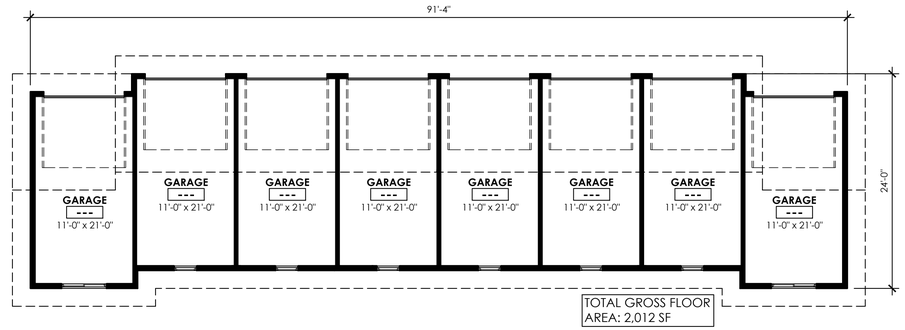
FITNESS FLOOR PLAN

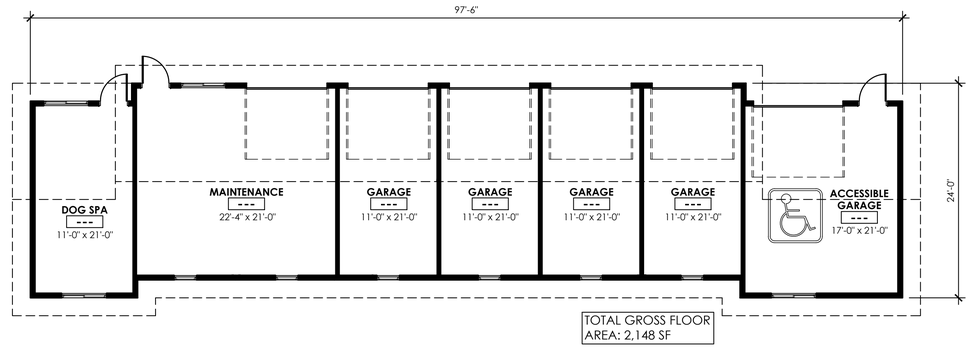
A2.5.1



DETACHED GARAGE 1 FLOOR PLAN

INTERIOR WALL HIEGHT 9'-0"

SCALE: 1/8" = 1'-0"



DETACHED GARAGE 2 FLOOR PLAN

INTERIOR WALL HIEGHT 9'-0"

SCALE: 1/8" = 1'-0"

DETACHED GARAGE FLOOR PLANS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

N

PROJECT

NO. 22-2003-01

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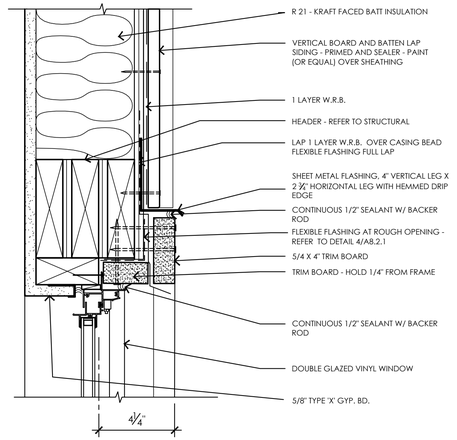
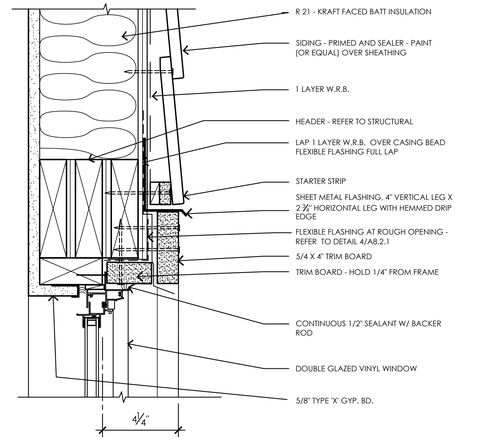
DETACHED GARAGE
FLOOR PLANS

A2.6.1



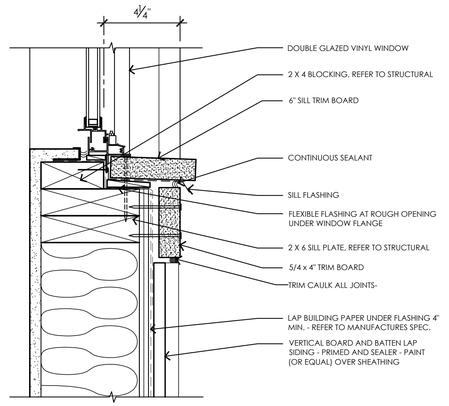
4 WINDOW HEAD AT VER. CEMENT PANEL

SCALE: 3" = 1'-0"



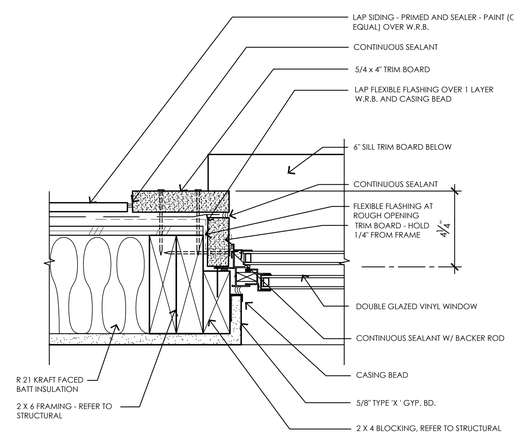
1 WINDOW HEAD AT HOR. SIDING LAP

SCALE: 3" = 1'-0"



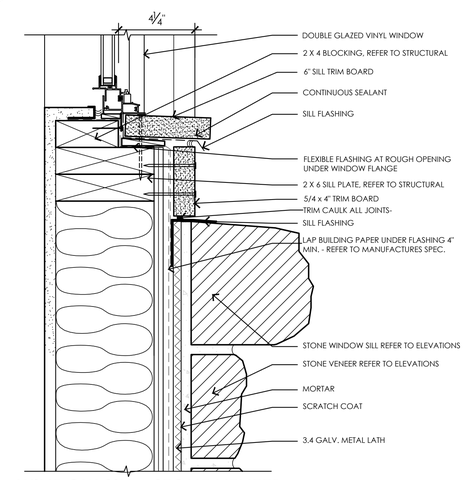
5 WINDOW SILL AT VER. CEMENT PANEL

SCALE: 3" = 1'-0"



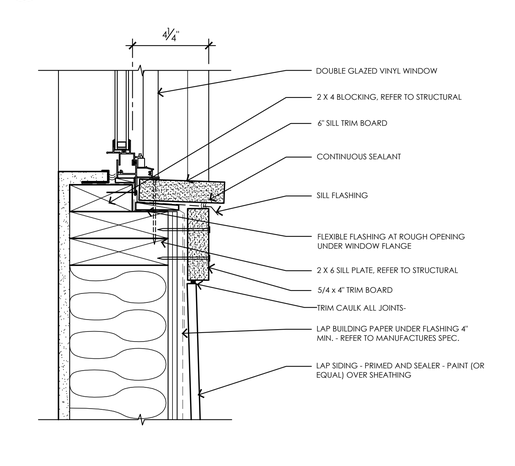
2 WINDOW JAMB AT HOR. / VER. SIDING

SCALE: 3" = 1'-0"



6 WINDOW SILL - STONE VENEER

SCALE: 3" = 1'-0"



3 WINDOW SILL AT HOR. SIDING LAP

SCALE: 3" = 1'-0"

PROJECT

NO. 22-2003-01

LIV
TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

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TEMPE, AZ 85284

SEAL

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CERTIFICATE NO.
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GARY D.
TODD
11/18/22
Date Signed
ARIZONA U.S.A.

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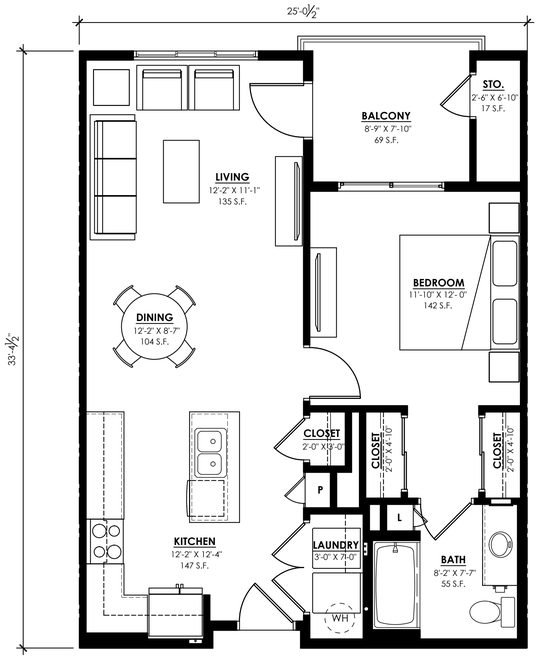
Proj Mgr.:
Drawn By:

TYPICAL WINDOW DETAILS

A3.7.1



UNIT A - 1 BEDROOM / 1 BATH

ACCESSIBILITY SCOPING:
FHAG: COVERED DWELLING UNIT, SPECIFICATION B BATHROOM
IBC: ANSI TYPE B DWELLING UNIT, OPTION B BATHROOM

NET RENTABLE	**743 S.F.**
BALCONY / PATIO	**69 S.F.**
STORAGE	**23 S.F.**
-	**- S.F.**
TOTAL:	**835 S.F.**

NOTE: NET RENTABLE AREA IS CALCULATED FROM CENTERLINE OF DOUBLE STUD AIR SPACE TO OUTSIDE FACE OF EXTERIOR WALLS TO THE OUTSIDE FACE OF THE CORRIDOR WALL AND INCLUDES ALL INTERNAL WALLS AND CAVITIES.

UNIT PLANS

SCALE: 1/4"=1'-0"

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NO. 22-2003-01
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TIMBER SKY

FLAGSTAFF, AZ

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8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

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11/18/22
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ARIZONA U.S.A.

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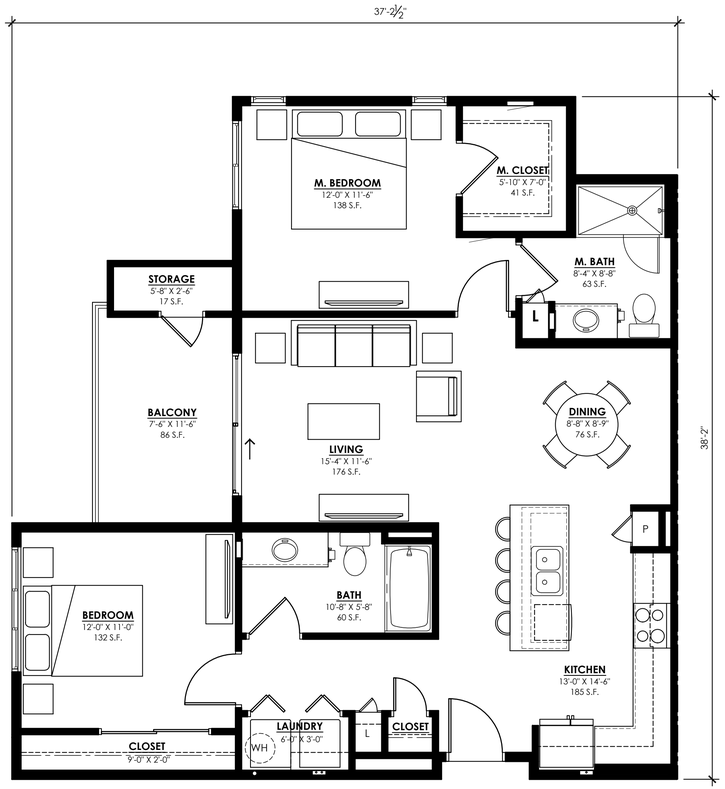
A & A1 ENLARGED UNIT PLANS

A6.1.1

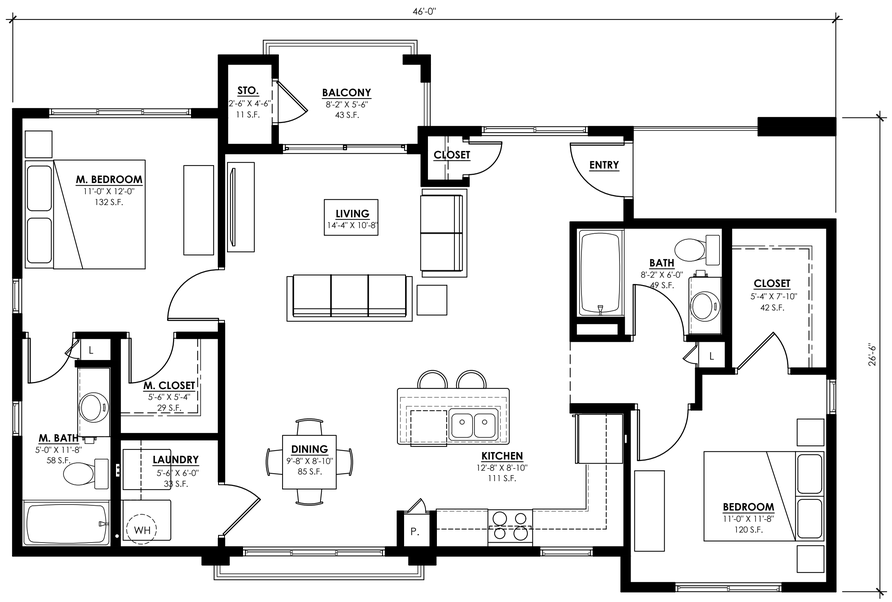


UNIT B - 2 BEDROOM / 2 BATH

ACCESSIBILITY SCOPING:
FHAG: COVERED DWELLING UNIT, SPECIFICATION A BATHROOMS
IBC: ANSI TYPE B DWELLING UNIT, OPTION A BATHROOMS

NET RENTABLE AREA	**1,096 S.F.**
BALCONY / PATIO	**86 S.F.**
STORAGE	**22 S.F.**
-	**- S.F.**
TOTAL:	**1,204 S.F.**

NOTE: NET RENTABLE AREA IS CALCULATED FROM CENTERLINE OF DOUBLE STUD AIR SPACE TO OUTSIDE FACE OF EXTERIOR WALLS TO THE OUTSIDE FACE OF THE CORRIDOR WALL AND INCLUDES ALL INTERNAL WALLS AND CAVITIES.



UNIT B1
2 BEDROOM / 2 BATH (CARRIAGE UNIT)

ACCESSIBILITY SCOPING:
FHAG: NO ACCESSIBILITY REQUIREMENTS
IBC: NO ACCESSIBILITY REQUIREMENTS

GROSS AREA	**1,071 S.F. S.F.**
BALCONY	**43 S.F. S.F.**
STORAGE	**11 S.F.**
	S.F.
TOTAL:	**1,125 S.F. S.F.**

UNIT PLANS

SCALE: 1/4"=1'-0"

PROJECT
NO. 22-2003-01
LIV
TIMBER SKY

FLAGSTAFF, AZ

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TEMPE, AZ 85284

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TODD
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REGISTERED ARCHITECT

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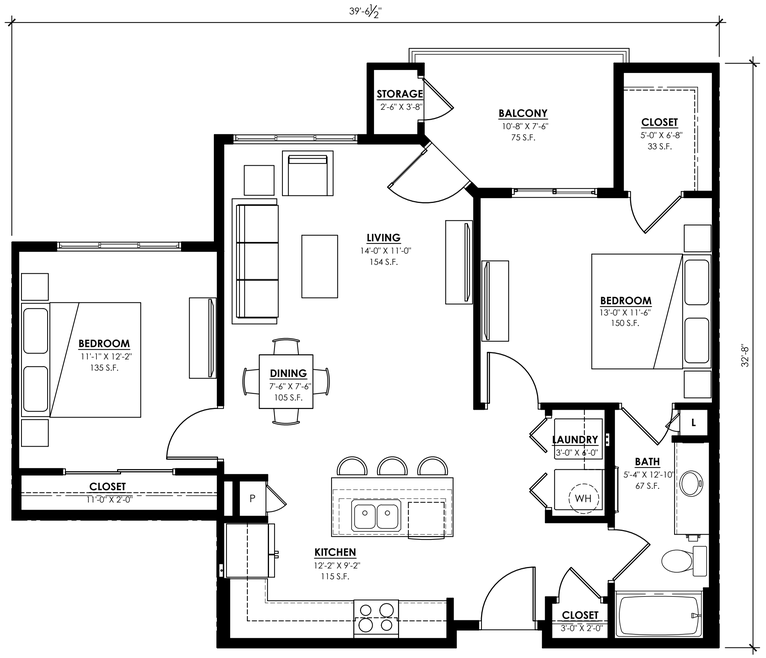
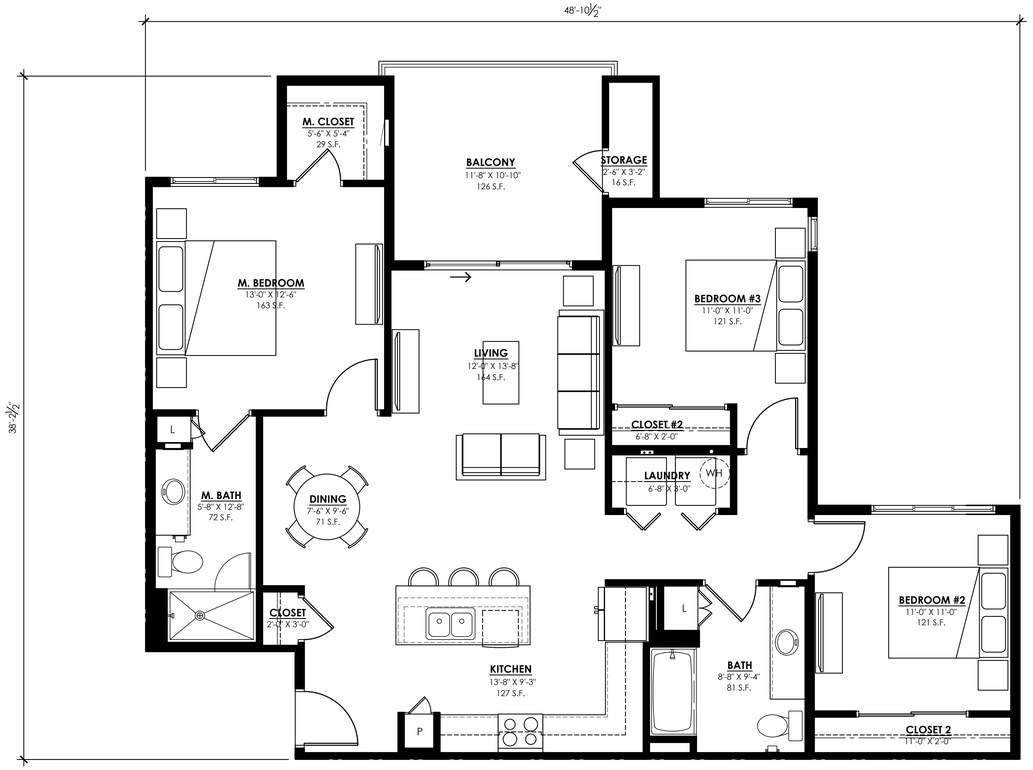
Proj Mgr.
Dwn By:

Rev.	Date:	Description:
△		
△		
△		
△		
△		

B & B1 ENLARGED
UNIT PLANS

A6.1.2





UNIT B3 - 2 BEDROOM / 1 BATH

ACCESSIBILITY SCOPING:
FHAG: COVERED DWELLING UNIT, SPECIFICATION A BATHROOMS
IBC: ANSI TYPE B DWELLING UNIT, OPTION A BATHROOMS

NET RENTABLE AREA	**975 S.F.**
BALCONY / PATIO	**75 S.F.**
STORAGE	**13 S.F.**
-	**- S.F.**
TOTAL:	**1,063 S.F.**

UNIT C1 - 3 BEDROOM / 2 BATH

ACCESSIBILITY SCOPING:
FHAG: COVERED DWELLING UNIT, SPECIFICATION B BATHROOM
IBC: ANSI TYPE B DWELLING UNIT, OPTION B BATHROOM

NET RENTABLE AREA	**1,300 S.F.**
BALCONY / PATIO	**126 S.F.**
STORAGE	**11 S.F.**
-	**- S.F.**
TOTAL:	**1,437 S.F.**

NOTE: NET RENTABLE AREA IS CALCULATED FROM CENTERLINE OF DOUBLE STUD AIR SPACE TO OUTSIDE FACE OF EXTERIOR WALLS TO THE OUTSIDE FACE OF THE CORRIDOR WALL AND INCLUDES ALL INTERNAL WALLS AND CAVITIES.

UNIT PLANS

SCALE: 1/4"=1'-0"

PROJECT
NO. 22-2003-01
LIV
TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES

8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

SEAL

REGISTERED ARCHITECT
CERTIFICATE NO.
13467
GARY D.
TODD
11/18/22
Date Signed
ARIZONA U.S.A.

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CRITICAL THINKING / CREATIVE DESIGN

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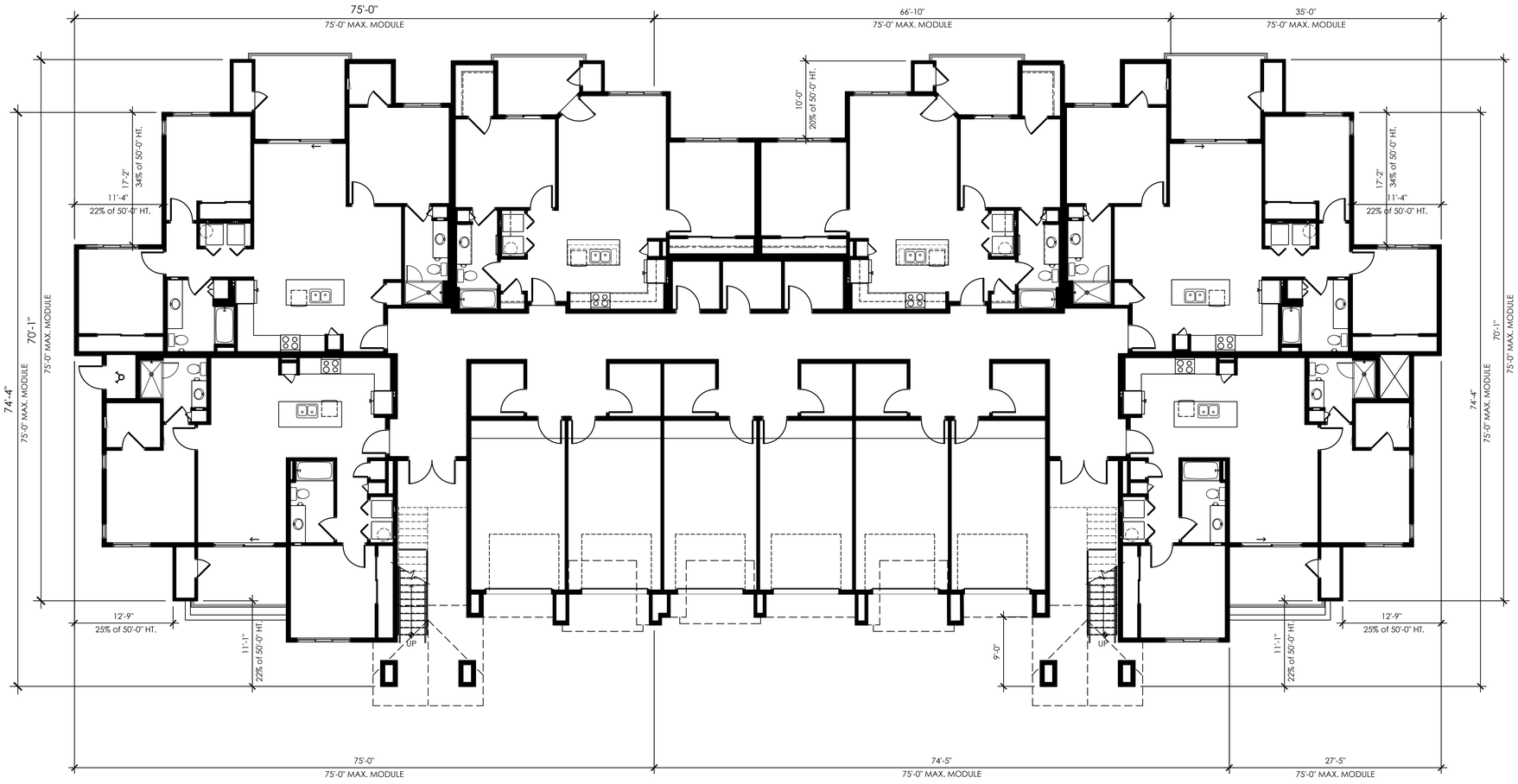
SUBMITTAL #2

Proj Mgr.
Dwn By:

Rev.	Date:	Description:
△		
△		
△		
△		
△		

B3 & C1 ENLARGED
UNIT PLANS

A6.1.3



-

BUILDING TYPE 1

-

SCALE: 1/8" = 1'-0"

20% MINIMUM WALL OFFSET
ACHIEVED AT ALL FOUR ELEVATIONS
PER ORDINANCE 10-50.20.030 (2)

BUILDING TYPE 1 MASSING STUDY

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV
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FLAGSTAFF, AZ

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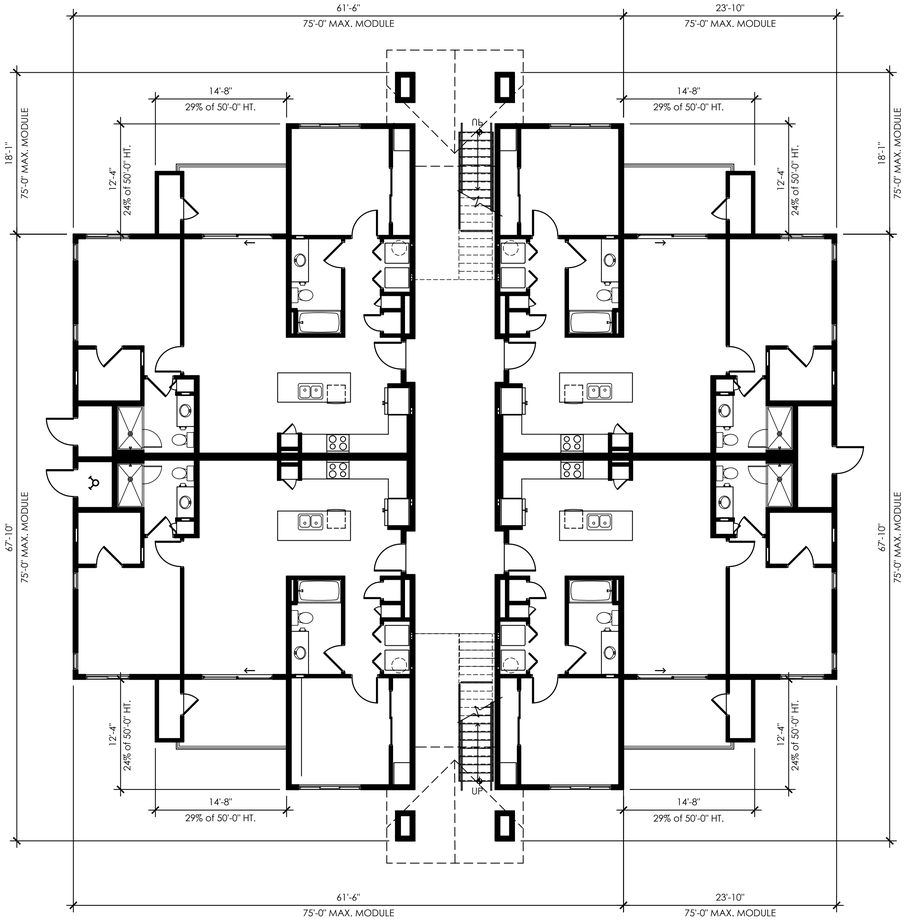
BUILDING TYPE 1
MASSING STUDY

A7.1.1



-

BUILDING TYPE 2

-

SCALE: 1/8" = 1'-0"

20% MINIMUM WALL OFFSET
ACHIEVED AT ALL FOUR ELEVATIONS
PER ORDINANCE 10-50.20.030 (2)

BUILDING TYPE 2 MASSING STUDY

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV
TIMBER SKY

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LIV COMMUNITIES

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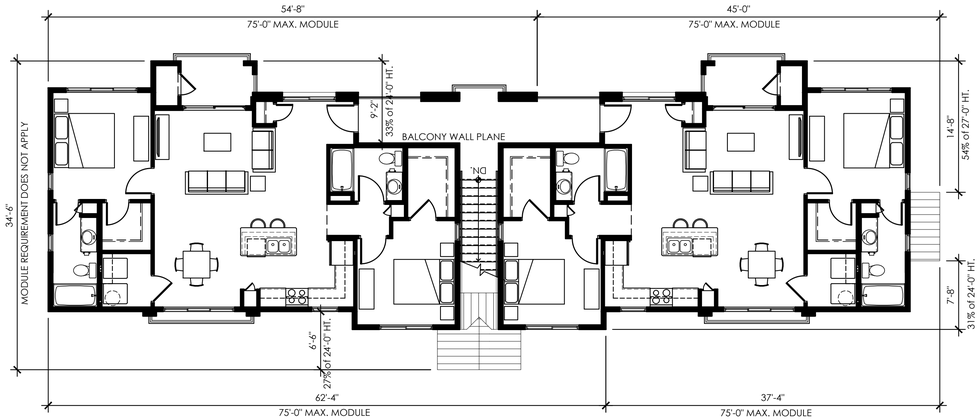
BUILDING TYPE 2
MASSING STUDY

A7.2.1



-

BUILDING TYPE 3

-

SCALE: 1/8" = 1'-0"

20% MINIMUM WALL OFFSET ACHIEVED
AT FRONT AND REAR ELEVATIONS PER
ORDINANCE 10-50.20.030 (2)

BUILDING TYPE 3 MASSING STUDY

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV
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CLIENT

LIV COMMUNITIES

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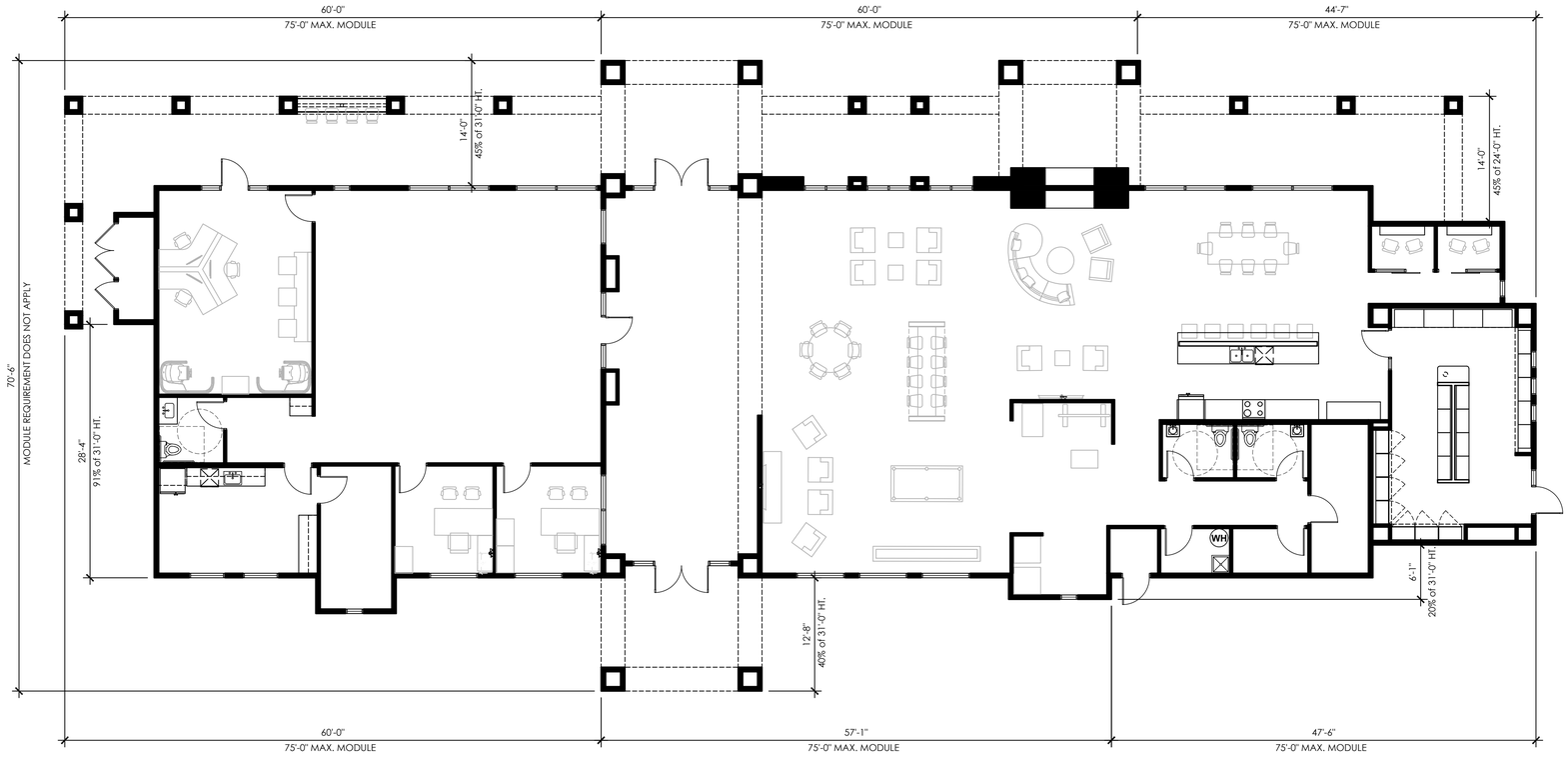
BUILDING TYPE 3
MASSING STUDY

A7.3.1



-

CLUBHOUSE BUILDING

-

SCALE: 1/8" = 1'-0"

20% MINIMUM WALL OFFSET ACHIEVED
AT FRONT AND REAR ELEVATIONS PER
ORDINANCE 10-50.20.030 (2)

CLUBHOUSE MASSING STUDY

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

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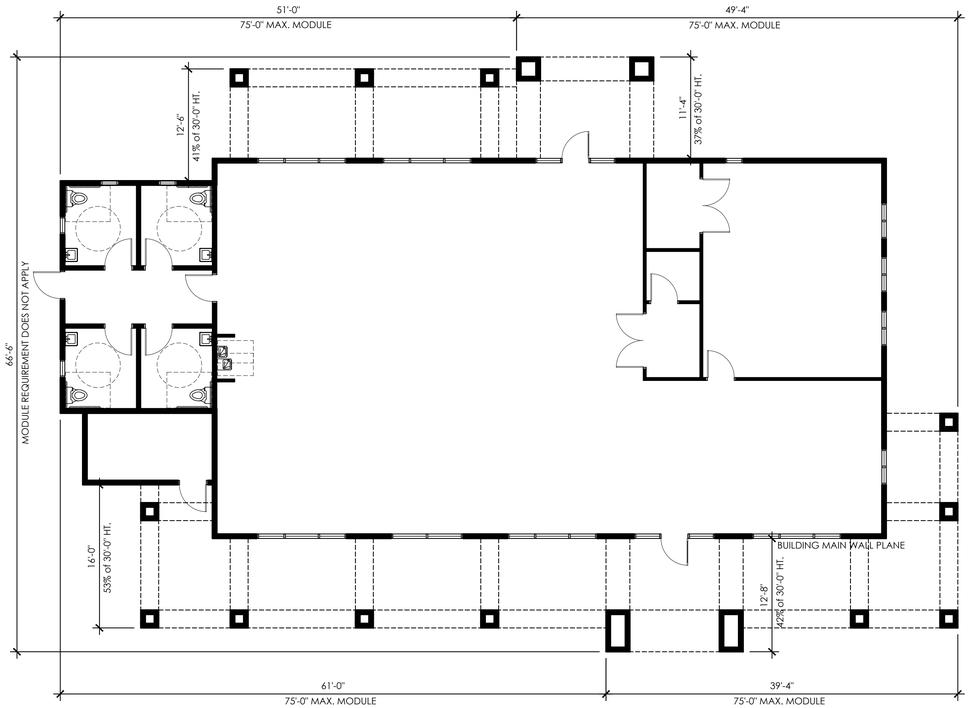
Dwn By:

CLUBHOUSE
MASSING STUDY

A7.4.1



-

FITNESS BUILDING

-

SCALE: 1/8" = 1'-0"

20% MINIMUM WALL OFFSET ACHIEVED
AT FRONT AND REAR ELEVATIONS PER
ORDINANCE 10-50.20.030 (2)

FITNESS MASSING STUDY

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV
TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

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FITNESS
MASSING STUDY

A7.5.1

FRONT ELEVATION

RIGHT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR		SWATCH
A	Fiber Cement Siding Body 1	MFG.: COLOR: LRV:	Allura Lap Siding - Horizontal Panels Traditional Texture PPG Bleached Maple (PPG1089-5) 37	
B	Fiber Cement Siding Body 2	MFG.: COLOR: LRV:	Allura Lap Siding - Vertical Panels Traditional Texture PPG Cloudy Slate (PPG0996-4) 29	
C	Fiber Cement Fascia	MFG.: COLOR: LRV:	Allura - Plycem Fiber Cement Trim Alurra Sterling Gray 48.2	
D	Fiber Cement Trim	MFG.: COLOR: LRV:	Allura - Plycem Fiber Cement Trim Alurra Autumn Red 12.6	
E	Stone Veneer	MFG.: COLOR: LRV:	Coronado - Getty Stone Embassy Blend 45.43	
F	Shingle Roof	MFG.: COLOR: LRV:	GAF Timberline - Ultra HD Shingles Charcoal n/a	
G	Metal Roof	MFG.: COLOR: LRV:	MBCI - Slimline Roof Panel Signature 300 "Slate Gray" 18.76	
H	Metal Railing	MFG.: COLOR: LRV:	Sherwin Williams SW 7578 "Borscht" 6	

TYPE 1 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

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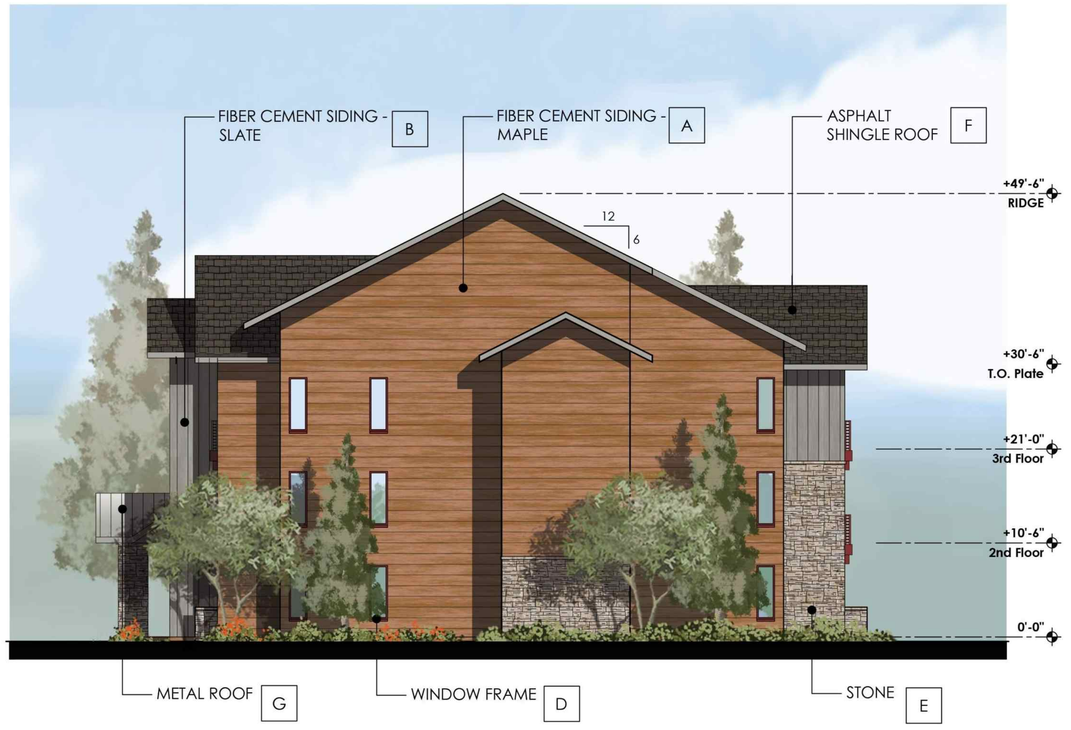
BUILDING TYPE 1 ELEVATIONS

A3.1.1

REAR ELEVATION



LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	

TYPE 1 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

SEAL

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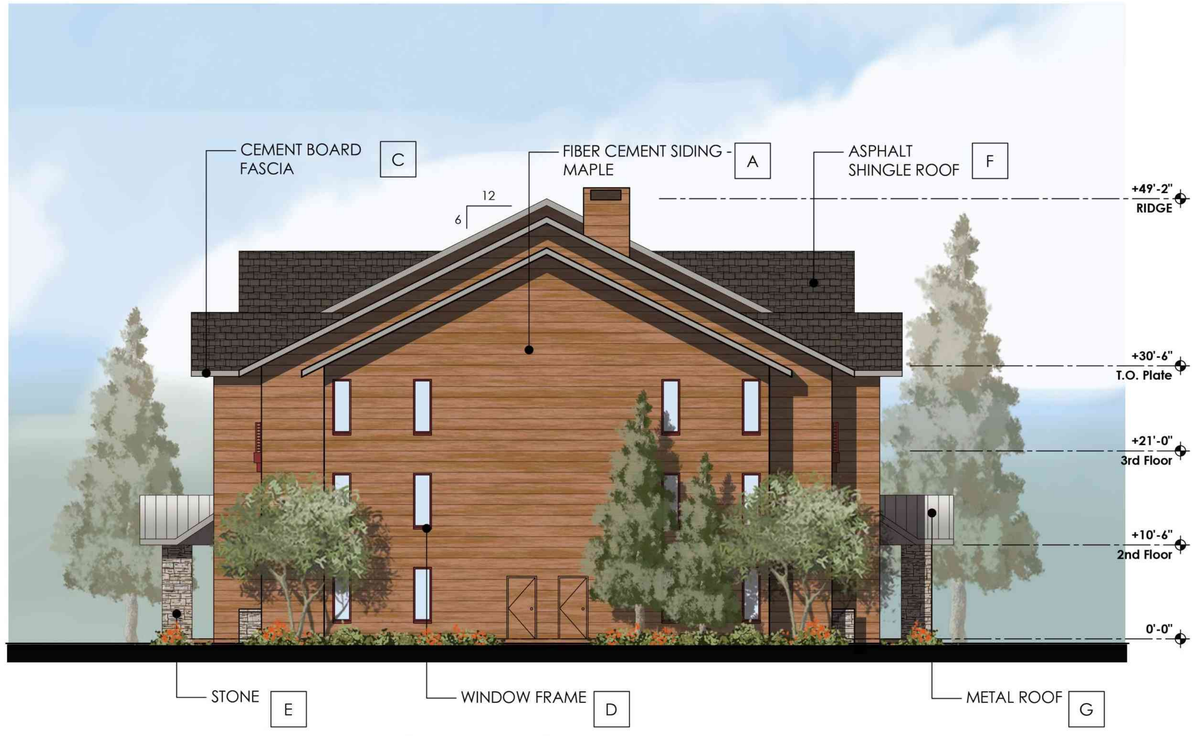
BUILDING TYPE 1 ELEVATIONS

A3.1.2

FRONT ELEVATION



RIGHT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR		SWATCH
A	Fiber Cement Siding Body 1	MFG.: COLOR: LRV:	Allura Lap Siding - Horizontal Panels Traditional Texture PPG Bleached Maple (PPG1089-5) 37	
B	Fiber Cement Siding Body 2	MFG.: COLOR: LRV:	Allura Lap Siding - Vertical Panels Traditional Texture PPG Cloudy Slate (PPG0996-4) 29	
C	Fiber Cement Fascia	MFG.: COLOR: LRV:	Allura - Plycem Fiber Cement Trim Alurra Sterling Gray 48.2	
D	Fiber Cement Trim	MFG.: COLOR: LRV:	Allura - Plycem Fiber Cement Trim Alurra Autumn Red 12.6	
E	Stone Veneer	MFG.: COLOR: LRV:	Coronado - Getty Stone Embassy Blend 45.43	
F	Shingle Roof	MFG.: COLOR: LRV:	GAF Timberline - Ultra HD Shingles Charcoal n/a	
G	Metal Roof	MFG.: COLOR: LRV:	MBCI - Slimline Roof Panel Signature 300 "Slate Gray" 18.76	
H	Metal Railing	MFG.: COLOR: LRV:	Sherwin Williams SW 7578 "Borscht" 6	

TYPE 2 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

SEAL

REGISTERED ARCHITECT
CERTIFICATE NO.
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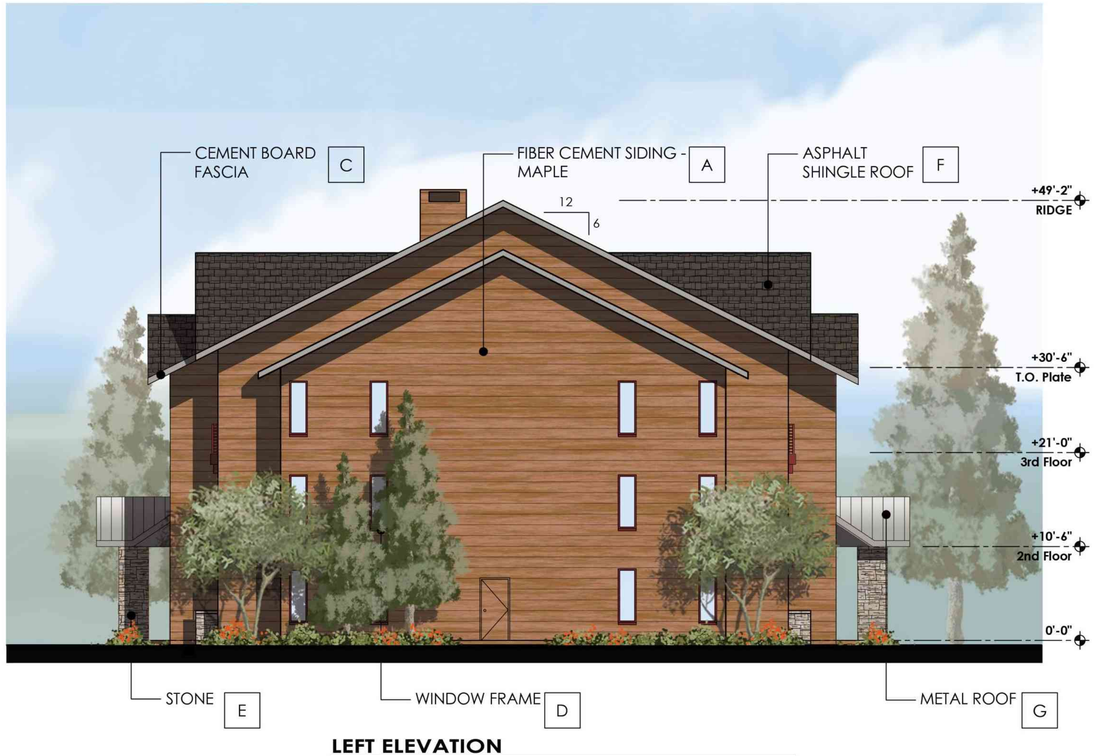
BUILDING TYPE 2 ELEVATIONS

A3.2.1

REAR ELEVATION



LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	

TYPE 2 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

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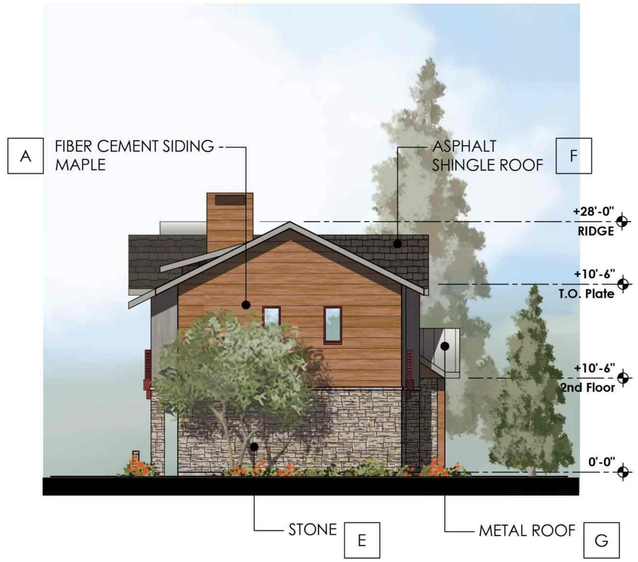
BUILDING TYPE 2 ELEVATIONS

A3.2.2

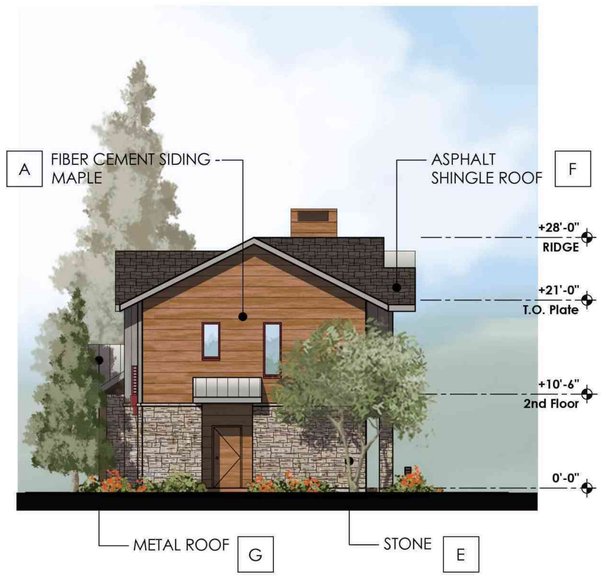


RIGHT ELEVATION

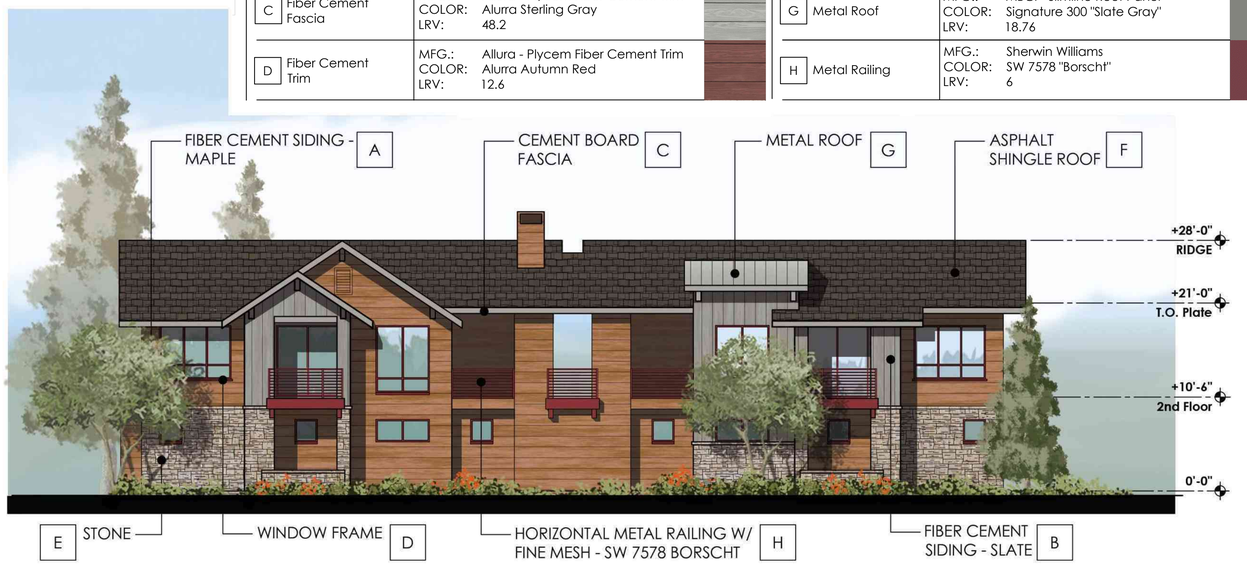
FRONT ELEVATION

COLOR SCHEDULE

LOCATION	COLOR	SWATCH
A Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	



LEFT ELEVATION



REAR ELEVATION

TYPE 3 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES

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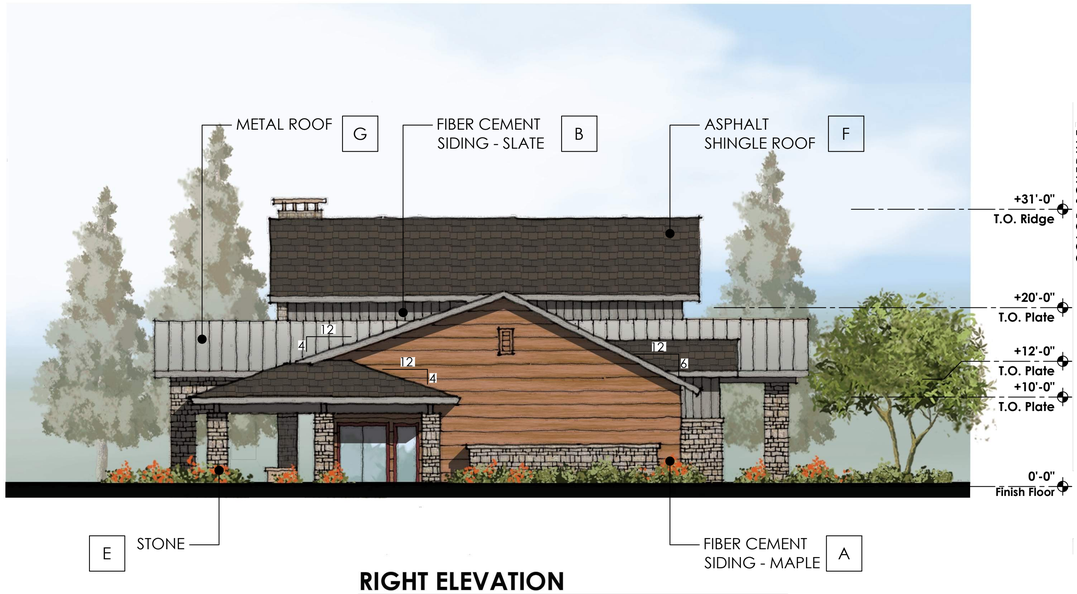
BUILDING TYPE 3 ELEVATIONS

A3.3.1

FRONT ELEVATION



RIGHT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	

CLUBHOUSE ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

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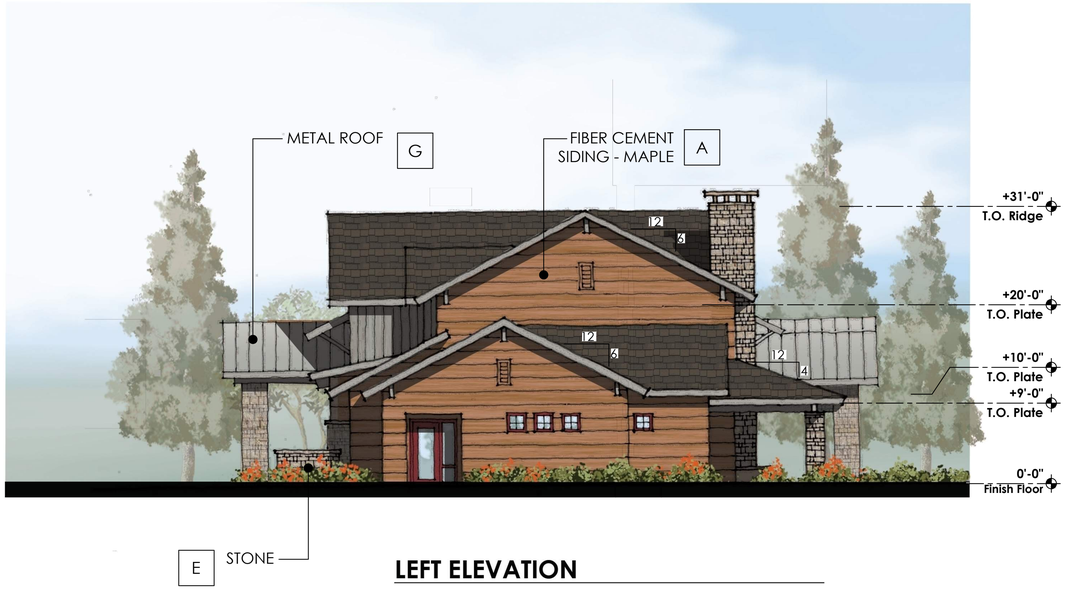
DATA PHASE
09-22-2022
SITE PLAN REVIEW SUBMITTAL

Proj Mgr.
Dwn By:

CLUBHOUSE ELEVATIONS

A3.4.1

REAR ELEVATION



LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
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E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	

CLUBHOUSE ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES

8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

SEAL

REGISTERED ARCHITECT
CERTIFICATE NO.
13467
GARY D. TODD
09/22/22
Date Signed
ARIZONA U.S.A.

CONTACT
TODD + ASSOCIATES
CRITICAL THINKING / CREATIVE DESIGN

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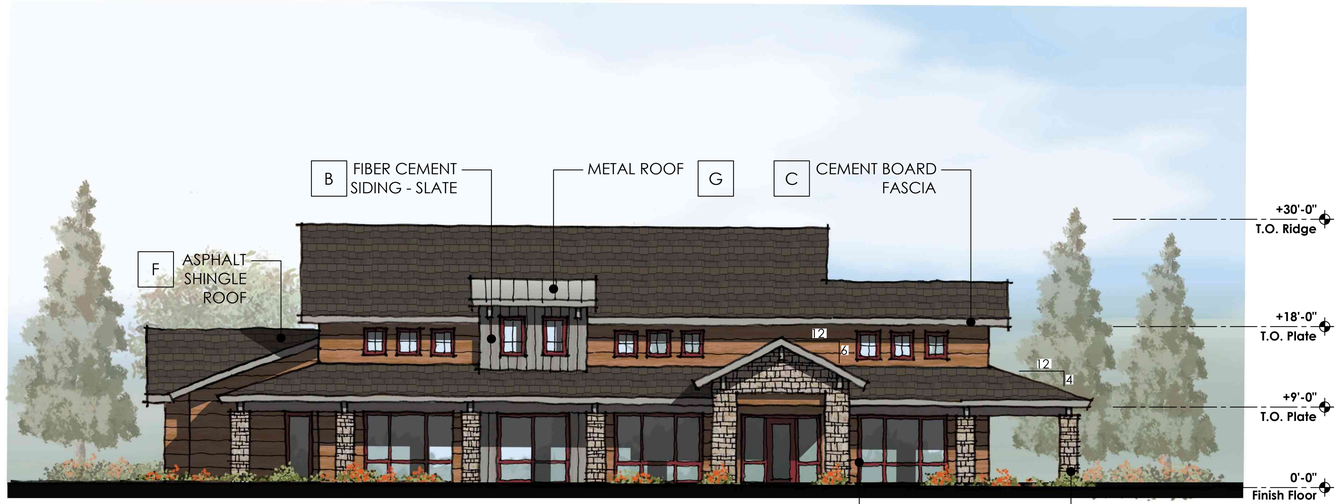
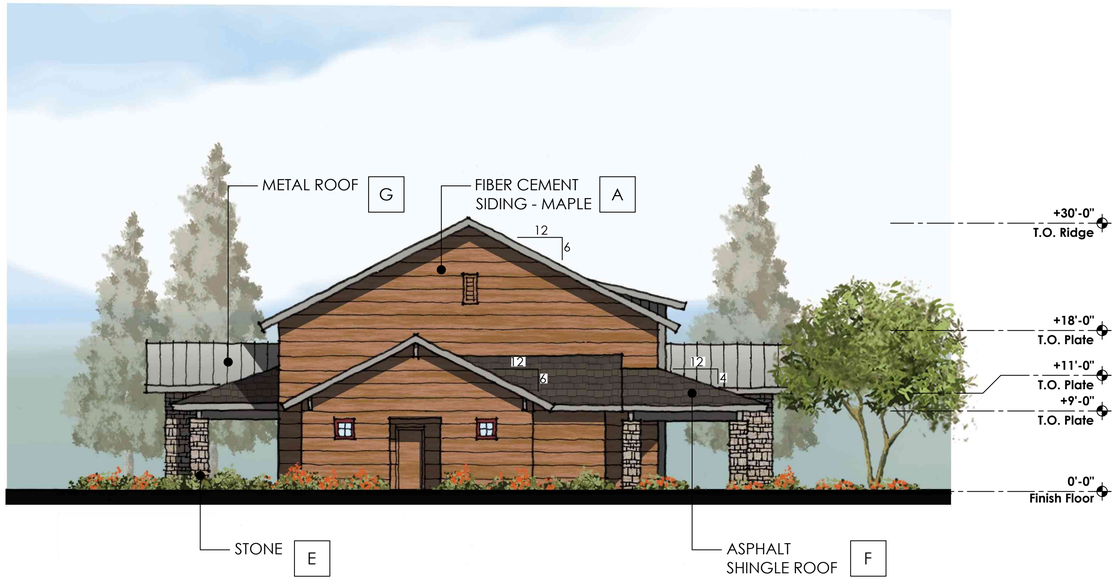
CLUBHOUSE ELEVATIONS

A3.4.2



FRONT ELEVATION



RIGHT ELEVATION

COLOR SCHEDULE

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FITNESS ELEVATIONS

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SCALE: 1/8" = 1'-0"

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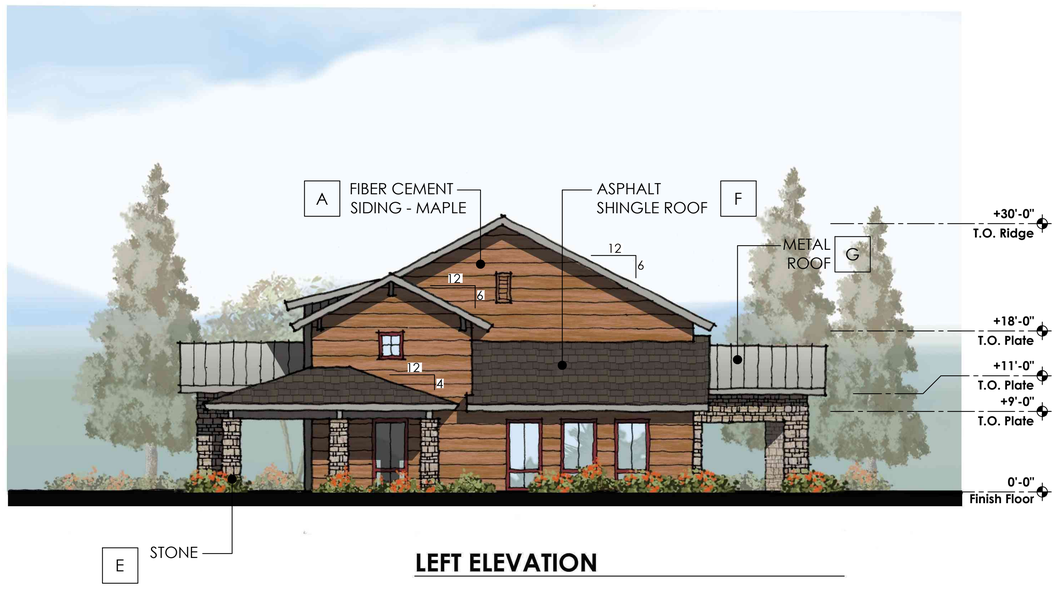
FITNESS ELEVATIONS

A3.5.1

REAR ELEVATION



LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR		SWATCH
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FITNESS ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

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DATA

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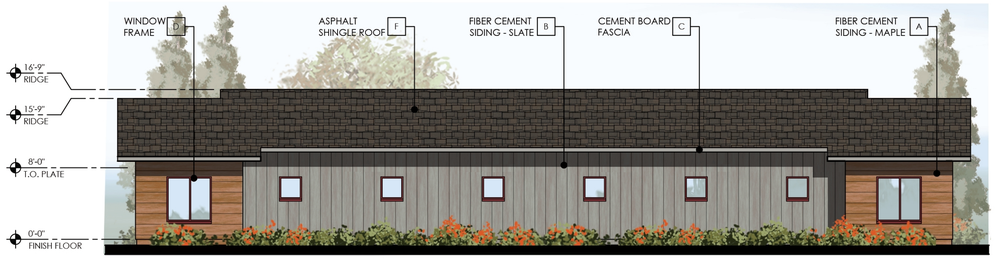
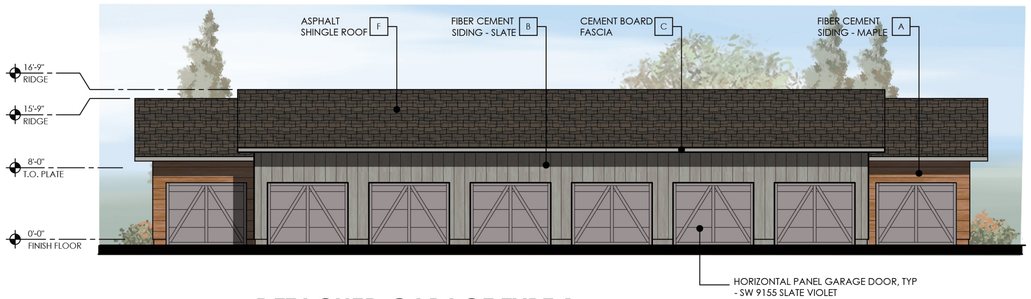
Dwn By:

FITNESS ELEVATIONS

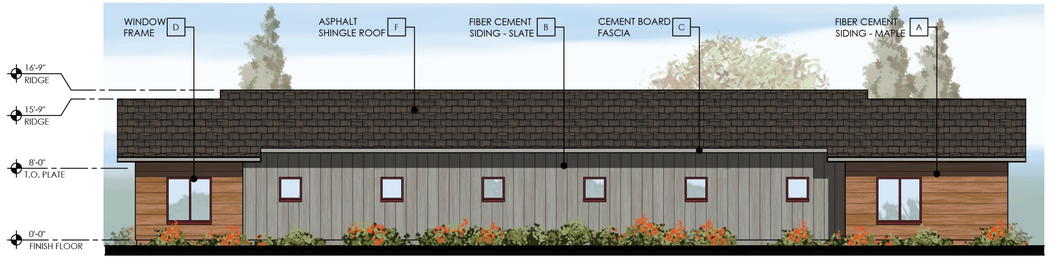
A3.5.2



DETACHED GARAGE TYPE 1
REAR ELEVATION



DETACHED GARAGE TYPE 1
FRONT ELEVATION



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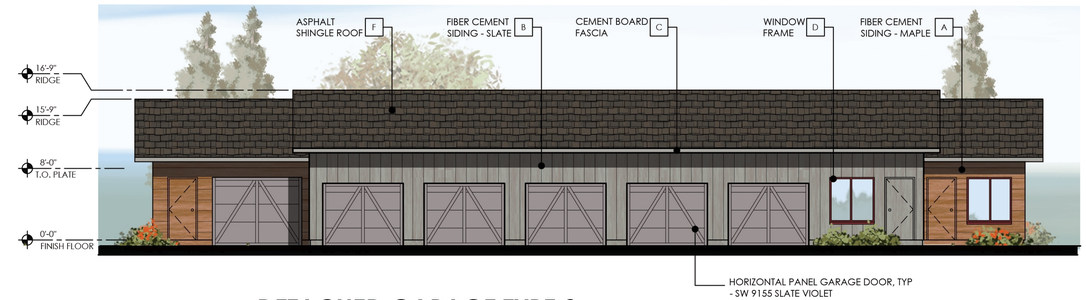
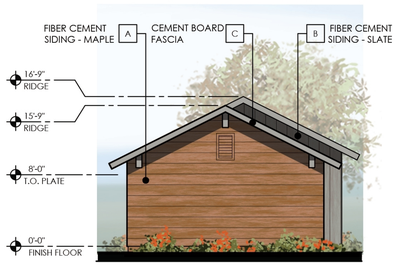
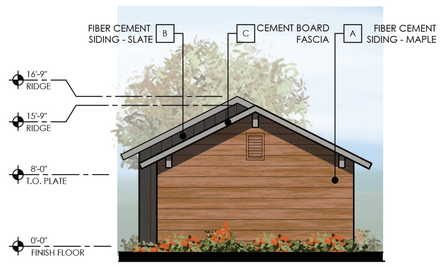
REAR ELEVATION



DETACHED GARAGE TYPE 2
FRONT ELEVATION



DETACHED GARAGE TYPICAL
LEFT ELEVATION



DETACHED GARAGE TYPICAL
RIGHT ELEVATION

COLOR SCHEDULE

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DETACHED GARAGE ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT
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Proj Mgr.
Dwn By:

DETACHED GARAGE ELEVATIONS

A3.6.1

LIV Timber Sky

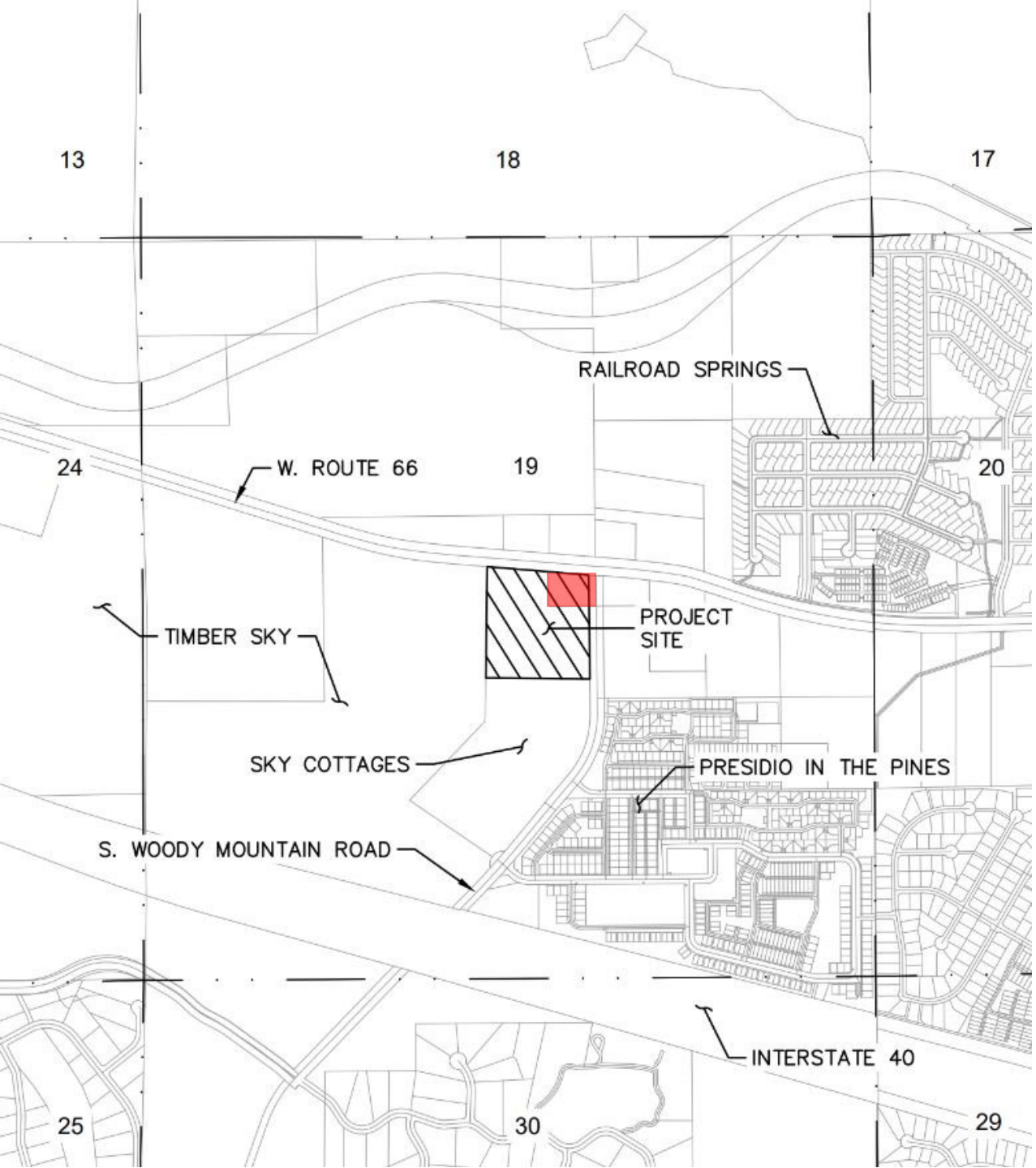
Annexation &
Direct to Ordinance Zoning Map Amendment

Alaxandra Pucciarelli
Current Planning Manager

TEAM FLAGSTAFF
WE MAKE THE CITY BETTER

Request Overview

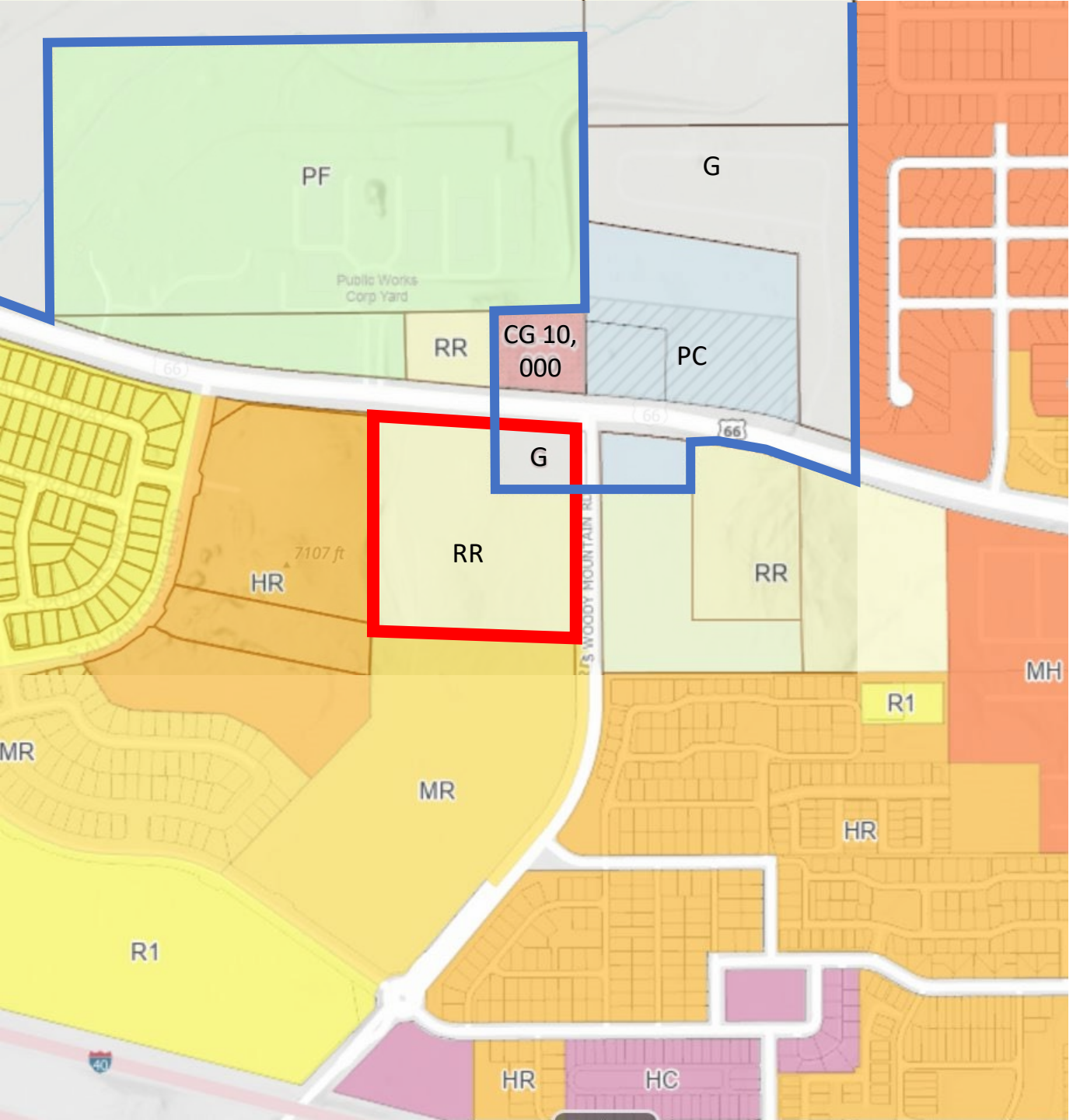
- Vintage Partners and Liv Communities, LLC requests to annex approximately 1.82 acres located at 2445 S. Woody Mountain Road
- Concurrent Direct to Ordinance Zoning Map Amendment request to rezone 13.01 acres from RR with RPO to HR with RPO



Vicinity Map

- 1.82 acres county land
- 13.01 acres undeveloped land

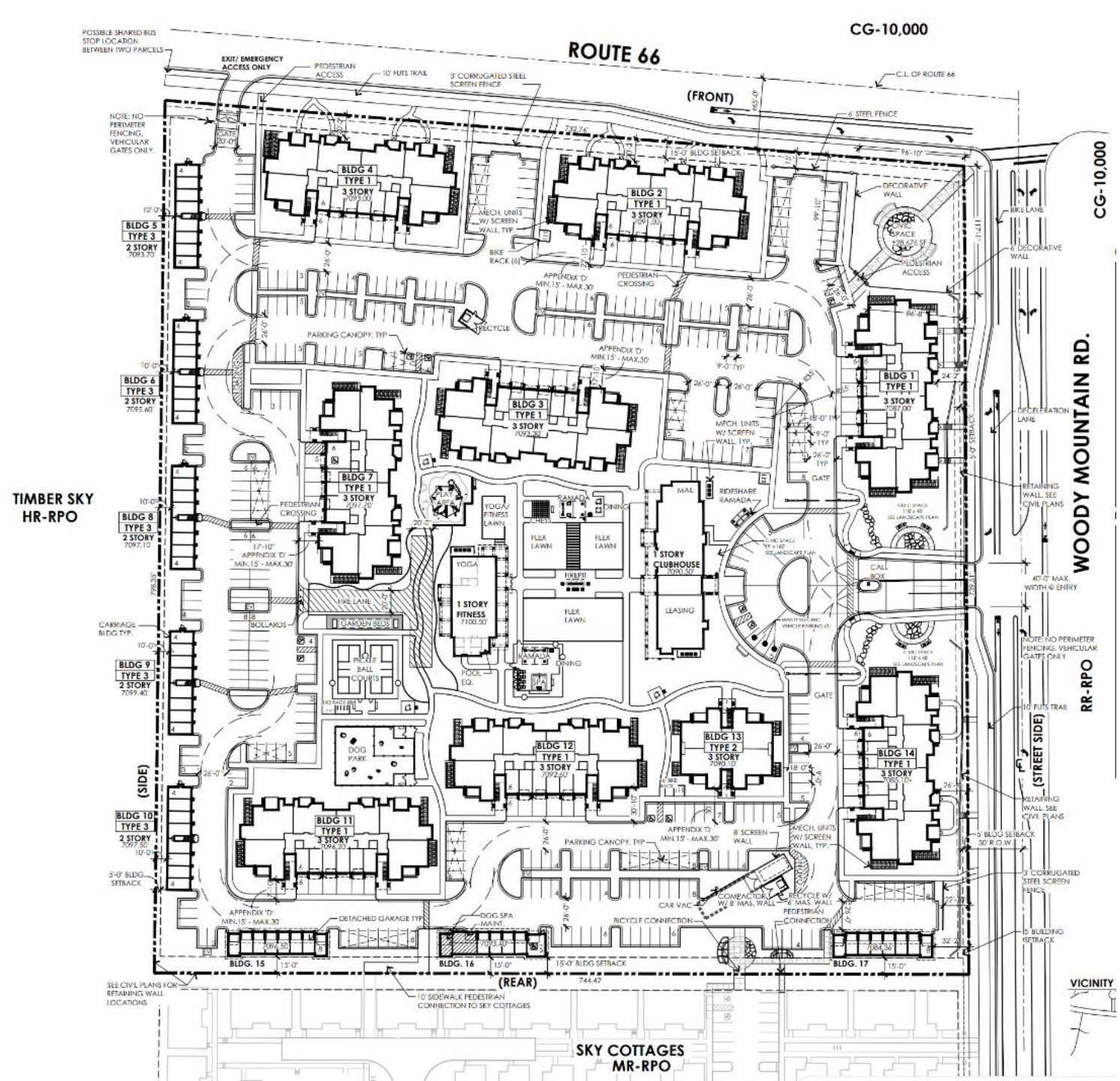
- North: Public Works Yard & River Outfitter
- East: Woody Mountain Campground & Presidio
- South: Sky Cottages
- West: Timber Sky



TEAM FLAGSTAFF
WE MAKE THE CITY BETTER

Adjacent Zoning

- City Rural Residential (RR)
- County General (G)



Proposal:

Zoning:

- RR to HR zone w/ RPO

Development:

- Multi-family Residential
- Parking
- Site Amenities

Proposed Density

Policy:

- HR zone allows 10-29 units per acre in RPO and Urban Activity Center (130 units min. - 377 units max.)
- Regional Plan calls for min. density of 13 units/acre

Proposed:

- 214 total units
- Density of 16.45 units/acre

Proposed Unit Mix

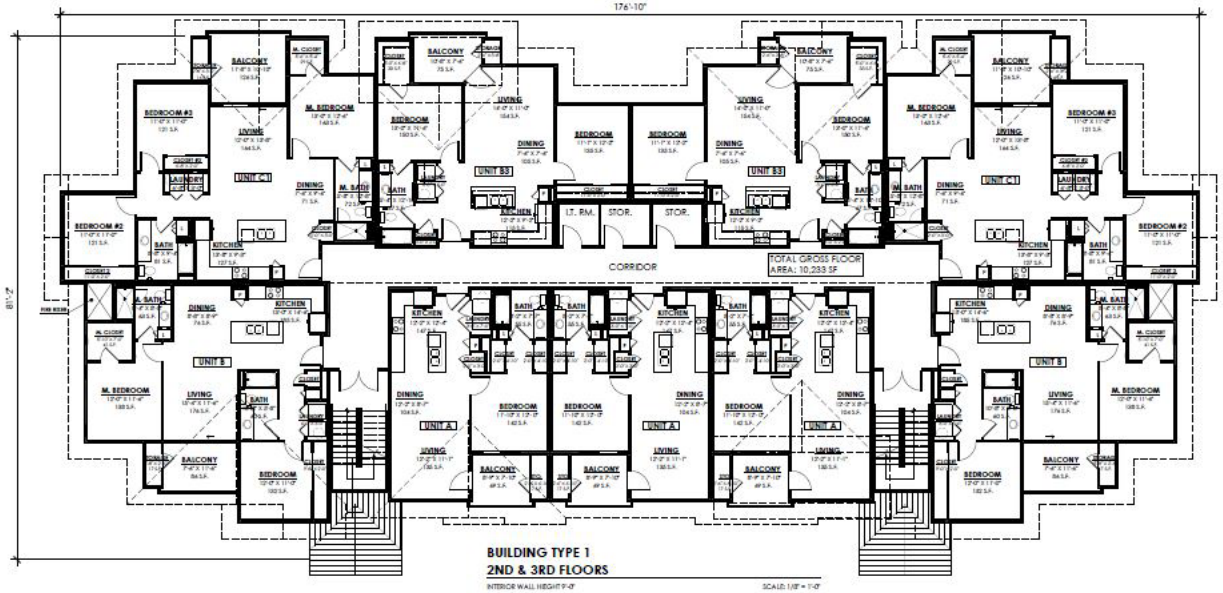
Unit Type	No. Units	Percentage
1 Bed/1 Bath	48	22%
2 Bed/1 Bath	48	22%
2 Bed/2 Bath	70	33%
3 Bed/2 Bath	48	22%
Total	214	

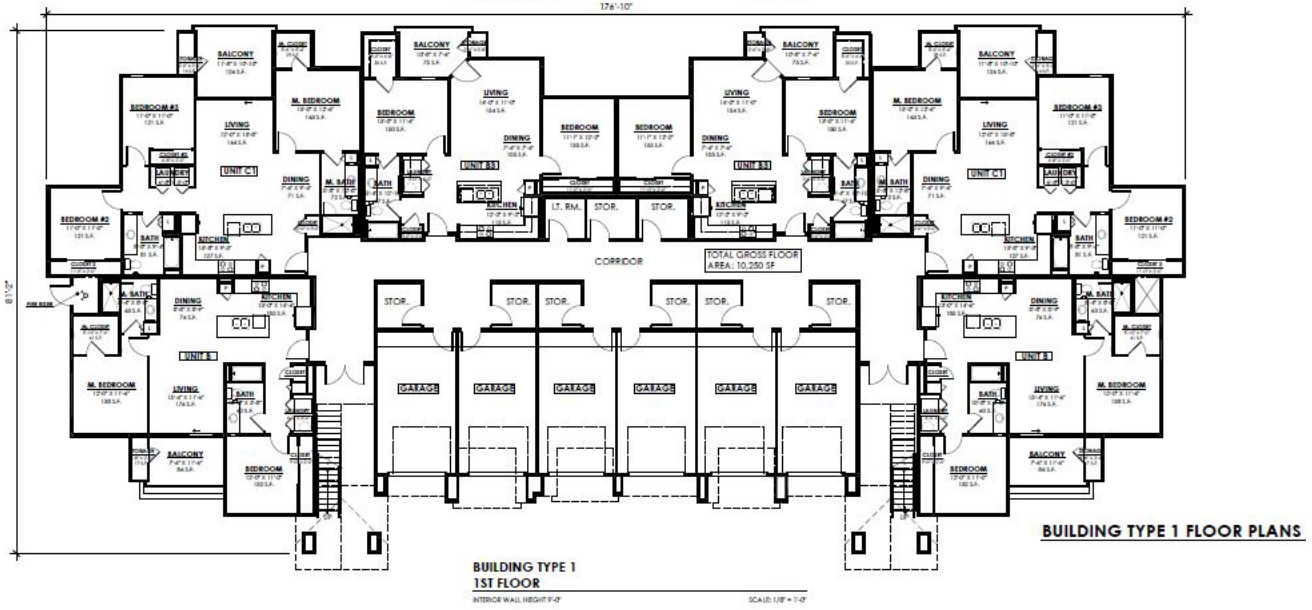
Site Plan Review

Application for Site Plan Review

- Approved on June 30, 2023
- Subject to Direct to Ordinance Zoning Map Amendment

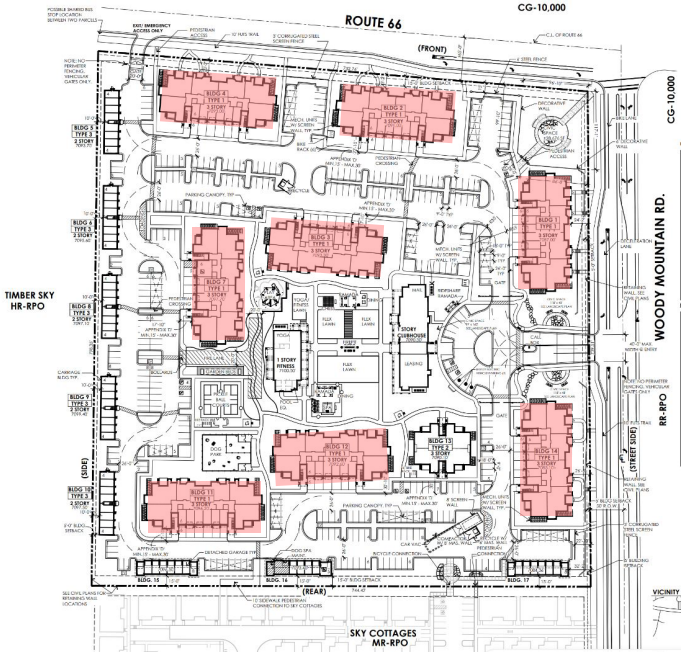
Proposed Floor Plans





Building Type 1:

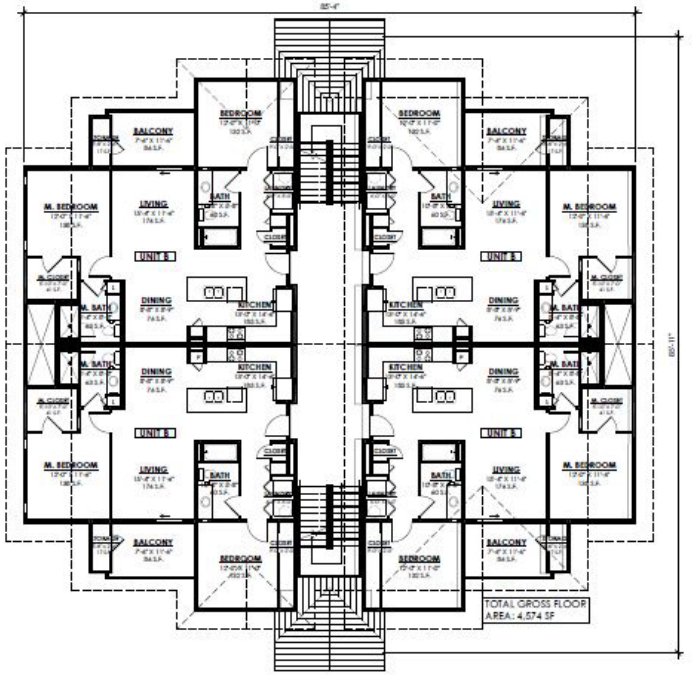
- 3-story
- 6 garages
- 24 units



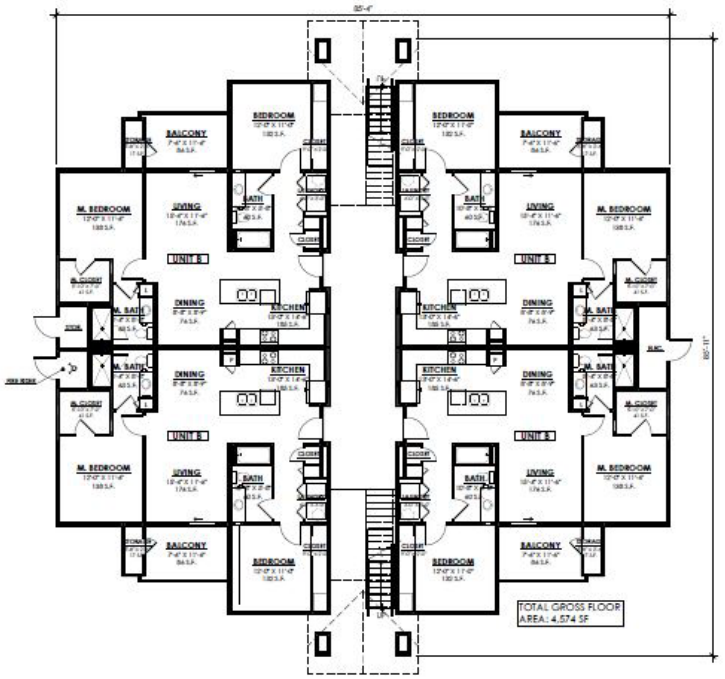
Proposed Elevation

FRONT ELEVATION

Proposed Floor Plans



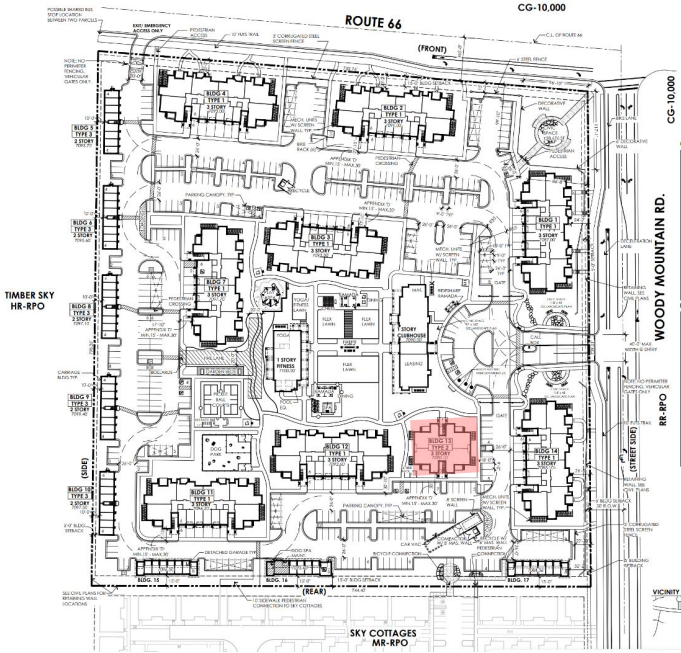
BUILDING TYPE 2
2ND & 3RD FLOORS



BUILDING TYPE 2
1ST FLOOR

Building Type 2:

- 3-story
- 12 units



Proposed Elevation

FRONT ELEVATION

COLOR SCHEDULE

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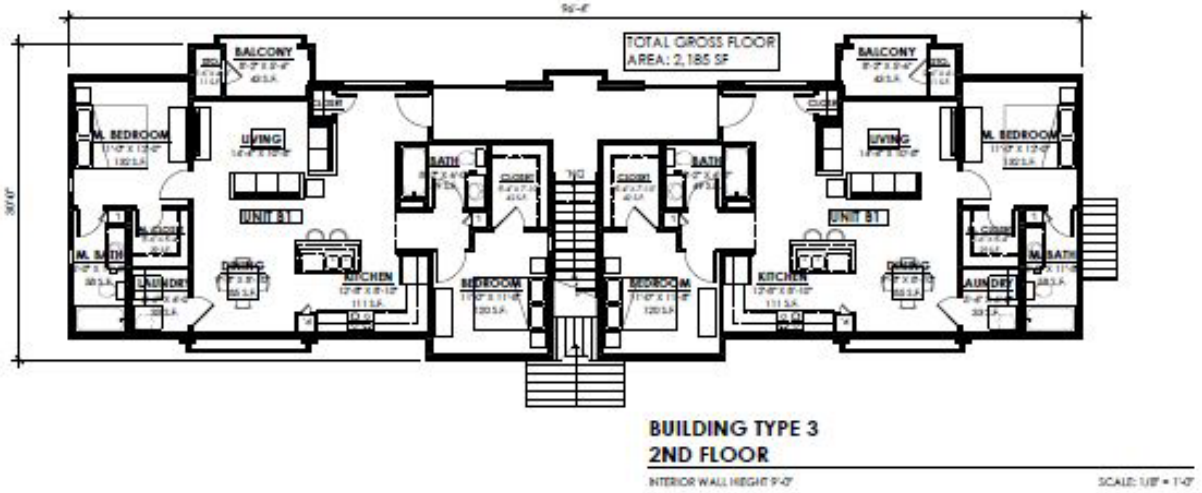
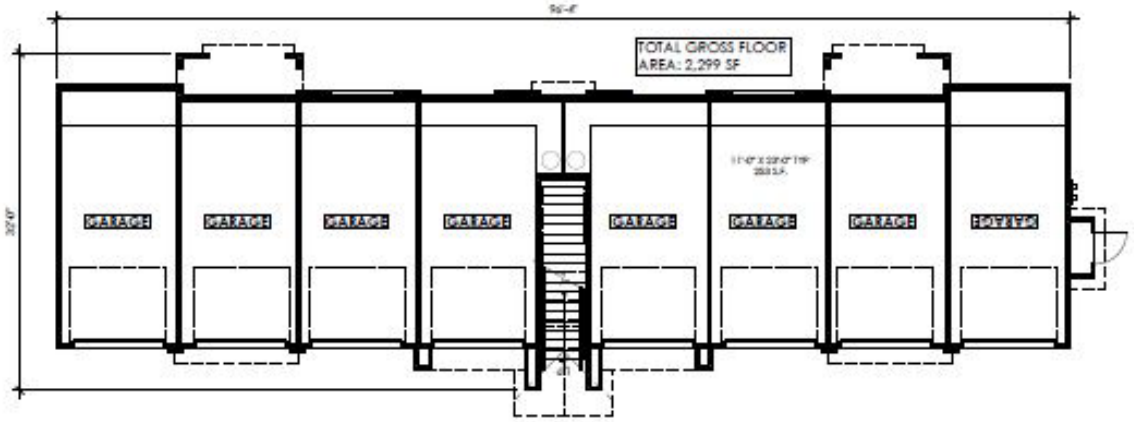


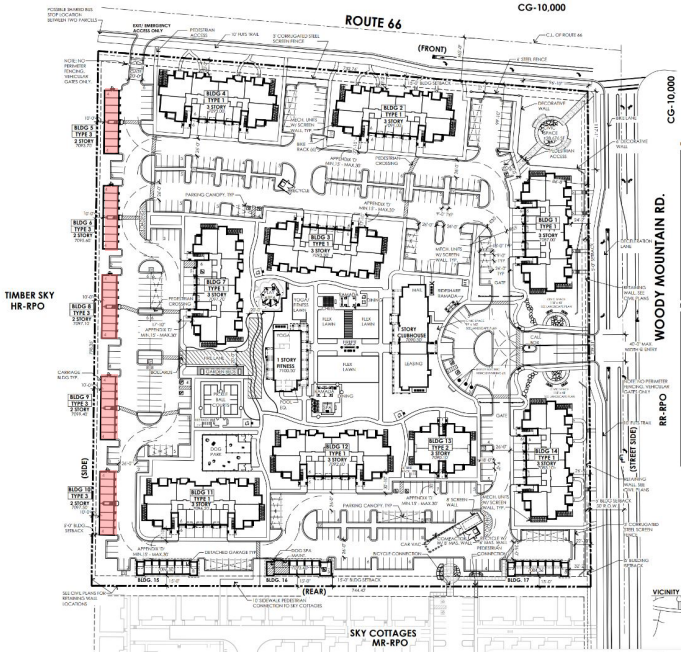
BUILDING TYPE 3
2ND FLOOR



BUILDING TYPE 3
1ST FLOOR

Building Type 3:

- 2-story
- 8 garages
- 2 units



Proposed Elevation

FRONT ELEVATION

Resource Protection

Tree Resources

- Requires 50% of tree canopy to be saved
- Proposal: 52.2%

LEGEND

EXISTING TREE TO BE REMOVED

EXISTING TREE TO BE SAVED

EXISTING TREE WITHIN WOODY MTN ROW OR AFFECTED BY ROW IMPROVEMENTS

NOTES:
1. EXISTING SLOPES ON THE SITE DO NOT EXCEED 16.99%.
2. EXISTING TREES WITHIN ROW OR AFFECTED BY ROW IMPROVEMENTS DO NOT APPLY TO CALCULATION PER CITY OF FLAGSTAFF CITY CODE SECTION 10-50.90.020 (B).
3. SITE IS NOT WITHIN A RURAL OR URBAN FLOODPLAIN.

TOTAL ONSITE TREE RESOURCES					
TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER EXISTING	0	0	1	11	0
POINTS	1	2	4	8	20
SUM OF POINTS	0	0	4	88	0
				SUBTOTAL TREE POINTS=	92

POST-DEVELOPMENT TREES					
TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER EXISTING	0	0	0	6	0
POINTS	1	2	4	8	20
SUM OF POINTS	0	0	0	48	0
				TOTAL TREE POINTS=	92
				TOTAL PRESERVED TREE POINTS=	48
				REQUIRED PRESERVATION RATE=	50%
				PRESERVATION RATE=	52.2%

NOTE:
1) PER CITY OF FLAGSTAFF ZONING CODE SECTION 10-50.90.060 RESIDENTIAL ZONES PRESERVATION RATE IS 50%.

Annexation Request

- Vintage Partners and Liv Communities, LLC requests to annex approximately 1.82 acres located at 2445 S. Woody Mountain Road
- Portion (1.82 acres) of Coconino County Assessor's Parcel Number 112-01-019B (13.01 acres) plus adjacent ROW of S Woody Mountain Road

Annexation Approval Criteria

Required Findings

Annexation requests must meet the required findings for approval:

- Arizona State Statute Compliance
- City of Flagstaff Regional Plan 2030 Compliance
- Public Facilities and Service Impact Analysis

Annexation Approval Criteria

Finding 1: Conformance with Arizona State Statute (ARS 9-471)

- Sets eligibility criteria for properties to annex
- Identifies required processes and procedures for cities and towns to annex real property
- Sets requirements for zoning classification for annexed property

Annexation Approval Criteria

Finding 2: Conformance with Flagstaff Regional Plan 2030 *applicable* goals and policies

The proposed annexation should not be detrimental to the majority of persons or property in the surrounding area or the community in general

Annexation must demonstrate a favorable benefit to the taxpayers of the City

Policy LU.7.2: Require unincorporated properties to be annexed prior to the provision of City services, or that a pre-annexation agreement is executed when deemed appropriate.

Policy WR.4.3: Development requiring public utility services will be located within the Urban Growth Boundary.

Annexation Approval Criteria

Finding 3: Conformance with City Code Division 10-20.90: Annexations (Public Systems Analysis)

- Traffic Analysis/Right of Way Impact; Transportation Improvements
- Water and Sewer Impact Analysis; Water and Sewer Improvements
- Stormwater Analysis; Stormwater Improvements
- Schools
- Fire Protection

Public Systems Analysis

Traffic /Right of Way Impact

Traffic Impact Analysis dated June 9, 2023

- Accepted by City Staff
- Approved by ADOT

Transportation Improvements

- New or extended turn lanes as required
- Extended median on S Woody Mountain Road
- Proportional contribution to traffic signal

Public Systems Analysis

Water and Sewer Impact Analysis

- Water and Sewer Impact Analysis (WSIA) completed December 20, 2013, for a similar land use on the property
- WSIA Waiver issued September 20, 2022

Water and Sewer Improvements

- 12-inch offsite sewer main

Public Systems Analysis

Stormwater Analysis

- Drainage Impact Analysis prepared on August 30, 2022

Stormwater Improvements

- No offsite stormwater improvements required
- Onsite retention for increase runoff volumes

Public Systems Analysis

Schools

The proposed development of the subject site is not anticipated to affect the local school district.

Fire Protection

- Served by Fire Station No. 1, located at 1972 S. Thompson Drive
- Site is within the desired response time

Annex Recommendation

The Planning and Zoning Commission, in accordance with the required findings, forwarded the annexation request to the City Council with a recommendation for approval.

<u>At the September 5, 2023 Council Meeting:</u>
1) Hold public hearing

<u>At the September 19, 2023 Council Meeting:</u>
2) Read Ordinance No. 2023-21 by title only for the first time
3) City Clerk reads Ordinance No. 2023-21 by title only (if approved above)

<u>At the October 3, 2023 Council Meeting:</u>
4) Read Ordinance No. 2023-21 by title only for the final time
5) City Clerk reads Ordinance No. 2023-21 by title only (if approved above)
6) Adopt Ordinance No. 2023-21

ZMA Approval Criteria

Required Findings

Zoning Map Amendment requests must meet the required findings for approval:

- Conformance with the General Plan
- Community Benefits and Public Good
- Site is Physically Suitable

Findings

Finding #1: Conformance with the General Plan

- Future Urban Area type and Neighborhood Urban Activity Center
- Within the Urban Growth Boundary
- Electric-only development, stringent outdoor lighting standards, construction of FUTS along frontages, 214 rental units
- Lack of commercial development, residential development to support future commercial
- Lack of connectivity, condition #2 proposed by staff

Findings

Finding #2: Community Benefits and Public Good

- 214 residential units
- Electric-only development
- FUTS construction
- Required civic space amenity

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:

- The construction of off-site sewer improvements
- The construction of general off-site roadway improvements
- The proportional share of the cost for a future traffic signal
- Materials management
- Electric only development

Citizen Participation

Neighborhood Meetings

- December 12, 2022 and February 6, 2023
  - 18 individuals attended first meeting
  - 4 individuals attended second meeting

Recommendation

The Planning and Zoning Commission, in accordance with the required findings, forwarded the Direct to Ordinance Zoning Map Amendment request to the City Council with a recommendation for approval subject to the following conditions:

1. The subject property must be developed in accordance with the approved site plan and the conditions of approval dated June 30, 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. ~~The site plan shall be amended to include one of the following:~~
   ~~a. Remove the gates from the site plan,~~
   ~~b. Establish a vehicular connection to Sky Cottages, or~~
   ~~c. Add a driveway through the central amenity space~~.

Recommendation

3. All other requirements of the Zoning Code and other City codes, ordinances, and regulations, shall be met by the proposed development.

4. All terms, conditions, and restrictions detailed within the "LIV Timber Sky Development Agreement" must be fully satisfied.

5. In the event the property is rezoned, and the applicant fails to obtain final Civil Plan approval within two (2) years of the effective date of the rezoning ordinance, then the City may schedule a public hearing before the City Council for the purpose of causing the zoning on the Property to revert to the former classification of RR zone in accordance with A.R.S. § 9-462.01.

City Council Meeting - FINAL (AMENDED) **8. C.**

Meeting Date: 10/03/2023

From: Alaxandra Pucciarelli, Current Planning Manager

Information

TITLE:

Consideration and Adoption of Ordinance No. 2023-22: An ordinance of the City Council of the City of Flagstaff, amending the Flagstaff Zoning Map to rezone approximately 13.01 acres of real property generally located at 2445 S Woody Mountain Road from the Rural Residential (RR) zone within the Resource Protection Overlay (RPO) zone to the High Density Residential (HR) zone within the RPO zone, providing for severability, authority for clerical corrections, and establishing and effective date.

STAFF RECOMMENDED ACTION:

1) Read Ordinance No. 2023-22 by title only for the final time
2) City Clerk reads Ordinance No. 2023-22 by title only (if approved above)
3) Adopt Ordinance No. 2023-22

Executive Summary:

A Direct to Ordinance Zoning Map Amendment request from Vintage Partners and Liv Communities, LLC to rezone approximately 13.01 acres located at 2445 S Woody Mountain Road from the Rural Residential (RR) zone within the Resource Protection Overlay (RPO) zone to the High Density Residential (HR) zone within the RPO zone.

Financial Impact:

No financial impacts are anticipated with this request.

Policy Impact:

There are no policy impacts affiliated 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:
  Support social services, community partners, and housing opportunities.
- 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: Provide amenities and activities that support a healthy lifestyle

Carbon Neutrality Plan:

- DD-2 Create inclusive networks for walking and biking that are continuous, attractive, safe,

comprehensive and convenient for people of all ages.
- FS-2 Encourage new buildings to rely on the electric grid as their main energy source.

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 July 7, 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 is requesting a Direct to Ordinance Zoning Map Amendment to rezone approximately 13.01 acres from the RR zone within the RPO to the HR zone within the RPO located at 2445 S Woody Mountain Road, at the southwest corner of the intersection of W Route 66 and S Woody Mountain Road. This amendment would allow the development of a multi-family residential development consisting of 214 dwelling units. The Property is currently undeveloped land with a small number of ponderosa pine trees left after the 2006 Woody Fire burned the site. The property gently slopes from west to east with no significant slope resources.

Key Considerations:

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:

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.

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.

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.

Community Benefits and Considerations:

Community benefits and considerations related to this request are addressed in more detail in the attached Planning & Zoning Commission Staff Report dated July 7, 2023.

Community Involvement:

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 on December 12, 2022 and February 6, 2023. Both meetings were held virtually. Per the meeting sign-in, approximately 18 individuals attended the first meeting and 4 attended the second meeting. A Citizen Participation Report is attached and includes responses to any questions, comments and concerns presented. The meetings included a presentation from the applicant and a question-and-answer session. Comments on the project included the topics of traffic and the lack of commercial development.

To date, staff has not received any comments from the public concerning this development.

Attachments

Ord. 2023-22
Staff Report
Application
Area Context Map
Legal Notice
Parcel Legal Description
Traffic Impact Analysis
WSIA Waiver
Drainage Impact Analysis
Project Narrative
Citizen Participation Report
Civil Plans
Site Plan
Floor Plans
Building Elevations part 1
Building Elevations part 2
Landscape Plan
Draft Development Agreement

ORDINANCE NO. 2023-22

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF FLAGSTAFF, AMENDING THE FLAGSTAFF ZONING MAP TO REZONE APPROXIMATELY 13.01 ACRES OF REAL PROPERTY GENERALLY LOCATED AT 2445 SOUTH WOODY MOUNTAIN ROAD, APN 112-01-712, FROM THE RURAL RESIDENTIAL (RR) ZONE WITH A RESOURCE PROTECTION OVERLAY (RPO) TO THE HIGH DENSITY RESIDENTIAL (HR) ZONE WITH A RESOURCE PROTECTION OVERLAY (RPO); PROVIDING FOR SEVERABILITY, AUTHORITY FOR CLERICAL CORRECTIONS, AND ESTABLISHING AN EFFECTIVE DATE

RECITALS:

WHEREAS, VP 66 & Woody Mountain LLC ("Owner") is the owner of approximately 13.01 acres of real property generally located at 2445 S Woody Mountain Road (the "Property"); and

WHEREAS, the Owner has submitted an Annexation application to annex a portion of the Property into the City of Flagstaff corporate boundaries further described in Ordinance 2023-21; and

WHEREAS, the Owner has applied for a Direct to Ordinance Zoning Map Amendment to rezone approximately 13.01 acres of the 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 the Rural Residential (RR) zone with a Resource Protection Overlay (RPO) to the High Density Residential (HR) zone with a Resource Protection Overlay (RPO) for purposes of developing a 214-unit, multi-family residential development; and

WHEREAS, the Applicant conducted two neighborhood meetings on December 12, 2022 and February 6, 2023 to discuss the proposed Zoning Map Amendment with the surrounding community, as required by Section 10-20.50.40 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 a hearing on July 26, 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, Planning and Zoning Commission has recommended approval of the Direct to Ordinance Zoning Map Amendment application, subject to the conditions, 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 development of the Property will be controlled by the conditions of approval of the Direct to Ordinance Zoning Map Amendment application, the Annexation application, Ordinance No. 2023-22, the Development Agreement, other relevant provisions of the Zoning Code, and various other City codes regulating the development of the Property; 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 General 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) zone within the Resource Protection Overlay (RPO) zone to the High Density Residential (HR) zone within the RPO zone as set forth in Exhibit A, attached hereto and incorporated by reference.

SECTION 6. That the Zoning Map Amendment be further conditioned upon the Applicant's satisfaction of the following conditions:

CONDITIONS:

1. The subject property must be developed in accordance with the approved site plan and the conditions of approval dated June 30, 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. The site plan shall be amended to remove the gates shown on the site plan at the internal drives near the entrance at the clubhouse. The emergency access only gate at W Route 66 shall remain.
3. All other requirements of the Zoning Code and other City codes, ordinances, and regulations, shall be met by the proposed development.
4. All terms, conditions, and restrictions detailed within the "LIV Timber Sky Development Agreement" must be fully satisfied.
5. In the event the property is rezoned, and the applicant fails to obtain final Civil Plan

approval within two (2) years of the effective date of the rezoning ordinance, then the City may schedule a public hearing before the City Council for the purpose of causing the zoning on the Property to revert to the former classification of RR zone in accordance with A.R.S. § 9-462.01

SECTION 7. That this Ordinance shall only take effect if the associated annexation application is approved and the annexation becomes effective.

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 sixty (60) days following adoption by the City Council.

PASSED AND ADOPTED by the City Council of the City of Flagstaff this 3rd day of October, 2023.

_____
MAYOR

ATTEST:

_____
CITY CLERK

APPROVED AS TO FORM:

_____
CITY ATTORNEY

Exhibits:
Legal Description

PLANNING AND DEVELOPMENT SERVICES REPORT
DIRECT TO ORDINANCE ZONING MAP AMENDMENT

PUBLIC HEARING
PZ-21-00271-05

DATE: July 7, 2023
MEETING DATE: July 26, 2023
REPORT BY: Alaxandra Pucciarelli

REQUEST:
A Direct to Ordinance Zoning Map Amendment request from Vintage Partners and Liv Communities, LLC to rezone approximately 13.01 acres located at 2445 S Woody Mountain Road from the Rural Residential (RR) zone within the Resource Protection Overlay (RPO) zone to the High Density Residential (HR) zone within the RPO zone.

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 request to the City Council with a recommendation for approval subject to the following conditions:

1. The subject property must be developed in accordance with the approved site plan and the conditions of approval dated June 30, 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. The site plan shall be amended to include one of the following:
    a. Remove the gates from the site plan,
    b. Establish a vehicular connection to Sky Cottages, or
    c. Add a driveway through the central amenity space.
3. All other requirements of the Zoning Code and other City codes, ordinances, and regulations, shall be met by the proposed development.
4. All terms, conditions, and restrictions detailed within the "LIV Timber Sky Development Agreement" must be fully satisfied.
5. In the event the property is rezoned, and the applicant fails to obtain final Civil Plan approval within two (2) years of the effective date of the rezoning ordinance, then the City may schedule a public hearing before the City Council for the purpose of causing the zoning on the Property to revert to the former classification of RR zone in accordance with A.R.S. § 9-462.01.

PRESENT LAND USE:
The subject site consists of undeveloped land in the RR zone. A separate application requests approximately 1.82 acres in Coconino County jurisdiction and zoned General (G) to be annexed into the City of Flagstaff under the RR zone.

PROPOSED LAND USE:
The applicant proposes the construction of a 214-unit for-rent multi-family residential development, associated parking, landscaping, outdoor amenities, clubhouse, and fitness building.

NEIGHBORHOOD DEVELOPMENT:
See the attached area context map.

North: Public Works Yard owned by the City of Flagstaff in the Public Facility (PF) Zone; Professional River Outfitters in the General Commercial (CG-10,000) Zone under Coconino County jurisdiction.
East: Woody Mountain Campground & RV Park in the RR Zone and the G Zone under Coconino County jurisdiction; Single-Family homes in the HR Zone (Presidio in the Pines).
South: Multi-family development under construction in the Medium Density Residential (MR) Zone (Sky Cottages).
West: Vacant Land in the HR Zone (Timber Sky).

I. Project Introduction

A. Background

The applicant is requesting a Direct to Ordinance Zoning Map Amendment to rezone approximately 13.01 acres from the RR zone within the RPO to the HR zone within the RPO located at 2445 S Woody Mountain Road, at the southwest corner of the intersection of W Route 66 and S Woody Mountain Road. This amendment would allow the development of a multi-family residential development consisting of 214 dwelling units. The Property is currently undeveloped land with a small number of ponderosa pine trees left after the 2006 Woody Fire burned the site. The property gently slopes from west to east with no significant slope resources.

An applicant requesting an amendment to the Zoning map may elect to pursue either a "Direct to Ordinance with a Site Plan" or "Authorization to Rezone with a Concept Zoning Plan" per Section 10-20.50.040.D of the Zoning Code. The Direct to Ordinance with a Site Plan process requires the applicant to submit fully developed site plans with all supporting information required for site plan review concurrently with the Zoning Map amendment application. Once the Zoning Map amendment is approved by the Council, then the applicant can proceed directly to construction plan and building permit review.

B. Proposed Rezoning and Development Plan

The applicant is requesting rezoning approval to permit the development of an apartment complex consisting of 214 units. The development includes nine three-story apartment buildings and five two-story apartment buildings. The unit mix includes the following:

UNIT DESCRIPTION	NO. OF UNITS	PERCENTAGE
1 Bed/1 Bath	48	22%
2 Bed/1 Bath	48	22%
2 Bed/2 Bath	70	33%
3 Bed/2 Bath	48	22%

The minimum density requirement in the HR zone is 10 units per acre and the maximum density allowed is 29 units per acre (within the RPO and the pedestrian shed of an activity center). Based on the entire project area (13.01 acres) between 130 and 377 units are allowed. The proposal is for 214 units. The Regional Plan proposes a minimum density of 13 units per acre in urban activity centers. The overall density of the project is 16.45 units per acre (214 units /13.01 acres).

The project will also include three single-story garage buildings, the 6,500 square-foot single-story clubhouse, and the 3,700 square-foot single-story fitness buildings. Site access will be provided from a driveway on S Woody Mountain Road. Gates will limit the public's access to the site, containing them within the entry area in front of the clubhouse. There is also a gated emergency access only drive at the northwest corner of the site on to W Route 66.

The HR zone permits a maximum building height of 60 feet, or 65 feet for buildings with roofs with a pitch of 6:12 and greater. The highest roofline of the proposed buildings will be approximately 56 feet from existing grade and approximately 50 feet from finished grade.

II. Staff Site Plan Review

On June 30, 2023, 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 application is attached to this report. Should the rezoning be denied, the Site Plan, as submitted, will no longer be approved.

A. Zoning – City of Flagstaff Zoning Code

If this Direct to Ordinance Zoning Map Amendment request is approved, approximately 13.01 acres will be rezoned to the HR zone. Development of the site will be conditioned to the approved site plan and a final development agreement (DA). 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 the overall site layout, open space and civic space areas, resource protection plan, preliminary landscaping, building floor plans, and building elevations.

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. The proposal locates four three-story buildings along the two street frontages, achieving "building forward" design, a zoning code requirement. The applicant proposes to locate the lower buildings along the interior edges of the site. The two-story buildings are placed along the west property line adjacent to the Timber Sky development, and the single-story garage buildings are placed along the south property line adjacent to the Sky Cottages development.

ii. Resource Protection

There is an RPO zone on the subject site. The Zoning Code requires 50% of the tree resources to be saved. The applicant proposes to save 52.2% of the existing tree resources. The few tree resources are located along the south and east edges of the property. Of the 12 trees on site, the project proposes to save 6, meeting the required 50% protection rate.

iii. Open Space & Civic Space

The HR zone requires 15% of the gross lot area to be Common Open Space (Table 10-40-30.030.G). A minimum of 85,053 square feet of open space is required for the proposed residential project. The applicant identifies 91,109 square feet of common open space, which is 16% of the site area. The open space is located at the center of the site, around the clubhouse and fitness buildings. It includes many amenities, such as ramadas, BBQs, outdoor dining, chess/checkerboard, a yoga/fitness lawn, a play structure, garden beds, pickle ball courts, a dog park, a spa, lawns, and a fire pit. The applicant has committed to an electric only development, however the BBQs, pool equipment, and fire pit, may use propane as necessary.

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 general public. A total of 28,351 square feet of civic space is required for this project. The site plan identifies a total of 28,360 square feet of civic space within the residential development. The civic space is located at the northeast corner of the site, at the intersection of W Route 66 and S Woody Mountain Road, as well as around the entry drive. The civic spaces include sidewalks, seat walls/benches, landscaping, and flagstone patios.

iv. Pedestrian and Bicycle Circulation Systems

The applicant will be constructing a ten-foot-wide Flagstaff Urban Trail System (FUTS) along the south side of W Route 66 and the west side of S Woody Mountain Road which will continue the FUTS from Timber Sky to the west and Sky Cottages to the south. The FUTS will be located along side a 5-foot parkway which provides a buffer between pedestrians and bicycle riders and the street, will greatly increase pedestrian safety and comfort.

Throughout the site, the applicant has proposed sidewalks connecting the buildings, parking areas, and common amenities. There are also numerous connections from the site to the FUTS and to the residential development to the south.

The development includes many outdoor amenities and has four bicycle parking areas and a bicycle repair station near the center of the site.

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. This project locates buildings along both street frontages and provides pedestrian connections from the site directly to the FUTS along both W Route 66 and S Woody Mountain Road. The street will be improved to city standards and will include street trees. The proposed development includes a pedestrian connection to the development directly to the south, Sky Cottages.

Scale refers to similar or harmonious proportions, overall height and width, the visual intensity of the development, and the building massing. The tallest, three-story buildings are located along the edges of the development. Sky Cottages consists of single-story buildings and the development locates the single story detached garage structures along the adjacent property line. Development on the parcel to the west is currently proposed to include three-story apartment buildings.

Continuity encompasses patterns of development and scale, but also site development, building forms, texture, materials, details, and colors. The proposed development has a building form with jogs in the façade and steep sloped roofs common in the area.

vi. Landscaping

The applicant has provided a conceptual landscaping plan, showing all landscape areas and plant locations. The conceptual plan generally meets the requirements of parking lot landscaping, street buffer landscaping, building foundation, and peripheral buffer landscaping 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

The subject property is located within Lighting Zone I and is allowed a total of 17,500 lumens per acre. However, the applicant has committed that the total lumen output of all exterior light fixtures installed shall not exceed 180,000 lumens. Outdoor lighting plans are not required in conjunction with a Direct to Ordinance Zoning Map Amendment. A final lighting plan will be reviewed for compliance at the time of building permit submittal.

viii. Parking

Based on the requirements for market rate units and guest parking, 446 spaces are required. There is a total of 384 proposed surface parking spaces; including 267 uncovered surfaces spaces, 70 spaces located under a canopy, and 47 tandem spaces located in front of a garage space. These tandem spaces must be assigned to the same unit as the associated garage space. There is also a total of 108 garage spaces: 47 within the eight Type 1 buildings, 40 within the five type 3 buildings, and 21 within the three garage buildings. The zoning code requires 10 Americans with Disabilities Act (ADA) accessible parking spaces. The applicant proposes 9 accessible surface parking spaces and 2 accessible garage spaces. The project will also be required to provide a minimum of 22 bicycle parking spaces. The site plan indicates 13 bike racks (with 2 spaces each) located at 4 locations on the site, for a total of 26 bicycle parking spaces. The project proposes no reductions in required parking. The zoning code limits parking to 5% above that required without structured parking. This project exceeds the maximum parking allowed by providing garages.

ix. Historic/Cultural Resources

A Cultural Resource Letter Report was not required for the subject property.

B. <u>Public Systems Impact Analysis</u>

i. <u>Traffic/Right-of-Way Impact</u>

The specific objectives of the Traffic Impact Analysis are:

- To determine whether the planned street system in the vicinity of the site is adequate to accommodate the increased traffic that results from the proposed development;

- To recommend additional street improvements or traffic control devices, where necessary, to mitigate the additional site-generated traffic; and,
- To evaluate the internal site circulation and provide recommendations if necessary.

The scope of a Traffic Impact Analysis (TIA) is generally determined by the estimated peak hour trips generated by a development, per the Engineering Standards. The estimated peak hour trips for this development is 89 trips during the AM peak hour and 113 trips during the PM peak hour. According to the Standards, a level one analysis was appropriate. The consulting engineer analyzed the intersections of S Woody Mountain Road and W Route 66, Alvin Clark Blvd and W Route 66, Woody Mountain Road and Patio Del Presidio, Woody Mountain Road and Presidio Drive, Flagstaff Public Works Driveway and W Route 66, and Northwestern Street and W Route 66.

Transportation Improvements

The applicant is responsible for the following roadway improvements, as shown in the TIA dated June 9, 2023, and outlined in the Development Agreement:

- Dedication of any necessary right(s) of way and easement(s) and construction of off-site Roadway Improvements along both S Woody Mountain Road and W Route 66 as shown on Site Plan.
- Extending the northbound left and right-turn lane storage at the intersection of S Woody Mountain Road and W Route 66.
- Extending the median north on S Woody Mountain Road and adding a left-turn lane into the site driveway.
- A new eastbound right turn lane, at the intersection of S Woody Mountain Road and W Route 66.

The report indicates that a traffic signal, located at the intersection of S Woody Mountain Road and W Route 66 is warranted in the future. The developer is obligated to pay the city a proportional share contribution for the cost of the signal, based on the percentage of peak hour traffic volumes, and the estimated cost of a signal.

The project site is not serviced by transit. This area is identified in the Flagstaff Area Regional Land Use and Transportation Plan for future service, but there are no current plans to service the property. Pedestrian and bicycle access to the subject property is limited. There are currently no sidewalks along Route 66 to the east of this project. Bike lanes are provided along S Woody Mountain Road up to W Route 66 but only a striped shoulder exists on Route 66 to Woodlands Village Boulevard. It is possible for both pedestrians and bicycles to gain access through the Presidio in the Pines development into Boulder Pointe and beyond.

ii. Water and Wastewater Impact

A Water and Sewer Impact Analysis (WSIA) was completed by the City on December 20, 2013, for a similar land use on the property. On September 20, 2022, the City issued a letter waiving the requirement for a WSIA as part of this application. 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. Offsite sewer improvements are required and are defined in the wastewater section below. It is the developer's responsibility to design and construct all on-site and connecting water infrastructure per the City of Flagstaff Engineering Standards.

Water

Water to the site will be provided by an 8-inch water main loop within the project site connecting to a new 8-inch PVC water main in the northeast corner of Sky Cottages and to an existing 12-inch DIP water main in Woody Mountain Road.

Wastewater

Sewer will be provided by two 8-inch sewer main branches throughout the project site connecting to a new sewer manhole near the northeast corner of Sky Cottages. The project requires a 12-inch offsite sewer main. The offsite sewer improvements will be completed with the construction of the Sky Cottages.

If the construction of the sewer improvements is not completed by the adjacent development, then the applicant shall be responsible to construct offsite sewer improvements. The sewer improvements must be completed and accepted by the City prior to the issuance of the first Certificate of Occupancy for the Project. The sewer improvements shall be designed and constructed in accordance with the City Engineering Standards and ADEQ requirements.

iii. Stormwater Analysis

The site is located in the South Fork of Clay Wash watershed.

- The north portion of the site drains to the east/northeast to an existing 24-inch CMP at the intersection of S. Woody Mountain Road and W. Route 66. The existing storm drain system along W Route 66 ultimately discharges into the South Fork Clay Wash.
- The south portion of the site drains to the east/southeast to an existing 4-foot by 3-foot concrete box culvert which conveys the stormwater to an existing storm drain system within Presidio in the Pines. This existing storm drain system also discharges into South Fork Clay Wash.

The project's overarching drainage concept is to provide peak flow stormwater discharge mitigation (detention) for the 10-year and 100-year storms, stormwater runoff volume mitigation (LID ROCV), improvement to the water quality of site discharges (LID), and retention of the runoff volume increase for the 100-year 24-hour storm per the approved Drainage Impact Analysis prepared on August 30, 2022. There are no proposed offsite stormwater improvements required with the inclusion of onsite retention for increase runoff volumes.

The Water Quality Improvements consisting of sediment capture components will be incorporated with the use of Low Impact Development (LID) Integrated Management Practices (IMPs) including sediment trapping isolator rows within the sub-surface, extended detention basin (EDB) storage systems . The increase in volume of stormwater runoff discharged from the site will be mitigated by additional retention volume provided within aforementioned EDB's.

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 a Future Urban area type within a Neighborhood Urban Activity Center pedestrian shed. Neighborhood Urban Activity Centers are intended to be smaller, mixed-use centers at intersections of Circulation Corridors and Access Roads with access to surrounding neighborhoods, providing local goods and services, public spaces that serve residents, and providing transit and FUTS access. The City's desired Urban Activity Center Characteristics include a density of 13+ units per acre providing a wide variety of housing choices from medium- to high-density.

Staff has identified the following Goals and Policies as most relevant to the current application proposal. This portion of the analysis is subjective in nature because some policies are given a higher weight in the analysis than others.

ii. <u>Applicable General Plan Goals and Policies</u>

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 within the applicant's narrative attached to this report. The following is a discussion of how the project generally meets or conflicts with goals and policies in each chapter.

a. Environmental Planning & Conservation (Air Quality, Climate Change and Adaptation, Dark Skies, Ecosystem Health, Environmentally Sensitive Lands, Natural Quiet, Soils, and Wildlife)

In accordance with Goal E&C.2 and E&C.3, the applicant is trying to encourage the reduction of greenhouse gas emissions through the provision of electric only development, electric vehicle charging stations, the provision of two electric vehicles for resident use, and the provision of abundant bicycle parking on site. The site, however, is not currently served by transit and has limitations for both bicycle and pedestrian connectivity to commercial supporting services.

In accordance with Goal E&C.5, the applicant will develop the project as an extension of Timber Sky, utilizing stringent outdoor lighting standards to protect our Dark Skies. Given the property's proximity to the Lowell and Naval Observatories, these standards will ensure that Liv Timber Sky will not only meet the City's lighting code but exceed it.

b. Water Resources (Water Sources, Water Demand, Stormwater and Watershed Management, and Water Quality)

As shown on the Regional Plan's Map 21 and referenced in Policy WR.4.3., "Development requiring public utility services will be located within the Urban Growth Boundary." The Property is located within the Urban Growth Boundary. There is existing water infrastructure in Woody Mountain Road that can support the proposed development. The existing sewer infrastructure available to serve the property is at capacity and will need to be increased in size to accommodate the proposed development. These improvements will be required prior to the occupancy of the project. The proposed development complies with the findings of the Drainage Impact Analysis discussed in the Public Systems Impact Analysis section of this report.

c. Efficient Use of Energy Goals and Policies

The Regional Plan Policy E.1.4 promotes cost-effective, energy-efficient technologies and design in all new buildings for residential construction. The applicant has committed to an electric only development with no gas lines within the project. Policy E.1.5 promotes and encourages the expansion and use of energy

efficient modes of transportation. Although the site is not served by public transit, the applicant states that the project promotes energy-efficient alternatives to motorized forms of transportation by including an on-site pedestrian circulation system that favors pedestrian and bike access, as well as connects to the off-site FUTS trail. To further encourage residents' use of bike, the project includes outdoor, uncovered bike racks.

d. Community Character (Scenic Resources and Natural Setting, Heritage Preservation, Community Design, and Arts, Sciences and Education)

Policy CC.1.1 aims to preserve the natural character of the region and includes the preservation of stands of ponderosa pines. The site has few existing trees, but the applicant meets the code requirement to save 50% of the tree resources.

Goal CC.3 aims to preserve, restore, enhance, and reflect the design traditions of Flagstaff. Specifically, policies CC.3.1 and CC.3.2 discuss the desired design of buildings and their relationship to their context. The applicant states that the architectural design contributes to the character of the project and the community. They propose to use materials typical to Flagstaff construction such as pitched roofs, cementitious lap siding and stone veneer and a color palette inspired by the surrounding earth and forest.

Policy CC.4.1 states streetscapes are to be context sensitive and transportation systems are to reflect the desired land use while balancing the needs of all modes for traffic safety and construction and maintenance costs. As part of this development, the applicant will be constructing the FUTS along both W Route 66 and S Woody Mountain Road frontages. The proposed landscaping and limited fencing were designed to blend with that of the adjacent developments.

e. Growth Areas & Land Use (Reinvestment, Greenfield, Urban Area, Suburban Area, Rural Area, Employment Area, Special Planning Area, and Activity Centers)

LIV Timber Sky completes a section of the larger greenfield development in conformance with LU.2. It provides a continuation of the design and character of housing. The proposal provides 16.44 dwelling units per acre, which is more than 13 dwelling units per acre, the minimum density for residential only development in Urban Regional Activity Centers. This creates a pattern where the densest development is oriented to the activity center core in conformance with LU.5, "Encourage compact development principles to achieve efficiencies and open space preservation."

The Westside plan was completed in 1998 and supported the water, sewer, and infrastructure planning for this portion of Flagstaff. In addition, the WSIA confirms the availability of water and sewer capacity for this development in conformance with Goal LU.7, "Provide for public services and infrastructure."

Policy LU.13.9 promotes the use of open space and FUTS trails to provide walking and biking links. The proposed development is on a vacant infill parcel. The development of the infill parcel includes the required civic space, open space, and pedestrian amenities, including the portion of FUTS along both street frontages.

The proposal conforms to some of the policies under Goal LU.18, "Develop well designed activity centers and corridors with a variety of employment, business, shopping, civic engagement, cultural opportunities, and residential choices." It provides for increased density, a variety of housing types, and is appropriate to the neighborhood scale. However, it does conflict with policies related to the connectivity of urban activity centers as described under "Conflicting Land Use and Transportation Policies."

Policy LU.1.11 calls for "collaboration between an applicant, residents, and property owners in existing neighborhoods where redevelopment and reinvestment are proposed so that they are included, engaged, and informed." The applicant has met with residents and property owners. The Citizen Participation Report, required as part of the rezoning application and prepared by the applicant, outlines the specific

details of these efforts.

Policy LU.18.4. "Encourage developers to provide activity centers and corridors with housing of various types and price points, especially attached and multi-family housing." This project will provide 214 new residential units to the community. The applicant has stated that there is no market demand for employment, business, shopping, civic engagement, and cultural opportunity uses on the property.

f. 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)

Policy T.2.1 encourages the design of infrastructure to provide safe and efficient movement of vehicles, bicycles, and pedestrians. The applicant states that the project has been designed to accommodate multiple modes of transportation, both motorized and non-motorized. It includes a connected internal pedestrian and bicycle network, as well as numerous non-motorized off-site connections. Through this on-site network and the proposed off-site connections, multi-modal transportation will be facilitated in a safe, efficient, and convenient manner. The proposed development will construct a portion of the FUTS along the project's two street frontages. These improvements do help promote the use of public transportation and bicycling as stated in Policy T.1.6, "Provide and promote strategies that increase alternate modes of travel and demand for vehicle travel to reduce peak period traffic."

g. Neighborhoods, Housing, and Urban Conservation

Goal NH.3 of the Regional Plan speaks to the desire to make available a variety of housing types at different price points, to provide housing opportunity for all economic sectors. The project does not include affordable housing units; all units will be market rate. The site is adjacent to a proposed affordable rental multi-family development project and a proposed for-sale affordable housing project being done in partnership with Habitat for Humanity and Vintage Partners. The applicant states that the project provides much-needed additional housing opportunities that will allow residents to enjoy "the lifestyle of Timber Sky". To further support the finding that this development can support affordable housing housing in the Region, the City of Flagstaff has declared a housing emergency and the 10-year housing plan recommends that the City needs to provide 7,976 housing units of all types by 2031 to catch up to supply which has lagged demand for more than a decade. The 214 units on this site constitute 3% of that objective and high-density use of this 13-acre site.

Goal NH.4 is that "All housing is safe and sanitary." All the proposed units are designed to meet current building codes, therefore making the community safe for all future residents.

h. Conflicting Land Use and Transportation Policies

While the Regional Plan allows for residential only development of a high density in urban activity centers, the lack of commercial or employment uses within the core of this activity center means that the proposal is not able to conform to LU.6., "Provide for a mix of land uses." While this is a desirable future outcome, the site is on the periphery of Flagstaff and therefore there are not enough surrounding residents to support a substantial commercial use currently and the site is not large enough for a larger employment use. Providing the residential to support retail and other commercial uses will encourage the redevelopment of adjacent sites to meet these future needs.

The applicant states that LIV Timber Sky was intentionally designed to not provide a vehicular connection between the proposed project and Sky Cottages. As a result, the road network connectivity does not meet the Regional Plan goal and policies related to connectivity because the street pattern of 300 ft. by 600 ft. or 600 ft. by 600 ft. block size in the Table of Characteristics on pages IX-35 and IX-36 is not present. Connectivity within the larger Timber Sky neighborhood is not prioritized, and gates, which are incompatible with the connectivity goals of the Regional Plan, are proposed to be installed. This means that the proposed development is in conflict with the following goals and policies:

- Policy LU.10.1. "Prioritize connectivity within all urban neighborhoods and activity centers."
- 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."
- 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.18.18. "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 minimizes dead ends and offset street and driveway connections."
- Policy T.1.3. "Transportation systems are consistent with the place type and needs of people."

The Regional Plan emphasizes connectivity for all transportation modes, increasing access, and developing smaller block sizes in urban activity centers.

Lacking road connectivity to surrounding properties does not conform with Policy T.11.4, "Attempt to equitably distribute the burdens and benefits of transportation investments to all segments of the community." Preventing cut through traffic puts the burden of increased collector and arterial traffic and emissions on the rest of the Flagstaff community to the benefit of residents that live on a particular street or development. It requires surrounding residents to travel longer distances and decreases the air quality of the region by increasing vehicle miles traveled. This is at odds with policy E&C.2, "Reduce greenhouse gas emissions."

No long-term bicycle parking except for outside bicycle racks is being supplied and therefore this site plan does not fully conform to Policy T.6.5, "Provide short- and long-term bicycle parking where bicyclists want to travel." Long-term bicycle parking is typically characterized as being located inside a structure.

The site is not currently served by transit and therefore is not fully in conformance with 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." As previously stated, the Flagstaff Area Regional Land Use and Transportation Plan identifies this area for future service. Bringing more density to this area may increase the viability of funding for a new route to serve this neighborhood. Pedestrian connections were emphasized to make walking to future bus stops comfortable and convenient.

While there are several conflicting policies for this proposal, it can achieve general plan conformance if at least one of the recommended conditions of approval are included in the motion:

- Remove the gates from the site plan,
- Establish a vehicular connection to Sky Cottages, or
- Add a driveway through the central amenity space.

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 does not believe that the proposed project will be detrimental to the public interest, health, safety, convenience, or welfare. Staff also believes that the proposed amendment will add to the public good.

The applicant has identified the following Community Benefits and Public Good:

i. The development provides an additional 214 residential units, helping to address Flagstaff's housing emergency.

ii. All dwelling units will be electric only and no gas lines will be installed within the development.
iii. The developer will contract with an electric car sharing service to provide 2 electric vehicles to residents for a minimum of 3 years.
iv. The developer will provide 2 electric bicycles to residents for a minimum of 3 years.
v. The developer will provide 9 dual-port surface parking charge stations and the garages will have 220v outlets for EV charging.

Staff has also identified the following additional benefits:
vi. The applicant will construct the FUTS trail across both street frontages.
vii. The applicant will provide the required civic space at the street corner and at the entrance to the development.
viii. The proposed project will participate in the Crime Free Multi-Housing Program.
ix. The applicant will provide recycling facilities to residents.

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 IDS team 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 analysis for the site. Any potential impacts will be mitigated by the applicant and any off-site improvements required to serve this development are included in the Development Agreement.

IV. DEVELOPMENT AGREEMENT

A draft development agreement, attached to this report, has been prepared. The primary purpose of this agreement is to set out roles and responsibilities regarding the following (not limited to):

- The construction of off-site sewer improvements
- The construction of general off-site roadway improvements
- The proportional share of the cost for a future traffic signal
- Materials management
- Electric only development

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 on December 12, 2022 and February 6, 2023. Both meetings were held virtually. Per the meeting sign-in, approximately 18 individuals attended the first meeting and 4 attended the second meeting. A Citizen Participation Report is attached and includes responses to any questions, comments and concerns presented. The meetings included a presentation from the applicant and a question-and-answer session. Comments on the project included the topics of traffic and the lack of commercial development.

To date, staff has not received any comments from the public concerning this development.

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 subject to the following conditions:

1. The subject property must be developed in accordance with the approved site plan and the conditions of approval dated June 30, 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. The site plan shall be amended to include one of the following:
    a. Remove the gates from the site plan,
    b. Establish a vehicular connection to Sky Cottages, or
    c. Add a driveway through the central amenity space.
3. All other requirements of the Zoning Code and other City codes, ordinances, and regulations, shall be met by the proposed development.
4. All terms, conditions, and restrictions detailed within the "LIV Timber Sky Development Agreement" must be fully satisfied.
5. In the event the property is rezoned, and the applicant fails to obtain final Civil Plan approval within two (2) years of the effective date of the rezoning ordinance, then the City may schedule a public hearing before the City Council for the purpose of causing the zoning on the Property to revert to the former classification of RR zone in accordance with A.R.S. § 9-462.01.

Attachments:

- Application
- Area Context Map
- Legal Notice
- Parcels' Legal Description
- Traffic Impact Analysis
- Water Sewer Impact Analysis Waiver
- Drainage Impact Analysis
- Project Narrative
- Citizen Participation Report
- Draft Development Agreement
- Approved Site Plan Drawings
    - Civil Plans
    - Site Plan
    - Floor Plans/Unit Plans
    - Building Elevations
    - Landscape Plans

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

Date Received	Application for Direct to Ordinance Zoning Map Amendment	File Number

Project Name			
Liv Timber Sky			
Site Address	**Parcel Number(s)**	**Subdivision & Lot Number**	**Site Acreage**
SWC Route 66 & Woody Mountain Road	112-01-019B (per 2022)	@Liv Subdivision Lot 2	+/- 13.86
Existing Zoning District	**Proposed Zoning District**	**Existing Regional Plan Area and Place Type**	
RR-RPO	HR-RPO	Urban Activity Center & Urban Future	
Existing Use		**Proposed Use**	
Undeveloped		Multi-family Residential	
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)		Phone
VP 66 & Woody Mountain LLC c/o Walter Crutchfield		602 / 459.9929
Mailing Address	**City, State, Zip**	**E-mail**
2502 East Camelback Road, Suite 214, Phoenix, Arizona 85016		walter@vintagevp.com
Applicant(s)		**Phone**
Gammage & Burnham PLC c/o Lindsay C. Schube		602 / 256.4471
Mailing Address	**City, State, Zip**	**E-mail**
40 North Central Avenue, 20th Floor, Phoenix, Arizona 85004		lschube@gblaw.com
Project Representative(s)		**Phone**
Same as Applicant.		
Mailing Address	**City, State, Zip**	**E-mail**

Property Owner Signature (required)	Date	Applicant Signature	Date
	11-17-22		11-17-22

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:

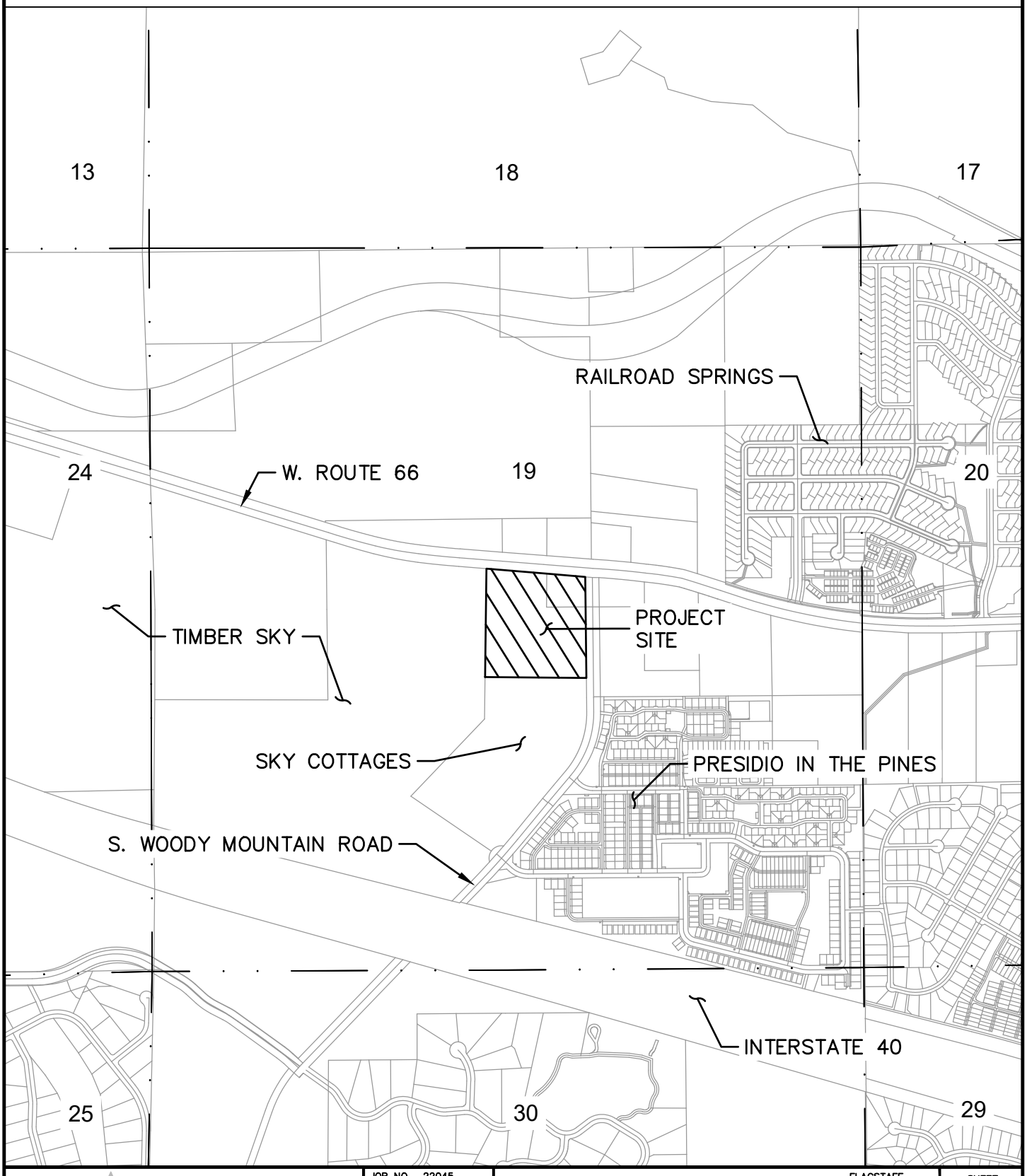
Action by Planning and Zoning Commission:	Action by City Council:
☐ Approved	☐ Approved
☐ Denied	☐ Denied
☐ Continued	☐ Continued

Staff Assignments	Planning	Engineering	Fire	PW/Water Services	Stormwater

PLOTTED: Aug 31, 2022–11:01am

FILE: P:\2022\22045\DRAWINGS\REZONE–ANNEXATION\22045 – VICINITY MAP.DWG KBAYER

LOCATED IN SECTION 19, TOWNSHIP 21 NORTH, RANGE 7 EAST, GILA AND SALT BASE MERIDIAN, COCONINO COUNTY, FLAGSTAFF, ARIZONA



Shephard Wesnitzer, Inc.

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax

www.swiaz.com

JOB NO.	22045
DATE	AUG 22
SCALE	1"=1000'
DRAWN	KMF
DESIGN	KMF
CHECKED	SCI

LIV TIMBER SKY

FLAGSTAFF
ARIZONA

VICINITY MAP

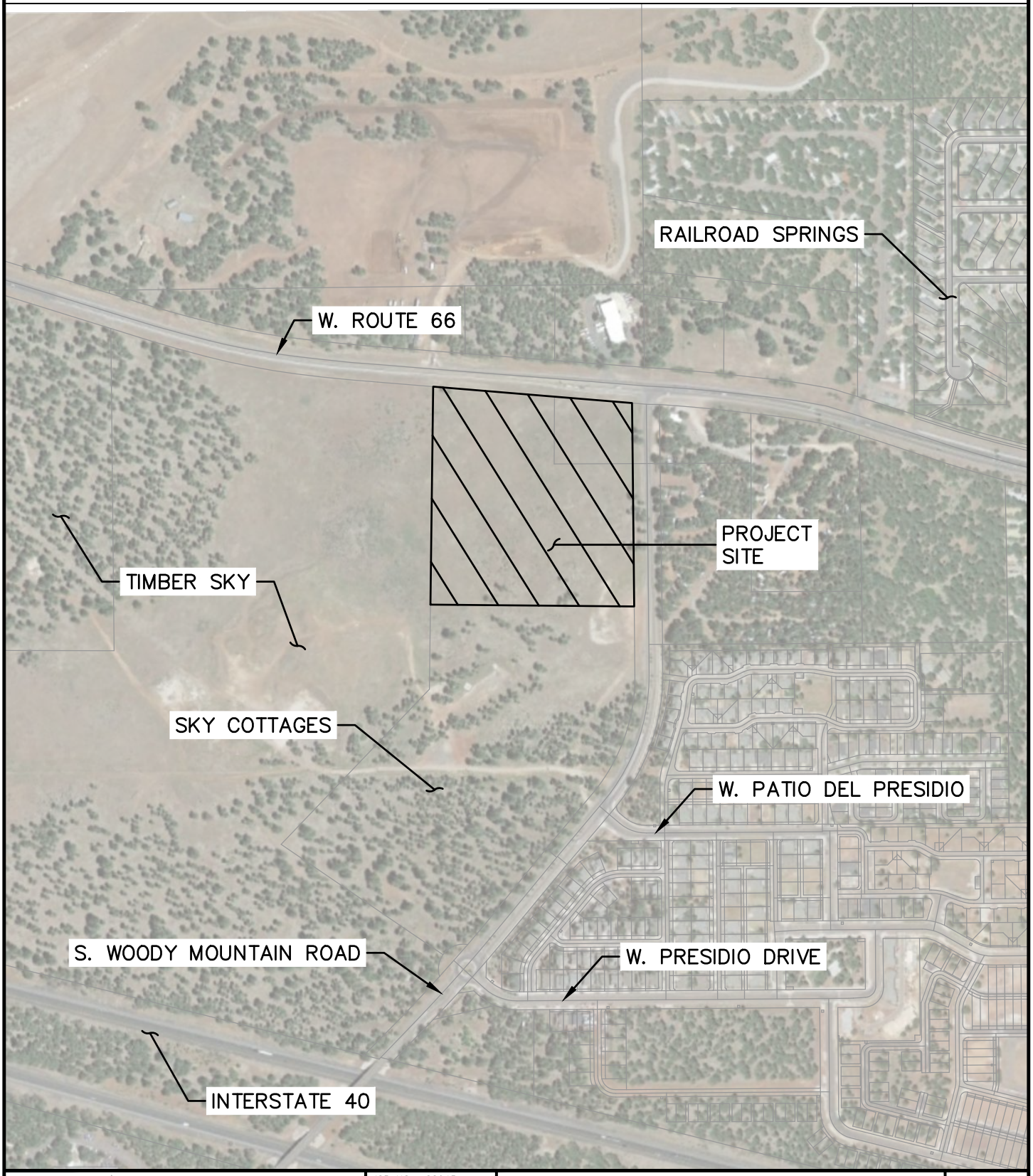
SHEET 1 OF 2

PLOTTED: Aug 31, 2022–11:02am

FILE: P:\2022\22045\DRAWINGS\REZONE–ANNEXATION\22045 – VICINITY MAP.DWG KBAYER

NORTH

LOCATED IN SECTION 19, TOWNSHIP 21 NORTH, RANGE 7 EAST, GILA AND SALT BASE MERIDIAN, COCONINO COUNTY, FLAGSTAFF, ARIZONA



Shephard Wesnitzer, Inc.

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax

www.swiaz.com

JOB NO.	22045
DATE	AUG 22
SCALE	1"=500'
DRAWN	KMF
DESIGN	KMF
CHECKED	SCI

LIV TIMBER SKY

FLAGSTAFF
ARIZONA

VICINITY MAP WITH AERIAL

SHEET 2 OF 2

PLOTTED: Aug 31, 2022 - 2:08pm

CITY OF FLAGSTAFF

COCONINO COUNTY
CITY OF FLAGSTAFF

EXISTING USE: PUBLIC WORKS

COCONINO COUNTY
CITY OF FLAGSTAFF

EXISTING USE: RESIDENTIAL

EXISTING USE: UNDEVELOPED

112-01-019B
EXISTING ZONING: RR/G
PROPOSED ZONING: HR
EXISTING USE: UNDEVELOPED

S. WOODY MOUNTAIN ROAD

COCONINO COUNTY
CITY OF FLAGSTAFF

EXISTING USE: COMMERCIAL
(RV PARK/CAMPGROUND)

EXISTING USE: RESIDENTIAL

TIMBER SKY
SUBDIVISION

EXISTING USE: RESIDENTIAL

EXISTING USE: UNDEVELOPED

112-01-019A
SKY COTTAGES
EXISTING USE: RESIDENTIAL

EXISTING USE: UNDEVELOPED

W PATIO DEL PRESIDIO

PRESIDIO IN THE PINES

EXISTING USE: RESIDENTIAL

W MISSION TIMBER CIRCLE

W PRESIDIO DRIVE

COCONINO COUNTY
CITY OF FLAGSTAFF

INTERSTATE 40 WEST

INTERSTATE 40 EAST

112-34-001B

W MISSION TIMBER CIRCLE

SCALE 1" : 200'
0 100 200

ZONING LEGEND

FLAGSTAFF ZONING

- MH MANUFACTURED HOUSING
- PF PUBLIC FACILITY
- POS PUBLIC OPEN SPACE
- HC HIGHWAY COMMERCIAL
- RD RESEARCH AND DEVELOPMENT
- R1 SINGLE FAMILY RESIDENTIAL
- MR MEDIUM DENSITY RESIDENTIAL
- HR HIGH DENSITY RESIDENTIAL
- RR RURAL RESIDENTIAL
- PROPOSED REZONE PROPERTY

COCONINO ZONING

- G GENERAL
- PC PLANNED COMMUNITY
- CG COMM. GENERAL- 10,000SQFT
- PROPOSED ANNEXATION PROPERTY

CITY OF FLAGSTAFF URBAN ACITIVITY CENTER (UAC)

FLAGSTAFF
ARIZONA

LIV TIMBER SKY

CONTEXT ANALYSIS MAP

JOB NO:	22045
DATE:	AUG 22
SCALE:	AS SHOWN
DRAWN:	KMF
DESIGN:	KMF
CHECKED:	SCI

REVISIONS

NO.	DESCRIPTION	DATE	BY

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

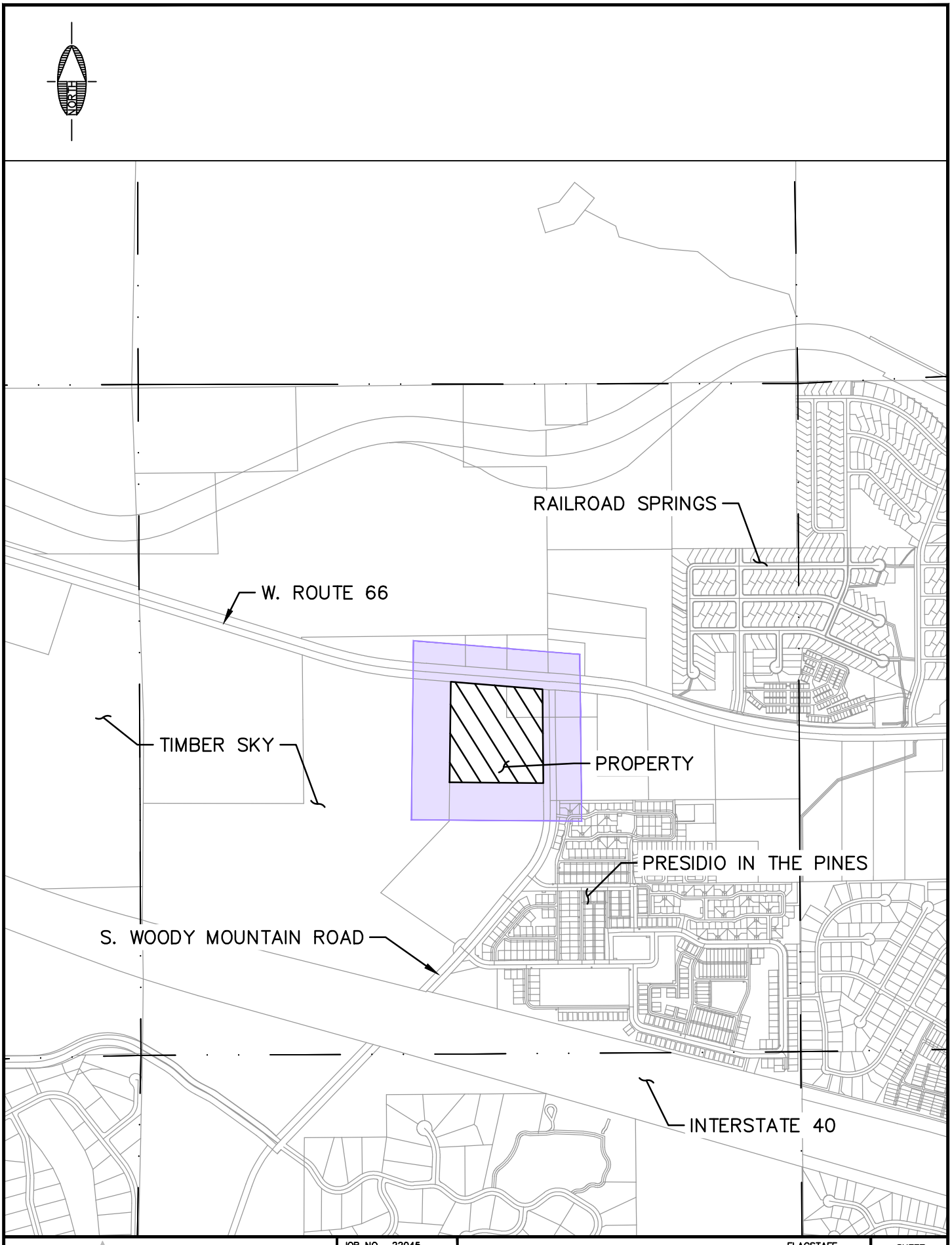
Shephard Wesnitzer, Inc.

Call at least two full working days before you plan to excavate
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:\2022\22045\DRAWINGS\REZONE-ANNEXATION\22045 - CONTEXT ANALYSIS MAP.DWG KBAYER



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Shephard Wesnitzer, Inc.
110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

JOB NO.	22045
DATE	SEP 22
SCALE	AS SHOWN
DRAWN	KMF
DESIGN	KMF
CHECKED	SCI

LIV TIMBER SKY

FLAGSTAFF
ARIZONA

300 FT BUFFER MAP

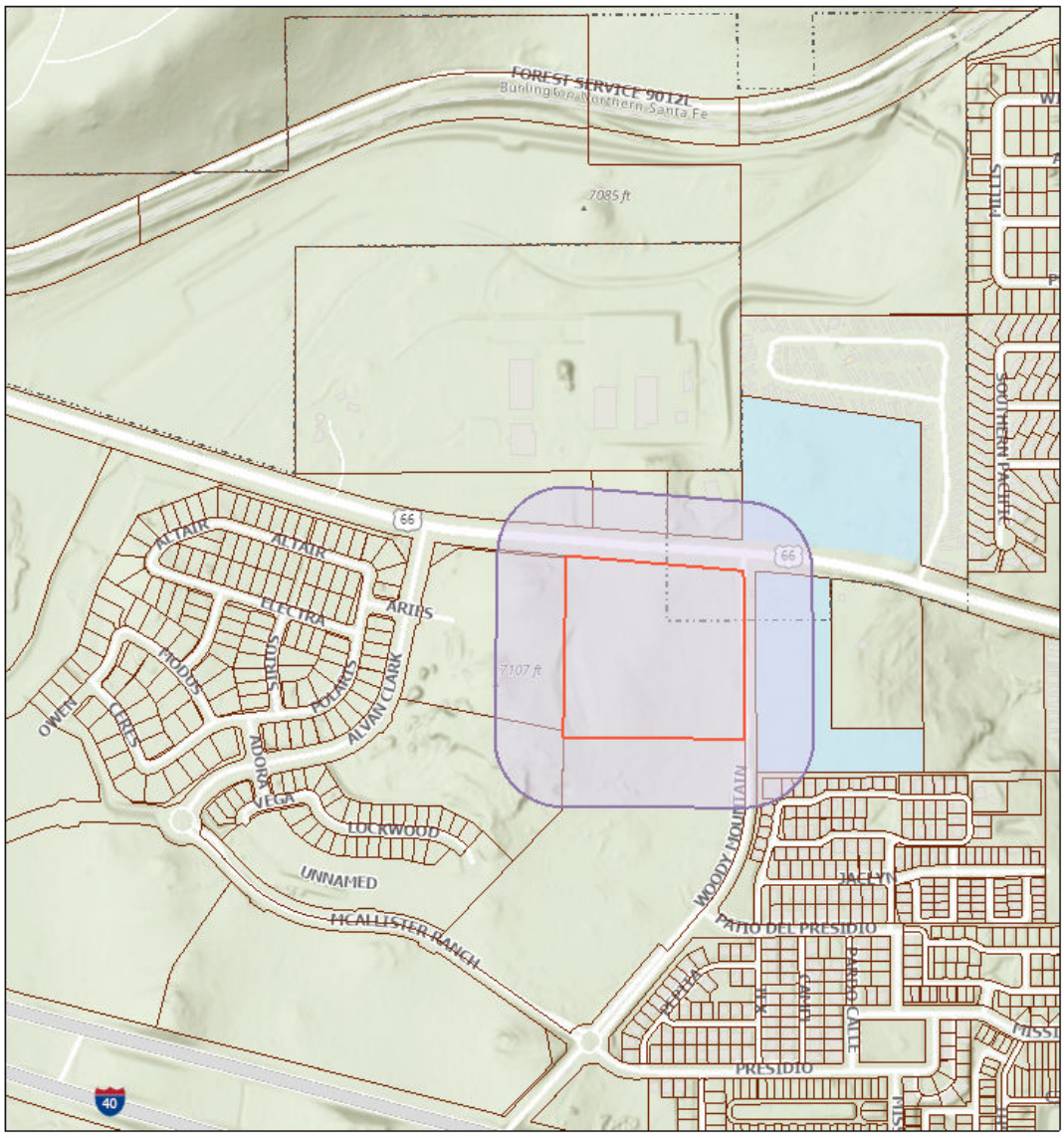
SHEET 1 OF 1

Parcel Report - 300 ft Buffer

Area of Interest (AOI) Information

Area : 1,814,854.54 ft²

Sep 12 2022 15:12:37 Mountain Standard Time



County Boundary

Municipal Boundaries

Coconino County Parcels

County Land Ownership

Private

Private

Private

State Trust

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Esri, NASA, NGA, USGS, FEMA, Esri Community Maps Contributors, City of Flagstaff GIS, Coconino County, County of Yavapai, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau,

Tax Parcel

#	APN	Account #	911 Address	Owner Name	Owner Address
1	11262207	R0281923	2884 W PICO DEL MONTE CIR	VAN HOY GARY R & MARY E	14194 W SMOKETREE DR SURPRISE, AZ 85387
2	11262212A	R0350347	2864 W PICO DEL MONTE CIR	DUNN SHELLY R	2864 W PICO DEL MONTE CIR FLAGSTAFF, AZ 86001
3	11201163	R0352223	*N/A*	TIMBER SKY COMMUNITY ASSOCIATION	2502 E CAMELBACK RD NO 214 PHOENIX, AZ 85016
4	11262210A	R0350346	2868 W PICO DEL MONTE CIR	WALKER WINSTON W & MARY M	13450 N KACHINA DR ORO VALLEY, AZ 85755
5	11262208A	R0350345	2876 W PICO DEL MONTE CIR	ESTERLY BRIAN & ROSETTA	24361 N 73RD ST SCOTTSDALE, AZ 85255
6	11262473B	R0349778	2200 W MISSION TIMBER CIR	PRESIDIO IN THE PINES HOMEOWNER'S ASSOC INC	323 S RIVER RUN RD NO 1 FLAGSTAFF, AZ 86001
7	11201002	R0053125	*N/A*	FLAGSTAFF CITY OF	211 W ASPEN AVE FLAGSTAFF, AZ 86001
8	11201003B	R0053127	2800 W ROUTE 66	HELIN BUILDING LLC	1800 N HEREFORD DR FLAGSTAFF, AZ 86001
9	11201003A	R0053126	2800 W ROUTE 66	HELIN BUILDING LLC	1800 N HEREFORD DR FLAGSTAFF, AZ 86001
10	11201157	R0352217	*N/A*	VP 66 & WOODY MOUNTAIN LLC	2502 E CAMELBACK RD NO 214 PHOENIX, AZ 85016
11	11201701	R0053122	2727 W HWY 66	WOODY MOUNTAIN CAMPGROUND	1425 W FOREST MEADOWS FLAGSTAFF, AZ 86001
12	11201156	R0352216	*N/A*	VP 66 & WOODY MOUNTAIN LLC	2502 E CAMELBACK RD NO 214 PHOENIX, AZ 85016
13	11201019A	R0354976	*N/A*	*N/A*	*N/A*
14	11201019B	R0354977	*N/A*	*N/A*	*N/A*

#	Subdivision	Parcel Area	Area Units	Sale Date	Sale Price	Area(ft²)
1	PRESIDIO IN THE PINES	0.060000	A	2/29/2016, 5:00 PM	323955.000000	173.15
2	PRESIDIO IN THE PINES	4350.000000	F	5/31/2020, 5:00 PM	425000.000000	948.19
3	TIMBER SKY	0.250000	A	*N/A*	*N/A*	2,738.95
4	PRESIDIO IN THE PINES	4394.000000	F	8/31/2020, 5:00 PM	499750.000000	3,314.95
5	PRESIDIO IN THE PINES	7608.000000	F	12/31/2021, 5:00 PM	725000.000000	7,483.78
6	PRESIDIO IN THE PINES	34.320000	A	*N/A*	*N/A*	8,797.35
7	*N/A*	5.000000	A	*N/A*	*N/A*	49,409.75
8	*N/A*	2.210000	A	2/28/2001, 5:00 PM	25000.000000	54,794.74
9	*N/A*	1.990000	A	*N/A*	*N/A*	55,572.35
10	TIMBER SKY	9.660000	A	*N/A*	*N/A*	88,233.04
11	*N/A*	0.000000	*N/A*	*N/A*	*N/A*	215,786.09
12	TIMBER SKY	10.560000	A	*N/A*	*N/A*	221,287.33
13	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	239,769.47
14	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	601,297.85

Permits

#	Permit Number	Area(ft²)
1	PZ-LP-22-001	8,797.35
2	BLD-01-0413	54,794.74
3	PZ-LP-97-002	54,794.74
4	PZ-SP-98-005	54,794.74
5	PZ-VAR-97-003	54,794.74
6	BLD-97-0206	54,794.74
7	BLD-92-1033	215,786.09
8	EQ-12-0036	215,786.09

County Supervisor

#	District #	County Supervisor	Area(ft²)
1	1	Patrice Horstman	1,814,854.54

Subdivision

#	Subdivision	Area(ft²)
1	PRESIDIO IN THE PINES	28,325.95
2	TIMBER SKY FINAL BLOCK	312,259.32

Zoning

#	Zoning Code	Zoning Description	Area(ft²)
1	PC	Planned Community	35,780.50
2	CG-10,000	Comm. Gen.-10,000 sq.ft. min	54,794.74
3	G	General-10AC min.	129,867.50

These data are for
general planning purposes only. No warranty of
accuracy is given or implied.

GAMMAGE & BURNHAM, PLC
ATTORNEYS AT LAW
FORTY NORTH CENTRAL AVENUE
20TH FLOOR
PHOENIX, ARIZONA 85004

TELEPHONE (602) 256-0566
FACSIMILE (602) 256-4475

WRITER'S DIRECT LINE
(602) 256-4471

July 10, 2023

Lindsay C. Schube
lschube@gblaw.com

Dear Neighbor or Resident:

Vintage Partners, in partnership with Liv Communities (collectively, the "Applicant"), is proposing Liv Timber Sky, a new residential community located on the approximate 13.01 acres located at the southwest corner of US 66 & Woody Mountain Road ("Property"). Liv Timber Sky, which is planned as the final extension of the Timber Sky master-planned community, will be a professionally managed, accessible, outdoor-centric, multi-family residential community consisting of 214 residential dwelling units (comprised of 1, 2, and 3-bedroom units) oriented around a centrally located resident amenity, active and passive open spaces, clubhouse, and fitness area. In addition to being highly amenitized, Liv Timber Sky will include trail connections, as well as civic space available for public use. See enclosed Aerial Map, Site Plan, and Perspective Renderings.

Vintage Partners is responsible for developing forward thinking and award-winning projects throughout the State for more than 30 years. One of those projects includes the highly successful Timber Sky master-planned community, located just west of Liv Timber Sky, which is considered the finest Dark Skies compliant master-planned community in the State. More recently, Vintage Partners received approval from the City for Sky Cottages, a highly anticipated residential community located at the northwest corner of Woody Mountain Road & McAllister Ranch Road (just south of Liv Timber Sky). Liv Communities is an experienced multi-family and senior housing residential development and management company that operates communities that promote an eco-friendly, social, and healthy lifestyle for their residents.

In order to facilitate development of Liv Timber Sky, the Applicant filed the following applications with the City of Flagstaff ("City"):

1. **Annexation Case No. PZ-21-00271-04 ("Annexation")** to annex the approximate 1.555 acres located at the immediate southwest corner of US 66 & Woody Mountain Road into the City limit. Upon annexation, the approximate 1.555 acres will be rezoned from Coconino County G—General Zone to City Rural Residential, Resource Protection Overlay (RR—RPO).

2. **Zoning Map Amendment Case No. PZ-21-00271-05 ("Rezone")** to rezone the approximate 13.01 acres located at southwest corner of US 66 & Woody Mountain Road (including the 1.555 acres being annexed in Case No. PZ-21-00271-04) from Rural Residential, Resource Protection Overlay (RR—RPO) to High-Density Residential, Resource Protection Overlay (HR—RPO).

3. **Development Agreement Case No. PZ-21-00271-06 ("Development Agreement")** for the approximate 13.01 acres located at the southwest corner of US 66 & Woody Mountain Road.

The purpose of this correspondence is to inform you that the City has scheduled **Annexation** and **Rezone** for consideration by the Planning & Zoning Commission as follows:

Date:	July 26, 2023
Time:	4:00 PM
Location:	City Council Chambers, 211 West Aspen Avenue

The Planning & Zoning Commission will not consider the **Development Agreement**. You should receive a follow-up public hearing notification letter once this application is scheduled for consideration by the City Council.

The Planning & Zoning Commission serves as an advisory board to the City Council on matters relating to the growth and physical development of the City. The Planning & Zoning Commission will review the Annexation, conduct a public hearing for the Rezone, and may forward recommendations on for the City Council's consideration. Upon receipt of recommendations from the Planning & Zoning Commission, the City Council will conduct a public hearing and take action on the Annexation and Rezone. Any interested person or authorized agent may attend the Planning & Zoning Commission hearing and be heard. For more information on how to participate or submit written comments, please visit https://www.flagstaff.az.gov/2845/Planning-Zoning-Commission.

The City Planner assigned to this case is Ms. Bethan X. Heng. Ms. Heng can be reached at (928) 213-2603 or bethan.heng@flagstaffaz.gov. She can answer your questions regarding the City's review and hearing process and provide the development file materials for your review for all of the above referenced cases.

Should you have any questions or would like more information, please do not hesitate to contact me at **(602) 256-4471** or **lschube@gblaw.com**. Thank you.

Sincerely yours,

GAMMAGE & BURNHAM

By
Lindsay C. Schube

LCS/nas
Enclosures

Affidavit of Sign Posting

Case Number: PZ-21-00271-04 and -05

Project Name: Liv Timber Sky

Applicant Name: Gammage & Burnham PLC

Location: SWC US 66 & Woody Mountain Road

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 10th day of July, 20 23 by:

Bradford Brohard
Notary Public

09/01/2025
My Commission Expires:

BRADFORD B. BROHARD
Notary Public - Arizona
Maricopa Co. / #613849
Expires 09/01/2025

INFO BOX
CITY OF FLAGSTAFF
PUBLIC HEARING:
Planning & Zoning Commission: July 26, 2023 at 4:00 PM (for Zoning Map Amendment)
City Council: TBD (for Zoning Map Amendment, Development Agreement & Annexation)
LOCATION OF HEARINGS:
City Council Chambers, 211 West Aspen Avenue
For instructions on the Planning & Zoning Commission meeting visit the following link:
https:// www.flagstaff.az.gov/2845/Planning-Zoning-Commission.
REQUEST:
ANNEXATION of +/- 1.555 acres. If annexed the +/- 1.555 acres will be designated RR□ RPO. City of Flagstaff case no. PZ-21-00271-04.
ZONING MAP AMENDMENT +/- 13.01 acres (including the +/- 1.555 acres being Annexed) from RR□ RPO to HR□ RPO to allow for a 214 unit multi-family residential development. City of Flagstaff case no. PZ-21-00271-05.
DEVELOPMENT AGREEMENT +/- 13.01 acres. City of Flagstaff case no. PZ-21-00271-06.
GENERAL LOCATION:
Southwest corner of US Route 66 & Woody Mountain Road.
APPLICANT/CONTACT:
Gammage & Burnham PLC c/o Lindsay C. Schube (602) 256-4471
Planning & Development Services Division: c/o Bethan X. Heng (928) 213-2603
Posting Date: July 7, 2023
11800.5.3594421.2

INFO BOX
CAPSTONE HOMES
ORION AT TIMBER SKY
CAPSTONEHOMESAZ.COM
855.928.1100
CITY OF FLAGSTAFF
PUBLIC HEARING:
Planning & Zoning Commission: July 26, 2023 at 4:00 PM (for Zoning Map Amendment)
City Council: TBD (for Zoning Map Amendment, Development Agreement & Annexation)
LOCATION OF HEARINGS:
City Council Chambers, 211 West Aspen Avenue
For instructions on the Planning & Zoning Commission meeting
visit the following link:
https:// www.flagstaff.az.gov/2845/Planning-Zoning-Commission.
REQUEST:
ANNEXATION of +/- 1.555 acres. If annexed the +/- 1.555 acres will be designated
RR RPO. City of Flagstaff case no. PZ-21-00271-04.
ZONING MAP AMENDMENT +/- 13.01 acres (including the +/- 1.555 acres being Annexed)
from RR RPO to HR RPO to allow for a 214 unit multi-family residential development.
City of Flagstaff case no. PZ-21-00271-05.
DEVELOPMENT AGREEMENT +/- 13.01 acres. City of Flagstaff case no.
PZ-21-00271-06.
GENERAL LOCATION:
Southwest corner of US Route 66 & Woody Mountain Road.
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Planning & Development Services Division: c/o Bethan X. Heng (928) 213-2603
Posting Date: July 7, 2023
11800.5.3594421.2

INFO BOX
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RR RPO. City of Flagstaff case no. PZ-21-00271-04.
ZONING MAP AMENDMENT +/- 13.01 acres (including the +/- 1.555 acres being Annexed)
from RR RPO to HR RPO to allow for a 214 unit multi-family residential development.
City of Flagstaff case no. PZ-21-00271-05.
DEVELOPMENT AGREEMENT +/- 13.01 acres. City of Flagstaff case no.
PZ-21-00271-06.
GENERAL LOCATION:
Southwest corner of US Route 66 & Woody Mountain Road.
APPLICANT/CONTACT:
Gammage & Burnham PLC c/o Lindsay C. Schube (602) 256-4471
Planning & Development Services Division: c/o Bethan X. Heng (928) 213-2603
Posting Date: July 그, 2023

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the Flagstaff Planning and Zoning Commission will hold a public hearing for a Zoning Map Amendment on Wednesday, July 26th, 2023, at 4:00 pm at City Hall Council Chambers (211 W Aspen Ave). A virtual option will be provided for this meeting. The Flagstaff City Council Public Hearings dates are to be determined.

A. Explanation of Matters to be Considered:
ZONING MAP AMENDMENT: A proposed amendment to the Official City of Flagstaff Zoning Map to rezone the entirety of the subject property, which is approximately 13.01 acres (this includes the 1.55 acres being annexed in Case No. PZ-21-00271-04), from RR zoning with the RPO to High Density Residential (HR) zoning with the RPO. The purpose of the rezone is to support the requested use of a multi-family development. Reference City of Flagstaff Case No.: PZ-21-00271-05.

Other item for consideration:
ANNEXATION: A proposed annexation of approximately 1.55 acres of land to the City of Flagstaff. The annexation is a request to incorporate the remaining portion of the subject parcel into the City limit. The parcel is owned by Vintage Partners and Woody Mountain LLC. The current Coconino County Zoning is G - General Zone. If this annexation is approved, the property will be designated the Rural Residential (RR) zone and a Resource Protection Overlay (RPO) to facilitate the development of Liv Timber Sky, a 214-unit multi-family development. Reference City of Flagstaff Case No,: PZ-21-00271-04.

B. How to Participate:
Interested parties may file comments in writing regarding the applications or may appear and be heard at the hearing date set forth above. Maps and information regarding the applications are available at the City of Flagstaff, Planning and Development Services Division, 211 West Aspen Avenue.

A virtual public comment platform will be available for all meetings. All meetings will be live-streamed on the city's website. Please see the corresponding agenda for additional information on how to participate virtually. Agendas can be found at this link:

https://www.flagstaff.az.gov/328/Meetings

C. General Description of the Affected Area:
Approximately 1.55 acres (annexation) and 13.01 acres total (rezoning) located at the southwest corner of the intersection of Route 66 and S Woody Mountain Rd, portion of Coconino County Assessor's Parcel Number 112-01-712, SW 1/4 of the NE 1/4 of Section 19, T21N R7E, of the G&SRM, City of Flagstaff, Coconino County, Arizona.

PROPOSED ANNEXATION AND REZONING MAP

ADDRESS:	**2445 S Woody Mountain Road**
APN:	**112-01-712**
ACRES:	**Approximately 1.55 acres (annexation); 13.01 acres total (rezoning) Coconino County**

FOR FURTHER INFORMATION, CONTACT:
Bethan X. Heng
Planning & Development Services
211 West Aspen Avenue
Flagstaff, Arizona 86001
(928) 213-2603
Email: Bethan.Heng@flagstaffaz.gov

Publish: July 8, 2023

EXHIBIT ‘A’

LEGAL DESCRIPTION

APN:112-01-712

A parcel of land being ‘Lot 2’ as shown on the Final Plat for @LIV according to Instrument Number 3955182, Official Records of Coconino County (herein referred to as R1), lying within Section 19, Township 21 North, Range 7 East, of the Gila and Salt River Meridian, Coconino County, Arizona, described as follows:

Commencing at the northwest corner of said parcel, from which a point on the west line of ‘Lot 1’ as shown on R1 bears South 00°42'05" West, 1107.36 feet (Basis of Bearing, R1) and the **TRUE POINT OF BEGINNING;**

Thence along the west line of said parcel, South 00°42'05" West, 798.35 feet to the southwest corner of said parcel;

Thence along the south line of said parcel, South 89°53'03" East, 744.42 feet to the southeast corner of said parcel, said point being in common with the westerly Right-of-Way line of South Woody Mountain Road as shown on R1;

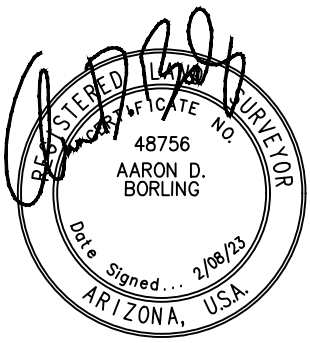
Thence along the east line of said parcel, and said Right-of-Way line, North 00°20'18" West, 739.51 feet to the northeast corner of said parcel, said point being in common with the southerly Right-of-Way line of West Route 66 as shown on R1;

Thence along the northerly line of said parcel, and said Right-of-Way line, North 85°16'49" West, 732.76 feet to the **TRUE POINT OF BEGINNING;**

Containing 13.01 Acres, more or less.

See Exhibit ‘B’ attached hereto and made a part hereof.

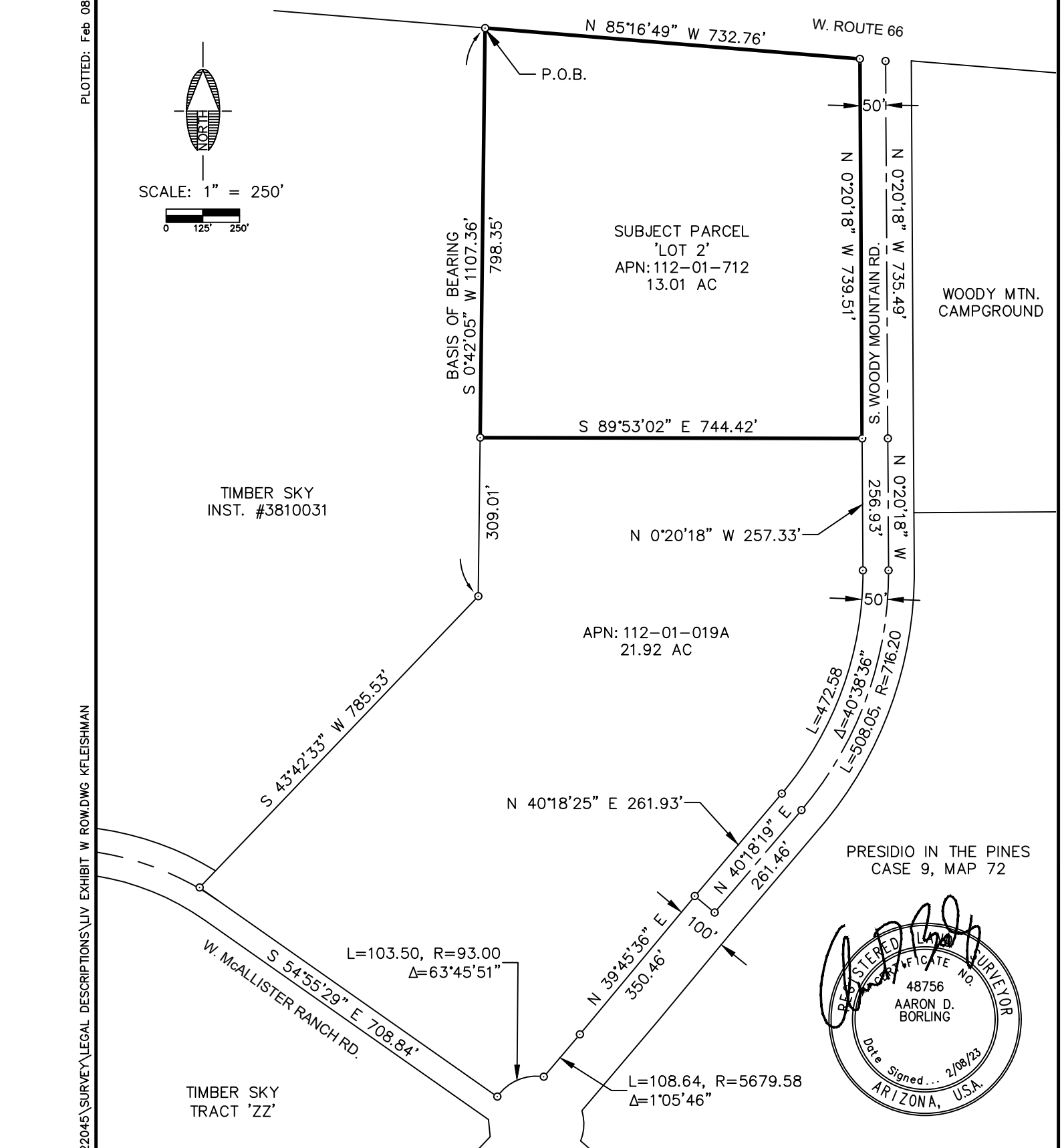
This legal description was prepared by Aaron D. Borling, RLS 48756,
on behalf of and at the request of Shephard-Wesnitzer, Inc., Flagstaff, AZ.



PLOTTED: Feb 08, 2023–12:50pm

EXHIBIT 'B'

A PARCEL OF LAND LOCATED IN SECTION 19, TOWNSHIP 21 NORTH, RANGE 7 EAST,
OF THE GILA AND SALT RIVER MERIDIAN, COCONINO COUNTY, ARIZONA



Shephard Wesnitzer, Inc.
110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

JOB NO.	22045
DATE	FEB 23
SCALE	1"=250'
DRAWN	RPR
DESIGN	
CHECKED	ADB

LIV TIMBER SKY — FLAGSTAFF, ARIZONA

LEGAL EXHIBIT

SHEET 2 OF 2

FILE: P:\2022\22045\SURVEY\LEGAL DESCRIPTIONS\LIV EXHIBIT W ROW.DWG KFLEISHMAN

LIV Timber Sky Project

Traffic Impact Analysis

South of Route 66 and
West of Woody Mountain Road
In Flagstaff, Arizona

June 2023
Project No. 15-537

Prepared For:
VP 66 & Woody Mountain, LLC
2520 E. Camelback Rd., Suite 214
Flagstaff, AZ 86001

For Submittal to:
City of Flagstaff

Prepared By:

CivTech

10605 North Hayden Road Suite 140
Scottsdale, Arizona 85260
480-659-4250

LIV TIMBER SKY PROJECT
TRAFFIC IMPACT ANALYSIS

South of Route 66 and
west of Woody Mountain Road in Flagstaff, Arizona

Prepared for:
VP 66 & Woody Mountain, LLC
2520 East Camelback Road, Suite 214
Phoenix, AZ 85016

For Submittal to:
City of Flagstaff
Arizona Department of Transportation

Prepared By:

CivTech Inc.
10605 North Hayden Road
Suite 140
Scottsdale, Arizona 85260
Office: (480) 659-4250
Fax: (480) 659-0566

June 2023

CivTech Project No. 15-537

TABLE OF CONTENTS

EXECUTIVE SUMMARY **1**
INTRODUCTION **3**
Study Requirements 3
Study Area 3
Horizon Years 3
EXISTING CONDITIONS **5**
Land Use 5
Surrounding Land Use 5
Roadway Network 5
Intersection Configuration 6
Traffic Volumes 6
Capacity Analysis 10
Existing Traffic Signal Warrant Analysis 11
Future Roadway Improvements 16
Crash History 16
PROPOSED DEVELOPMENT **17**
Site Location 17
Site Density/Intensity 17
Site Access 17
Trip Generation 17
Vehicle Trip Distribution And Assignment 19
Future Background Traffic 22
Total Traffic 22
Future Traffic Signal Warrant Analysis 27
Proportional Share 28
TRAFFIC AND IMPROVEMENT ANALYSIS **28**
Turn Lane Warranting And Queue Length Analysis 29
Sight Distance Analysis 33
CONCLUSIONS **33**
LIST OF REFERENCES **35**
TECHNICAL APPENDICES **36**

LIST OF TABLES

Table 1 – Level of Service Criteria for Controlled Intersections 10
Table 2 – Existing Peak Hour Levels of Service 11
Table 3 – Traffic Signal Analysis Summary Warrants 1 – 3 15
Table 4 – Intersection Crash Data Summary 16
Table 5 – Trip Generation 19
Table 6 – Site Trip Distribution 19
Table 7 – Traffic Signal Analysis Summary Warrants 1 – 3 27
Table 8 – Peak Hour Levels of Service 28
Table 9 – Queue Storage Lengths 31
Table 10 – AASHTO Sight Distance Requirements 33

LIST OF FIGURES

Figure 1 – Vicinity Map 4
Figure 2 – Existing Lane Configurations and Stop Controls 8
Figure 3 – Existing Peak Hour Traffic Volumes 9
Figure 4 – Site Plan and Access 18
Figure 5 – Trip Distribution 20
Figure 6 – Site Generated Traffic Volumes 21
Figure 7 – 2024 Background Traffic Volumes 23
Figure 8 – 2027 Background Traffic Volumes 24
Figure 9 – 2024 Total Traffic Volumes 25
Figure 10 – 2027 Total Traffic Volumes 26
Figure 11 – Proposed Lane Configurations and Traffic Control 32

EXECUTIVE SUMMARY

VP 66 & Woody Mountain, LLC proposes the development of 214 multi-family residential units ("Project") located south of Route 66 and west of Woody Mountain Road on property currently undeveloped. The Project includes approximately 13 acres and is proposed to rezone the site from RR-RPO (Rural Residential, Resource Protection Overlay) to HR-RPO (High Density Residential, Resource Protection Overlay). The Project is proposed to have a main access on Woody Mountain Road, with a secondary emergency gated access along Route 66.

CivTech, Inc. has been retained by Liv Communities to produce the traffic impact analysis (TIA) for the proposed development. The purpose of this assessment is to address the traffic and transportation impacts of the proposed development on the surrounding streets and intersections.

The following conclusions and recommendations have been documented in this study:

CONCLUSIONS

GENERAL

- The proposed development is anticipated to generate 1,448 weekday daily trips, 89 trips (21 In/68 Out) during the AM peak hour, and 113 trips (71 In/42 Out) during the PM peak hour.

EXISTING

- The results of the existing conditions analysis indicate that all study intersections operate with acceptable levels of service (LOS C or better).

TRAFFIC SIGNAL WARRANT ANALYSIS

- The results of the volume-based traffic signal warrants analysis indicate that the 2024 and 2027 Build traffic volumes on Woody Mountain Road and Route 66 could be expected to exceed the criteria for Warrants 1, and 2. These traffic signal warrants are met.

PROPORTIONAL SHARE

- A proportional share analysis was completed for the opening year of 2024 in which the traffic signal warrant was met. Proportional share analysis results and email coordination with ADOT discussing the future signal funding at Woody Mountain Road and Route 66 are provided within **Appendix K**.

CAPACITY ANALYSIS

- The results of the Synchro analysis summarized in **Table 8** indicate that all study intersections operate with overall acceptable levels of service (LOS C or better).

QUEUE STORAGE

- The recommended storage lengths are provided for study horizon year 2027 using the total traffic projections.

SIGHT DISTANCE

- Sight visibility for the proposed driveways were calculated using AASHTO methodology considering roadway speed, grade, number of lanes, and other factors.
    - All landscaping that is within the line of sight from the access point to the surrounding public streets should be maintained at a maximum of two feet in height. Trees should be of a single trunk variety with all branches lower than eight feet trimmed. To avoid a "picket fence effect," trees should not be spaces too closely together.

INTRODUCTION

VP 66 & Woody Mountain, LLC proposes the development of 214 multi-family residential dwelling units located south of West Route 66 and west of Woody Mountain Road on property currently undeveloped. The Project includes approximately 13 acres and proposed to rezone the site from RR-RPO (Rural Residential, Resource Protection Overlay) to HR-RPO (High Density Residential, Resource Protection Overlay). The Project is proposed to have a main access on Woody Mountain Road, with a secondary emergency gated access along West Route 66. The vicinity of the site is provided in **Figure 1**.

CivTech, Inc. has been retained by Liv Communities to produce the traffic impact analysis (TIA) for the proposed development. The purpose of this assessment is to address the traffic and transportation impacts of the proposed development on the surrounding streets and intersections.

STUDY REQUIREMENTS

This study analyzes the Project's traffic impact on the surrounding street network. The study has been prepared in conformance with the *City of Flagstaff Transportation Impact Analysis Manual, Section 2* Traffic Levels of Study, May 2017. The specific objectives of the study are:

- To determine whether the planned street system in the vicinity of the site is adequate to accommodate the increased traffic that results from the proposed development.
- To recommend additional street improvements or traffic control devices, where necessary, to mitigate the additional site-generated traffic; and,
- Evaluate the internal site circulation and provide recommendations if necessary.

STUDY AREA

The study area has been defined as including the following intersections:

- Woody Mountain Road & Route 66
- Alvan Clark Boulevard & Route 66
- Woody Mountain Road & Presidio Drive
- Woody Mountain Road & Patio Del Presidio
- Flagstaff Public Works Driveway & Route 66
- Northwestern Street & Route 66

HORIZON YEARS

This study has been conducted to conform to *Transportation Impact Analysis Manual, Section 2* Traffic Levels of Study, prepared by the City of Flagstaff Transportation Department in May 2017. Under Section 240 of the Arizona Department of Transportation (ADOT) *Traffic Engineering Guidelines and Processes* (TGP 240), a Traffic Statement would be sufficient based on the proposed Project. For this analysis, knowing the challenges with the adjacent neighborhoods and the multi-jurisdictional review and through ongoing coordination with the City of Flagstaff and ADOT, a full Category 1 Traffic Impact Analysis will be performed for this development and will evaluate the opening year and a horizon year three (3) years after opening. It is assumed that the complex will open during 2024.

The study intersections and the site accesses will be analyzed for the AM and PM peak hours to determine the recommended intersection lane configuration, intersection stop control, turn lane storage requirements, and roadway typical sections for the development.

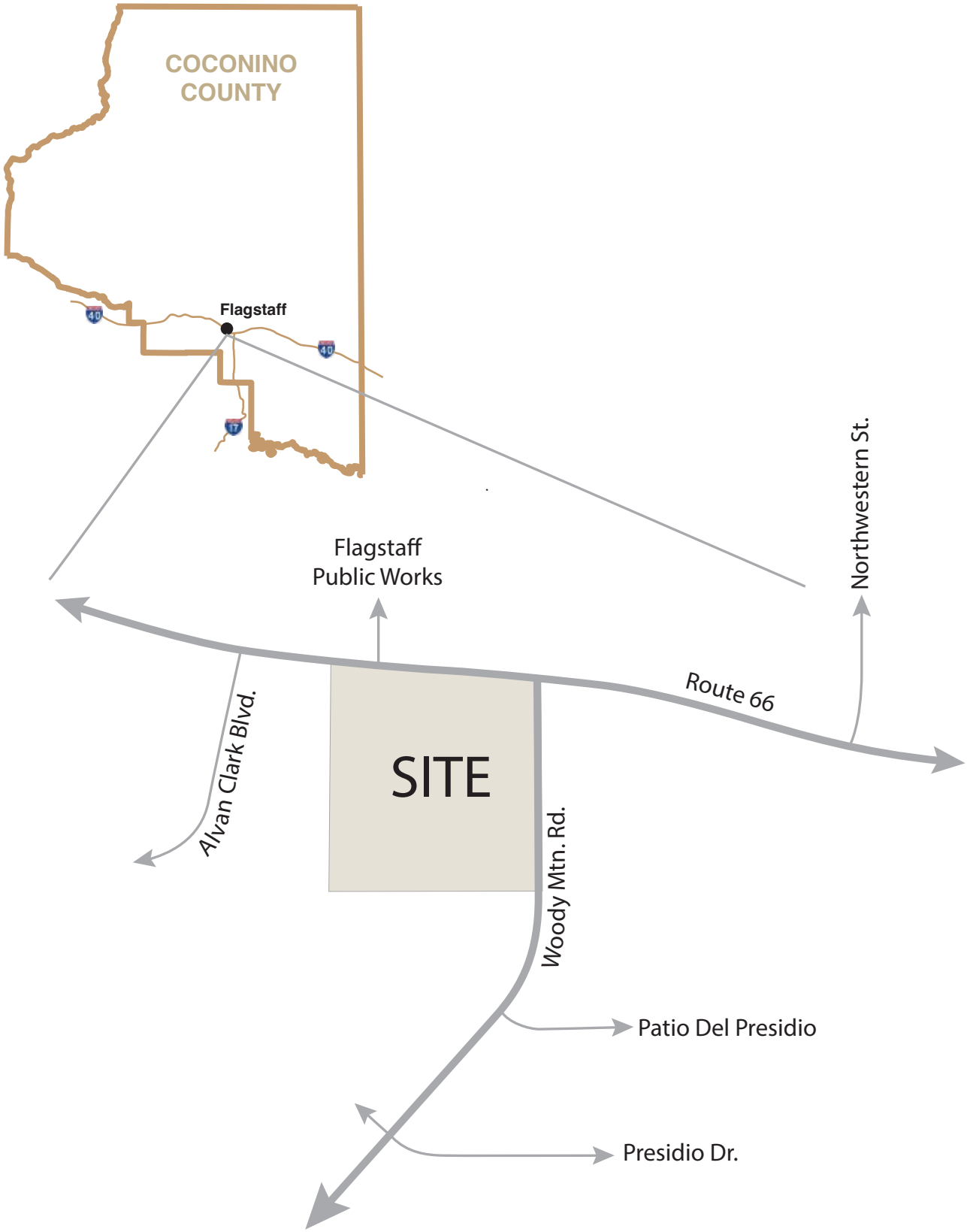


Figure 1: Site Plan and Access

EXISTING CONDITIONS

LAND USE

The existing land is currently used as vacant land.

SURROUNDING LAND USE

Directly surrounding the site is the Timber Sky master-planned community to the west and Sky Cottages to the south. Timber Sky is partially developed and occupied; Sky Cottages is currently under construction. West of the site across Alvan Clark Boulevard is the Orion at Timber Sky by Capstone Homes development and southeast of the site across Woody Mountain Road is the Presidio in The Pines development. Additionally, north of the site across Route 66 is the Flagstaff Public Works Department building. Freeways surrounding the site within two and a half miles include Interstate 40 (I-40) to the south and Interstate 17 (I-17) to the east.

ROADWAY NETWORK

The existing roadway network within the study area includes Alvan Clark Boulevard, Route 66, Woody Mountain Road, and Patio Del Presidio. The roadway classifications were obtained from the City of Flagstaff Roadway Functional Classification Map, 2017.

Alvan Clark Boulevard is north-south two (2) lane minor collector road with one (1) lane and a bike lane in each direction of travel and a raised median. The roadway begins at Route 66 and terminates to the south at McAllister Ranch Road. The posted speed limit is 30 miles per hour (mph) within the vicinity of the site.

Route 66 is an east-west two (2) lane minor arterial street with one (1) through lane and a bike lane in each direction of travel, and a center two-way left-turn lane (TWLTL). The roadway begins to the west at I-40 and extends northeast where it transitions to SR-89. Route 66 provides access to the I-40. The posted speed limit is 45 mph within the vicinity of the site. For a small segment west of Flagstaff Public Works Department Driveway, the posted speed limit is 50 mph in the westbound direction of travel.

Woody Mountain Road is a north-south two (2) lane minor arterial street with one (1) lane in each direction of travel. The roadway begins at Route 66 and transitions to SR-231 approximately 9,000 ft south of the site. Woody Mountain Road provides access to the I-40. The posted speed limit is 40 mph within the vicinity of the site.

Patio Del Presidio is an east-west two (2) lane minor collector road with one (1) lane in each direction of travel. The roadway begins at Woody Mountain Road and transitions to Pollo Circle at Pais Del Norte. There is no posted speed limit within the vicinity of the site.

Presidio Drive is an east-west two (2) lane minor collector road with one (1) lane and a bike lane in each direction of travel. The roadway begins south of Mission Timber Circle and terminates to the west at Woody Mountain Road. The posted speed limit is 25 mph within the vicinity of the site.

Northwestern Drive is a north-south two (2) lane minor collector road with one (1) lane in each direction of travel. The roadway begins to the south at Putnam Drive and terminates to the north at Route 66. The posted speed limit is 25 mph within the vicinity of the site.

INTERSECTION CONFIGURATION

The intersection of **Alvan Clark Boulevard and Route 66** is a "T" intersection with stop control on the northbound approach. The northbound approach consists of a left-turn lane and a right-turn lane. The eastbound approach consists of a through lane, a right-turn lane, and a bike lane. The westbound approach consists of a left-turn lane, a through lane, and a bike lane. A striped crosswalk is provided only at the south leg of the intersection.

The intersection of **Flagstaff Public Works Driveway and Route 66** is a "T" intersection with stop control on the southbound approach. The southbound approach consists of a left-turn lane and a right-turn lane. The eastbound approach consists of a left-turn lane, a through-lane, and a bike lane. The westbound approach consists of a through lane, a right-turn lane, and a bike lane.

The intersection of **Woody Mountain Road and Route 66** is a "T" intersection with stop control on the northbound approach. The northbound approach consists of a left-turn lane and a right-turn lane. The eastbound approach consists of a through lane, a right-turn lane, and a bike lane. The westbound approach consists of a left-turn lane, a through lane, and bike lane.

The intersection of **Woody Mountain Road and Patio Del Presidio** is a "T" intersection with stop control in the westbound approach. The northbound approach consists of a through lane, a right-turn lane, and a bike lane. The southbound approach consists of a left-turn lane, a through lane, and a bike lane. The westbound approach consists of a left-turn lane and a right-turn lane.

The intersection of **Woody Mountain Road and Presidio Drive** is a roundabout intersection with yield control on all approaches. The northbound, eastbound, and westbound approaches consist of one (1) shared through/left/right-turn lane. The southbound approach consists of one (1) shared through/left/right-turn lane and a bike lane. Pedestrian crosswalks are provided on all approaches of the intersection.

The intersection of **Northwestern Street and Route 66** is a "T" intersection with stop control in the southbound approach. The southbound approach consists of one (1) left-turn lane and one (1) right-turn lane. The eastbound approach consists of one (1) left-turn lane and one (1) through lane, and a bike lane. The westbound approach consists of one (1) through lane and one (1) shared through-right turn lane.

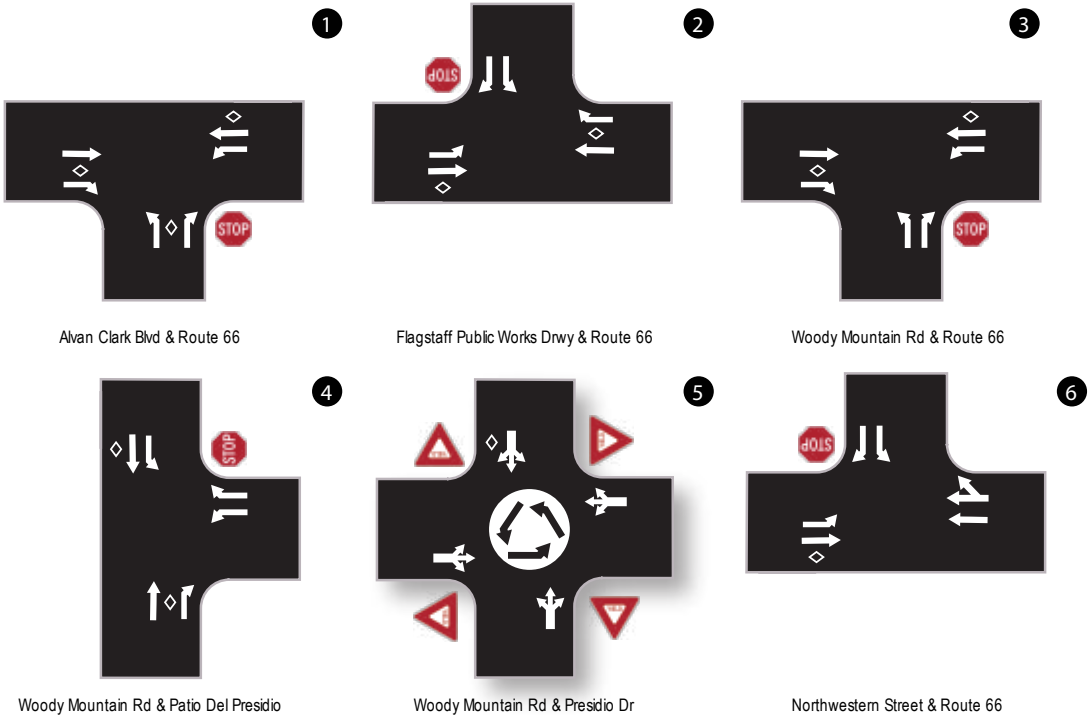
The existing intersection lane configurations and traffic control is illustrated in **Figure 2**.

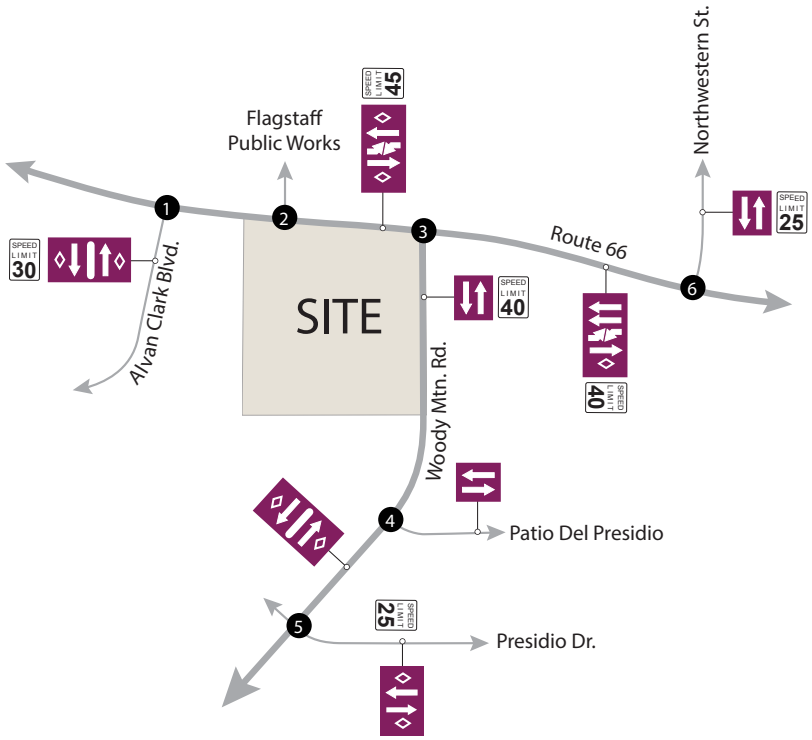
TRAFFIC VOLUMES

CivTech engaged All Traffic Data Services to record traffic volumes at four (4) study intersections within the project vicinity. Peak hour volume turning movement counts were performed from 7:00-9:00 AM and 4:00-6:00 PM on Tuesday, September 27, 2022. Peak hour turning movement counts were conducted at the following study intersections:

- Alvan Clark Boulevard and Route 66
- Flagstaff Public Works Driveway and Route 66
- Woody Mountain Road and Route 66
- Woody Mountain Road and Patio Del Presidio

The existing traffic volumes observed for this study are presented in **Figure 3** for the weekday AM and PM peak hours. Traffic volume data obtained for this study have been included in **Appendix B**.





LEGEND

NORTH

- Thru or Turning Movement
- Two-Way Left Turn-Lane
- Raised Median
- Bike Lane
- Traffic Signal
- Stop Sign
- Speed Limit
- Yield Sign

Figure 2: Existing Lane Configurations and Traffic Controls

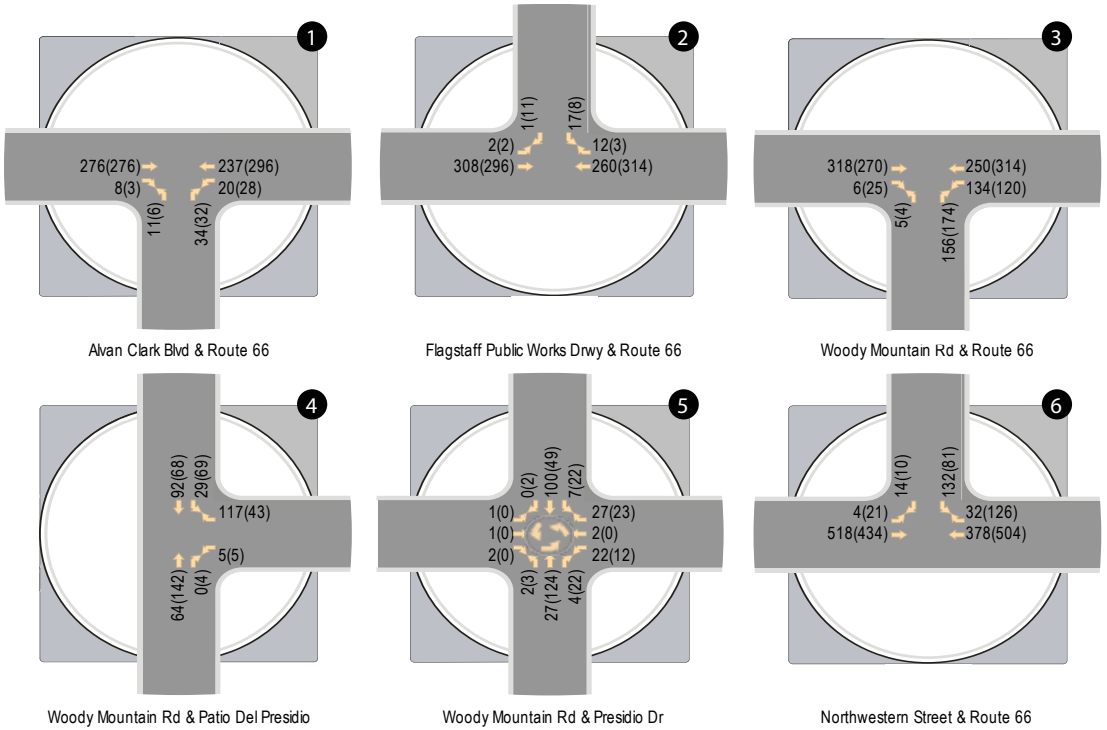


Figure 3: Existing Traffic Volumes

CAPACITY ANALYSIS

Peak hour capacity analyses have been conducted for the study intersections based on existing intersection configurations and traffic volumes. All intersections have been analyzed using the methodologies presented in the *Highway Capacity Manual (HCM),* Updated 2016, *Special Report 209,* and using Synchro software, version 11.0 under the HCM 6th edition (2016) methodology.

The concept of level of service (LOS) uses qualitative measures that characterize operational conditions within the traffic stream. The individual levels of service are described by factors that include speed, travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations A through F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions. Levels of service for intersections are defined within ranges of average control delay per vehicle, the number of seconds a vehicle can expect to wait due to the presence of a traffic control device. **Table 1** lists the level of service criteria for signalized and unsignalized intersections, respectively.

Table 1 – Level of Service Criteria for Controlled Intersections

Level-of-Service	Signalized Control Delay (sec/veh)	Unsignalized Control Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80 (or v/c > 1)	> 50 (or v/c > 1)

Source: Exhibits 19-8, 20-2, 21-8, and 22-8, Highway Capacity Manual, 6th Edition (2016)

Synchro 11.0 software calculates the LOS per the HCM 6th edition (2016) methodology. The 6th edition HCM documents the signalized LOS calculation methodology which takes into account lane geometry, traffic volumes and cycle length/phasing to compute LOS. Synchro analysis worksheets report individual movement delay/LOS and overall delay/LOS for signalized intersections; unsignalized intersection worksheets report the worst-case delay/LOS and the average overall intersection delay. Results of the existing level of service analyses are shown in **Table 2** for both AM and PM peak hours. Delays within **Table 2** are measured in seconds per vehicle. The existing conditions analysis worksheets have been included in **Appendix C**.

Table 2 – Existing Peak Hour Levels of Service

ID	Intersection	Intersection Control	Approach/ Movement	Existing Delay & LOS AM (PM)
1	Alvan Clark Boulevard & Route 66	1-way stop (WB)	NB Left WB Left NB Right	10.8 B (10.9 B) 8.0 A (8.0 A) 10.4 B (10.3 B)
2	Flagstaff Public Works Driveway & Route 66	1-way stop (SB)	SB Left EB Left SB Right	12.1 B (12.2 B) 7.9 A (8.0 A) 9.9 A (10.3 B)
3	Woody Mountain Road & Route 66	1-way stop (NB)	NB Left WB Left NB Right	15.1 C (14.9 B) 8.5 A (8.4 A) 12.1 B (11.9 B)
4	Woody Mountain Road & Patio Del Presidio	1-way stop (WB)	SB Left WB Left WB Right	7.4 A (7.7 A) 10.1 B (11.6 B) 9.3 A (9.4 A)
5	Woody Mountain Road & Presidio Dr	Roundabout	NB SB EB WB	2.9 A (3.8 A) 3.5 A (3.3 A) 3.1 A (-) 3.2 A (3.4 A)
			Overall	3.3 A (3.6 A)
6	Northwestern Street & Route 66	1-way stop (SB)	SB Left EB Left SB Right	17.7 C (17.1 C) 8.4 A (9.1 A) 9.9 A (10.7 B)

The results of the existing conditions analysis summarized in **Table 2** indicate that all study intersections operate with acceptable levels of service (LOS C or better).

EXISTING TRAFFIC SIGNAL WARRANT ANALYSIS

CivTech utilized 2022 existing traffic volumes at the intersection of Woody Mountain Road and Route 66 in the signal warrant analysis below. The signal warrant analysis results are presented in **Table 3** for Warrants 1 through 3 for 2022.

CivTech conducted a site visit from 7:00-9:00 AM and 4:00-6:00 PM on Wednesday, May 3, 2023 to collect data for a right turn on red (RTOR) reduction to be used within the signal warrant analysis below. Peak hour turning movement counts were conducted for the northbound right-turn movement at the intersection of Woody Mountain Road and Route 66. Vehicles that were delayed less than 10 seconds while making the turn were counted as allowable for the RTOR reduction. It was determined that a daily average RTOR reduction of 64% occurs at the intersection. Per comments from ADOT, this percentage was increased to 74% within the signal warrant analyses below. The increase to 74% allows for non-peak hours to have a higher RTOR due to less through traffic on Route 66. Data obtained from the site visit have been included in **Appendix D**.

The traffic signal warrant analysis was accomplished in accordance with standard traffic signal warranting criteria found in the Manual on Uniform Traffic Control Devices, 2009 Edition (MUTCD). The MUTCD describes three conditions under which a traffic signal might be warranted, designated Warrants 1 through 3. It indicates that, "The investigation of the need for a traffic control signal shall

include an analysis of the applicable factors contained in the [three] traffic signal warrants and other factors related to existing operation and safety at the study location." It then cautions that, "The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal."

The MUTCD indicates that traffic control signals should be installed only after one or more of the signal warrants are met; however, as provided in the MUTCD itself (see previous paragraph), the satisfaction of a warrant or warrants is not in itself justification for a signal. Every situation is unique and warrant guidelines must be supplemented by the effects of specific site conditions and the application of good engineering judgment. Installation of a traffic signal should improve the overall safety and/or operation of an intersection and should be considered only when deemed necessary by careful traffic analysis and after less restrictive solutions have been attempted.

Recorded approach traffic volumes at the subject intersection were compared to the MUTCD criteria to determine if a traffic signal would be warranted prior to and with the proposed development. The MUTCD methodology calls for signal warrants to be analyzed using 24-hour directional approach counts at the intersection. CivTech engaged All Traffic Data Services to record 24-hour directional approach volumes at the intersection of Woody Mountain Road and Route 66. Counts were performed on Tuesday, September 27, 2022.

WARRANT 1: EIGHT-HOUR VEHICULAR VOLUME

The Eight-Hour Vehicular Volume Warrant is intended for locations where either of the following two conditions, or a combination of both, exist for each of any 8 hours of an average day and is, thus, the principle reason to consider the installation of a traffic signal: a large volume of intersecting traffic or traffic volumes so heavy on the major street that entering vehicles suffer extensive delay or conflict.

CONDITION A: MINIMUM VEHICULAR VOLUME

Condition A, the Minimum Vehicular Volume, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if the vehicles per hour given in both of the 100 percent columns of Condition A in Table 4C-1 of the MUTCD (reproduced below) occur on the major-street and the higher-volume minor-street approaches, respectively, to the intersection for each of any 8 hours of an average day.

CONDITION B: INTERRUPTION OF CONTINUOUS TRAFFIC

Condition B, the Interruption of Continuous Traffic, is intended for application at locations where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The need for a traffic control signal shall be considered if the vehicles per hour given in both of the 100 percent columns of Condition B in Table 4C-1 of the MUTCD occur on the major-street and the higher-volume minor-street approaches, respectively, to the intersection for each of any 8 hours of an average day.

COMBINATION OF CONDITIONS A AND B

The combination of Conditions A and B is intended for application at locations where Condition A is not satisfied and Condition B is not satisfied *and should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems*. The need for a traffic control signal shall be considered if the vehicles per hour given in both of the 80 percent columns of Conditions A and Condition B in Table 4C-1 of the MUTCD occur on the major-street and the higher-volume minor-street approaches, respectively, to the intersection for each of any 8 hours of an average day.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1.....	1.....	500	400	350	280	150	120	105	84
2 or more...	1.....	600	480	420	336	150	120	105	84
2 or more...	2 or more ...	600	480	420	336	200	160	140	112
1.....	2 or more ...	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1.....	1.....	750	600	525	420	75	60	53	42
2 or more...	1.....	900	720	630	504	75	60	53	42
2 or more...	2 or more ...	900	720	630	504	100	80	70	56
1.....	2 or more ...	750	600	525	420	100	80	70	56

[a] Basic minimum hourly volume.
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures.
[c] May be used when the major-street speed exceeds 70 km/h or exceeds 40 mph or in an isolated community with a population of less than 10,000.
[d] May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major- street speed exceeds 70 km/h or exceeds 40 mph or in an isolated community with a population of less than 10,000.

Excerpt from MUTCD page 438

For each of the above, if the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 70 percent columns in Table 4C-1 may be used in place of the 100 percent columns.

WARRANT 2: FOUR-HOUR VEHICULAR VOLUME

The Four-Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that, for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) all fall above the applicable curve in Figure 4C-1 (this and all other referenced figures are attached) for the existing combination of approach lanes.

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 70 km/h or exceeds 40 mph or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-2 may be used in place of Figure 4C-1. The posted speed limit on Route 66 is 45 mph; therefore, Figure 4C-2 was used for this analysis.

WARRANT 3: PEAK-HOUR

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. It shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

   1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and

   2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and

   3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 70 km/h or exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-4 may be used in place of Figure 4C-3 to satisfy the criteria in the second category of the Standard. The posted speed limit on Route 66 is 45 mph; therefore, Figure 4C-4 was used for this analysis.

Table 3 – Traffic Signal Analysis Summary Warrants 1 – 3

Warrant		Hour(s) of the Day	Hours Required to Meet Warrant	Existing	
				Hours Met	Is Warrant Met?
Warrant 1. Eight-Hour Vehicular Volume	Condition A: Minimum Vehicular Volume	Any Eight Hours	8	0	No
	Condition B: Interruption of Continuous Traffic	Any Eight Hours	8	6	No
	Combination of Condition A & Condition B	Any Eight Hours	8	0	No
	Overall (Either Condition A or B satisfied meets warrant)				**No**
Warrant 2. Four-Hour Vehicular Volume		Any Four Hours	4	0	**No**
Warrant 3. Peak Hour		Any One/ Peak Hour	1	0	**No**

Table 3 summarizes the volume-based warrant analysis results for the existing conditions. The warranting criteria for Warrants 2 and 3 were automatically calculated using formulae, not determined by the plotting method described in the MUTCD. The formulae, which approximate the curves of the MUTCD, were published in the *2011 Indiana MUTCD Revisions 1 & 2 & 3*.

The results of the volume-based traffic signal warrants analysis indicate that the existing traffic volumes on Woody Mountain Road and Route 66 do not exceed the criteria for Warrants 1, 2, or 3. These traffic signal warrants are not met. Signal Warrant worksheets for the existing conditions are included in **Appendix E**.

FUTURE ROADWAY IMPROVEMENTS

The development will not provide any new external roadways. The proposed development will be required to construct half-street improvements to Woody Mountain Road and Route 66 along the project frontage. Based on the signal warrant analysis, a signal is warranted at the intersection of Woody Mountain Road and Route 66. Existing underground equipment is already installed to facilitate the construction of the traffic signal at Woody Mountain Road and Route 66. In addition, the Arizona Department of Transportation indicated via email on July 14, 2022, that proportionate share contributions from other developers have been provided to construct the traffic signal once recommended.

CRASH HISTORY

Crash data for the study area was obtained from the Arizona Department of Transportation (ADOT) for three (3) consecutive years, 2018, 2019, and 2020. Crash data for all study intersections were provided. In total, there have been 1 incident within the study area since the beginning of 2018. The incident occurred in 2019 and was classified as "other". There were 0 crashes involving a pedestrian and 0 crashes involving a bicyclist. The summary of intersection crash data is presented in **Table 4** and the summary of segment crash data is presented in **Appendix F.**

Table 4 – Intersection Crash Data Summary

Intersection	Total	2021	2020	2019	Injury	Fatality	Angle	Left Turn	Rear End	Head On	Sideswipe	Other	DUI	Pedestrian	Bicycle
Woody Mountain Road & Route 66	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0
Northwestern Street & Route 66	2	2	0	0	1	0	0	2	0	0	0	0	0	0	0

PROPOSED DEVELOPMENT

SITE LOCATION

VP 66 & Woody Mountain, LLC proposes development of a multi-family residential development community located on the southwest corner of Route 66 and Woody Mountain Road on property currently undeveloped. The Project includes approximately 13 acres.

SITE DENSITY/INTENSITY

This development consists of 214 multi-family residential dwelling units. The 214 units are comprised of the following:

- 1 Bedroom – 48 dwelling units
- 2 Bedroom – 118 dwelling units
- 3 Bedroom – 48 dwelling units

SITE ACCESS

The Project will have one (1) boulevard-type access point.

- *Access A* – is the main full movement access along Woody Mountain Road. Access A is located approximately 410 feet south of Route 66. Curb cuts as well as a southbound right-turn bay are expected to be constructed at this proposed access.

The proposed development site plans are provided in **Figure 4**.

TRIP GENERATION

The potential trip generation for the proposed development was estimated utilizing the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition* and *Trip Generation Handbook, 3rd Edition*. The ITE *Trip Generation Manual* contains data collected by various transportation professionals for a wide range of different land uses. The data are summarized in the report and average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized land use. The report provides information for daily and peak hour trips.

The anticipated trip generation is summarized in **Table 5**. Detailed trip generation calculations are provided in **Appendix G**.

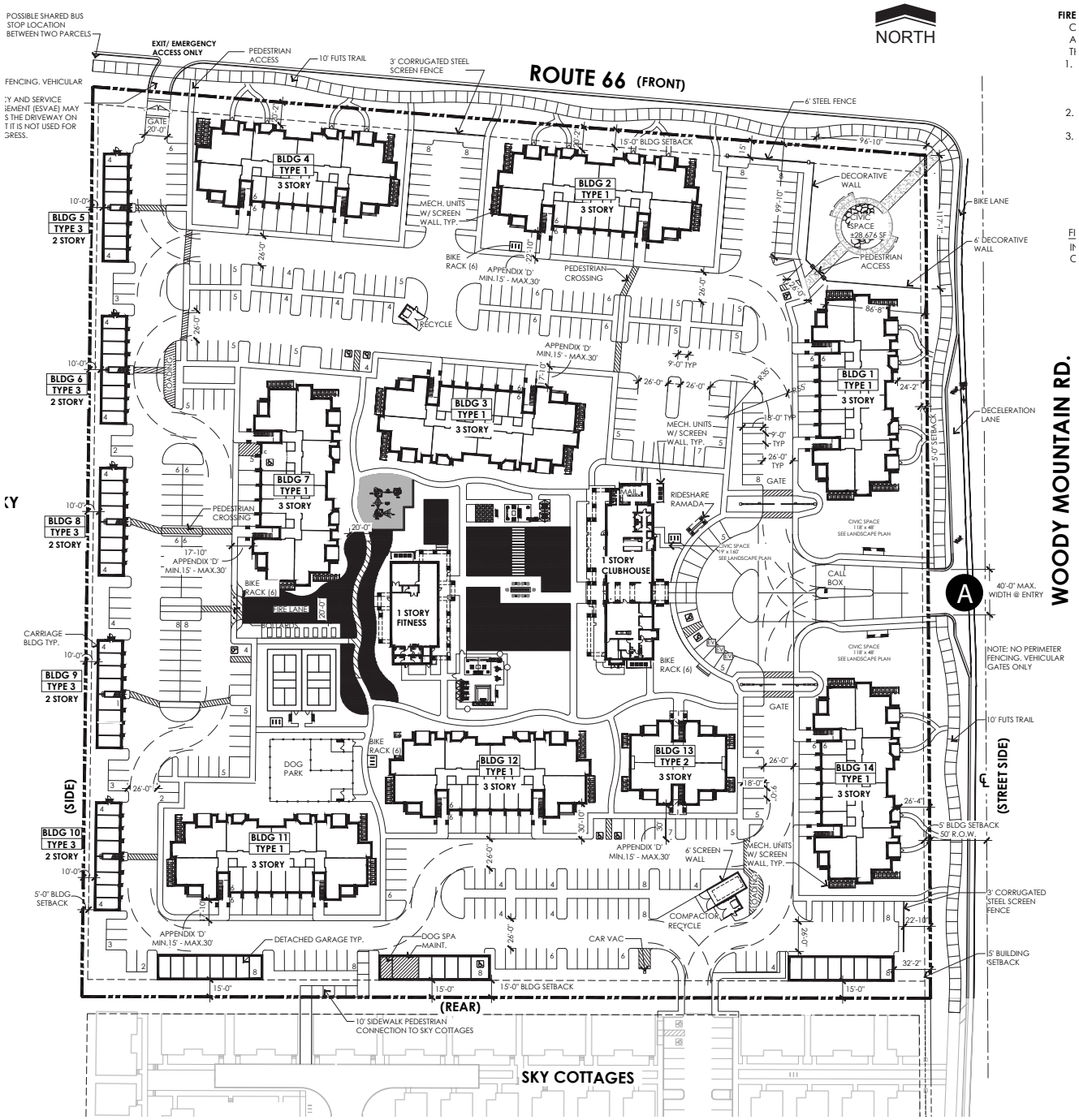


Figure 4: Site Plan and Access

Table 5 – Trip Generation

Land Use	ITE Code	ITE Land Use Name	Quantity	Units+	AM Distribution		PM Distribution	
					In	Out	In	Out
Apartments	220	Multi-family Housing (Low-Rise)	214	DUs	24%	76%	63%	37%

Land Use	ADT		AM Peak Hour				PM Peak Hour			
	Avg. Rate*	Total	Avg. Rate*	In	Out	Total	Avg. Rate*	In	Out	Total
Apartments	6.76	1,448	0.42	21	68	89	0.53	71	42	113

Notes: *All average rates were calculated by dividing total trips generated using regression equation by the number of dwelling units. (See below.)
DUs = Dwelling Units

CALCULATIONS (Equations shown only where applicable)			
Land Use [Units]	*Daily*	*AM Peak Hour*	*PM Peak Hour*
Apartments [214 DUs]	T_{Day} = 214 x 6.41 + 75.31 = 1,448	T_{AM} = 214 x 0.31+ 22.85 = 89	T_{PM} = 214 x 0.43 + 20.55 = 113

The proposed development is anticipated to generate 1,448 weekday daily trips, 89 trips (21 In/68 Out) during the AM peak hour, and 113 trips (71 In/42 Out) during the PM peak hour.

VEHICLE TRIP DISTRIBUTION AND ASSIGNMENT

The trip distributions approved within Figure 5 of the approved Sky Cottages TIA was used for this study. Trip distribution patterns used are for traffic generated by residential land use only. A single trip distribution pattern was applied for trips generated by residential use. The resulting trip distribution percentages for the study are shown in **Table 6** and the approved Sky Cottages TIA trip distribution has been included within **Appendix H.**

Table 6 – Site Trip Distribution

Direction (To/From)	Percentage
South on Woody Mountain Road (South of Patio del Presidio)	5%
East on Route 66 (East of Northwestern Road)	90%
West on Route 66 (West of Alvan Clark Boulevard)	5%
Total	**100%**

Figure 5 illustrates the trip distribution percentages noted in **Table 6** on the roadway network within the study area. The percentages presented in **Figure 5** were applied to the site trips generated to determine the AM and PM peak hour site traffic at the intersections within the study area. **Figure 6** presents the resulting site generated traffic for the proposed development.

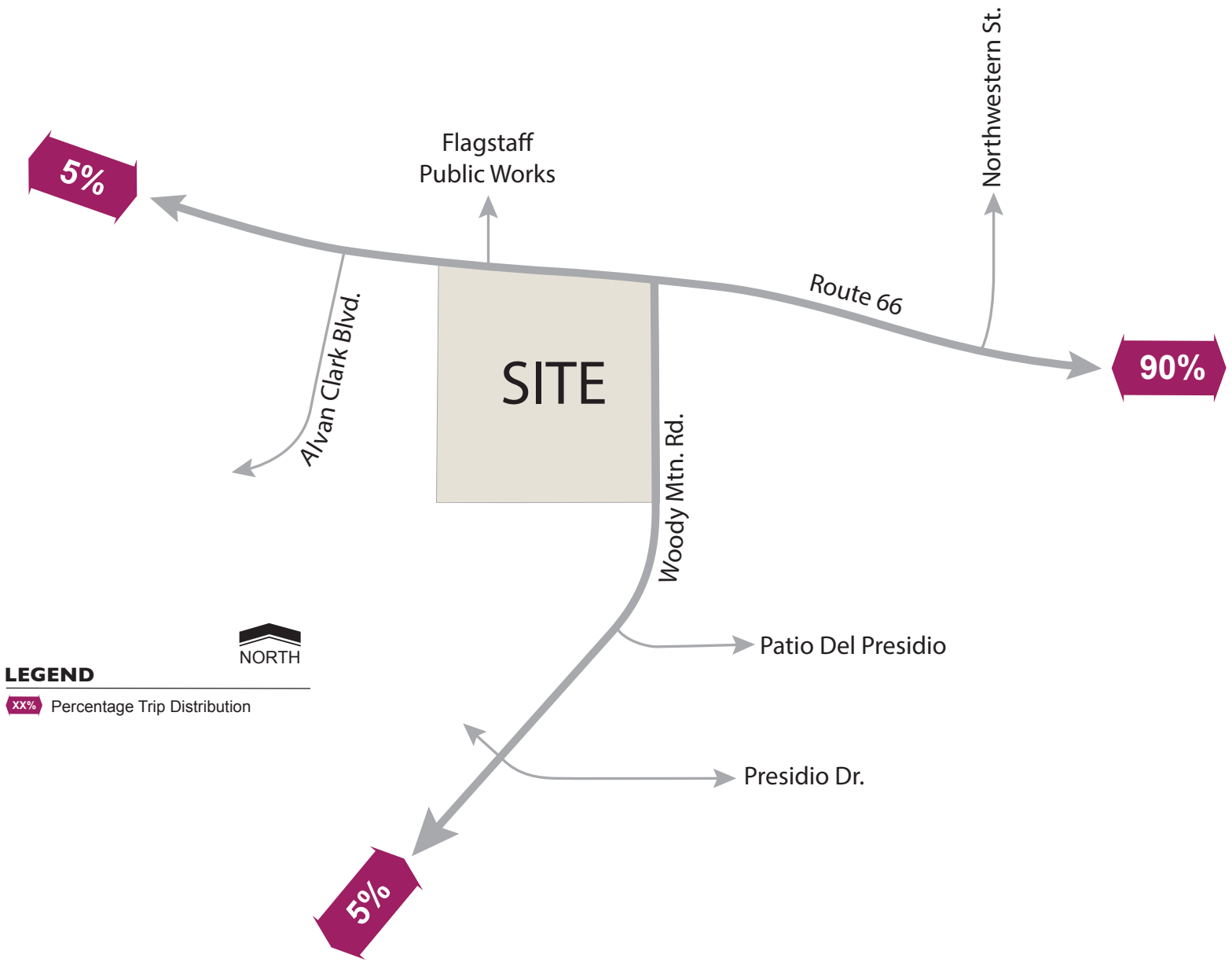


Figure 5: Trip Distribution

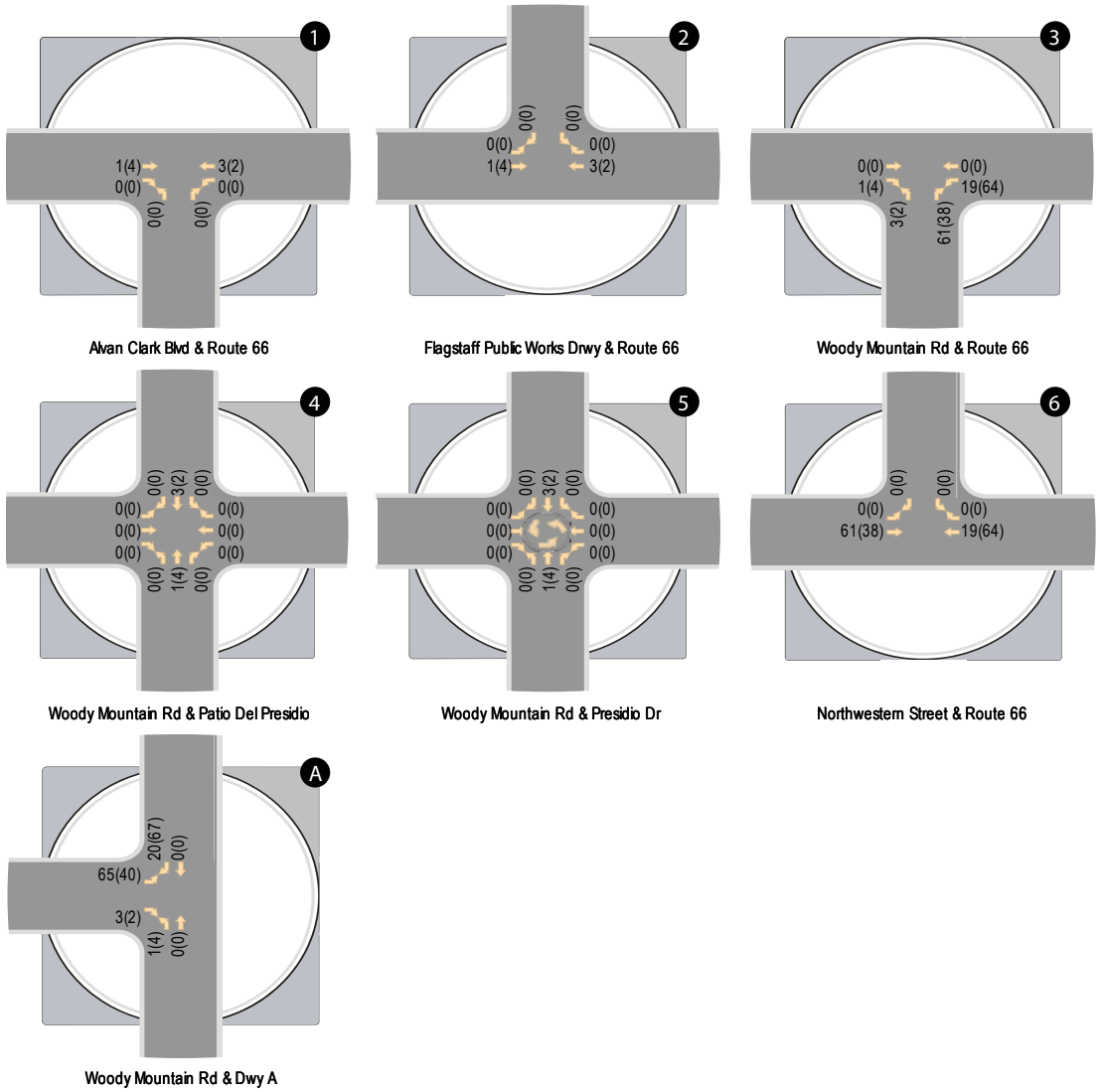


Figure 6: Site Generated Traffic Volumes

FUTURE BACKGROUND TRAFFIC

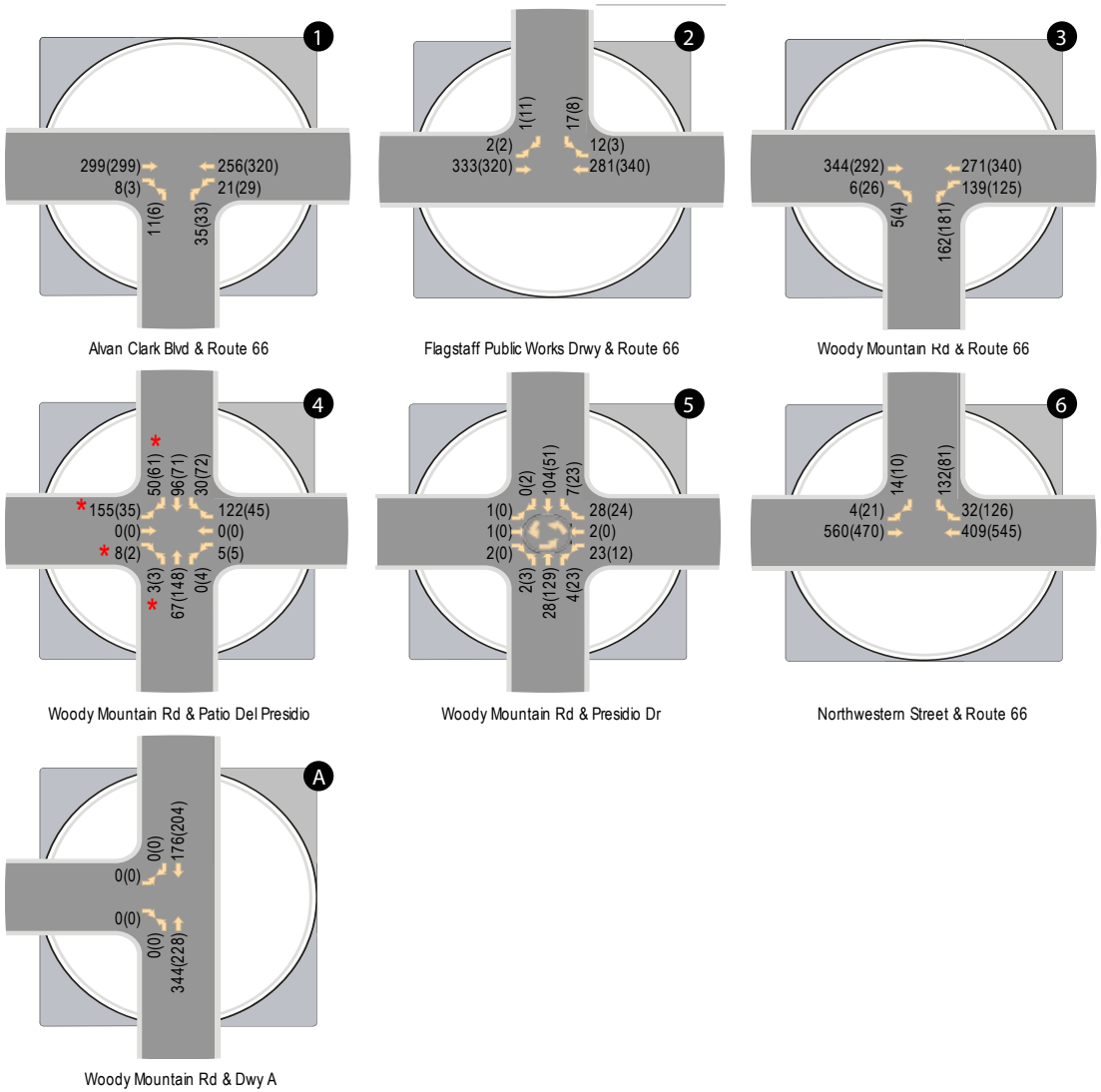
After discussion with ADOT and the City of Flagstaff, CivTech utilized an annual growth rate of 2% per year for existing volumes to/from Alvan Clark Boulevard as well as to/from and along Woody Mountain Road. An annual growth rate of 4% per year was utilized for the existing through movement volumes along Route 66. The 2% annual growth rate (1.04 expansion factor for 2024, 1.104 for 2027) and 4% annual growth rate (1.082 expansion factor for 2024, 1.217 for 2027) were applied to the existing volumes at the study intersections to obtain future background traffic volumes. In the previous report, volumes to/from Northwestern Street and the Flagstaff Public Works Driveway were grown with a 2% annual growth rate, this has been eliminated in the updated report since there is little area for growth from the existing conditions.

In addition, after coordination with both ADOT and the City of Flagstaff, surrounding development traffic from the Timber Sky and Sky Cottages proposed developments were taken out of this version of the report. As shown within **Figure 7** and **Figure 8**, surrounding development traffic from the Sky Cottages project were only added to/from the eastbound approach at the intersection of Woody Mountain Road and Patio Del Presidio to obtain realistic, non-zero volumes at that approach for the opening and horizon years. The surrounding development volumes and growth rate calculations are provided in **Appendix I**.

The background volumes for the opening year of 2024 are presented in **Figure 7**. The background volumes for the horizon year of 2027 are presented in **Figure 8**.

TOTAL TRAFFIC

Total traffic was determined by adding the site generated traffic to the estimated projected background traffic. Total peak hour traffic volumes for the opening year of 2024 are shown in **Figure 9**. Total peak hour traffic volumes for the horizon year of 2027 are shown in **Figure 10**.



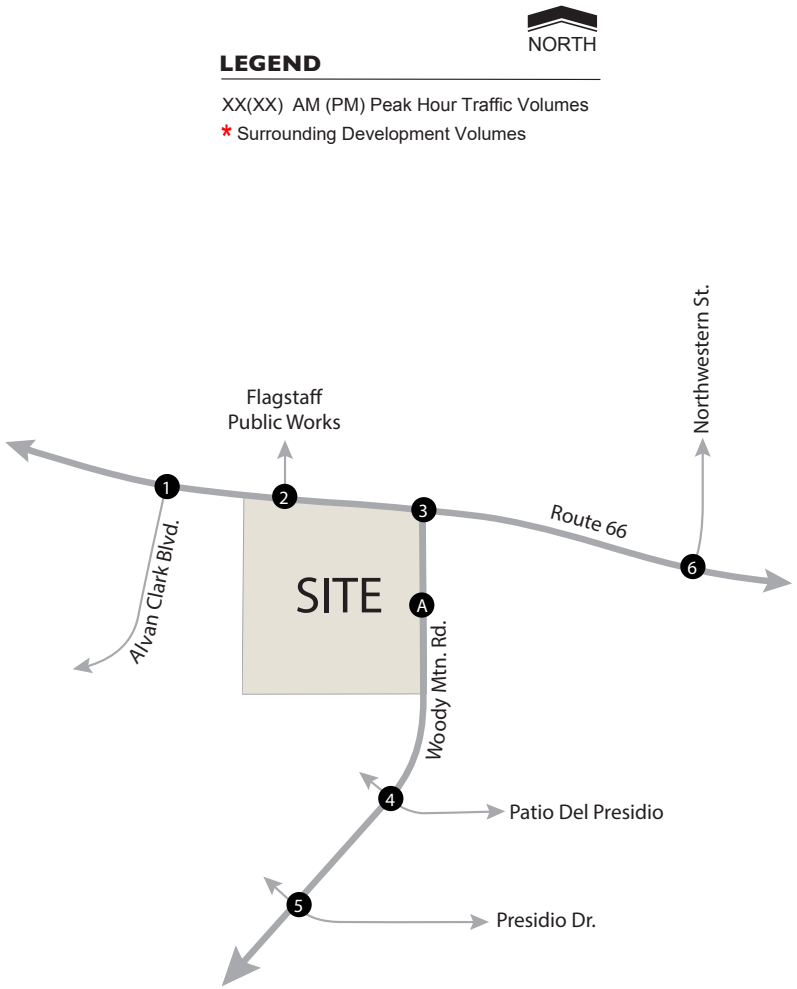


Figure 7: 2024 Background Traffic Volumes

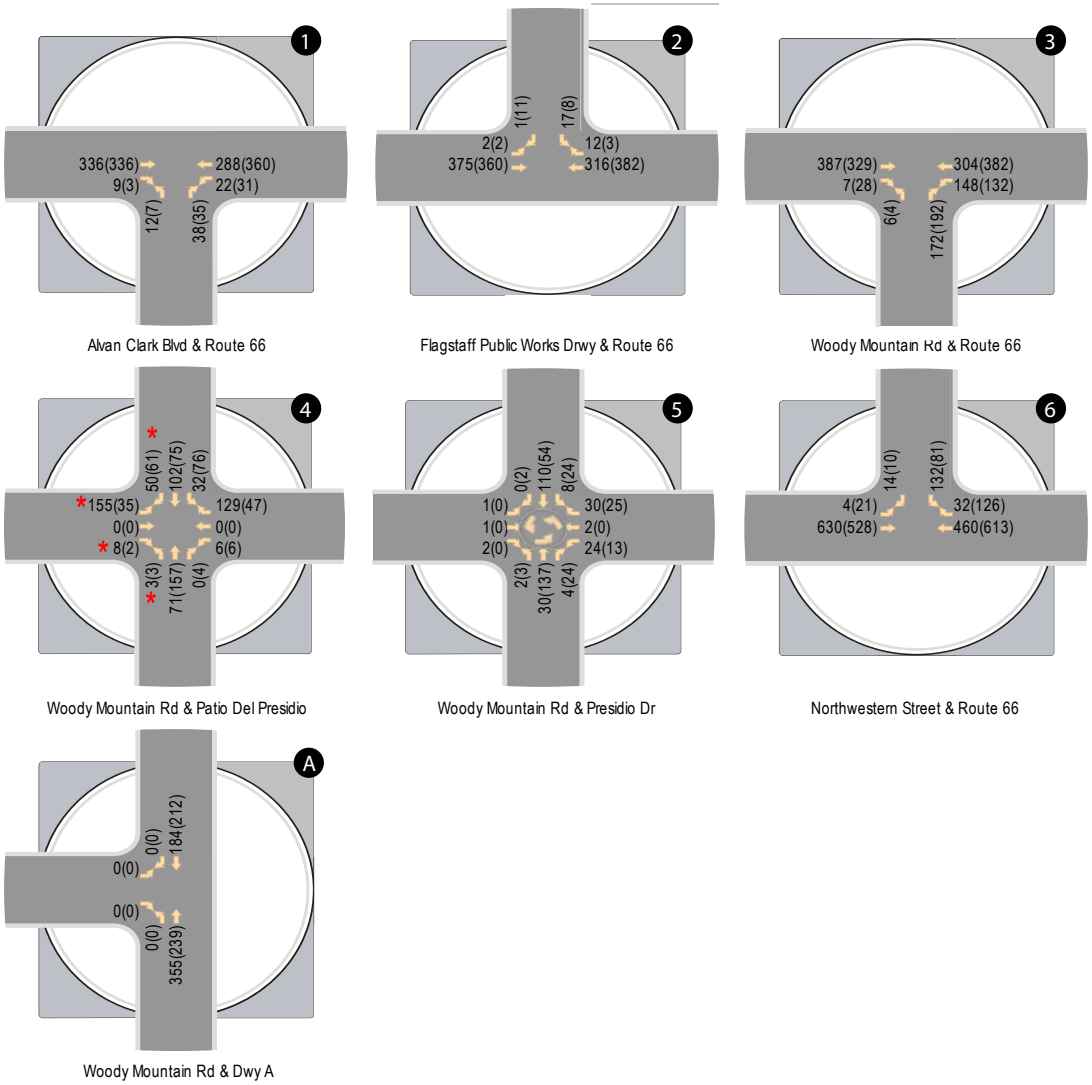


Figure 8: 2027 Background Traffic Volumes

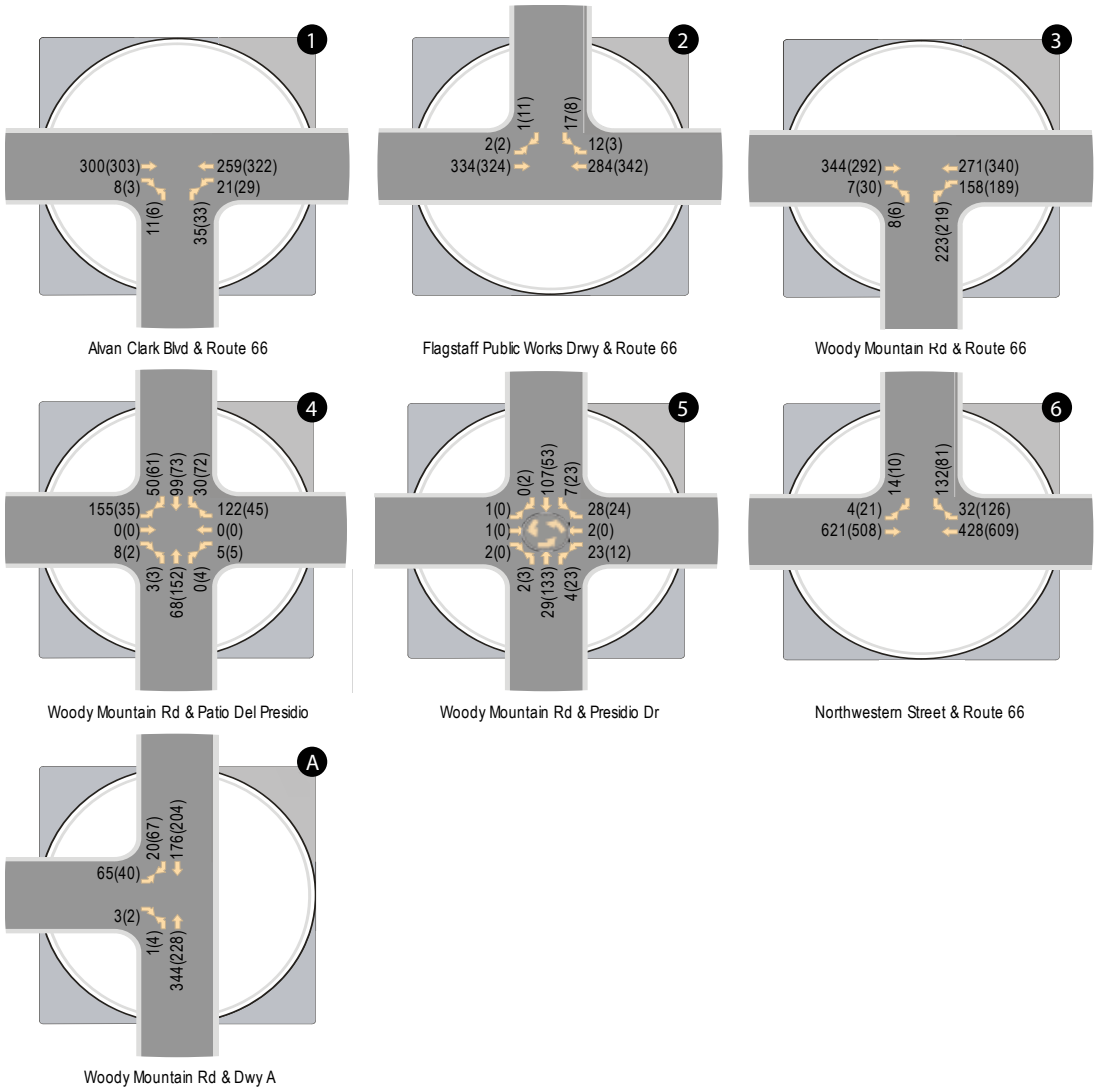


Figure 9: 2024 Total Traffic Volumes

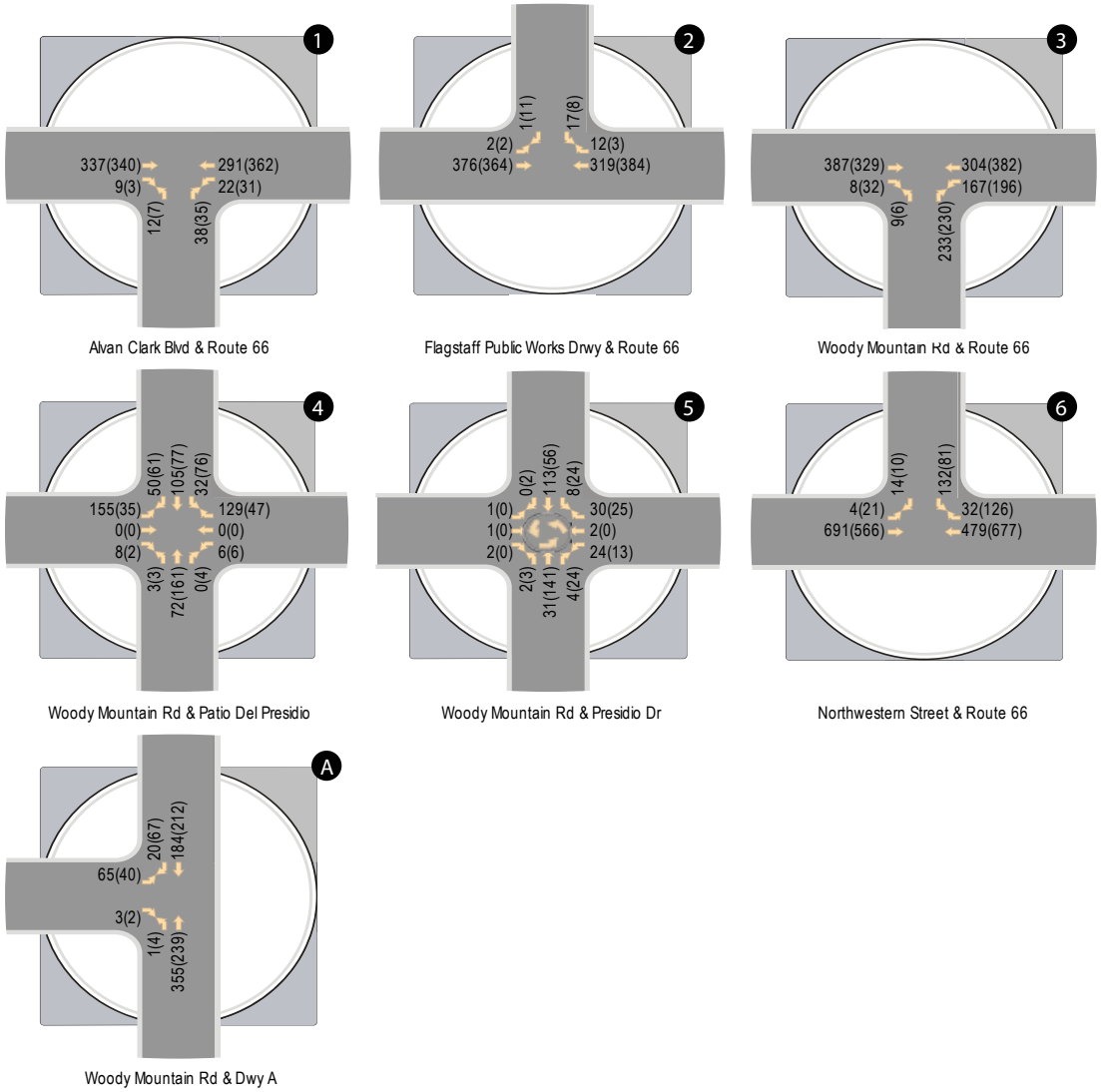


Figure 10: 2027 Total Traffic Volumes

FUTURE TRAFFIC SIGNAL WARRANT ANALYSIS

The signal warrant analysis results are presented in **Table 7** for Warrants 1 through 3 for the opening year of 2024 and horizon year of 2027. Existing counts were grown for opening and horizon analyses based on the methods discussed within the future background traffic section. Site volumes were added to the background volumes for the total "Build" signal warrant analyses. The signal warrant analyses presented below were completed using the same MUTCD standards as the existing traffic signal warrant analysis.

Table 7 – Traffic Signal Analysis Summary Warrants 1 – 3

Warrant		Hour(s) of the Day	Hours Required to Meet Warrant	2024 No Build		2024 Build		2027 No Build		2027 Build	
				Hours Met	Is Warrant Met?	Hours Met	Is Warrant Met?	Hours Met	Is Warrant Met?	Hours Met	Is Warrant Met?
Warrant 1. Eight-Hour Vehicular Volume	Condition A: Minimum Vehicular Volume	Any Eight Hours	8	0	No	0	No	0	No	0	No
	Condition B: Interruption of Continuous Traffic	Any Eight Hours	8	6	No	7	No	6	No	8	Yes
	Combination of Condition A & Condition B	Any Eight Hours	8	0	No	1	No	0	No	1	No
	Overall (Either Condition A or B satisfied meets warrant)				**No**	-	**No**	**-**	**No**	**-**	**Yes**
Warrant 2. Four-Hour Vehicular Volume		Any Four Hours	4	0	**No**	4	**Yes**	1	**No**	6	**Yes**
Warrant 3. Peak Hour		Any One/ Peak Hour	1	0	**No**	0	**No**	0	**No**	0	**No**

Table 7 summarizes the volume-based warrant analysis results for the future conditions. The results of the volume-based traffic signal warrants analysis indicate that the 2024 and 2027 Build traffic volumes on Woody Mountain Road and Route 66 could be expected to exceed the criteria for Warrants 1, and 2. These traffic signal warrants are met. Future signal warrant worksheets are included in **Appendix J**.

PROPORTIONAL SHARE

A proportional share analysis was completed for the opening year of 2024 in which the traffic signal warrant was met. Proportional share analysis results and email coordination with ADOT discussing the future signal funding at Woody Mountain Road and Route 66 are provided within **Appendix K**.

TRAFFIC AND IMPROVEMENT ANALYSIS

The overall intersection and approach levels of service are summarized in **Table 8** for the 2024 and 2027 background and total traffic conditions. Detailed analysis worksheets for the 2024 background analysis can be found in **Appendix L**, worksheets for the 2027 background analysis can be found in **Appendix M**, worksheets for the 2024 total traffic analysis can be found in **Appendix N**, worksheets for the 2027 total traffic analysis can be found in **Appendix O**. Worksheets showing analyses with a traffic signal at Woody Mountain Road and Route 66 can be found in **Appendix P**.

Table 8 – Peak Hour Levels of Service

ID	Intersection	Intersection Control	Approach/ Movement	2024 Delay & LOS		2027 Delay & LOS	
				No Build	Build	No Build	Build
				AM (PM)	AM(PM)	AM (PM)	AM(PM)
1	Alvan Clark Boulevard & Route 66	1-way stop (WB)	NB Left WB Left NB Right	10.9 B (11.1 B) 8.1 A (8.1 A) 10.6 B (10.5 B)	11.0 B (11.1 B) 8.1 A (8.1 A) 10.6 B (10.4 B)	11.2 B (11.4 B) 8.1 A (8.2 A) 10.8 B (10.7 B)	11.2 B (11.4 B) 8.1 A (8.2 A) 10.8 B (10.8 B)
2	Flagstaff Public Works Driveway & Route 66	1-way stop (SB)	SB Left EB Left SB Right	12.4 B (12.5 B) 8.0 A (8.1 A) 10.1 B (10.5 B)	12.4 B (12.5 B) 8.0 A (8.1 A) 10.1 B (10.5 B)	12.9 B (13.0 B) 8.0 A (8.2 A) 10.2 B (10.8 B)	12.9 B (13.1 B) 8.0 A (8.2 A) 10.2 B (10.9 B)
3	Woody Mountain Road & Route 66	1-way stop (NB)	NB Left WB Left NB Right	15.7 C (15.5 C) 8.6 A (8.5 A) 12.6 B (12.4 B)	16.5 C (18.2 C) 8.7 A (8.8 A) 13.9 B (13.1 B)	16.6 C (16.4 C) 8.8 A (8.6 A) 13.5 B (12.9 B)	17.6 C (19.4 C) 8.9 A (8.9 A) 15.2 C (13.8 B)
		Warrant: Signal	NB EB WB	- - -	9.5 A (9.9 A) 4.9 A (4.4 A) 5.7 A (5.6 A)	9.7 A (9.2 A) 5.0 A (4.7 A) 5.6 A (5.7 A)	10.4 B (10.6 B) 4.8 A (4.3 A) 5.7 A (5.6 A)
			Overall	-	5.7 A (5.5 A)	5.6 A (5.6 A)	5.7 A (5.5 A)
4	Woody Mountain Road & Patio Del Presidio	2-way stop (EB/WB)	SB Left WB Left NB Shared EB Shared WB Shared	7.4 A (7.8 A) 10.9 B (12.8 B) 7.6 A (7.5 A) 17.0 C (14.3 B) 9.3 A (9.4 A)	7.4 A (7.8 A) 10.9 B (12.9 B) 7.6 A (7.5 A) 17.1 C (14.5 B) 9.3 A (9.5 A)	7.5 A (7.8 A) 11.1 B (13.0 B) 7.6 A (7.5 A) 17.8 C (14.6 B) 9.4 A (9.5 A)	7.4 A (7.8 A) 11.1 B (13.1 B) 7.6 A (7.5 A) 17.8 C (14.7 B) 9.4 A (9.5 A)
5	Woody Mountain Road & Presidio Dr	Roundabout	NB SB EB WB	2.9 A (3.9 A) 3.5 A (3.3 A) 3.1 A (-) 3.2 A (3.5 A)	2.9 A (3.9 A) 3.6 A (3.3 A) 3.1 A (-) 3.2 A (3.5 A)	2.9 A (4.0 A) 3.6 A (3.3 A) 3.2 A (-) 3.2 A (3.5 A)	3.0 (4.0 A) 3.6 A (3.3 A) 3.2 A (-) 3.2 A (3.5 A)
			Overall	3.3 A (3.6 A)	3.4 A (3.7 A)	3.4 A (3.7 A)	3.4 A (3.7 A)
6	Northwestern Street & Route 66	1-way stop (SB)	SB Left EB Left SB Right	18.9 C (18.1 C) 8.5 A (9.3 A) 10.0 B (10.9 B)	20.4 C (19.8 C) 8.5 A (9.6 A) 10.1 B (11.2 B)	21.2 C (20.0 C) 8.6 A (9.6 A) 10.2 B (11.2 B)	23.1 C (21.9 C) 8.7 A (9.9 A) 10.3 B (11.6 B)
7	Woody Mountain Road & Access A	1-way stop (EB)	NB Left EB Left EB Right	- - -	7.7 A (7.9 A) 14.3 B (12.7 B) 9.3 A (9.5 A)	- - -	7.7 A (7.9 A) 14.6 B (13.0 B) 9.4 A (9.6 A)

The results of the Synchro analysis summarized in **Table 8** indicate that all study intersections operate with overall acceptable levels of service (LOS C or better).

The results of the volume-based traffic signal warrants analysis indicate that the 2024 and 2027 Build traffic volumes on Woody Mountain Road and Route 66 could be expected to exceed the criteria for Warrants 1, and 2. These traffic signal warrants are met and the intersection was analyzed with both a signal and stop-control for the 2024 Build and 2027 scenarios.

TURN LANE WARRANTING AND QUEUE LENGTH ANALYSIS

RIGHT-TURN DECELERATION LANES

CivTech utilized the 2027 total traffic volumes and the City *Figure 10-10-01 Right Turn Lane Warrant* in the *Engineering Standards* to determine if a right turn deceleration lane is warranted at the proposed access. For a roadway such as Woody Mountain Road, with a posted speed limit of 40 mph, more than 25 hourly right-turning vehicles would be required to warrant a turn lane. With 67 right-turning vehicles during the highest peak hour, a southbound right-turn deceleration lane is warranted at Access A. Additionally, the site plan already shows a southbound right-turn deceleration lane at Access A, therefore CivTech assumed for the future analysis that the lane will be constructed.

An eastbound right-turn lane currently exists at the intersection of Woody Mountain Road and Route 66. Per comments from Flagstaff, a right-turn lane warrant was completed assuming a four-lane cross-section on Route 66. For a roadway such as Route 66, with a posted speed limit of 45 mph, more than 20 hourly right-turning vehicles would be required to warrant a turn lane. With 32 right-turning vehicles during the highest peak hour, an eastbound right turn deceleration lane is warranted at Woody Mountain Road and Route 66 per City *Figure 10-10-01 Right Turn Lane Warrant* in the *Engineering Standards.* Based on ADOT guidelines for right-turn lanes, for an eastbound advancing volume of 329 vph during the highest peak hour, and a posted speed limit of 45 mph along Route 66, a right-turn deceleration lane is not warranted at Woody Mountain Road and Route 66.

The intersection of Woody Mountain Road and Route 66 operates acceptably in the future horizon years with a three (3) lane section on Route 66 and the current dedicated eastbound right-turn deceleration lane. The client understands that right-of-way should be dedicated for future full build out at the intersection consisting of a five-lane cross section with a dedicated eastbound right-turn deceleration lane. Maintaining the current geometry is recommended.

LEFT-TURN DECELERATION LANES

After referring to Chapter 10 of the City of Flagstaff *Engineering Standards*, left-turn lane warrant guidelines were unable to be found to determine the need for the installation of a left-turn deceleration lane. Based on ADOT guidelines for left-turn lanes, for a northbound advancing volume of 355 vph during the highest peak hour, and a posted speed limit of 40 mph along Woody Mountain Road, a left-turn deceleration lane into Access A is not warranted. Based on comments from the City of Flagstaff and given that Woody Mountain Road is classified as a minor arterial roadway, a left-turn deceleration lane is required into Access A.

The City of Flagstaff and ADOT turn lane warrant guidelines are included within **Appendix Q.**

QUEUE STORAGE

Adequate turn storage should be supplied on any approach where turn lanes are permitted and/or warranted. A queuing analysis was prepared according to the methodology documented in *AASHTO's A Policy on Geometric Design of Highways and Streets*. The study intersections were analyzed to determine the left-turn and right-turn storage needed to accommodate the expected traffic volumes in the 2027 horizon year.

The storage length for a turn lane is typically estimated as the length required to hold the average number of arriving vehicles per two minutes, where unsignalized, or per one-and-a-half to two signal cycles, where signalized.[1] The equations used for the calculations are shown below, and the resulting turn lane storage requirements for the study intersections are summarized in **Table 9**. Detailed queue storage calculation worksheets using the AASHTO method are included in **Appendix R.**

For signalized intersections, the storage length is determined by the following equations:

$$\text{Storage Length} = \left[\frac{1.5\ x\ (veh/hr)}{(cycles/hr)}\right] \times\ 25\ feet$$

For unsignalized intersections, the storage length for a left turn lane is determined by the following equation:

$$\text{Storage Length} = \left\{\frac{\ln[P(n>N)]}{\ln\frac{v}{c}} - 1\right\} \times\ 25\ feet$$

where:

$$c = \frac{V_0 e^{-V_0 t_c/3600}}{1 - e^{-V_0 t_c/3600}}$$

as defined in *AASHTO's A Policy on Geometric Design of Highways and Streets Equations 9-3 and 9-4.*

[1] The American Association of Highway and Transportation Officials, under Section 9.7.2.2 (page 9-96) of the latest (7th) edition of its publication, A Policy on Geometric Design of Highways and Streets (the AASHTO "Green Book"), indicates that storage length for a turn lane, exclusive of taper, "should usually be based on 1.5 to 2 times the average number of vehicles that would need to be stored per signal cycle" at a signalized intersection.

Table 9 – Queue Storage Lengths

ID	Intersection	Intersection Control	Movement	Braking Distance (ft)[9]	Gap Length (ft)[9]	Turn Lane Length				
						Existing[1]	AASHTO	ADOT	HCM[2] [8]	Recommended
1	Alvan Clark Boulevard & Route 66	1-way stop (WB)	NB Left	80′	60′	135′ [6]	85′	110′	85′	No Change
			WB Left	245′	140′	TWLTL[3]	225′	250′	225′	No Change
			NB Right	80′	60′	135′	110′	110′	85′	No Change
			EB Right	245′	140′	200′	225′	250′	200′	250′
2	Flagstaff Public Works Driveway & Route 66	1-way stop (SB)	SB Left	45′	60′	100′[4]	50′	75′	50′	No Change
			EB Left	245′	140′	TWLTL[3]	225′	250′	200′	No Change
			WB Right	245′	140′	275′	225′	250′	200′	No Change
3	Woody Mountain Road & Route 66	Signal	NB Left	150′	90′	90′	145′	170′	145′	170′
			WB Left	200′	140′	175′	405′	355′	205′	355′
			NB Right	150′	90′	90′	420′	345′	145′	345′
			EB Right	200′	140′	240′	205′	205′	180′	No Change
4	Woody Mountain Road & Patio Del Presidio	2-way stop (EB/WB)	SB Left	-	-	215′	25′[7]	-	25′[7]	No Change
			WB Left	-	-	50′	25′[7]	-	25′[7]	No Change
			NB Right	-	-	120′	25′[7]	-	<25′[7]	No Change
			WB Right	-	-	50′	125′[7]	-	25′[7]	No Change
6	Northwestern Street & Route 66	1-way stop (SB)	EB Left	200′	140′	175′	180′	205′	180′	205′
			SB Right	45′	60′	110′	50′	75′	50′	No Change
A	Woody Mountain Road & Driveway A	1-way stop (EB)	NB Left	-	-	-	25′[7]	-	<25′[7]	25′[7]
			EB Left	-	-	-	75′[7]	-	25′[7]	25′[7]
			SB Right	-	-	-	75′[7]	-	<25′[7]	150′[5]
			EB Right	-	-	-	25′[7]	-	<25′[7]	25′[7]

(1) Measured from beginning of stop bar.
(2) HCM 95th percentile queue reported in vehicles/lane, assuming 1 vehicle ~ 25 feet.
(3) TWLTL provides excess storage for the left-turn lane.
(4) Dedicated left-turn constructed but not striped.
(5) Distance shown in the latest Site Plan
(6) Lane is a drop turn lane.
(7) Queue Storage Length for Non-ADOT Intersection.
(8) HCM value calculated by rounding up 95th Percentile to the next vehicle, then multiplying by 25 feet.
(9) Braking Distance and Gap Lengths used to calculate turn lane length for ADOT Intersections.

The recommended storage lengths in **Table 9** are provided for study horizon year 2027 using the total traffic projections. Proposed lane configurations are shown in **Figure 11**.

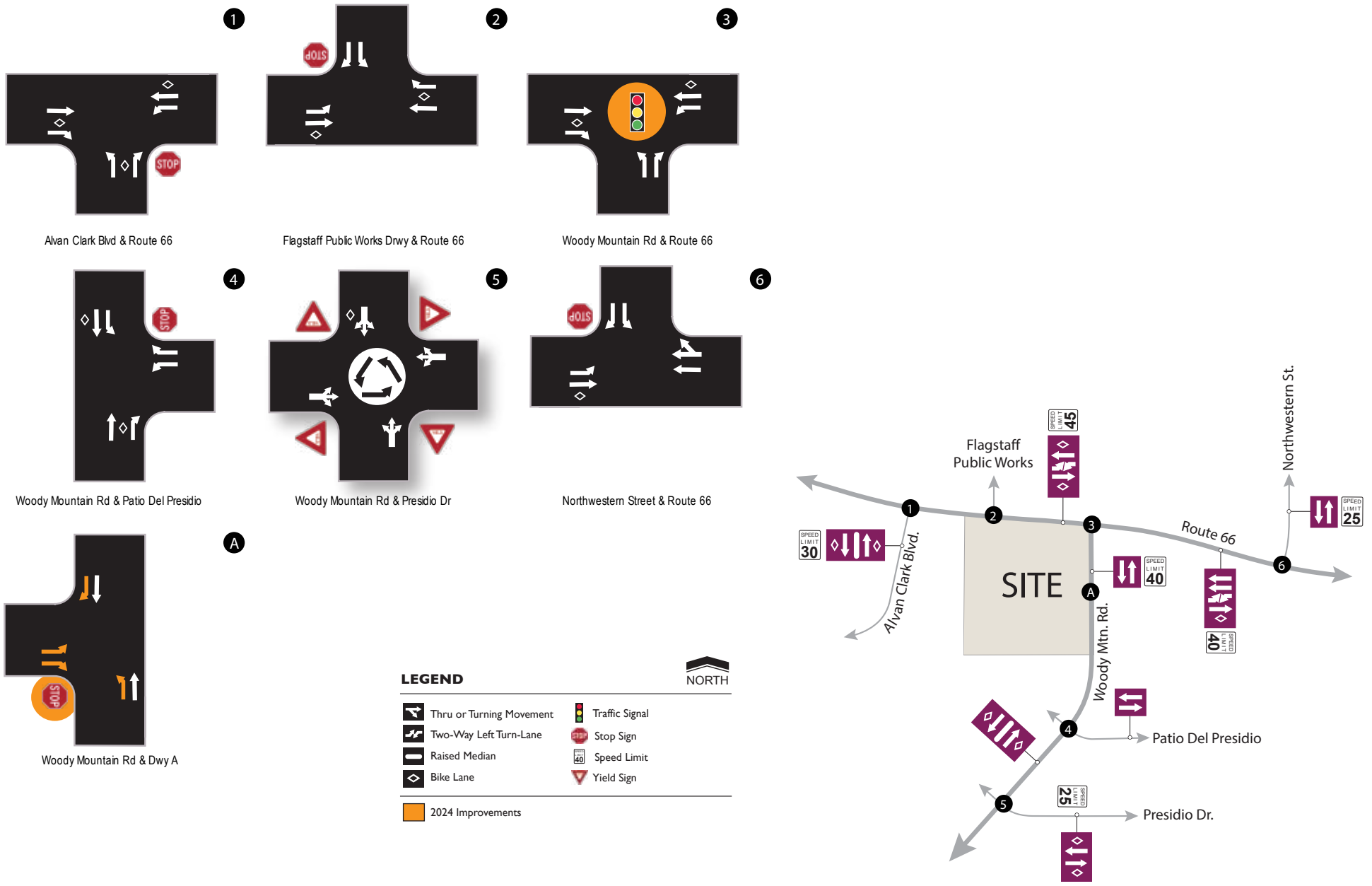


Figure 11: Proposed Lane Configurations and Traffic Controls

SIGHT DISTANCE ANALYSIS

Adequate sight distance must be provided at intersections and site access driveways to allow safe turning movements. There must be sufficient unobstructed sight distance along both approaches of a street/driveway intersection and across their included corners to allow operators of vehicles to see each other in time to prevent a collision.

An intersection sight distance analysis was performed to set guidelines for establishing lines of sight for the proposed development at the site access points. Using the guidelines set forth by the *American Association of State Highway and Transportation Officials' (AASHTO)'s A Policy on Geometric Design of Highway and* Streets, appropriate sight distances were calculated for the right and left turn/crossing movements out of each site driveway ("Case B2" and "Case B3/B1," respectively) and the left turn movement into these site driveways ("Case F").

Sight visibility for the proposed driveway was calculated using AASHTO methodology considering roadway speed, grade, number of lanes, and other factors. Recommended sight distances for movements from site driveways are summarized in **Table 10**.

Table 10 – AASHTO Sight Distance Requirements

Roadway	Posted Speed Limit/ Design Speed (mph)	Sight Distance Along Roadway		
		Left of Driveway (Case B2/B3)	Right of Driveway (Case B1)	On Major Road (Case F)
Woody Mountain Road	40/50	480′	555′	405′
Route 66	50/60	575′	665′	490′

Sight visibility should be provided at the driveway according to the distances shown in **Table 10**. All landscaping that is within the line of sight from the access point to the surrounding public streets should be maintained at a maximum of two feet in height. Trees should be of a single trunk variety with all branches lower than eight feet trimmed. To avoid a "picket fence effect," trees should not be spaces too closely together. AASHTO Sight Distance guidelines have been included within **Appendix S**.

CONCLUSIONS

The following conclusions and recommendations have been documented in this study.

GENERAL

- The proposed development is anticipated to generate 1,448 weekday daily trips, 89 trips (21 In/68 Out) during the AM peak hour, and 113 trips (71 In/42 Out) during the PM peak hour.

EXISTING

- The results of the existing conditions analysis indicate that all study intersections operate with acceptable levels of service (LOS C or better).

TRAFFIC SIGNAL WARRANT ANALYSIS

- The results of the volume-based traffic signal warrants analysis indicate that the 2024 and 2027 Build traffic volumes on Woody Mountain Road and Route 66 could be expected to exceed the criteria for Warrants 1, and 2. These traffic signal warrants are met.

PROPORTIONAL SHARE

- A proportional share analysis was completed for the opening year of 2024 in which the traffic signal warrant was met. Proportional share analysis results and email coordination with ADOT discussing the future signal funding at Woody Mountain Road and Route 66 are provided within **Appendix K**.

CAPACITY ANALYSIS

- The results of the Synchro analysis summarized in **Table 8** indicate that all study intersections operate with overall acceptable levels of service (LOS C or better).

QUEUE STORAGE

- The recommended storage lengths are provided for study horizon year 2027 using the total traffic projections.

SIGHT DISTANCE

- Sight visibility for the proposed driveways were calculated using AASHTO methodology considering roadway speed, grade, number of lanes, and other factors.
    - All landscaping that is within the line of sight from the access point to the surrounding public streets should be maintained at a maximum of two feet in height. Trees should be of a single trunk variety with all branches lower than eight feet trimmed. To avoid a "picket fence effect," trees should not be spaces too closely together.

LIST OF REFERENCES

ADOT Traffic Guidelines and Processes, Arizona Department of Transportation, Arizona, January 2019.

Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis. Transportation Research Board, Washington, D.C., 2018.

*Manual on Uniform Traffic Control Devices. U.*S. Department of Transportation, Federal Highways Administration, Washington, D.C., 2009.

Transportation Impact Analysis Manual, City of Flagstaff, May 2017.

Trip Generation Manual, 11th Edition, Institute of Transportation Engineers, Washington, D.C., 2021.

Trip Generation Handbook, 3rd Edition, Institute of Transportation Engineers, Washington, D.C., 2014.

TECHNICAL APPENDICES

APPENDIX A	**REVIEW COMMENTS AND RESPONSES (RESERVED)**
APPENDIX B	**EXISTING TRAFFIC COUNTS**
APPENDIX C	**EXISTING PEAK HOUR ANALYSIS**
APPENDIX D	**RIGHT TURN ON RED SITE VISIT**
APPENDIX E	**EXISTING TRAFFIC SIGNAL WARRANT WORKSHEETS**
APPENDIX F	**CRASH ANALYSIS WORKSHEETS**
APPENDIX G	**TRIP GENERATION CALCULATIONS**
APPENDIX H	**TRIP DISTRIBUTION CALCULATIONS**
APPENDIX I	**GROWTH AND SURROUNDING DEVELOPMENT TRAFFIC**
APPENDIX J	**FUTURE TRAFFIC SIGNAL WARRANT WORKSHEETS**
APPENDIX K	**2024 PROPORTIONAL SHARE ANALYSIS**
APPENDIX L	**2024 NO BUILD PEAK HOUR ANALYSIS**
APPENDIX M	**2027 NO BUILD PEAK HOUR ANALYSIS**
APPENDIX N	**2024 BUILD PEAK HOUR ANALYSIS**
APPENDIX O	**2027 BUILD PEAK HOUR ANALYSIS**
APPENDIX P	**2024 & 2027 SIGNAL AT WOODY MOUNTAIN AND ROUTE 66**
APPENDIX Q	**TURN LANE WARRANT GUIDELINES**
APPENDIX R	**QUEUE STORAGE ANALYSIS**
APPENDIX S	**SIGHT DISTANCE ANALYSIS**

APPENDIX A

REVIEW COMMENTS AND RESPONSES (Reserved)

Liv Timber Sky **CivTech, Inc.** **Review Comments & Responses**

1st Submittal

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Reviewer Name, Agency: **Northwest Region Traffic**

Item	Review Comment	(Code) & Response
1.	Need more discussion on the traffic signal warrant analysis. Example: right turn reductions, why 2 approach lanes were used for Woody when left turn volumes are essentially nonexistent, etc.	(1) Will comply. The traffic signal warrant analysis was updated to account for a 74% reduction in northbound right turns based on field data showing 64% reductions for four peak hours and coordination with ADOT. Woody Mountain Road was analyzed as having one approach lane due to the low number of NB left turns in the existing conditions. With these changes, a signal is warranted in the build scenario in 2024/2027. A signal is not warranted in the existing condition.
2.	Northwestern left turn delay needs to be mitigated somehow.	(1) After re-evaluating the volumes at Northwestern Street and Route 66, it was determined that there is little area for growth from the existing conditions. In the previous report, volumes to/from Northwestern were grown with the growth rate, this has been eliminated in the updated report. With this change and assuming a 4% annual growth rate along Route 66 with no surrounding development volumes incorporated along Route 66, the intersection of Northwestern Street and Route 66 operates with acceptable levels of service.
3.	In table 8 why are you recommending shorter than ADOT desired turn lane lengths? Our preference is the desirable length and less than that typically requires explanation/justification.	(2) Will evaluate and use desired lengths, where possible, on ADOT facilities. If not, recommendations will include a length to maximize the available queue distance. Minimum lengths will be only be recommended where required.
4.	Full build-out volumes from the projects expected to be constructed / that are already partially constructed in the immediate area should be included in this report. This will further highlight the need for mitigation at the Northwestern intersection.	(3) After further discussion with ADOT, it has been agreed upon that growing existing volumes at an annual 2% rate and including surrounding development volumes overestimates future traffic within the study area. Traffic along Route 66 will be grown at an annual 4% rate. Ingress/egress traffic at Woody Mountain Road and Route 66 will be grown at the annual 2% growth rate.
5.	ROW should be dedicated at the woody mountain intersection for a future right turn lane into the site with a 5 lane cross section on Route 66. ADOT does not want a shared right/through lane.	(4) Noted. Client understands that ROW should be dedicated for future full build out at the intersection of Woody Mountain Road and Route 66.

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Reviewer Name, Agency: **Northwest Region Traffic**

Item	Review Comment	(Code) & Response
6.	Please analyze route 66/ woody mountain as a single lane roundabout. This is the preferred intersection control for this intersection.	(3) There is an email from ADOT on July 14th, 2022 that discusses proportionate share contributions from other developers and coordination once a traffic signal is warranted. Existing underground equipment is already installed to facilitate construction of a traffic signal at Woody Mountain Road and Route 66. The email from ADOT is included for review.

CivTech Received Date: 2/3/2023
CivTech Entered Date: 6/7/2023
CivTech Response Date: 6/9/2023

Drawing # or Page #	Item #	ADOT Comments	Applicants Response
Name of Reviewer: Northern Region Traffic			
	1	Need more discussion on the traffic signal warrant analysis. Example: right turn reductions, why 2 approach lanes were used for Woody when left turn volumes are essentially nonexistent, etc.	
	2	Northwestern left turn delay needs to be mitigated somehow.	
	3	In table 8 why are you recommending shorter than ADOT desired turn lane lengths? Our preference is the desirable length and less than that typically requires explanation/justification.	
	4	Full build-out volumes from the projects expected to be constructed / that are already partially constructed in the immediate area should be included in this report. This will further highlight the need for mitigation at the Northwestern intersection.	
	5	ROW should be dedicated at the woody mountain intersection for a future right turn lane into the site with a 5 lane cross section on Route 66. ADOT does not want a shared right/through lane.	
	6	Please analyze route 66/ woody mountain as a single lane roundabout . This is the preferred intersection control for this intersection.	

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Reviewer Name, Agency: **Stephanie Santana, Reid Miller, City of Flagstaff**

Item	Review Comment	(Code) & Response
1.	PDF pg. 19 – Future Roadway Improvements: "ADOT indicated via email on July 14, 2022 that proportionate share contributions from other developers have been provided to construct the traffic signal once warranted." In the event that a traffic signal is not warranted with the project, but will be in the future, LIV Timber needs to calculate a proportional share using the same methodology as Sky Cottage. See calculation below.	(1) Will Comply and calculate a proportional updated proportional share values for the intersection of Woody Mountain Road and Route 66.
2.	PDF pg. 31 – Table 7 Peak Hour LOS: This table needs to also include delays.	(1) Will Comply and add delay values to the table.
3.	PDF pg. 31 – Table 7 Peak Hour LOS – ID 6 Northwestern & Route 66: The AM peak hour LOS changes from D in no build to a failing E in the build scenario. This needs to be mitigated.	(1) After re-evaluating the volumes at Northwestern Street and Route 66, it was determined that there is little area for growth from the existing conditions. In the previous report, volumes to/from Northwestern were grown with the growth rate, this has been eliminated in the updated report. With this change and assuming a 4% annual growth rate along Route 66 with no surrounding development volumes incorporated along Route 66, the intersection of Northwestern Street and Route 66 operates with acceptable levels of service.
4.	PDF pg. 32 – "Due to the intersection having unacceptable delay in the background scenario, no mitigation is recommended at this intersection." This is incorrect. The LOS is a D in the no build scenario and falls to an E in the build scenario.	(1) Refer to comment three.
5.	PDF pg. 33 – Right Turn Deceleration Lanes: A right turn lane warrant needs to be completed at Route 66 and Woody Mountain assuming a 4-lane cross section on Route 66. If a right turn lane is warranted right-of-way will need to be designated on the site plan (this comment was also made previously on the Site Plan review).	(1) Will comply and complete a turn lane warrant analysis with these assumptions.

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Reviewer Name, Agency: **Stephanie Santana, Reid Miller, City of Flagstaff**

Item	Review Comment	(Code) & Response
6.	PDF pg. 33 - Left Turn Deceleration Lanes: Woody Mountain is a minor Arterial roadway, and this requires a left turn lane into any access point (this comment was also made previously on the Site Plan review).	(1) Will comply and add a Left turn deceleration lane based on Minor Arterial Roadway requirements.
7.	PDF pg. 34 – Table 8 Queue Storage Lengths: The HCM method shall be calculated by first rounding the 95th%tile queue storage length up to the next vehicle, then multiplying by 25 feet.	(2) Will comply and update HCM queue storage values based on the described method.
8.	PDF pg. 34 – Table 8 Queue Storage Lengths – ID A: Missing EBL & EBR at Driveway A & Woody Mtn.	(1) Noted. Will add in Queue Lengths for EBL and EBR at driveway A.
9.	PDF pg. 35 – Figure 11 Proposed Lane Configurations and Traffic Controls – Intersection A: This figure shows designated EB left turn and right turn lanes, but it was analyzed as an EB shared left/right lane.	(1) Analysis will be updated to account for designated EB left turn and right turn lanes out of the site.
10.	General: Please ensure ADOT receives future submittals as well.	(1) Will Comply
11.	General: Please schedule a meeting for comment resolution.	(1) Will Comply

MEMORANDUM

Transportation Engineering Section

To: **Genevieve Pearthree, Senior Planner**

From: **Stephanie Santana, Sr. Transportation Engineer**
Reid Miller, Sr. Transportation Engineer

Date: **January 31, 2023**

RE: **1st Review of LIV Timber Sky - Sealed November 21, 2022**

CC: **Jeffrey Bauman, City of Flagstaff Traffic Engineer**

The City of Flagstaff Transportation Engineering Section has reviewed the submitted TIA sealed November 21, 2022. Please address the following comments and resubmit:

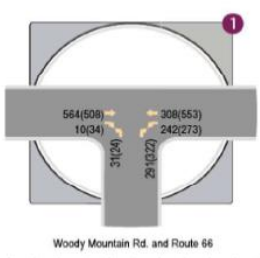
1. PDF pg. 19 – Future Roadway Improvements: "ADOT indicated via email on July 14, 2022 that proportionate share contributions from other developers have been provided to construct the traffic signal once warranted." In the event that a traffic signal is not warranted with the project, but will be in the future, LIV Timber needs to calculate a proportional share using the same methodology as Sky Cottage. See calculation below.
2. PDF pg. 31 – Table 7 Peak Hour LOS: This table needs to also include delays.
3. PDF pg. 31 – Table 7 Peak Hour LOS – ID 6 Northwestern & Route 66: The AM peak hour LOS changes from D in no build to a failing E in the build scenario. This needs to be mitigated.
4. PDF pg. 32 – "Due to the intersection having unacceptable delay in the background scenario, no mitigation is recommended at this intersection." This is incorrect. The LOS is a D in the no build scenario and falls to an E in the build scenario.
5. PDF pg. 33 – Right Turn Deceleration Lanes: A right turn lane warrant needs to be completed at Route 66 and Woody Mountain assuming a 4-lane cross section on Route 66. If a right turn lane is warranted right-of-way will need to be designated on the site plan (this comment was also made previously on the Site Plan review).
6. PDF pg. 33 - Left Turn Deceleration Lanes: Woody Mountain is a minor Arterial roadway, and this requires a left turn lane into any access point (this comment was also made previously on the Site Plan review).

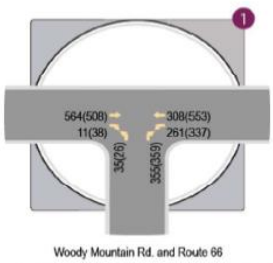
7. PDF pg. 34 – Table 8 Queue Storage Lengths: The HCM method shall be calculated by first rounding the 95th%tile queue storage length up to the next vehicle, then multiplying by 25 feet.
8. PDF pg. 34 – Table 8 Queue Storage Lengths – ID A: Missing EBL & EBR at Driveway A & Woody Mtn.
9. PDF pg. 35 – Figure 11 Proposed Lane Configurations and Traffic Controls – Intersection A: This figure shows designated EB left turn and right turn lanes, but it was analyzed as an EB shared left/right lane.
10. General: Please ensure ADOT receives future submittals as well.
11. General: Please schedule a meeting for comment resolution.

CivTech	Project: Sky Cottages TIA	Date: 10/21/2020	Date: 10/22/2020	Project No.
	Subject: Traffic Signal Proportional Share	Prepared By: BAG	Checked By: AA	15-0536

Traffic Signal at Route 66 and Woody Mountain Road

Using 2022 Traffic Volumes, as shown in Initial TIA with seal date October 5 2020





Without Project	With Project
AM: 564+10+31+291+242+308 = 1446	AM: 564+11+35+355+261+308 = 1534
PM: 508+34+24+322+273+553 = 1714	PM: 508+38+26+359+337+553 = 1821

AM Percentage = 100 * (1534 -1446) / 1534 = 5.77%
PM Percentage = 100 * (1821 - 1714) / 1821 = 5.88%

For the Daily trips, the TIA assumed 95% of trips would be from/to the north and use the intersection of Route 66 and Woody Mountain Road.

ADT of project is 1,472 total trips
1472 * 0.95 = 1398 trips per day through intersection.

Utilizing a K-Factor of 0.09, to convert from PM Peak Hour total volume of 1714, 1714/.09 = 19,044 vehicles per day

Daily Percentage = 100 * (1398) / (19044 + 1398) = 6.83%

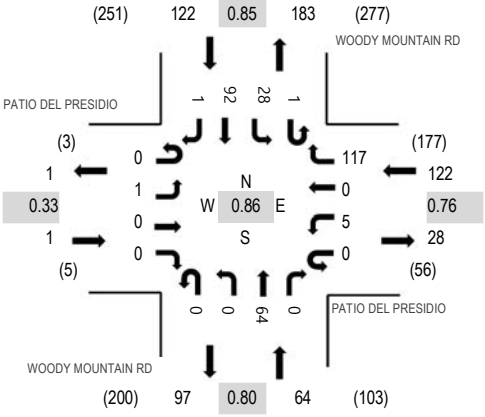
APPENDIX B

EXISTING TRAFFIC COUNTS

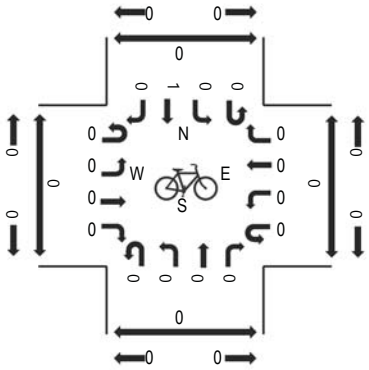
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 WOODY MOUNTAIN RD & PATIO DEL PRESIDIO AM
Date: Tuesday, September 27, 2022
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

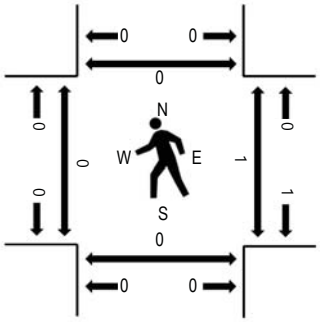
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

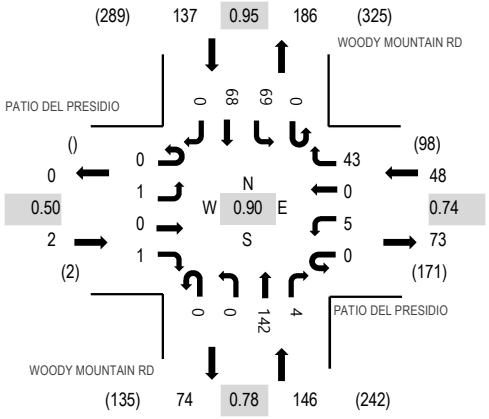
Traffic Counts - Motorized Vehicles

Interval Start Time	PATIO DEL PRESIDIO Eastbound				PATIO DEL PRESIDIO Westbound				WOODY MOUNTAIN RD Northbound				WOODY MOUNTAIN RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	1	0	0	0	0	0	22	0	0	17	0	1	3	18	1	63	309	0	1	0	0
7:15 AM	0	0	0	0	0	0	0	29	0	0	12	0	0	4	23	0	68	302	0	0	0	0
7:30 AM	0	0	0	0	0	2	0	38	0	0	20	0	0	9	21	0	90	302	0	0	0	0
7:45 AM	0	0	0	0	0	3	0	28	0	0	15	0	0	12	30	0	88	264	0	0	0	0
8:00 AM	0	0	0	0	0	1	0	14	0	0	11	0	0	4	25	1	56	227	0	0	0	0
8:15 AM	0	3	0	0	0	1	0	15	0	0	9	0	0	12	28	0	68		0	0	0	0
8:30 AM	0	0	0	0	0	1	0	10	0	0	11	0	0	4	25	1	52		0	0	0	0
8:45 AM	0	1	0	0	0	0	0	13	0	0	7	1	0	7	22	0	51		0	0	0	0
Count Total	0	5	0	0	0	8	0	169	0	0	102	1	1	55	192	3	536		0	1	0	0
Peak Hour	0	1	0	0	0	5	0	117	0	0	64	0	1	28	92	1	309		0	1	0	0

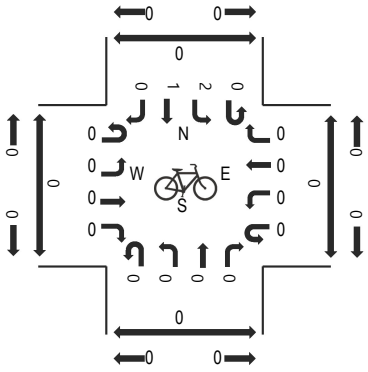
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 WOODY MOUNTAIN RD & PATIO DEL PRESIDIO PM
Date: Tuesday, September 27, 2022
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

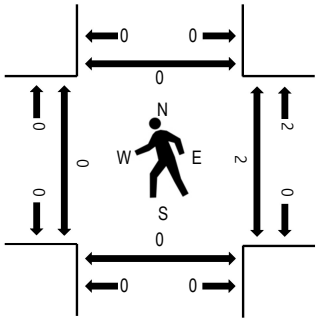
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

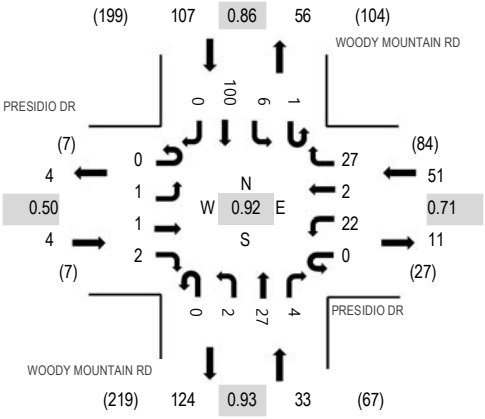
Traffic Counts - Motorized Vehicles

Interval Start Time	PATIO DEL PRESIDIO Eastbound				PATIO DEL PRESIDIO Westbound				WOODY MOUNTAIN RD Northbound				WOODY MOUNTAIN RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	1	0	0	0	8	0	0	46	1	0	16	21	0	93	333	0	2	0	0
4:15 PM	0	1	0	0	0	0	0	11	0	0	28	1	0	19	16	0	76	318	0	0	0	0
4:30 PM	0	0	0	0	0	2	0	10	0	0	38	1	0	15	14	0	80	311	0	0	0	0
4:45 PM	0	0	0	0	0	3	0	14	0	0	30	1	0	19	17	0	84	306	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	8	1	0	30	1	0	23	15	0	78	298	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	9	0	0	19	1	0	27	13	0	69		0	0	0	0
5:30 PM	0	0	0	0	1	0	0	15	0	0	22	0	0	23	14	0	75		0	0	0	0
5:45 PM	0	0	0	0	0	0	0	17	0	0	19	3	0	19	18	0	76		0	0	0	0
Count Total	0	1	0	1	1	5	0	92	1	0	232	9	0	161	128	0	631		0	2	0	0
Peak Hour	0	1	0	1	0	5	0	43	0	0	142	4	0	69	68	0	333		0	2	0	0

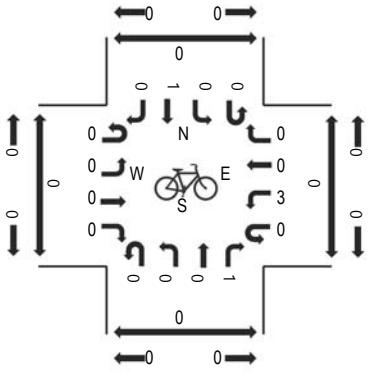
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 WOODY MOUNTAIN RD & PRESIDIO DR AM
Date: Tuesday, September 27, 2022
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

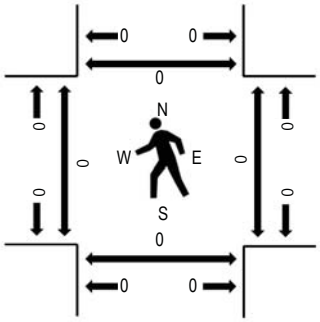
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

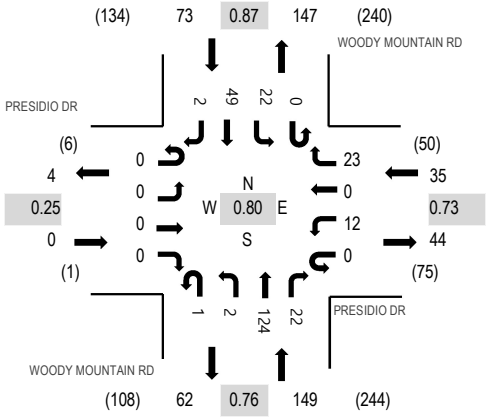
Traffic Counts - Motorized Vehicles

Interval Start Time	PRESIDIO DR Eastbound				PRESIDIO DR Westbound				WOODY MOUNTAIN RD Northbound				WOODY MOUNTAIN RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	4	0	7	0	0	10	1	0	2	15	0	39	182	0	0	0	0
7:15 AM	0	0	0	0	0	4	0	3	0	0	9	1	0	4	20	1	42	194	0	0	0	0
7:30 AM	0	0	0	1	0	3	1	10	0	0	11	0	0	2	20	0	48	195	0	0	0	0
7:45 AM	0	0	0	0	0	4	1	6	0	1	6	2	1	1	31	0	53	192	0	0	0	0
8:00 AM	0	0	1	1	0	11	0	7	0	0	4	2	0	2	23	0	51	175	0	0	0	0
8:15 AM	0	1	0	0	0	4	0	4	0	1	6	0	0	1	26	0	43		0	0	0	0
8:30 AM	0	0	2	1	1	2	1	2	0	0	8	0	1	3	24	0	45		0	0	0	0
8:45 AM	0	0	0	0	0	4	1	4	0	0	4	1	0	1	21	0	36		0	0	0	0
Count Total	0	1	3	3	1	36	4	43	0	2	58	7	2	16	180	1	357		0	0	0	0
Peak Hour	0	1	1	2	0	22	2	27	0	2	27	4	1	6	100	0	195		0	0	0	0

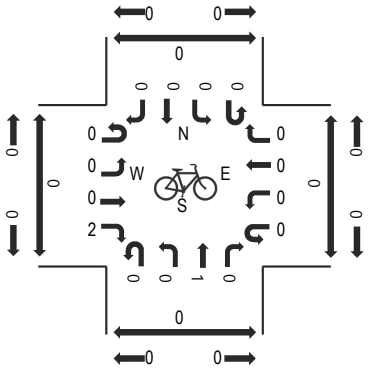
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 WOODY MOUNTAIN RD & PRESIDIO DR PM
Date: Tuesday, September 27, 2022
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

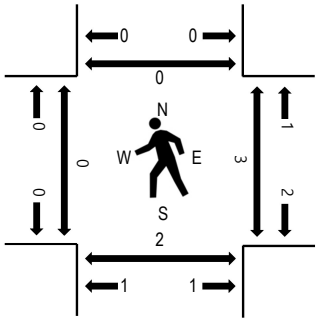
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

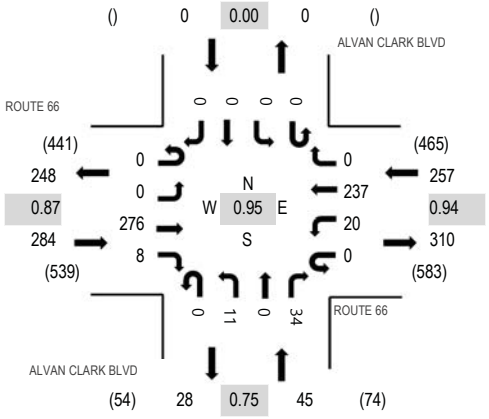
Traffic Counts - Motorized Vehicles

Interval Start Time	PRESIDIO DR Eastbound				PRESIDIO DR Westbound				WOODY MOUNTAIN RD Northbound				WOODY MOUNTAIN RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	4	0	6	1	0	40	8	0	2	19	0	80	257	0	1	1	0
4:15 PM	0	0	0	0	0	4	0	3	0	0	26	11	0	6	9	1	60	226	0	0	0	0
4:30 PM	0	0	0	0	0	2	0	4	0	0	35	0	0	6	10	0	57	210	0	0	0	0
4:45 PM	0	0	0	0	0	2	0	10	0	2	23	3	0	8	11	1	60	189	0	2	1	0
5:00 PM	0	0	0	0	0	2	0	1	0	0	28	2	0	5	11	0	49	172	0	0	0	2
5:15 PM	0	0	0	1	0	3	2	1	0	0	20	4	0	4	9	0	44		1	0	0	0
5:30 PM	0	0	0	0	0	1	0	1	0	0	19	1	1	5	8	0	36		0	1	0	2
5:45 PM	0	0	0	0	0	1	0	3	0	0	18	3	1	7	10	0	43		0	0	0	0
Count Total	0	0	0	1	0	19	2	29	1	2	209	32	2	43	87	2	429		1	4	2	4
Peak Hour	0	0	0	0	0	12	0	23	1	2	124	22	0	22	49	2	257		0	3	2	0

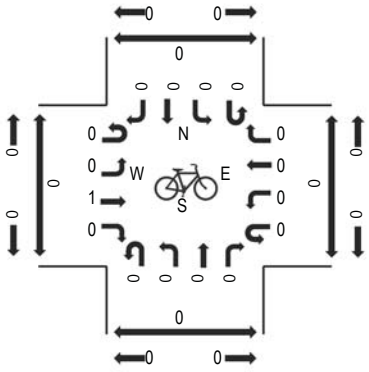
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 ALVAN CLARK BLVD & ROUTE 66 AM
Date: Tuesday, September 27, 2022
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:30 AM - 08:45 AM

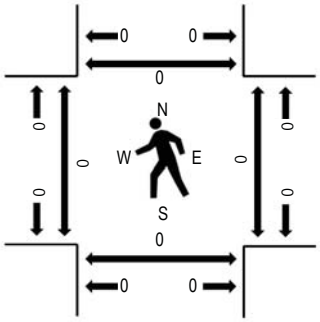
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

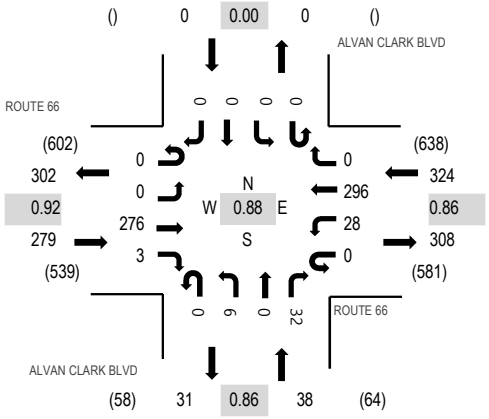
Traffic Counts - Motorized Vehicles

Interval Start Time	ROUTE 66 Eastbound				ROUTE 66 Westbound				ALVAN CLARK BLVD Northbound				ALVAN CLARK BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	62	1	0	6	43	0	0	5	0	6	0	0	0	0	123	517	0	0	0	0
7:15 AM	0	0	63	0	0	4	41	0	0	0	0	8	0	0	0	0	116	533	0	0	0	0
7:30 AM	0	0	73	0	0	6	44	0	0	2	0	6	0	0	0	0	131	562	0	0	0	0
7:45 AM	0	0	79	3	0	6	44	0	0	4	0	11	0	0	0	0	147	586	0	0	0	0
8:00 AM	0	0	57	1	0	4	64	0	0	4	0	9	0	0	0	0	139	561	0	0	0	0
8:15 AM	0	0	68	3	0	8	59	0	0	2	0	5	0	0	0	0	145		0	0	0	0
8:30 AM	0	0	72	1	0	2	70	0	0	1	0	9	0	0	0	0	155		0	0	0	0
8:45 AM	0	0	53	3	0	6	58	0	0	0	0	2	0	0	0	0	122		0	0	0	0
Count Total	0	0	527	12	0	42	423	0	0	18	0	56	0	0	0	0	1,078		0	0	0	0
Peak Hour	0	0	276	8	0	20	237	0	0	11	0	34	0	0	0	0	586		0	0	0	0

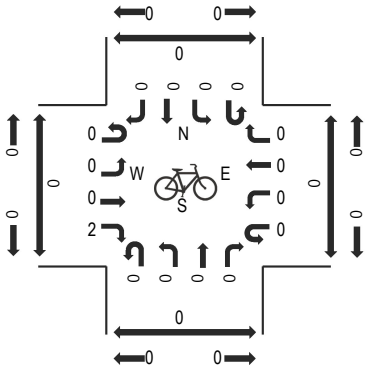
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 ALVAN CLARK BLVD & ROUTE 66 PM
Date: Tuesday, September 27, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

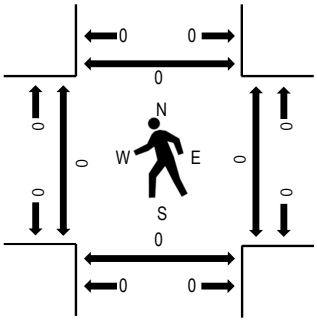
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

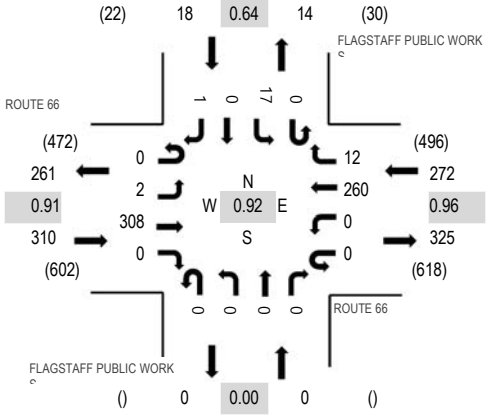
Traffic Counts - Motorized Vehicles

Interval Start Time	ROUTE 66 Eastbound				ROUTE 66 Westbound				ALVAN CLARK BLVD Northbound				ALVAN CLARK BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	74	3	0	3	85	0	0	1	0	5	0	0	0	0	171	622	0	0	0	0
4:15 PM	0	0	60	3	0	7	69	0	0	1	0	3	0	0	0	0	143	633	0	0	0	0
4:30 PM	0	0	75	1	0	5	76	0	0	1	0	8	0	0	0	0	166	641	0	0	0	0
4:45 PM	0	0	61	0	0	6	68	0	0	2	0	5	0	0	0	0	142	632	0	0	0	0
5:00 PM	0	0	76	0	0	13	82	0	0	2	0	9	0	0	0	0	182	619	0	0	0	0
5:15 PM	0	0	64	2	0	4	70	0	0	1	0	10	0	0	0	0	151		0	0	0	0
5:30 PM	0	0	67	1	0	0	80	0	0	0	0	9	0	0	0	0	157		0	0	1	0
5:45 PM	0	0	48	4	0	6	64	0	0	0	0	7	0	0	0	0	129		0	0	0	0
Count Total	0	0	525	14	0	44	594	0	0	8	0	56	0	0	0	0	1,241		0	0	1	0
Peak Hour	0	0	276	3	0	28	296	0	0	6	0	32	0	0	0	0	641		0	0	0	0

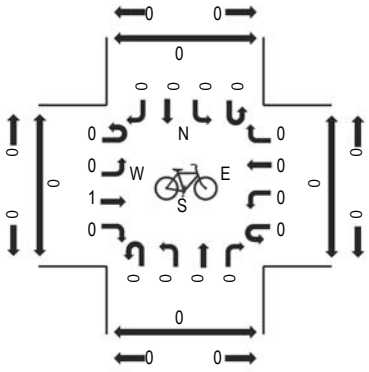
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 4 FLAGSTAFF PUBLIC WORKS & ROUTE 66 AM
Date: Tuesday, September 27, 2022
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:30 AM - 08:45 AM

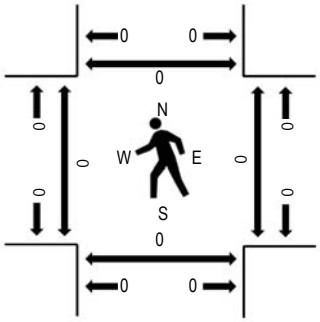
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

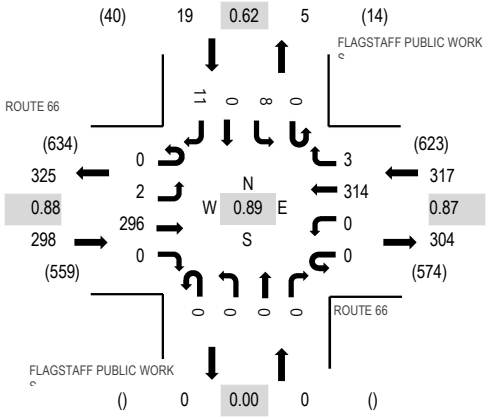
Traffic Counts - Motorized Vehicles

Interval Start Time	ROUTE 66 Eastbound				ROUTE 66 Westbound				FLAGSTAFF PUBLIC WORKS Northbound				FLAGSTAFF PUBLIC WORKS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	78	0	0	0	49	1	0	0	0	0	0	1	0	0	129	545	0	0	0	0
7:15 AM	0	0	70	0	0	0	48	3	0	0	0	0	0	2	0	0	123	553	0	0	0	0
7:30 AM	0	3	88	0	0	0	50	5	0	0	0	0	0	0	0	0	146	583	0	0	0	0
7:45 AM	0	1	90	0	0	0	51	2	0	0	0	0	0	2	0	1	147	600	0	0	0	0
8:00 AM	0	0	64	0	0	0	66	4	0	0	0	0	0	3	0	0	137	575	0	0	0	0
8:15 AM	0	1	72	0	0	0	72	3	0	0	0	0	0	5	0	0	153		0	0	0	0
8:30 AM	0	0	82	0	0	0	71	3	0	0	0	0	0	7	0	0	163		0	0	0	0
8:45 AM	0	0	53	0	0	0	64	4	0	0	0	0	0	1	0	0	122		0	0	0	0
Count Total	0	5	597	0	0	0	471	25	0	0	0	0	0	21	0	1	1,120		0	0	0	0
Peak Hour	0	2	308	0	0	0	260	12	0	0	0	0	0	17	0	1	600		0	0	0	0

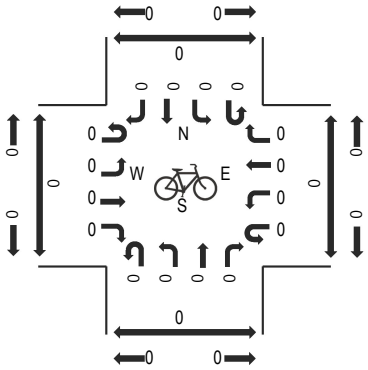
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 4 FLAGSTAFF PUBLIC WORKS & ROUTE 66 PM
Date: Tuesday, September 27, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

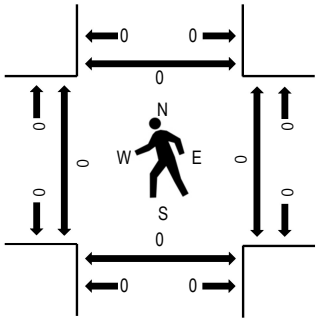
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

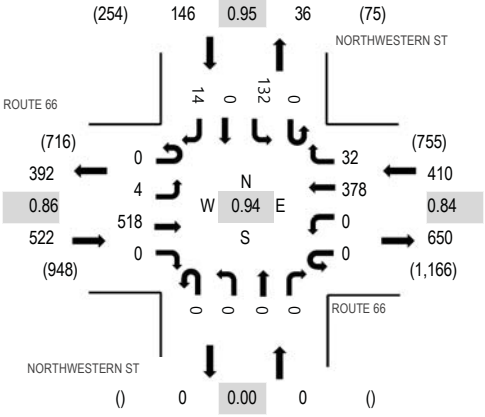
Traffic Counts - Motorized Vehicles

Interval Start Time	ROUTE 66 Eastbound				ROUTE 66 Westbound				FLAGSTAFF PUBLIC WORKS Northbound				FLAGSTAFF PUBLIC WORKS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	67	0	0	0	78	1	0	0	0	0	0	8	0	5	159	609	0	0	0	0
4:15 PM	0	2	61	0	0	0	76	4	0	0	0	0	0	2	0	1	146	628	0	0	0	0
4:30 PM	0	0	83	0	0	0	74	1	0	0	0	0	0	3	0	7	168	634	0	0	0	0
4:45 PM	0	0	57	0	0	0	73	0	0	0	0	0	0	4	0	2	136	620	0	0	0	0
5:00 PM	0	1	84	0	0	0	91	1	0	0	0	0	0	0	0	1	178	613	0	0	0	0
5:15 PM	0	1	72	0	0	0	76	1	0	0	0	0	0	1	0	1	152		0	0	0	0
5:30 PM	0	1	75	0	0	0	76	0	0	0	0	0	0	0	0	2	154		0	0	0	0
5:45 PM	0	0	55	0	0	0	70	1	0	0	0	0	0	2	0	1	129		0	0	0	0
Count Total	0	5	554	0	0	0	614	9	0	0	0	0	0	20	0	20	1,222		0	0	0	0
Peak Hour	0	2	296	0	0	0	314	3	0	0	0	0	0	8	0	11	634		0	0	0	0

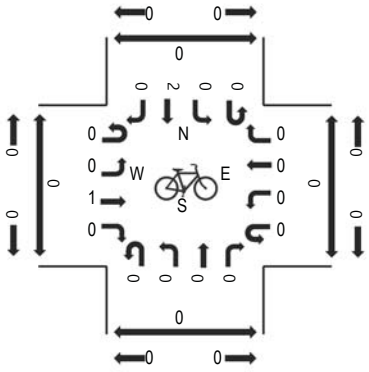
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 5 NORTHWESTERN ST & ROUTE 66 AM
Date: Tuesday, September 27, 2022
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

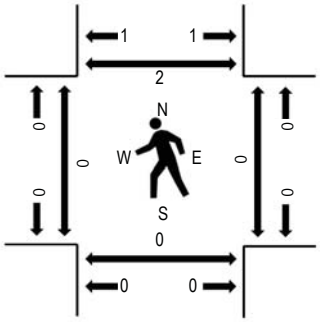
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

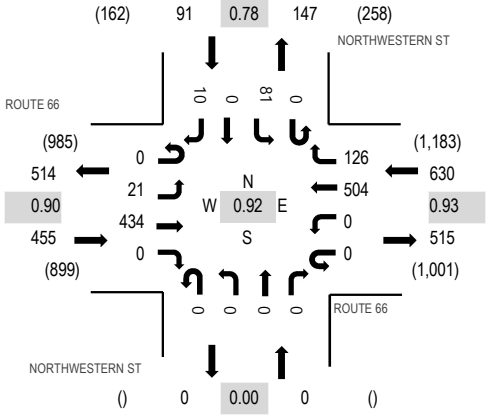
Traffic Counts - Motorized Vehicles

Interval Start Time	ROUTE 66 Eastbound				ROUTE 66 Westbound				NORTHWESTERN ST Northbound				NORTHWESTERN ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	1	121	0	0	0	64	9	0	0	0	0	0	17	0	1	213	998	0	0	0	0
7:15 AM	0	2	110	0	0	0	66	3	0	0	0	0	0	33	0	8	222	1,035	0	0	0	0
7:30 AM	0	1	156	0	0	0	81	6	0	0	0	0	0	39	0	4	287	1,078	0	0	0	0
7:45 AM	0	0	150	0	0	0	80	6	0	0	0	0	0	36	0	4	276	1,032	0	0	0	0
8:00 AM	0	2	102	0	0	0	94	12	0	0	0	0	0	37	0	3	250	959	0	0	0	1
8:15 AM	0	1	110	0	0	0	123	8	0	0	0	0	0	20	0	3	265		0	0	0	1
8:30 AM	0	0	113	0	0	0	94	11	0	0	0	0	0	19	0	4	241		0	0	0	0
8:45 AM	0	1	78	0	0	0	86	12	0	0	0	0	0	25	0	1	203		0	0	0	0
Count Total	0	8	940	0	0	0	688	67	0	0	0	0	0	226	0	28	1,957		0	0	0	2
Peak Hour	0	4	518	0	0	0	378	32	0	0	0	0	0	132	0	14	1,078		0	0	0	2

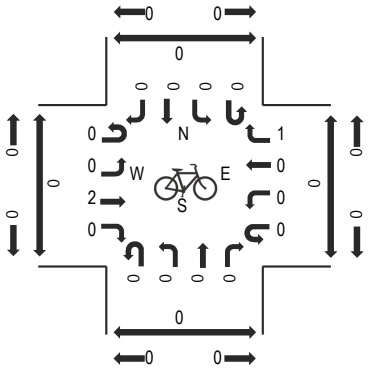
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 5 NORTHWESTERN ST & ROUTE 66 PM
Date: Tuesday, September 27, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

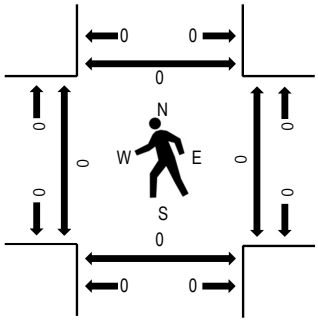
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	ROUTE 66 Eastbound				ROUTE 66 Westbound				NORTHWESTERN ST Northbound				NORTHWESTERN ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	5	126	0	0	0	112	19	0	0	0	0	0	18	0	3	283	1,083	0	0	0	0
4:15 PM	0	5	98	0	0	0	101	20	0	0	0	0	0	13	0	3	240	1,119	0	0	0	0
4:30 PM	0	3	128	0	0	0	114	32	0	0	0	0	0	12	0	3	292	1,176	0	0	0	0
4:45 PM	0	0	106	0	0	0	109	31	0	0	0	0	0	20	0	2	268	1,176	0	0	0	0
5:00 PM	0	7	112	0	0	0	138	33	0	0	0	0	0	29	0	0	319	1,161	0	0	0	0
5:15 PM	0	11	88	0	0	0	143	30	0	0	0	0	0	20	0	5	297		0	0	0	0
5:30 PM	0	7	107	0	0	0	142	21	0	0	0	0	0	14	0	1	292		0	0	0	1
5:45 PM	0	2	94	0	0	0	106	32	0	0	0	0	0	16	0	3	253		0	0	0	0
Count Total	0	40	859	0	0	0	965	218	0	0	0	0	0	142	0	20	2,244		0	0	0	1
Peak Hour	0	21	434	0	0	0	504	126	0	0	0	0	0	81	0	10	1,176		0	0	0	0

All Traffic Data Services

6 WOODY MOUNTAIN RD & ROUTE 66 AM
Tuesday, September 27, 2022

Peak Hour
02:15 PM - 03:15 PM
Peak 15-Minutes
02:30 PM - 02:45 PM

Traffic Counts - All Vehicles

	ROUTE 66					ROUTE 66					WOODY MOUNTAIN RD					WOODY MOUNTAIN RD						
	Eastbound					Westbound					Northbound					Southbound						Rolling
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Hour
7:00 AM	0	0	74	0	0	0	22	46	0	0	0	4	0	35	0	0	0	0	0	0	181	824
7:15 AM	0	0	69	2	0	0	28	46	0	0	0	4	0	37	0	0	0	0	0	0	186	836
7:30 AM	0	0	88	2	0	0	29	53	0	0	0	2	0	60	0	0	0	0	0	0	234	869
7:45 AM	0	0	88	3	0	0	38	51	0	0	0	2	0	41	0	0	0	0	0	0	223	850
8:00 AM	0	0	67	1	0	0	28	70	0	0	0	1	0	26	0	0	0	0	0	0	193	798
8:15 AM	0	0	75	0	0	0	39	76	0	0	0	0	0	29	0	0	0	0	0	0	219	791
8:30 AM	0	0	89	3	0	0	32	71	0	0	0	3	0	17	0	0	0	0	0	0	215	745
8:45 AM	0	0	57	0	0	0	26	67	0	0	0	2	0	19	0	0	0	0	0	0	171	698
9:00 AM	0	0	57	3	0	0	24	76	0	0	0	4	0	22	0	0	0	0	0	0	186	687
TOTAL Peak		0	318	6			134	250	0			5	0	156			0	0	0			

Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	0	318	12	0	0	209	261	0	0	0	8	0	226	0	0	0	0	0	0	1,034
Mediums	0	0	16	0	0	0	5	13	0	0	0	1	0	3	0	0	0	0	0	0	38
Total	0	0	334	12	0	0	214	275	0	0	0	9	0	229	0	0	0	0	0	0	1,073
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Bicycles on Crosswalk			0					0					0					0			0
Heavy Vehicle Percentage			4.6%					3.9%					1.7%					0.0%			3.6%
Heavy Vehicle Percentage	0.0%	0.0%	4.8%	0.0%	0.0%	0.0%	2.3%	5.1%	0.0%	0.0%	0.0%	11.1%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%
Peak Hour Factor (PHF)			0.85					0.95					0.58					0.00			0.78
Peak Hour Factor (PHF)	0.00	0.00	0.83	0.69	0.00	0.25	0.79	0.90	0.00	0.00	0.00	0.64	0.25	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.78

Traffic Counts by Vehicle Type

	Eastbound					Westbound					Northbound					Southbound					
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks																					
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
9:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

12:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Lights

12:00 AM	0	0	2	0	0	0	1	1	0	0	0	0	0	4	0	0	0	0	0	0	8
12:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	4
12:30 AM	0	0	3	1	0	0	2	2	0	0	0	0	0	6	0	0	0	0	0	0	14
12:45 AM	0	0	3	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	5
1:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	11	0	0	0	0	0	0	12
1:15 AM	0	0	1	0	0	0	3	1	0	0	0	0	0	5	0	0	0	0	0	0	10
1:30 AM	0	0	6	0	0	0	1	4	0	0	0	0	0	75	0	0	0	0	0	0	86
1:45 AM	0	0	1	1	0	0	3	3	0	0	0	0	0	6	0	0	0	0	0	0	14
2:00 AM	0	0	2	0	0	0	3	1	0	0	0	0	0	1	0	0	0	0	0	0	7
2:15 AM	0	0	3	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	7
2:30 AM	0	0	2	0	0	0	4	0	0	0	0	0	0	5	0	0	0	0	0	0	11
2:45 AM	0	0	3	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	0	1	0	0	0	7	5	0	0	0	0	0	1	0	0	0	0	0	0	14
3:15 AM	0	0	1	0	0	0	6	4	0	0	0	0	0	1	0	0	0	0	0	0	12
3:30 AM	0	0	5	0	0	0	19	8	0	0	0	0	0	9	0	0	0	0	0	0	41
3:45 AM	0	0	2	0	0	0	64	9	0	0	0	0	0	3	0	0	0	0	0	0	78
4:00 AM	0	0	3	0	0	0	11	3	0	0	0	0	0	2	0	0	0	0	0	0	19
4:15 AM	0	0	2	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	8
4:30 AM	0	0	7	0	0	0	5	7	0	0	0	1	0	2	0	0	0	0	0	0	22
4:45 AM	0	0	8	0	0	0	10	13	0	0	0	2	0	2	0	0	0	0	0	0	35
5:00 AM	0	0	5	0	0	0	1	18	0	0	0	3	0	0	0	0	0	0	0	0	27
5:15 AM	0	0	5	0	0	0	5	14	0	0	0	0	0	2	0	0	0	0	0	0	26
5:30 AM	0	0	13	0	0	0	6	43	0	0	0	3	0	4	0	0	0	0	0	0	69
5:45 AM	0	0	16	0	0	0	29	31	0	0	0	2	0	8	0	0	0	0	0	0	86
6:00 AM	0	0	26	0	0	0	7	20	0	0	0	0	0	10	0	0	0	0	0	0	63
6:15 AM	0	0	27	1	0	0	8	29	0	0	0	0	0	16	0	0	0	0	0	0	81
6:30 AM	0	0	46	0	0	0	8	30	0	0	0	1	0	18	0	0	0	0	0	0	103
6:45 AM	0	0	31	2	0	0	30	47	0	0	0	2	0	17	0	0	0	0	0	0	129
7:00 AM	0	0	67	0	0	0	21	44	0	0	0	4	0	35	0	0	0	0	0	0	171
7:15 AM	0	0	65	1	0	0	28	42	0	0	0	4	0	36	0	0	0	0	0	0	176
7:30 AM	0	0	83	2	0	0	28	52	0	0	0	2	0	59	0	0	0	0	0	0	226
7:45 AM	0	0	84	3	0	0	37	48	0	0	0	2	0	40	0	0	0	0	0	0	214
8:00 AM	0	0	66	1	0	0	28	65	0	0	0	1	0	25	0	0	0	0	0	0	186
8:15 AM	0	0	71	0	0	0	37	73	0	0	0	0	0	28	0	0	0	0	0	0	209
8:30 AM	0	0	84	2	0	0	29	67	0	0	0	3	0	17	0	0	0	0	0	0	202
8:45 AM	0	0	52	0	0	0	25	61	0	0	0	2	0	18	0	0	0	0	0	0	158
9:00 AM	0	0	55	2	0	0	24	74	0	0	0	4	0	22	0	0	0	0	0	0	181
9:15 AM	0	0	70	1	0	0	21	51	0	0	0	3	0	19	0	0	0	0	0	0	165
9:30 AM	0	0	65	0	0	0	19	50	0	0	0	3	0	24	0	0	0	0	0	0	161
9:45 AM	0	0	54	1	0	0	25	53	0	0	0	2	0	17	0	0	0	0	0	0	152
10:00 AM	0	0	70	1	0	0	18	62	0	0	0	2	0	21	0	0	0	0	0	0	174
10:15 AM	0	0	69	3	0	0	15	64	0	0	0	2	0	21	0	0	0	0	0	0	174
10:30 AM	0	0	73	0	0	0	17	53	0	0	0	3	0	21	0	0	0	0	0	0	167
10:45 AM	0	0	67	1	0	2	18	55	0	0	0	1	0	33	0	0	0	0	0	0	177
11:00 AM	0	0	65	3	0	0	35	63	0	0	0	2	0	44	0	0	0	0	0	0	212
11:15 AM	0	0	55	1	0	0	29	52	0	0	0	1	0	34	0	0	0	0	0	0	172
11:30 AM	0	0	80	5	0	0	37	94	0	0	0	4	0	56	0	0	0	0	0	0	276
11:45 AM	0	0	81	4	0	0	36	72	0	0	0	2	0	46	0	0	0	0	0	0	241
12:00 PM	0	0	66	3	0	1	45	78	0	0	0	3	0	53	0	0	0	0	0	0	249

12:15 PM	0	0	59	1	0	0	42	62	0	0	0	0	0	51	0	0	0	0	0	0	215
12:30 PM	0	0	58	1	0	0	58	70	0	0	0	4	0	27	0	0	0	0	0	0	218
12:45 PM	0	0	70	5	0	0	54	70	0	0	0	7	0	28	0	0	0	0	0	0	234
1:00 PM	0	0	65	2	0	0	35	76	0	0	0	4	0	30	0	0	0	0	0	0	212
1:15 PM	0	0	66	1	0	0	27	69	0	0	0	3	0	31	0	0	0	0	0	0	197
1:30 PM	0	0	52	1	0	0	27	67	0	0	0	3	0	23	0	0	0	0	0	0	173
1:45 PM	0	0	60	7	0	1	35	69	0	0	0	3	0	28	0	0	0	0	0	0	203
2:00 PM	0	0	64	3	0	0	34	60	0	0	0	4	0	26	0	0	0	0	0	0	191
2:15 PM	0	0	56	2	0	0	55	58	0	0	0	2	0	30	0	0	0	0	0	0	203
2:30 PM	0	0	99	2	0	0	68	65	0	0	0	2	0	99	0	0	0	0	0	0	335
2:45 PM	0	0	79	4	0	0	61	64	0	0	0	1	0	52	0	0	0	0	0	0	261
3:00 PM	0	0	84	4	0	0	25	74	0	0	0	3	0	45	0	0	0	0	0	0	235
3:15 PM	0	0	65	5	0	0	30	73	0	0	0	0	0	27	0	0	0	0	0	0	200
3:30 PM	0	0	75	4	0	0	36	76	0	0	0	3	0	52	0	0	0	0	0	0	246
3:45 PM	0	0	91	3	0	0	22	79	0	0	0	1	0	48	0	0	0	0	0	0	244
4:00 PM	0	0	68	3	0	0	31	78	0	0	0	1	0	49	0	0	0	0	0	0	230
4:15 PM	0	0	50	8	0	0	24	68	0	0	0	0	0	43	0	0	0	0	0	0	193
4:30 PM	0	0	77	3	0	0	28	72	0	0	0	2	0	47	0	0	0	0	0	0	229
4:45 PM	0	0	57	5	0	0	30	74	0	0	0	1	0	43	0	0	0	0	0	0	210
5:00 PM	0	0	79	6	0	0	34	89	0	0	0	0	0	34	0	0	0	0	0	0	242
5:15 PM	0	0	69	5	0	0	33	76	0	0	0	0	0	23	0	0	0	0	0	0	206
5:30 PM	0	0	69	5	0	0	31	78	0	0	0	2	0	36	0	0	0	0	0	0	221
5:45 PM	0	0	55	4	0	0	32	68	0	0	0	2	0	33	0	0	0	0	0	0	194
6:00 PM	0	0	50	4	0	0	23	48	0	0	0	1	0	17	0	0	0	0	0	0	143
6:15 PM	0	0	33	1	0	0	27	59	0	0	0	3	0	27	0	0	0	0	0	0	150
6:30 PM	0	0	42	2	0	0	20	40	0	0	0	0	0	25	0	0	0	0	0	0	129
6:45 PM	0	0	38	0	0	0	20	38	0	0	0	1	0	18	0	0	0	0	0	0	115
7:00 PM	0	0	29	1	0	0	22	40	0	0	0	1	0	19	0	0	0	0	0	0	112
7:15 PM	0	0	24	1	0	0	19	31	0	0	0	0	0	22	0	0	0	0	0	0	97
7:30 PM	0	0	17	2	0	0	21	28	0	0	0	1	0	12	0	0	0	0	0	0	81
7:45 PM	0	0	24	2	0	0	25	38	0	0	0	0	0	12	0	0	0	0	0	0	101
8:00 PM	0	0	22	1	0	0	24	21	0	0	0	0	0	33	0	0	0	0	0	0	101
8:15 PM	0	0	10	3	0	0	26	17	0	0	0	0	0	23	0	0	0	0	0	0	79
8:30 PM	0	0	21	1	0	0	29	21	0	0	0	0	0	9	0	0	0	0	0	0	81
8:45 PM	0	0	10	1	0	0	21	13	0	0	0	1	0	8	0	0	0	0	0	0	54
9:00 PM	0	0	10	3	0	0	11	18	0	0	0	0	0	15	0	0	0	0	0	0	57
9:15 PM	0	0	13	1	0	0	15	11	0	0	0	0	0	8	0	0	0	0	0	0	48
9:30 PM	0	0	13	0	0	0	17	9	0	0	0	1	0	5	0	0	0	0	0	0	45
9:45 PM	0	0	6	2	0	0	3	9	0	0	0	1	0	3	0	0	0	0	0	0	24
10:00 PM	0	0	10	2	0	0	3	9	0	0	0	1	0	3	0	0	0	0	0	0	28
10:15 PM	0	0	9	0	0	0	7	10	0	0	0	1	0	7	0	0	0	0	0	0	34
10:30 PM	0	0	5	0	0	0	3	5	0	0	0	1	0	6	0	0	0	0	0	0	20
10:45 PM	0	0	7	0	0	0	0	6	0	0	0	0	0	1	0	0	0	0	0	0	14
11:00 PM	0	0	5	0	0	0	8	2	0	0	0	1	0	2	0	0	0	0	0	0	18
11:15 PM	0	0	3	0	0	0	3	3	0	0	0	0	0	4	0	0	0	0	0	0	13
11:30 PM	0	0	3	0	0	0	0	5	0	0	0	1	0	1	0	0	0	0	0	0	10
11:45 PM	0	0	2	0	0	0	4	1	0	0	0	0	0	1	0	0	0	0	0	0	8

Mediums

12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 AM	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
5:45 AM	0	0	9	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	11
6:00 AM	0	0	3	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	6
6:15 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5
6:30 AM	0	0	3	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	7
6:45 AM	0	0	3	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	5
7:00 AM	0	0	6	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	9
7:15 AM	0	0	4	1	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	10
7:30 AM	0	0	5	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	8
7:45 AM	0	0	4	0	0	0	1	3	0	0	0	0	0	1	0	0	0	0	0	0	9
8:00 AM	0	0	1	0	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	6
8:15 AM	0	0	4	0	0	0	2	3	0	0	0	0	0	1	0	0	0	0	0	0	10
8:30 AM	0	0	5	1	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	12
8:45 AM	0	0	2	0	0	0	1	5	0	0	0	0	0	1	0	0	0	0	0	0	9
9:00 AM	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
9:15 AM	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	8
9:30 AM	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	6
9:45 AM	0	0	2	1	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	8
10:00 AM	0	0	2	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	6
10:15 AM	0	0	3	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	6
10:30 AM	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
10:45 AM	0	0	1	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	8
11:00 AM	0	0	1	0	0	0	0	5	0	0	0	0	0	1	0	0	0	0	0	0	7
11:15 AM	0	0	4	0	0	0	0	4	0	0	0	0	1	0	0	0	0	0	0	0	9
11:30 AM	0	0	5	0	0	0	0	6	0	0	0	0	0	1	0	0	0	0	0	0	12
11:45 AM	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
12:00 PM	0	0	2	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	5

12:15 PM	0	0	2	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	7
12:30 PM	0	0	0	2	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	5
12:45 PM	0	0	2	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	5
1:00 PM	0	0	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4
1:15 PM	0	0	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6
1:30 PM	0	0	1	0	0	0	1	2	0	0	0	0	0	2	0	0	0	0	0	0	6
1:45 PM	0	0	2	0	0	0	0	5	0	0	0	0	0	1	0	0	0	0	0	0	8
2:00 PM	0	0	4	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	8
2:15 PM	0	0	3	0	0	0	1	6	0	0	0	0	0	2	0	0	0	0	0	0	12
2:30 PM	0	0	4	0	0	0	3	2	0	0	0	1	0	1	0	0	0	0	0	0	11
2:45 PM	0	0	5	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	7
3:00 PM	0	0	4	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	8
3:15 PM	0	0	1	0	0	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	7
3:30 PM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
3:45 PM	0	0	2	0	0	0	0	5	0	0	0	0	0	3	0	0	0	0	0	0	10
4:00 PM	0	0	5	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	9
4:15 PM	0	0	3	1	0	0	3	9	0	0	0	1	0	1	0	0	0	0	0	0	18
4:30 PM	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	3
5:00 PM	0	0	0	1	0	0	1	0	0	0	0	0	0	4	0	0	0	0	0	0	6
5:15 PM	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:45 PM	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
7:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Bicycles on Road

12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1

12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Bicycles on Crosswalk

	Eastbound			Westbound			Northbound			Southbound		
Time	CCW	CW	Total	CCW	CW	Total	CCW	CW	Total	CCW	CW	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	1	1	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0

12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	1	1	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrians

	Eastbound			Westbound			Northbound			Southbound		
Time	CCW	CW	Total	CCW	CW	Total	CCW	CW	Total	CCW	CW	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	1	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	1	1	0	0	0

12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	1	1	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	1	1	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	1	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0

All Traffic Data Services

6 WOODY MOUNTAIN RD & ROUTE 66 PM
Tuesday, September 27, 2022

Peak Hour
02:15 PM - 03:15 PM
Peak 15-Minutes
02:30 PM - 02:45 PM

Traffic Counts - All Vehicles

	ROUTE 66					ROUTE 66					WOODY MOUNTAIN RD					WOODY MOUNTAIN RD						
	Eastbound					Westbound					Northbound					Southbound						Rolling
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Hour
4:00 PM	0	0	73	3	0	0	33	81	0	0	0	1	0	49	0	0	0	0	0	0	240	899
4:15 PM	0	0	53	9	0	0	27	77	0	0	0	1	0	44	0	0	0	0	0	0	211	907
4:30 PM	0	0	81	4	0	0	28	73	0	0	0	2	0	47	0	0	0	0	0	0	235	906
4:45 PM	0	0	57	5	0	0	30	75	0	0	0	1	0	45	0	0	0	0	0	0	213	893
5:00 PM	0	0	79	7	0	0	35	89	0	0	0	0	0	38	0	0	0	0	0	0	248	875
5:15 PM	0	0	69	6	0	0	33	77	0	0	0	0	0	25	0	0	0	0	0	0	210	771
5:30 PM	0	0	69	5	0	0	31	79	0	0	0	2	0	36	0	0	0	0	0	0	222	712
5:45 PM	0	0	55	4	0	0	32	69	0	0	0	2	0	33	0	0	0	0	0	0	195	620
SUM PEAK		0	270	25			120	314	0			4	0	174			0	0	0			

Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	0	318	12	0	0	209	261	0	0	0	8	0	226	0	0	0	0	0	0	1,034
Mediums	0	0	16	0	0	0	5	13	0	0	0	1	0	3	0	0	0	0	0	0	38
Total	0	0	334	12	0	0	214	275	0	0	0	9	0	229	0	0	0	0	0	0	1,073
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Bicycles on Crosswalk			0					0					0					0			0
Heavy Vehicle Percentage			4.6%					3.9%					1.7%					0.0%			3.6%
Heavy Vehicle Percentage	0.0%	0.0%	4.8%	0.0%	0.0%	0.0%	2.3%	5.1%	0.0%	0.0%	0.0%	11.1%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%
Peak Hour Factor (PHF)			0.85					0.95					0.58					0.00			0.78
Peak Hour Factor (PHF)	0.00	0.00	0.83	0.69	0.00	0.25	0.79	0.90	0.00	0.00	0.00	0.64	0.25	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.78

Traffic Counts by Vehicle Type

	Eastbound					Westbound					Northbound					Southbound					
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks																					
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
9:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

12:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Lights

12:00 AM	0	0	2	0	0	0	1	1	0	0	0	0	0	4	0	0	0	0	0	0	8
12:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	4
12:30 AM	0	0	3	1	0	0	2	2	0	0	0	0	0	6	0	0	0	0	0	0	14
12:45 AM	0	0	3	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	5
1:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	11	0	0	0	0	0	0	12
1:15 AM	0	0	1	0	0	0	3	1	0	0	0	0	0	5	0	0	0	0	0	0	10
1:30 AM	0	0	6	0	0	0	1	4	0	0	0	0	0	75	0	0	0	0	0	0	86
1:45 AM	0	0	1	1	0	0	3	3	0	0	0	0	0	6	0	0	0	0	0	0	14
2:00 AM	0	0	2	0	0	0	3	1	0	0	0	0	0	1	0	0	0	0	0	0	7
2:15 AM	0	0	3	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	7
2:30 AM	0	0	2	0	0	0	4	0	0	0	0	0	0	5	0	0	0	0	0	0	11
2:45 AM	0	0	3	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	0	1	0	0	0	7	5	0	0	0	0	0	1	0	0	0	0	0	0	14
3:15 AM	0	0	1	0	0	0	6	4	0	0	0	0	0	1	0	0	0	0	0	0	12
3:30 AM	0	0	5	0	0	0	19	8	0	0	0	0	0	9	0	0	0	0	0	0	41
3:45 AM	0	0	2	0	0	0	64	9	0	0	0	0	0	3	0	0	0	0	0	0	78
4:00 AM	0	0	3	0	0	0	11	3	0	0	0	0	0	2	0	0	0	0	0	0	19
4:15 AM	0	0	2	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	8
4:30 AM	0	0	7	0	0	0	5	7	0	0	0	1	0	2	0	0	0	0	0	0	22
4:45 AM	0	0	8	0	0	0	10	13	0	0	0	2	0	2	0	0	0	0	0	0	35
5:00 AM	0	0	5	0	0	0	1	18	0	0	0	3	0	0	0	0	0	0	0	0	27
5:15 AM	0	0	5	0	0	0	5	14	0	0	0	0	0	2	0	0	0	0	0	0	26
5:30 AM	0	0	13	0	0	0	6	43	0	0	0	3	0	4	0	0	0	0	0	0	69
5:45 AM	0	0	16	0	0	0	29	31	0	0	0	2	0	8	0	0	0	0	0	0	86
6:00 AM	0	0	26	0	0	0	7	20	0	0	0	0	0	10	0	0	0	0	0	0	63
6:15 AM	0	0	27	1	0	0	8	29	0	0	0	0	0	16	0	0	0	0	0	0	81
6:30 AM	0	0	46	0	0	0	8	30	0	0	0	1	0	18	0	0	0	0	0	0	103
6:45 AM	0	0	31	2	0	0	30	47	0	0	0	2	0	17	0	0	0	0	0	0	129
7:00 AM	0	0	67	0	0	0	21	44	0	0	0	4	0	35	0	0	0	0	0	0	171
7:15 AM	0	0	65	1	0	0	28	42	0	0	0	4	0	36	0	0	0	0	0	0	176
7:30 AM	0	0	83	2	0	0	28	52	0	0	0	2	0	59	0	0	0	0	0	0	226
7:45 AM	0	0	84	3	0	0	37	48	0	0	0	2	0	40	0	0	0	0	0	0	214
8:00 AM	0	0	66	1	0	0	28	65	0	0	0	1	0	25	0	0	0	0	0	0	186
8:15 AM	0	0	71	0	0	0	37	73	0	0	0	0	0	28	0	0	0	0	0	0	209
8:30 AM	0	0	84	2	0	0	29	67	0	0	0	3	0	17	0	0	0	0	0	0	202
8:45 AM	0	0	52	0	0	0	25	61	0	0	0	2	0	18	0	0	0	0	0	0	158
9:00 AM	0	0	55	2	0	0	24	74	0	0	0	4	0	22	0	0	0	0	0	0	181
9:15 AM	0	0	70	1	0	0	21	51	0	0	0	3	0	19	0	0	0	0	0	0	165
9:30 AM	0	0	65	0	0	0	19	50	0	0	0	3	0	24	0	0	0	0	0	0	161
9:45 AM	0	0	54	1	0	0	25	53	0	0	0	2	0	17	0	0	0	0	0	0	152
10:00 AM	0	0	70	1	0	0	18	62	0	0	0	2	0	21	0	0	0	0	0	0	174
10:15 AM	0	0	69	3	0	0	15	64	0	0	0	2	0	21	0	0	0	0	0	0	174
10:30 AM	0	0	73	0	0	0	17	53	0	0	0	3	0	21	0	0	0	0	0	0	167
10:45 AM	0	0	67	1	0	2	18	55	0	0	0	1	0	33	0	0	0	0	0	0	177
11:00 AM	0	0	65	3	0	0	35	63	0	0	0	2	0	44	0	0	0	0	0	0	212
11:15 AM	0	0	55	1	0	0	29	52	0	0	0	1	0	34	0	0	0	0	0	0	172
11:30 AM	0	0	80	5	0	0	37	94	0	0	0	4	0	56	0	0	0	0	0	0	276
11:45 AM	0	0	81	4	0	0	36	72	0	0	0	2	0	46	0	0	0	0	0	0	241
12:00 PM	0	0	66	3	0	1	45	78	0	0	0	3	0	53	0	0	0	0	0	0	249

12:15 PM	0	0	59	1	0	0	42	62	0	0	0	0	0	51	0	0	0	0	0	0	215
12:30 PM	0	0	58	1	0	0	58	70	0	0	0	4	0	27	0	0	0	0	0	0	218
12:45 PM	0	0	70	5	0	0	54	70	0	0	0	7	0	28	0	0	0	0	0	0	234
1:00 PM	0	0	65	2	0	0	35	76	0	0	0	4	0	30	0	0	0	0	0	0	212
1:15 PM	0	0	66	1	0	0	27	69	0	0	0	3	0	31	0	0	0	0	0	0	197
1:30 PM	0	0	52	1	0	0	27	67	0	0	0	3	0	23	0	0	0	0	0	0	173
1:45 PM	0	0	60	7	0	1	35	69	0	0	0	3	0	28	0	0	0	0	0	0	203
2:00 PM	0	0	64	3	0	0	34	60	0	0	0	4	0	26	0	0	0	0	0	0	191
2:15 PM	0	0	56	2	0	0	55	58	0	0	0	2	0	30	0	0	0	0	0	0	203
2:30 PM	0	0	99	2	0	0	68	65	0	0	0	2	0	99	0	0	0	0	0	0	335
2:45 PM	0	0	79	4	0	0	61	64	0	0	0	1	0	52	0	0	0	0	0	0	261
3:00 PM	0	0	84	4	0	0	25	74	0	0	0	3	0	45	0	0	0	0	0	0	235
3:15 PM	0	0	65	5	0	0	30	73	0	0	0	0	0	27	0	0	0	0	0	0	200
3:30 PM	0	0	75	4	0	0	36	76	0	0	0	3	0	52	0	0	0	0	0	0	246
3:45 PM	0	0	91	3	0	0	22	79	0	0	0	1	0	48	0	0	0	0	0	0	244
4:00 PM	0	0	68	3	0	0	31	78	0	0	0	1	0	49	0	0	0	0	0	0	230
4:15 PM	0	0	50	8	0	0	24	68	0	0	0	0	0	43	0	0	0	0	0	0	193
4:30 PM	0	0	77	3	0	0	28	72	0	0	0	2	0	47	0	0	0	0	0	0	229
4:45 PM	0	0	57	5	0	0	30	74	0	0	0	1	0	43	0	0	0	0	0	0	210
5:00 PM	0	0	79	6	0	0	34	89	0	0	0	0	0	34	0	0	0	0	0	0	242
5:15 PM	0	0	69	5	0	0	33	76	0	0	0	0	0	23	0	0	0	0	0	0	206
5:30 PM	0	0	69	5	0	0	31	78	0	0	0	2	0	36	0	0	0	0	0	0	221
5:45 PM	0	0	55	4	0	0	32	68	0	0	0	2	0	33	0	0	0	0	0	0	194
6:00 PM	0	0	50	4	0	0	23	48	0	0	0	1	0	17	0	0	0	0	0	0	143
6:15 PM	0	0	33	1	0	0	27	59	0	0	0	3	0	27	0	0	0	0	0	0	150
6:30 PM	0	0	42	2	0	0	20	40	0	0	0	0	0	25	0	0	0	0	0	0	129
6:45 PM	0	0	38	0	0	0	20	38	0	0	0	1	0	18	0	0	0	0	0	0	115
7:00 PM	0	0	29	1	0	0	22	40	0	0	0	1	0	19	0	0	0	0	0	0	112
7:15 PM	0	0	24	1	0	0	19	31	0	0	0	0	0	22	0	0	0	0	0	0	97
7:30 PM	0	0	17	2	0	0	21	28	0	0	0	1	0	12	0	0	0	0	0	0	81
7:45 PM	0	0	24	2	0	0	25	38	0	0	0	0	0	12	0	0	0	0	0	0	101
8:00 PM	0	0	22	1	0	0	24	21	0	0	0	0	0	33	0	0	0	0	0	0	101
8:15 PM	0	0	10	3	0	0	26	17	0	0	0	0	0	23	0	0	0	0	0	0	79
8:30 PM	0	0	21	1	0	0	29	21	0	0	0	0	0	9	0	0	0	0	0	0	81
8:45 PM	0	0	10	1	0	0	21	13	0	0	0	1	0	8	0	0	0	0	0	0	54
9:00 PM	0	0	10	3	0	0	11	18	0	0	0	0	0	15	0	0	0	0	0	0	57
9:15 PM	0	0	13	1	0	0	15	11	0	0	0	0	0	8	0	0	0	0	0	0	48
9:30 PM	0	0	13	0	0	0	17	9	0	0	0	1	0	5	0	0	0	0	0	0	45
9:45 PM	0	0	6	2	0	0	3	9	0	0	0	1	0	3	0	0	0	0	0	0	24
10:00 PM	0	0	10	2	0	0	3	9	0	0	0	1	0	3	0	0	0	0	0	0	28
10:15 PM	0	0	9	0	0	0	7	10	0	0	0	1	0	7	0	0	0	0	0	0	34
10:30 PM	0	0	5	0	0	0	3	5	0	0	0	1	0	6	0	0	0	0	0	0	20
10:45 PM	0	0	7	0	0	0	0	6	0	0	0	0	0	1	0	0	0	0	0	0	14
11:00 PM	0	0	5	0	0	0	8	2	0	0	0	1	0	2	0	0	0	0	0	0	18
11:15 PM	0	0	3	0	0	0	3	3	0	0	0	0	0	4	0	0	0	0	0	0	13
11:30 PM	0	0	3	0	0	0	0	5	0	0	0	1	0	1	0	0	0	0	0	0	10
11:45 PM	0	0	2	0	0	0	4	1	0	0	0	0	0	1	0	0	0	0	0	0	8

Mediums

12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 AM	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
5:45 AM	0	0	9	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	11
6:00 AM	0	0	3	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	6
6:15 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5
6:30 AM	0	0	3	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	7
6:45 AM	0	0	3	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	5
7:00 AM	0	0	6	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	9
7:15 AM	0	0	4	1	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	10
7:30 AM	0	0	5	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	8
7:45 AM	0	0	4	0	0	0	1	3	0	0	0	0	0	1	0	0	0	0	0	0	9
8:00 AM	0	0	1	0	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	6
8:15 AM	0	0	4	0	0	0	2	3	0	0	0	0	0	1	0	0	0	0	0	0	10
8:30 AM	0	0	5	1	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	12
8:45 AM	0	0	2	0	0	0	1	5	0	0	0	0	0	1	0	0	0	0	0	0	9
9:00 AM	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
9:15 AM	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	8
9:30 AM	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	6
9:45 AM	0	0	2	1	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	8
10:00 AM	0	0	2	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	6
10:15 AM	0	0	3	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	6
10:30 AM	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
10:45 AM	0	0	1	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	8
11:00 AM	0	0	1	0	0	0	0	5	0	0	0	0	0	1	0	0	0	0	0	0	7
11:15 AM	0	0	4	0	0	0	0	4	0	0	0	0	1	0	0	0	0	0	0	0	9
11:30 AM	0	0	5	0	0	0	0	6	0	0	0	0	0	1	0	0	0	0	0	0	12
11:45 AM	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
12:00 PM	0	0	2	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	5

12:15 PM	0	0	2	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	7
12:30 PM	0	0	0	2	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	5
12:45 PM	0	0	2	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	5
1:00 PM	0	0	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4
1:15 PM	0	0	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6
1:30 PM	0	0	1	0	0	0	1	2	0	0	0	0	0	2	0	0	0	0	0	0	6
1:45 PM	0	0	2	0	0	0	0	5	0	0	0	0	0	1	0	0	0	0	0	0	8
2:00 PM	0	0	4	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	8
2:15 PM	0	0	3	0	0	0	1	6	0	0	0	0	0	2	0	0	0	0	0	0	12
2:30 PM	0	0	4	0	0	0	3	2	0	0	0	1	0	1	0	0	0	0	0	0	11
2:45 PM	0	0	5	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	7
3:00 PM	0	0	4	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	8
3:15 PM	0	0	1	0	0	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	7
3:30 PM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
3:45 PM	0	0	2	0	0	0	0	5	0	0	0	0	0	3	0	0	0	0	0	0	10
4:00 PM	0	0	5	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	9
4:15 PM	0	0	3	1	0	0	3	9	0	0	0	1	0	1	0	0	0	0	0	0	18
4:30 PM	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	3
5:00 PM	0	0	0	1	0	0	1	0	0	0	0	0	0	4	0	0	0	0	0	0	6
5:15 PM	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:45 PM	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
7:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Bicycles on Road

12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1

12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Bicycles on Crosswalk

	Eastbound			Westbound			Northbound			Southbound		
Time	CCW	CW	Total	CCW	CW	Total	CCW	CW	Total	CCW	CW	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	1	1	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0

12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	1	1	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrians

	Eastbound			Westbound			Northbound			Southbound		
Time	CCW	CW	Total	CCW	CW	Total	CCW	CW	Total	CCW	CW	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	1	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	1	1	0	0	0

12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	1	1	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	1	1	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	1	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX C

EXISTING PEAK HOUR ANALYSIS

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	276	8	20	237	11	34
Future Vol, veh/h	276	8	20	237	11	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	75	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	80	80	85	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	325	10	25	279	14	43

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	335	0	515	325
Stage 1	-	-	-	-	325	-
Stage 2	-	-	-	-	190	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1223	-	504	715
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	824	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1223	-	494	715
Mov Cap-2 Maneuver	-	-	-	-	639	-
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	808	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	639	715	-	-	1223	-
HCM Lane V/C Ratio	0.022	0.059	-	-	0.02	-
HCM Control Delay (s)	10.8	10.4	-	-	8	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	276	3	28	296	6	32
Future Vol, veh/h	276	3	28	296	6	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	75	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	80	80	85	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	325	4	35	348	8	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	329	0	569	325
Stage 1	-	-	-	-	325	-
Stage 2	-	-	-	-	244	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1229	-	468	715
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	775	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1229	-	455	715
Mov Cap-2 Maneuver	-	-	-	-	613	-
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	753	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	613	715	-	-	1229	-
HCM Lane V/C Ratio	0.012	0.056	-	-	0.028	-
HCM Control Delay (s)	10.9	10.3	-	-	8	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	308	260	12	17	1
Future Vol, veh/h	2	308	260	12	17	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	300	90	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	85	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	342	306	15	21	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	321	0	-	0	654	306
Stage 1	-	-	-	-	306	-
Stage 2	-	-	-	-	348	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1239	-	-	-	431	734
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	715	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1239	-	-	-	430	734
Mov Cap-2 Maneuver	-	-	-	-	529	-
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	715	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1239	-	-	-	529	734
HCM Lane V/C Ratio	0.002	-	-	-	0.04	0.002
HCM Control Delay (s)	7.9	-	-	-	12.1	9.9
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	296	314	3	8	11
Future Vol, veh/h	2	296	314	3	8	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	300	90	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	85	90	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	348	349	4	10	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	353	0	-	0	703	349
Stage 1	-	-	-	-	349	-
Stage 2	-	-	-	-	354	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1206	-	-	-	404	694
Stage 1	-	-	-	-	714	-
Stage 2	-	-	-	-	710	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1206	-	-	-	403	694
Mov Cap-2 Maneuver	-	-	-	-	509	-
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	710	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1206	-	-	-	509	694
HCM Lane V/C Ratio	0.002	-	-	-	0.02	0.02
HCM Control Delay (s)	8	-	-	-	12.2	10.3
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	318	6	134	250	5	156
Future Vol, veh/h	318	6	134	250	5	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	235	175	-	0	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	85	85	80	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	353	8	158	294	6	184

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	361	0	963	353
Stage 1	-	-	-	-	353	-
Stage 2	-	-	-	-	610	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1198	-	284	691
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	542	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1198	-	247	691
Mov Cap-2 Maneuver	-	-	-	-	363	-
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	470	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	363	691	-	-	1198	-
HCM Lane V/C Ratio	0.017	0.266	-	-	0.132	-
HCM Control Delay (s)	15.1	12.1	-	-	8.5	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	1.1	-	-	0.5	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	270	25	120	314	4	174
Future Vol, veh/h	270	25	120	314	4	174
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	235	175	-	0	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	80	85	90	80	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	318	31	141	349	5	205

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	349	0	949	318
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	631	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1210	-	289	723
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	530	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1210	-	255	723
Mov Cap-2 Maneuver	-	-	-	-	368	-
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	468	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	12
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	368	723	-	-	1210	-
HCM Lane V/C Ratio	0.014	0.283	-	-	0.117	-
HCM Control Delay (s)	14.9	11.9	-	-	8.4	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0	1.2	-	-	0.4	-

Intersection	
Int Delay, s/veh	4.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	117	64	0	29	92
Future Vol, veh/h	5	117	64	0	29	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	215	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	85	80	80	80	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	138	80	0	36	108

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	260	80	0	0	80	0
Stage 1	80	-	-	-	-	-
Stage 2	180	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	729	980	-	-	1518	-
Stage 1	943	-	-	-	-	-
Stage 2	851	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	712	980	-	-	1518	-
Mov Cap-2 Maneuver	712	-	-	-	-	-
Stage 1	943	-	-	-	-	-
Stage 2	831	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	1.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	712	980	1518	-
HCM Lane V/C Ratio	-	-	0.009	0.14	0.024	-
HCM Control Delay (s)	-	-	10.1	9.3	7.4	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0.5	0.1	-

Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	43	142	4	69	68
Future Vol, veh/h	5	43	142	4	69	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	215	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	85	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	54	167	5	86	85

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	424	167	0	0	172	0
Stage 1	167	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	587	877	-	-	1405	-
Stage 1	863	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	551	877	-	-	1405	-
Mov Cap-2 Maneuver	551	-	-	-	-	-
Stage 1	863	-	-	-	-	-
Stage 2	738	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	3.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	551	877	1405	-
HCM Lane V/C Ratio	-	-	0.011	0.061	0.061	-
HCM Control Delay (s)	-	-	11.6	9.4	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0.2	0.2	-

Intersection	
Intersection Delay, s/veh	3.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	4	64	41	126
Demand Flow Rate, veh/h	4	66	42	128
Vehicles Circulating, veh/h	157	38	10	33
Vehicles Exiting, veh/h	4	14	151	71
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.1	3.2	2.9	3.5
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	4	66	42	128
Cap Entry Lane, veh/h	1176	1327	1366	1334
Entry HV Adj Factor	0.995	0.969	0.984	0.982
Flow Entry, veh/h	4	64	41	126
Cap Entry, veh/h	1170	1286	1344	1310
V/C Ratio	0.003	0.050	0.031	0.096
Control Delay, s/veh	3.1	3.2	2.9	3.5
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection	
Intersection Delay, s/veh	3.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	44	176	91
Demand Flow Rate, veh/h	0	45	180	93
Vehicles Circulating, veh/h	106	153	29	19
Vehicles Exiting, veh/h	6	56	77	179
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	3.4	3.8	3.3
Approach LOS	-	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	0	45	180	93
Cap Entry Lane, veh/h	1238	1180	1340	1353
Entry HV Adj Factor	1.000	0.978	0.978	0.976
Flow Entry, veh/h	0	44	176	91
Cap Entry, veh/h	1238	1154	1310	1321
V/C Ratio	0.000	0.038	0.134	0.069
Control Delay, s/veh	2.9	3.4	3.8	3.3
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	518	378	32	132	14
Future Vol, veh/h	4	518	378	32	132	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	85	85	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	576	445	38	155	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	483	0	-	0	1050	242
Stage 1	-	-	-	-	464	-
Stage 2	-	-	-	-	586	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	1078	-	-	-	237	759
Stage 1	-	-	-	-	600	-
Stage 2	-	-	-	-	555	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1078	-	-	-	236	759
Mov Cap-2 Maneuver	-	-	-	-	438	-
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	555	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	16.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1078	-	-	-	438	759
HCM Lane V/C Ratio	0.005	-	-	-	0.355	0.023
HCM Control Delay (s)	8.4	-	-	-	17.7	9.9
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0	-	-	-	1.6	0.1

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	434	504	126	81	10
Future Vol, veh/h	21	434	504	126	81	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	482	560	140	95	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	700	0	-	0	1164	350
Stage 1	-	-	-	-	630	-
Stage 2	-	-	-	-	534	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	895	-	-	-	201	647
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	587	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	895	-	-	-	195	647
Mov Cap-2 Maneuver	-	-	-	-	392	-
Stage 1	-	-	-	-	480	-
Stage 2	-	-	-	-	587	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	16.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	895	-	-	-	392	647
HCM Lane V/C Ratio	0.029	-	-	-	0.243	0.019
HCM Control Delay (s)	9.1	-	-	-	17.1	10.7
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9	0.1

APPENDIX D

RIGHT TURN ON RED SITE VISIT

Traffic Counts Performed: 5/3/2023

Location: Northbound Right at Woody Mountain Road and Route 66

Time	No Wait	Wait
7:00 AM to 7:15 AM	16	8
7:15 AM to 7:30 AM	38	11
7:30 AM to 7:45 AM	18	21
7:45 AM to 8:00 AM	27	10
8:00 AM to 8:15 AM	23	7
8:15 AM to 8:30 AM	26	4
8:30 AM to 8:45 AM	12	7
8:45 AM to 9:00 AM	19	5
4:00 PM to 4:15 PM	34	23
4:15 PM to 4:30 PM	25	20
4:30 PM to 4:45 PM	34	22
4:45 PM to 5:00 PM	33	15
5:00 PM to 5:15 PM	28	32
5:15 PM to 5:30 PM	21	7
5:30 PM to 5:45 PM	19	13
5:45 PM to 6:00 PM	22	15

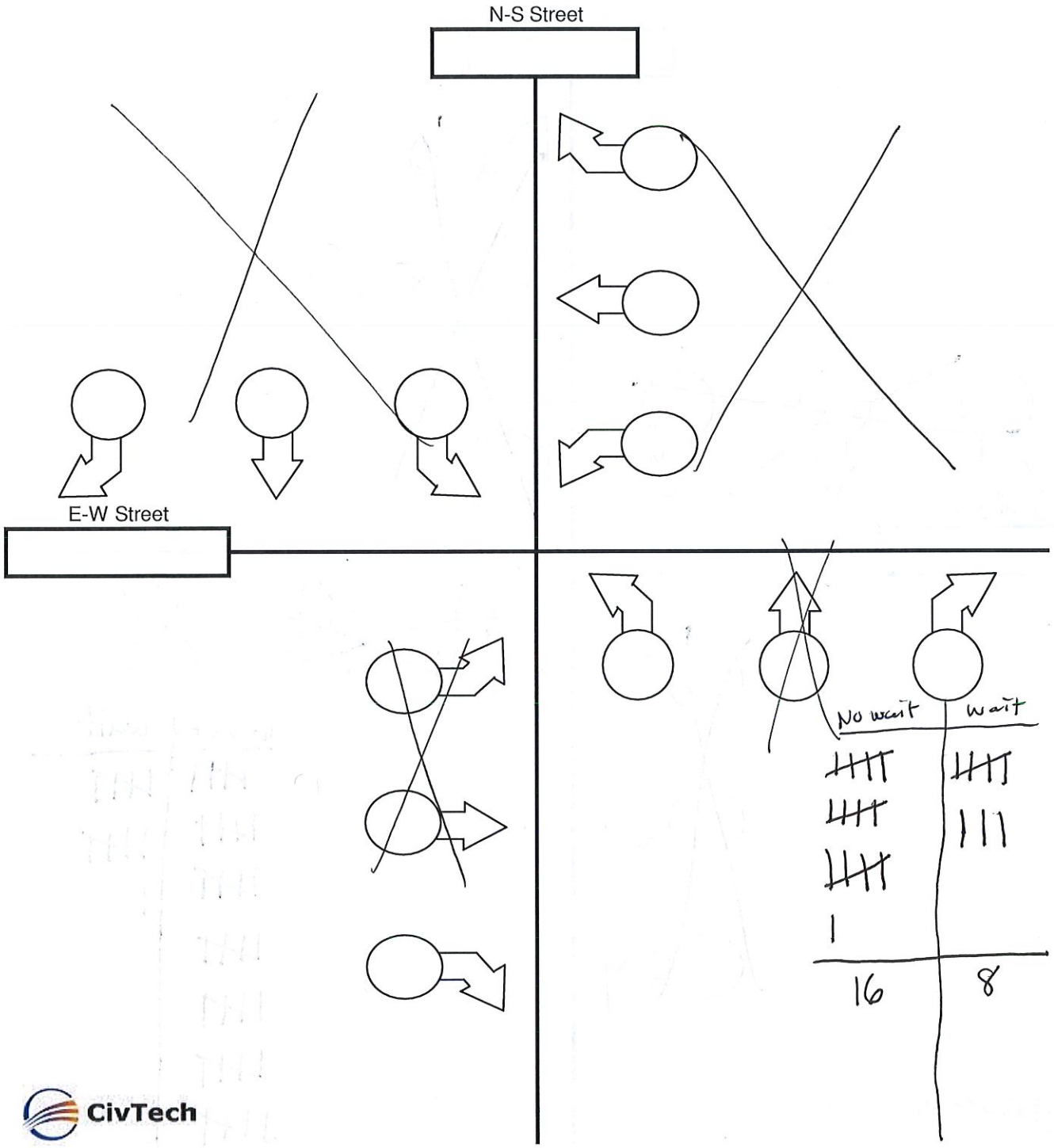
Total	395	220	615

Percentage	64%	36%

Traffic Count Data Collection

Date: 5/3/23 **Day of Week:** wednesday
Time: 7:00 AM to 7:15 AM
Name: Eddie M.
Location: woody Merriam Rd & Route 66

N

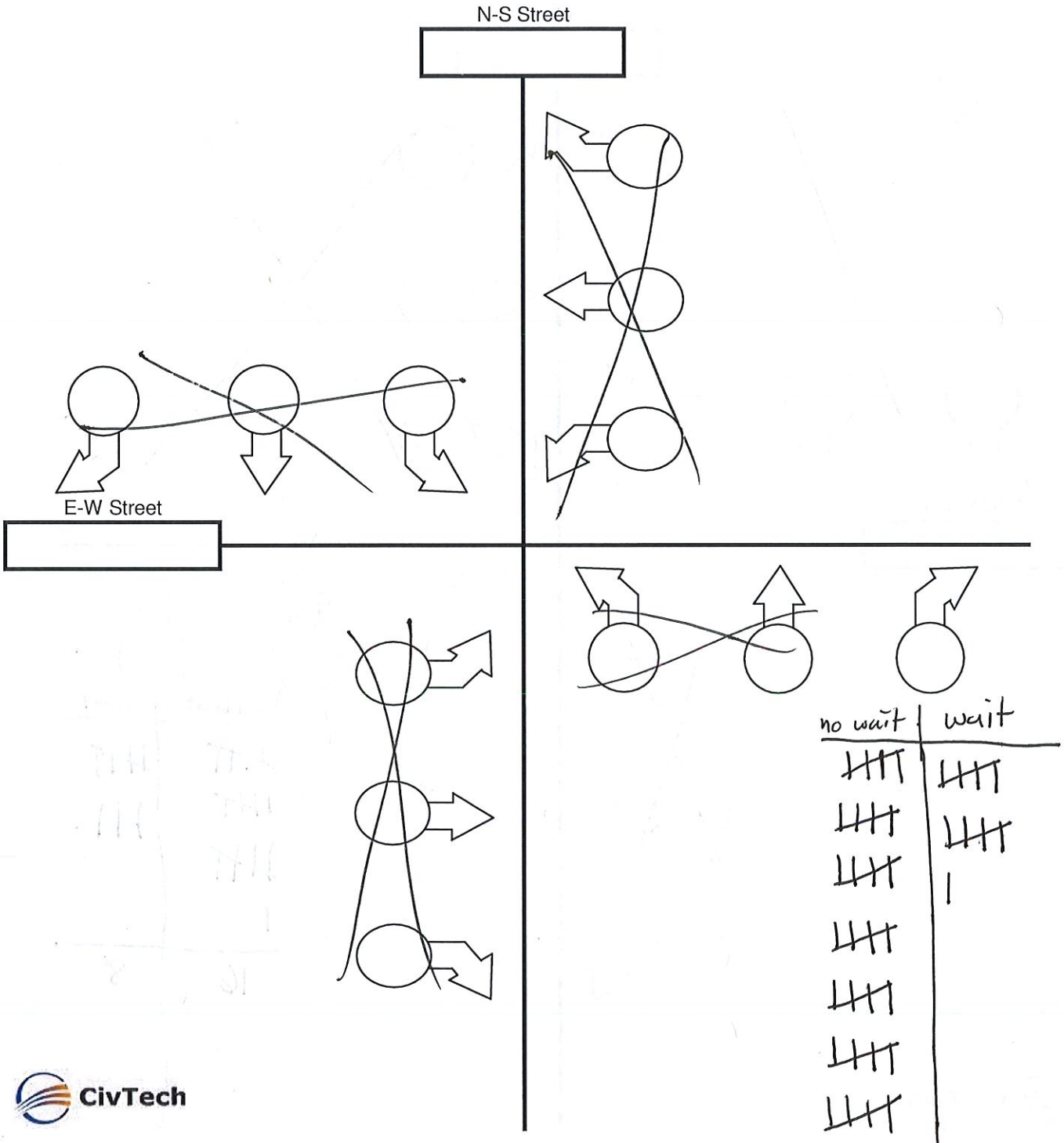


CivTech

Traffic Count Data Collection

Date: _____ **Day of Week:** _____
Time: 7:15 AM to 7:30 AM
Name: _____
Location: _____

N



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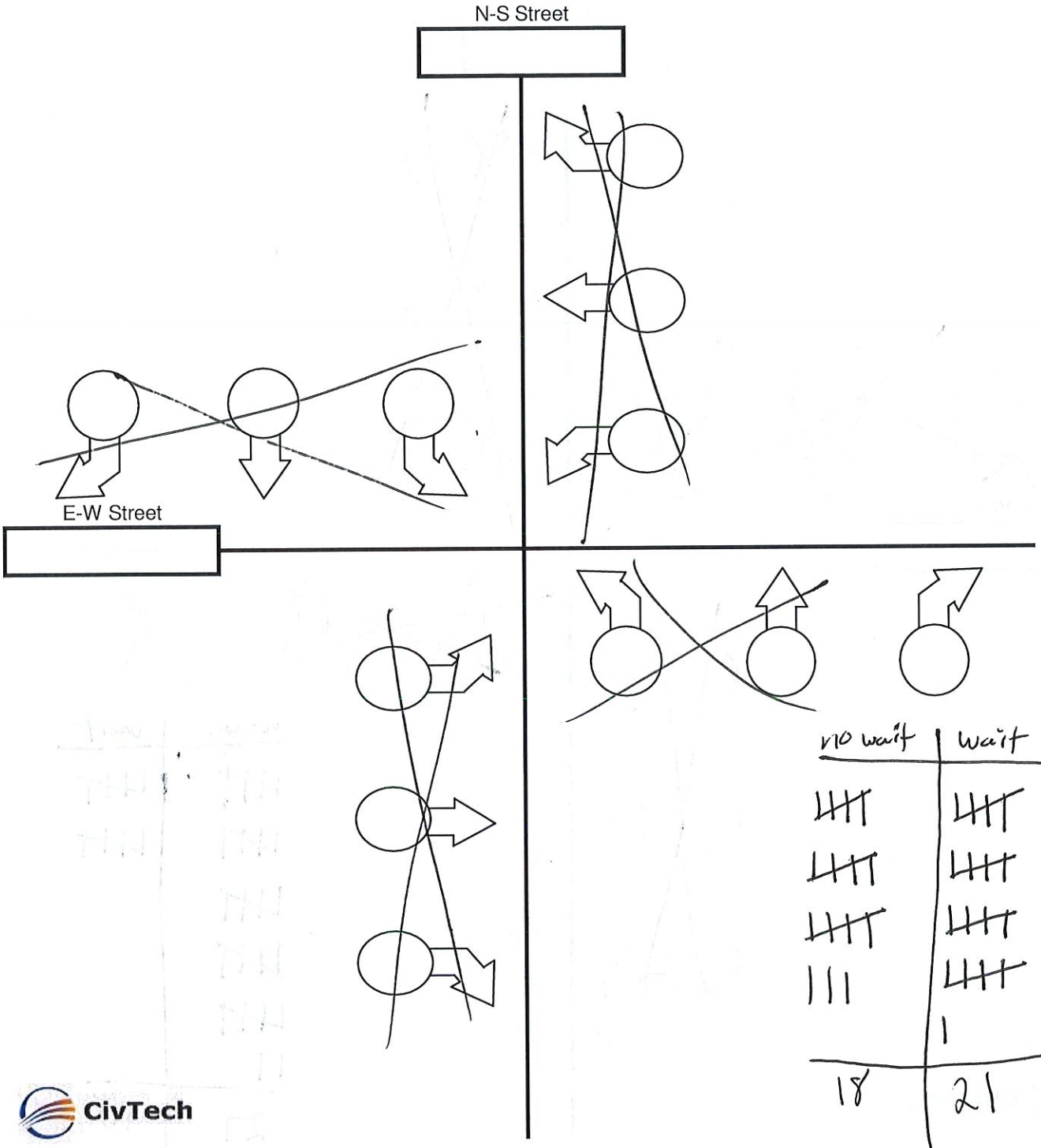
CivTech

Traffic Count Data Collection

Date: _____ **Day of Week:** _____
Time: 7:30 AM to 7:45 AM
Name: _____
Location: _____

N



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Date: _____ **Day of Week:** _____
Time: 7:45 AM to 8:00 AM
Name: _____
Location: _____

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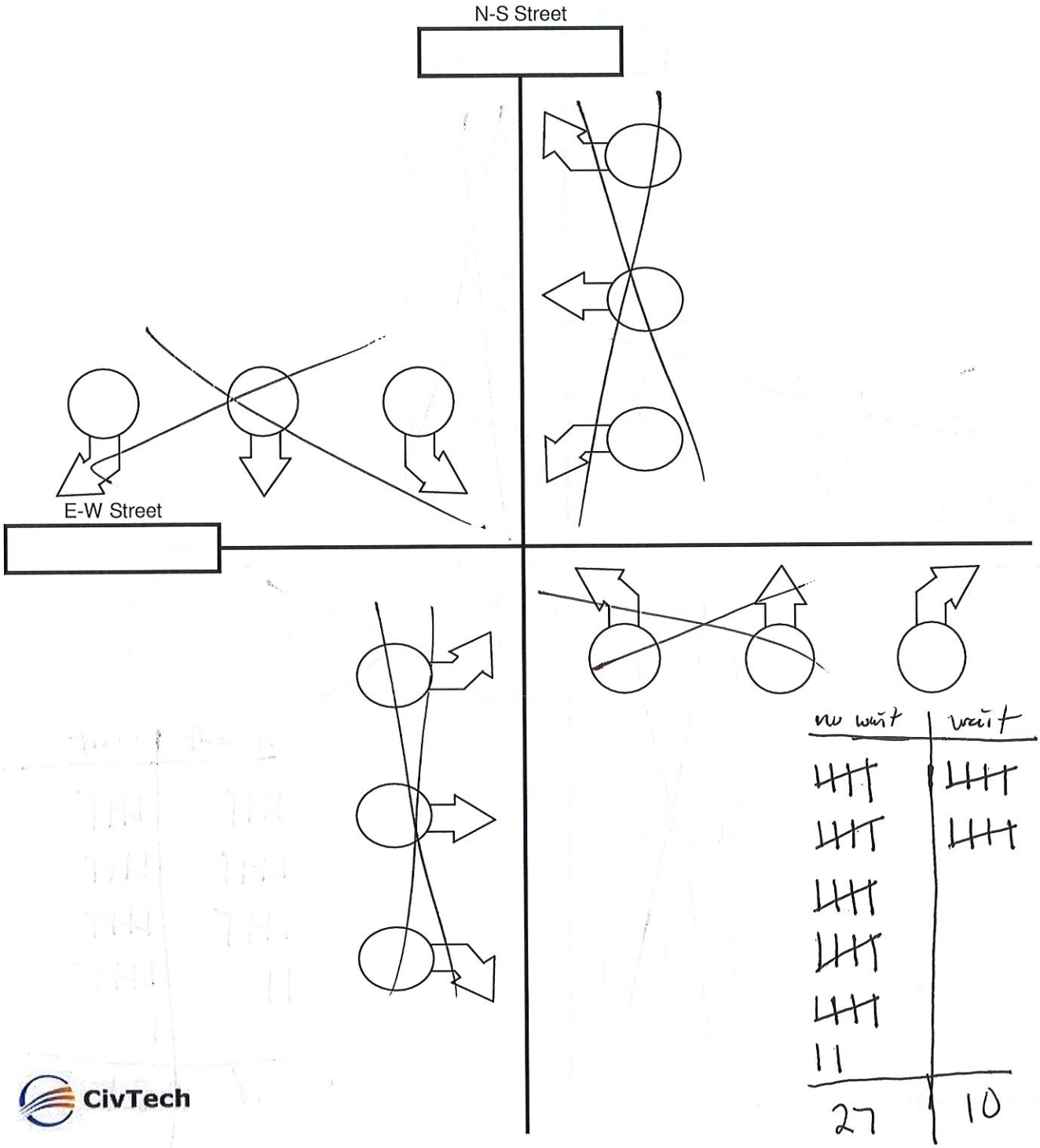

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Traffic Count Data Collection

Date: _____ **Day of Week:** _____
Time: 8:00 AM to 8:15 AM
Name: _____
Location: _____

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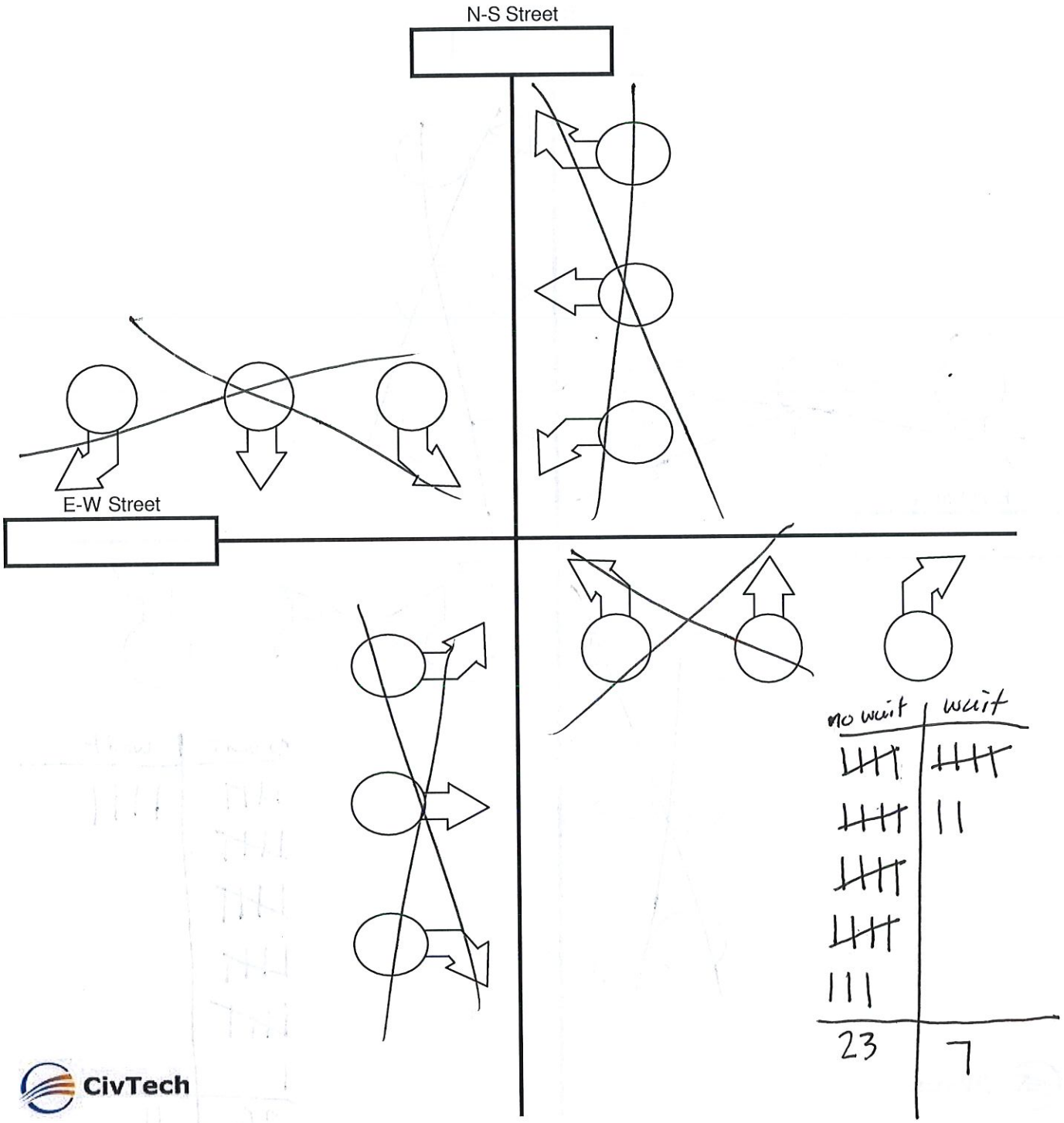

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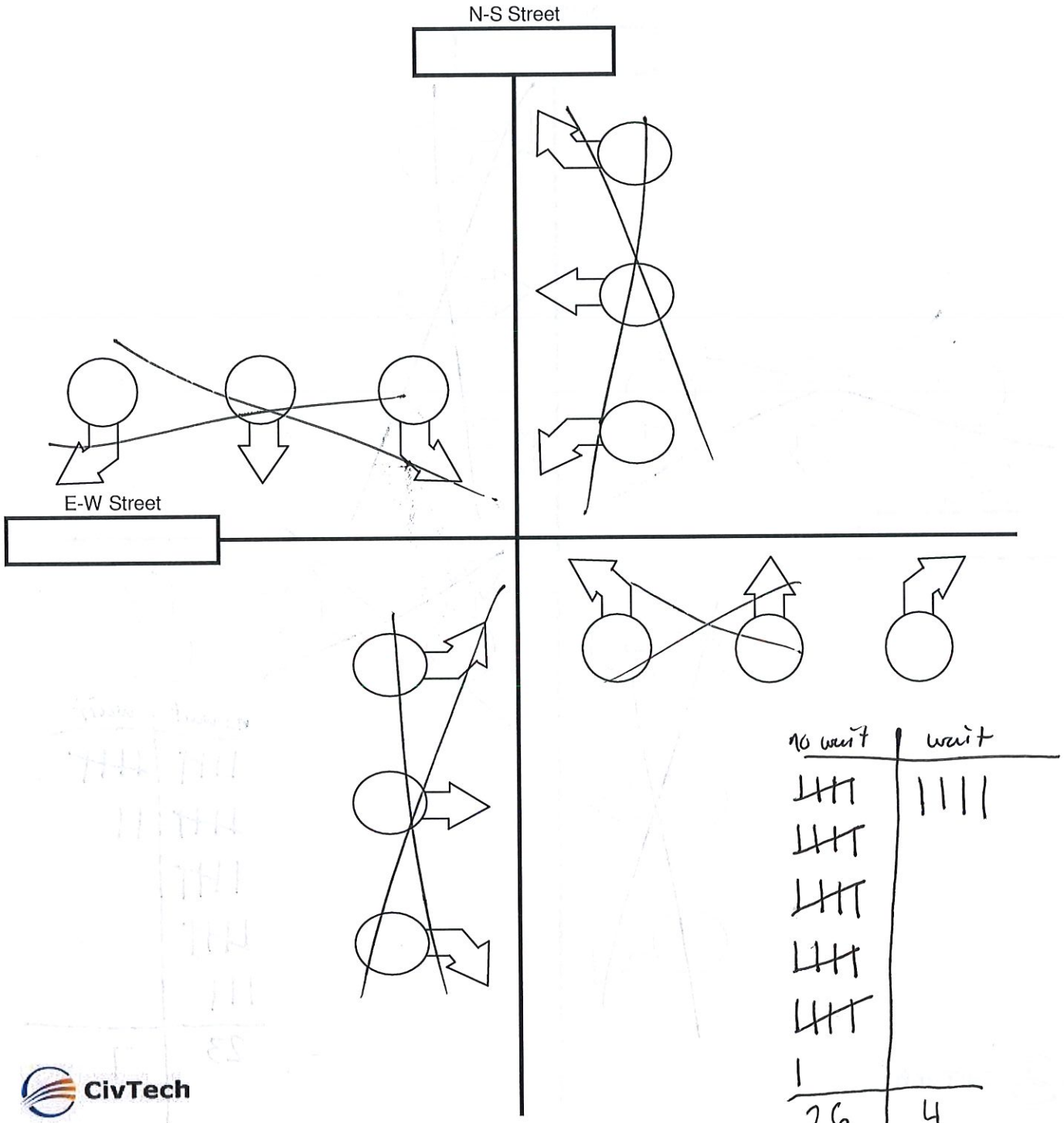
Traffic Count Data Collection

Date: _____ **Day of Week:** _____
Time: 8:15 AM to 8:30 AM
Name: _____
Location: _____

N



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Traffic Count Data Collection

Date: _____ **Day of Week:** _____
Time: 8:30 AM to 8:45 AM
Name: _____
Location: _____

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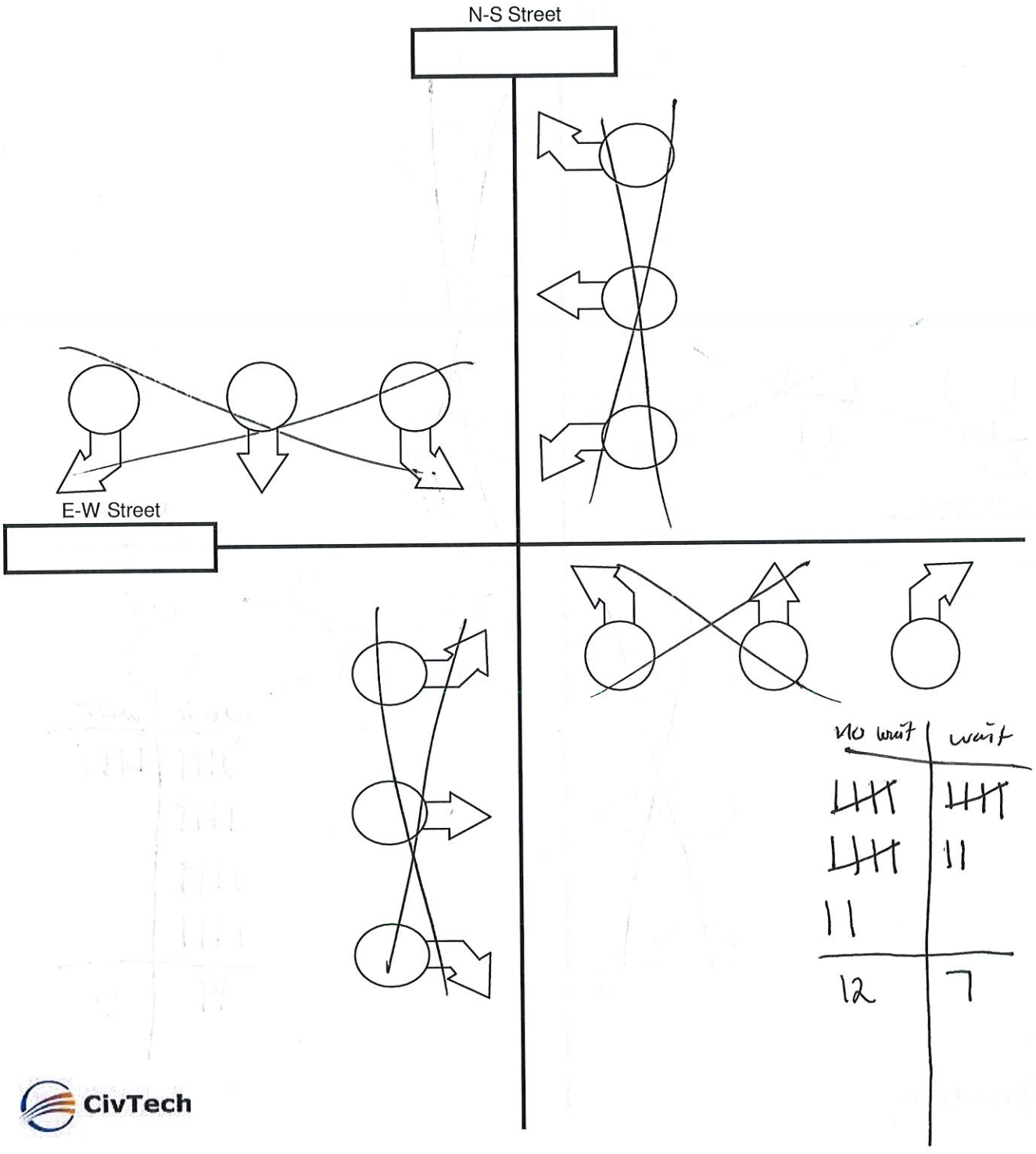
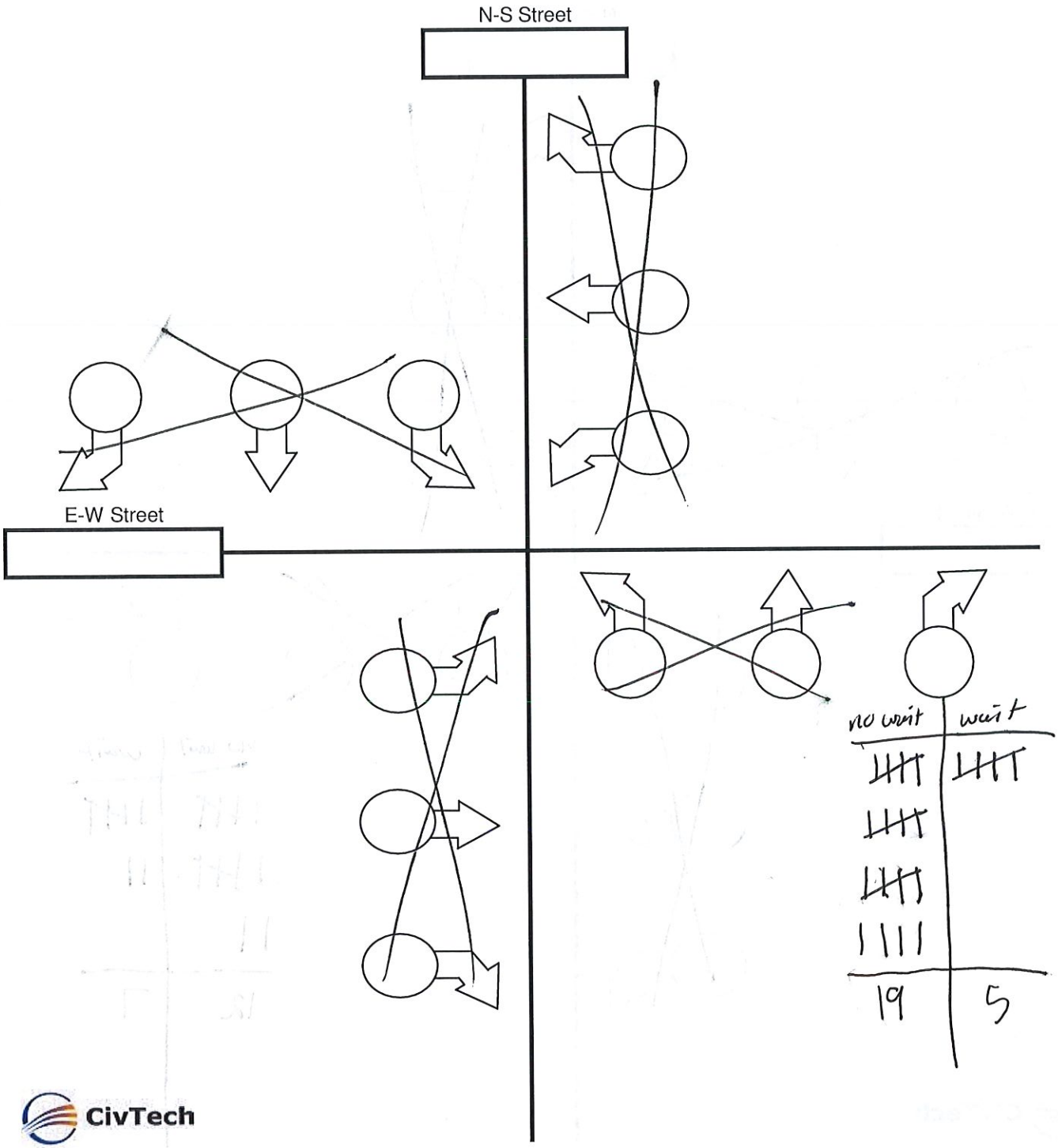


CivTech

Traffic Count Data Collection

Date: _____ **Day of Week:** _____
Time: 8:45 AM to 9:00 AM
Name: _____
Location: _____

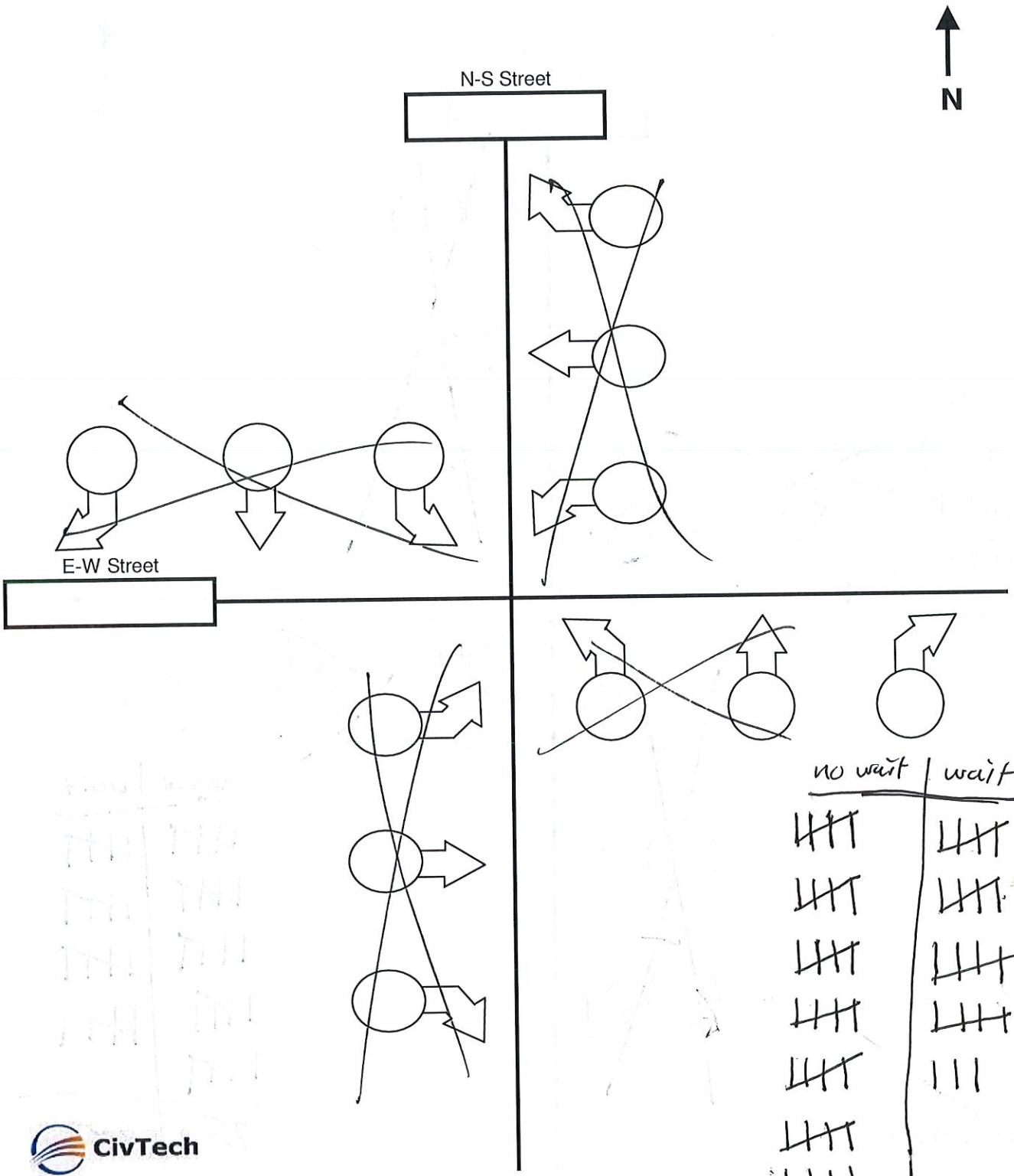
N



CivTech

Traffic Count Data Collection

Date: _____ **Day of Week:** _____
Time: 4:00 PM to 4:15 PM
Name: _____
Location: _____



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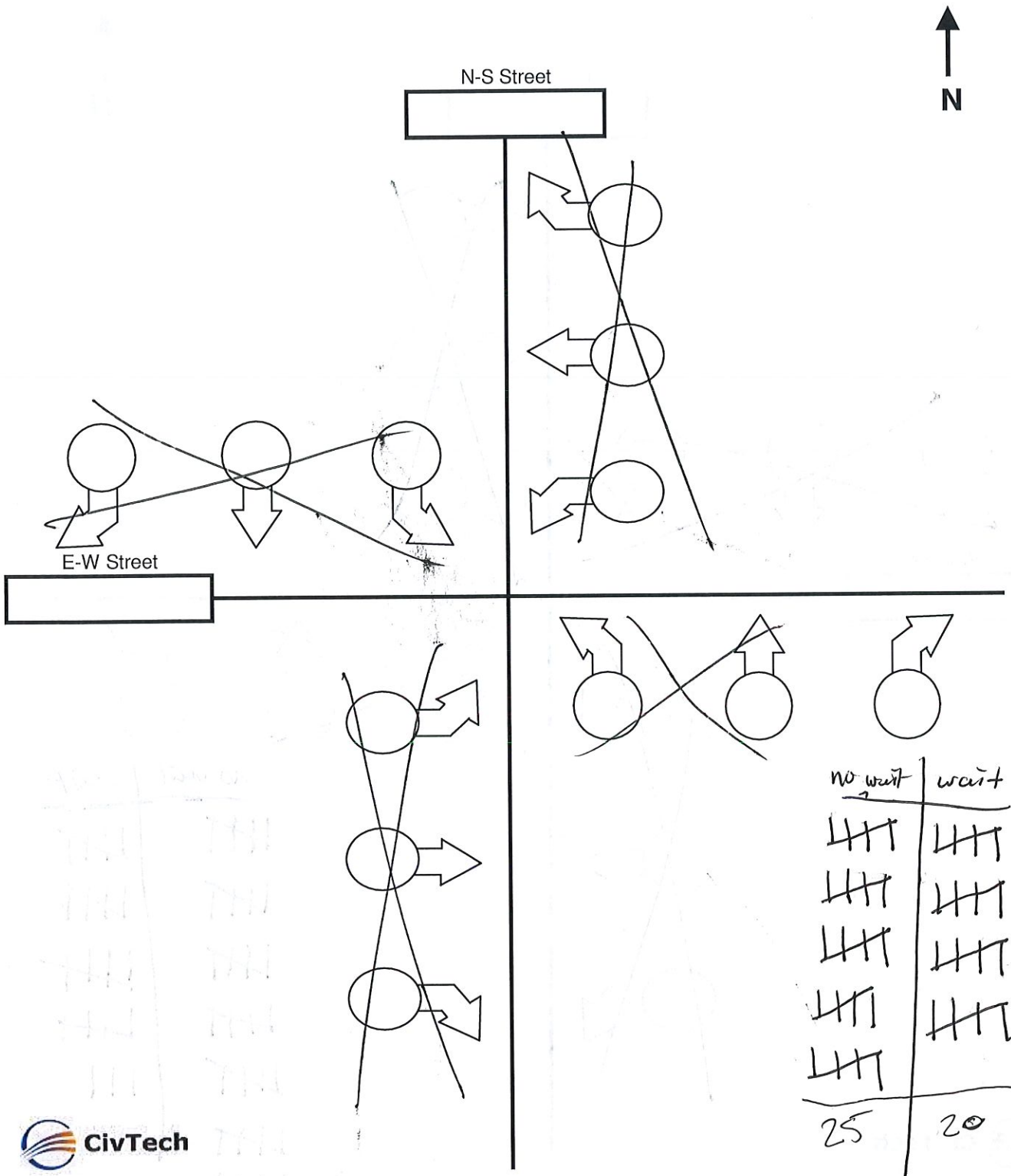
34	23

10

CivTech

Traffic Count Data Collection

Date: _____ **Day of Week:** _____
Time: 4:15 PM to 4:30 PM
Name: _____
Location: _____



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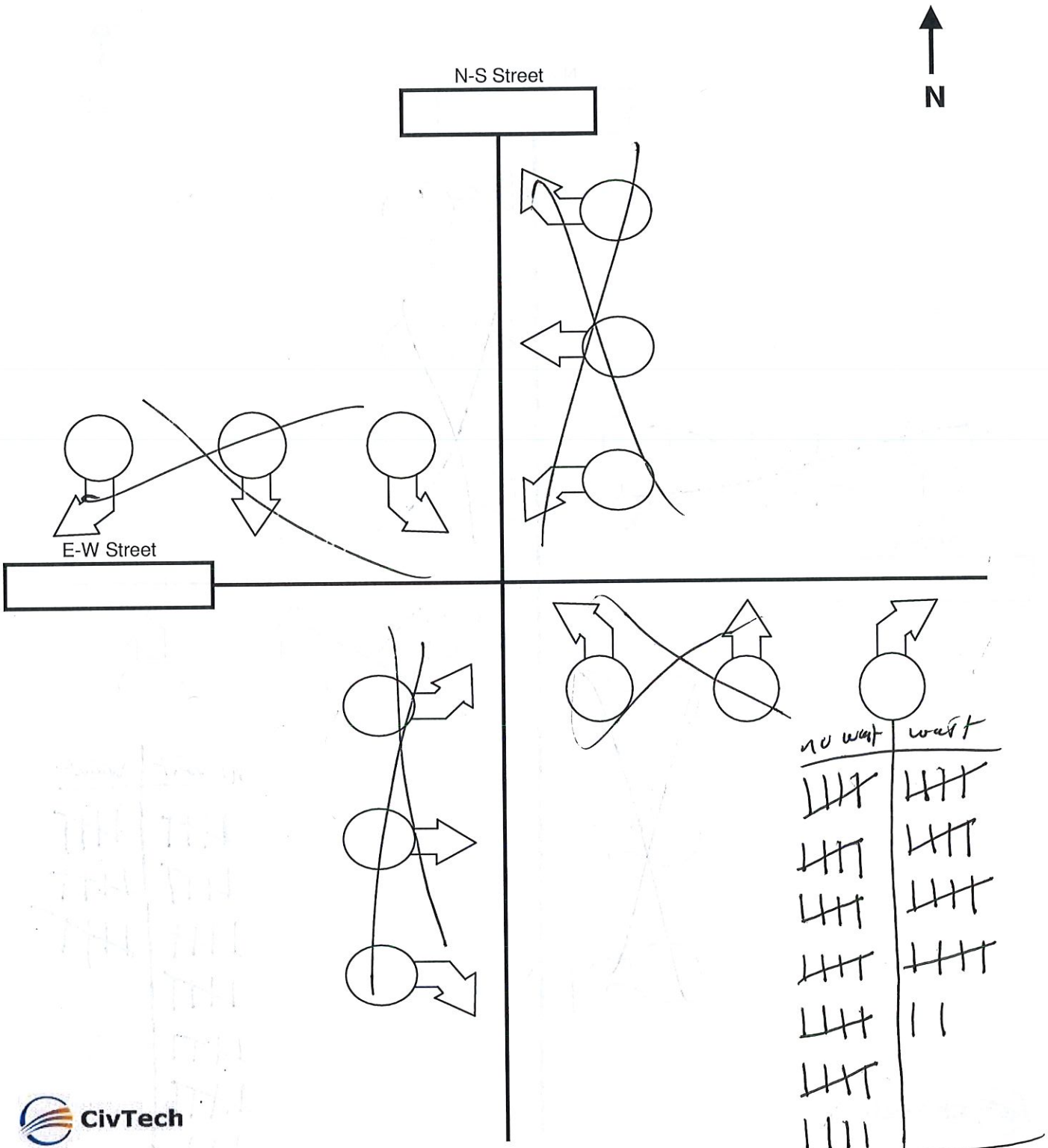
CivTech

Traffic Count Data Collection

Date: _____ **Day of Week:** _____
Time: 4:30 PM to 4:45 PM
Name: _____
Location: _____



CivTech

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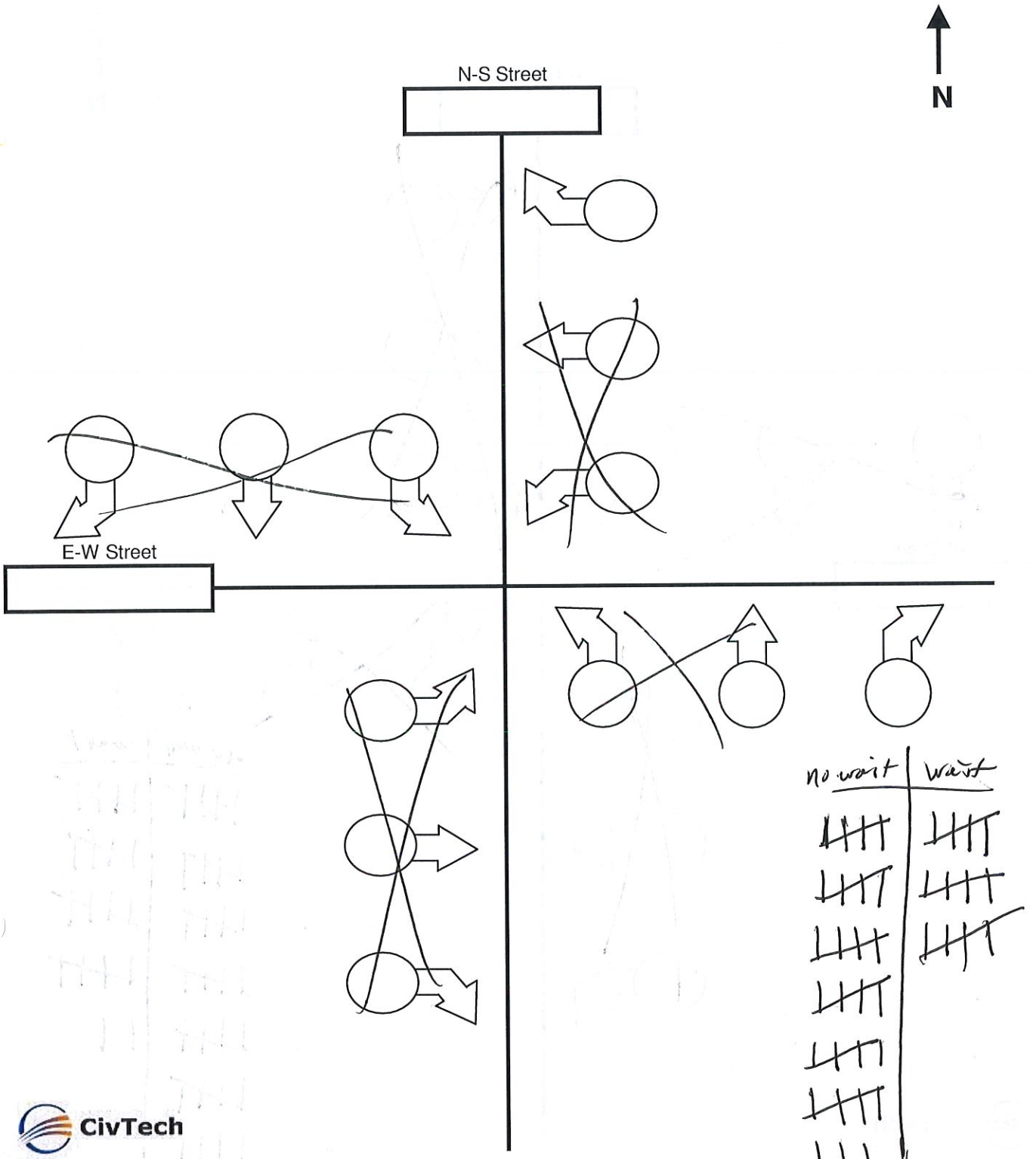
Date: _____ **Day of Week:** _____
Time: 4:45 PM to 5:00 PM
Name: _____
Location: _____



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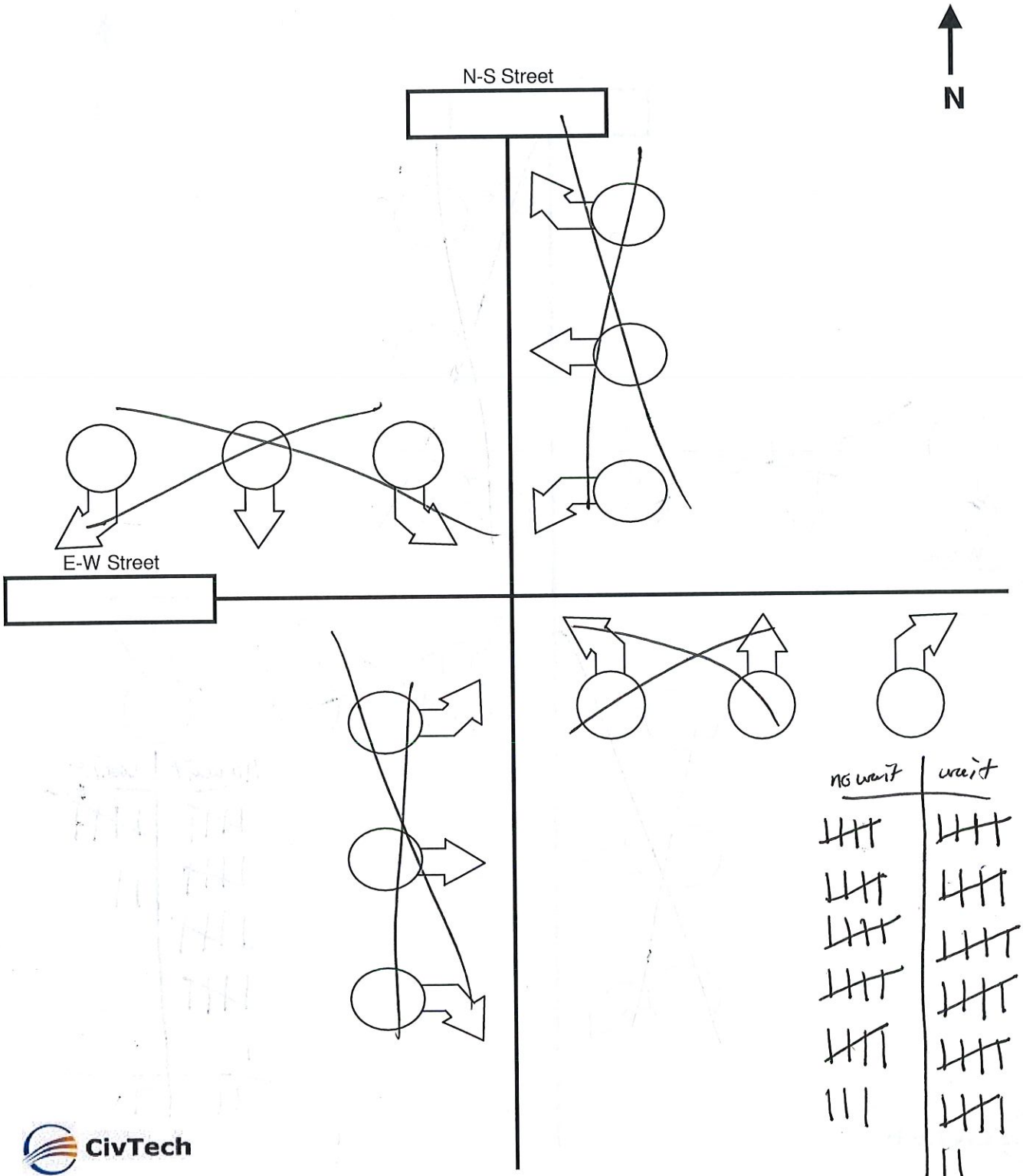
Date: _____ **Day of Week:** _____
Time: 5:00 PM to 5:15 PM
Name: _____
Location: _____



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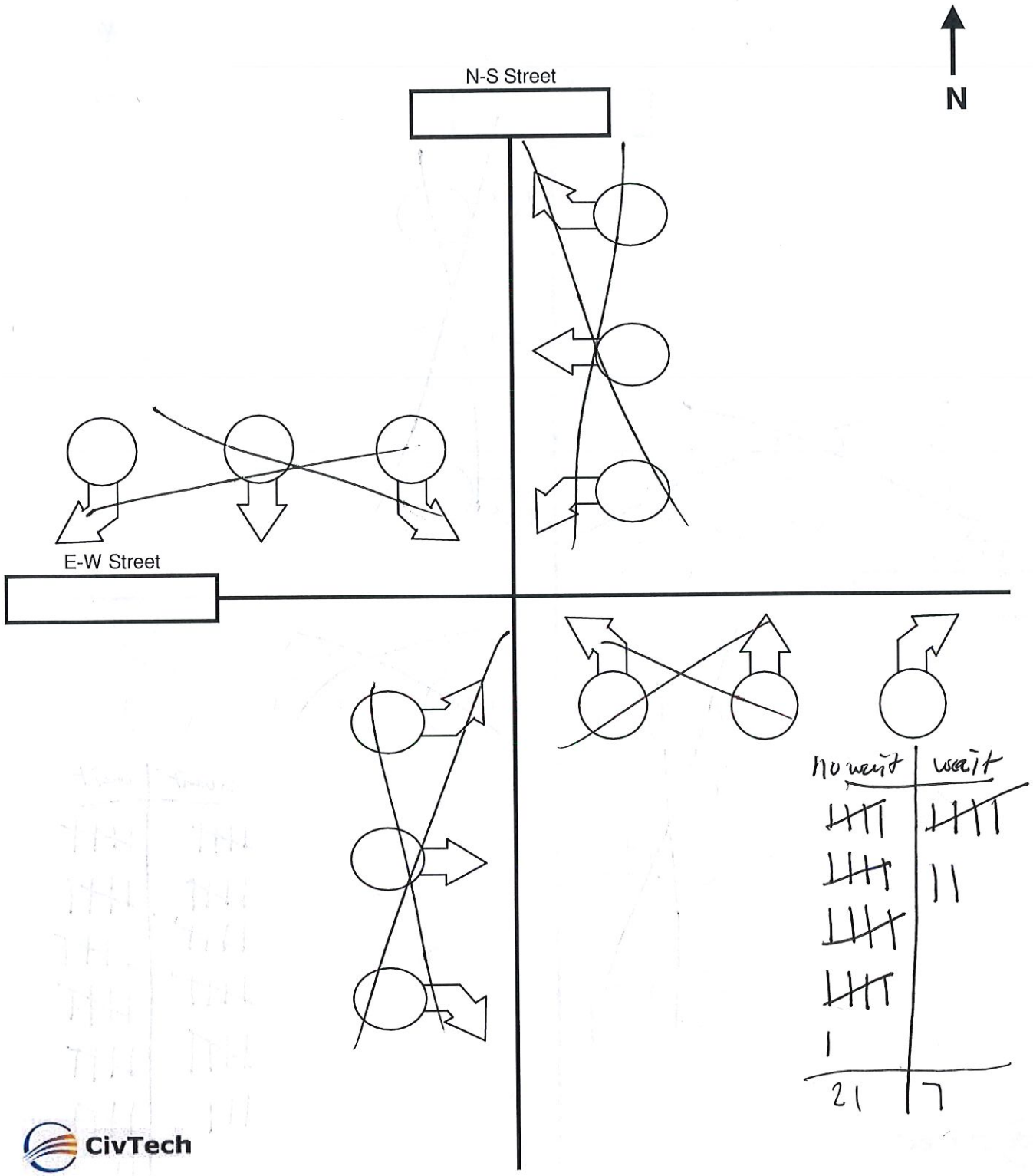
Traffic Count Data Collection

Date: _____ **Day of Week:** _____
Time: 5:15 PM to 5:30 PM
Name: _____
Location: _____



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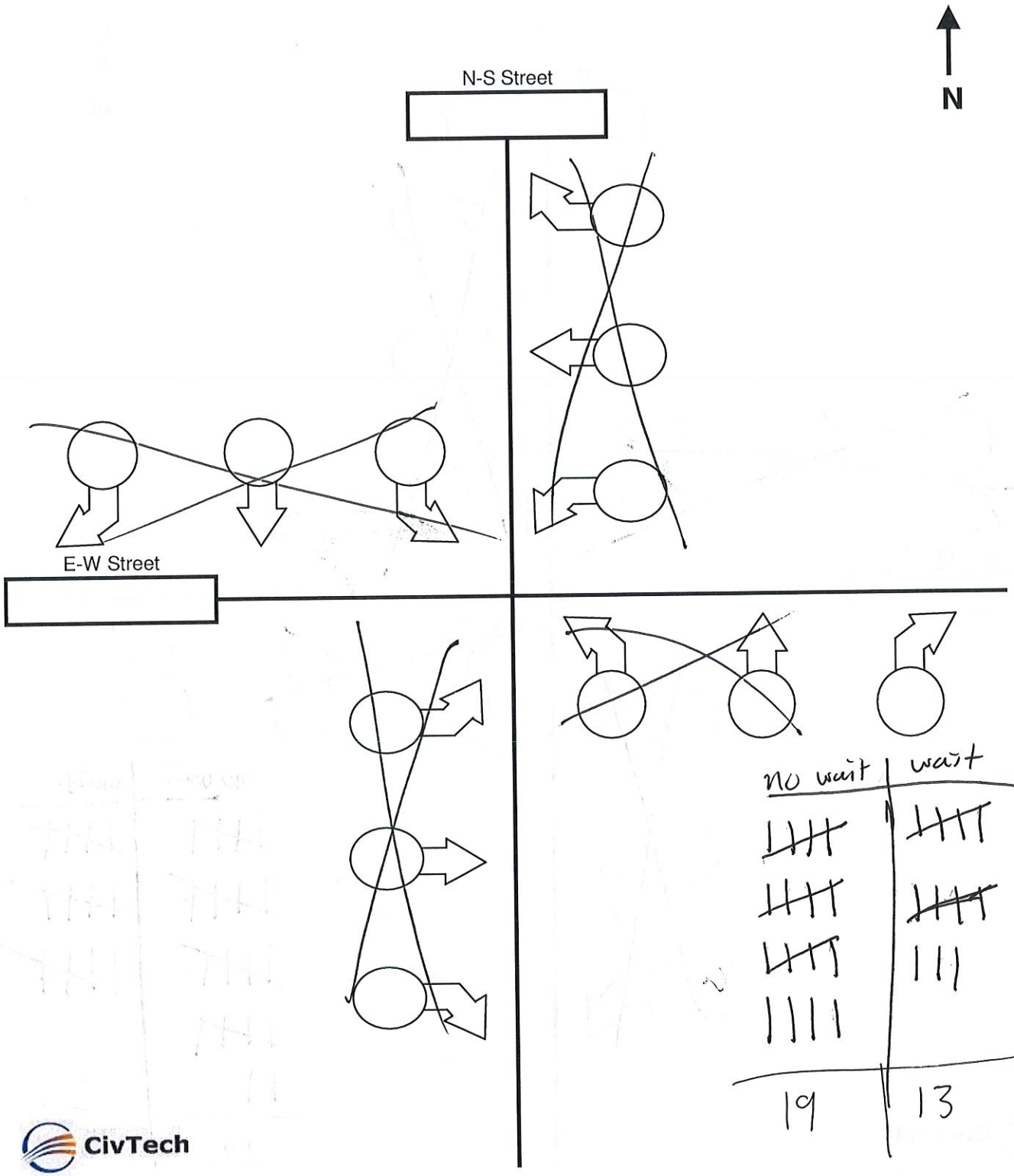
Traffic Count Data Collection

Date: _____ **Day of Week:** _____
Time: 5:30 PM to 5:45 PM
Name: _____
Location: _____



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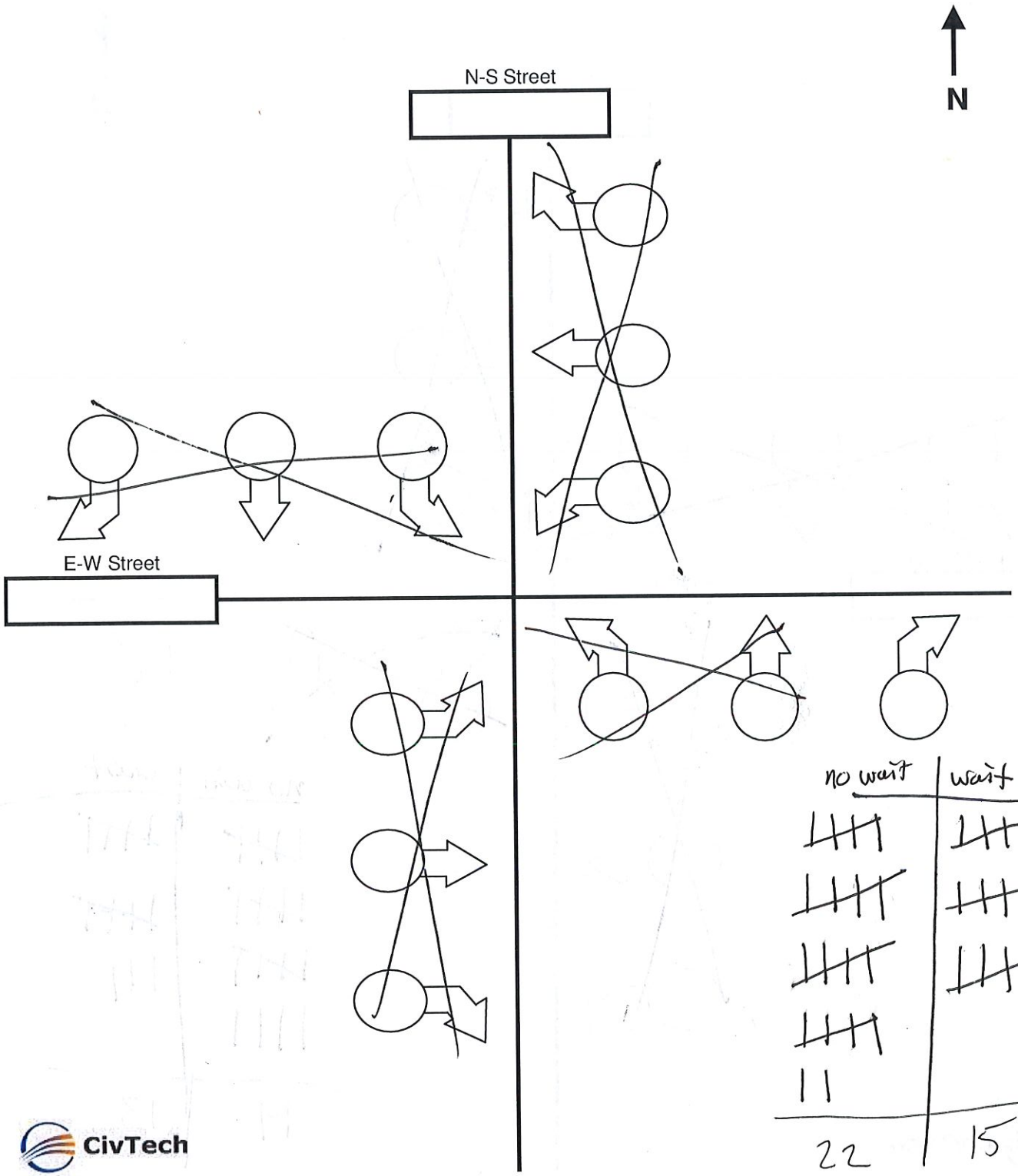
Traffic Count Data Collection

Date: _____ **Day of Week:** _____
Time: 5:45 PM to 6:00 PM
Name: _____
Location: _____



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22	15

CivTech

APPENDIX E

EXISTING TRAFFIC SIGNAL WARRANT WORKSHEETS

Timber Sky Apartments

Signal Warrant Analysis

MUTCD Warrants 1-3

Major Street: Route 66 — Speed Limit: 45 — Lanes:* 2
Minor Street: Woody Mountian Road — Speed Limit: 40 — Lanes:* 1
Locale: City of Flagstaff — *Number of Approach Lanes of Moving Traffic:

Major Street vph - total of both approaches	18	25	23	136	76	206	333	639	701	592	613	745	765	683	809	768	709	739	451	332	242	142	78	39
Minor Street volume - higher-volume approach (vph)	3	25	2	4	5	12	21	57	30	34	33	57	56	43	65	55	53	38	28	19	20	10	7	4
Direction of higher-volume minor approach	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB
Beginning of hour	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00

Critical speed of major street traffic above 40 mph X
In built-up area of isolated community less than 10,000 population
Urban x

Warrant 1, Eight-Hour Vehicular Volume

Condition A *Minimum Vehicular Volume*					Criteria	Hour																						
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Minimum Reqmts	500	600	600	500																									
(100%[a])	150	150	200	200																									
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																								
Minimum Reqmts	350	420	420	350	**420**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
(70%[c])	105	105	140	140	**105**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Condition B *Interruption of Cont. Traffic*					Criteria	Hour																						
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Minimum Reqmts	750	900	900	750																									
(100%[a])	75	75	100	100																									
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																								
Minimum Reqmts	525	630	630	525	**630**	No	No	No	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
(70%[c])	53	53	70	70	**53**	No	No	No	No	No	No	No	Yes	No	No	No	Yes	Yes	No	Yes	Yes	Yes	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**	**No**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Combination *of Conditions A & B*					Criteria	Hour																						
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Condition A	400	480	480	400																									
(80%[b])	120	120	160	160																									
Condition B	600	720	720	600																									
(80%[b])	60	60	80	80																									
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																								
Condition A	280	336	336	280	**336**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
(56%[d])	84	84	112	112	**84**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Condition B	420	504	504	420	**504**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
(56%[d])	42	42	56	56	**42**	No	No	No	No	No	No	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Warrant 2, Four Hour Vehicular Volume					Criteria	Hour																						
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
100% *See to the right*																													
70% *See to the right*					**Use**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Warrant 3, Peak Hour					Criteria	Hour																						
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
100% *See to the right*																													
70% *See to the right*					**Use**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Volume-Based Traffic Signal Warrants Analysis Summary

Warrant		Hour(s) of the Day	Hours Required to Meet Warrant	Hours Met	Is Warrant Met?
Warrant 1. Eight-Hour Vehicular Volume	Condition A: Minimum Vehicular Volume	Any Eight Hours	8	0	No
	Condition B: Interruption of Continuous Traffic	Any Eight Hours	8	6	No
	Combination of Condition A & Condition B	Any Eight Hours	8	0	No
	Overall (at least 1 of the 3 conditions required to meet warrant)				**No**
Warrant 2. Four-Hour Vehicular Volume		Any Four Hours	4	0	**No**
Warrant 3. Peak Hour		Any One/Peak Hour	1	0	**No**

APPENDIX F

CRASH ANALYSIS WORKSHEETS

CRASH STATISTICS

2019

Woody Mountain Rd & Route 66

Involvement

	# Incidents	Totals		# Motorists	# Non-Motorists
Incidents	1	1	Veh	1	0
Fatal	0	0	Ppl	0	0
Injury	0	0	Ppl	0	0
PDO	1	1	Veh		

Peds/Bikes Summary

	Incidents	Persons	Injuries Fatal	Injuries Non-Fatal
Pedestrian:	0	0	0	0
Bicycle:	0	0	0	0

Code	LightCondition	No.
1	DAYLIGHT	0
2	DAWN	0
3	DUSK	0
4	DARK_LIGHTED	0
5	DARK_NOT_LIGHTED	1
6	DARK_UNKNOWN_LIGHTING	0
99	UNKNOWN	0
	Check Total	1

Code	Weather	No.
1	CLEAR	1
2	CLOUDY	0
3	SLEET_HAIL_FREEZING_RAIN_OR_DRIZZLE	0
4	RAIN	0
5	SNOW	0
6	SEVERE_CROSSWINDS	0
7	BLOWING_SAND_SOIL_DIRT	0
8	FOG_SMOG_SMOKE	0
9	BLOWING_SNOW	0
97	OTHER	0
99	UNKNOWN	0
	Check Total	1

Code	TrafficWayType	No.
1	ONE_WAY_TRAFFICWAY	0
2	TWO_WAY_NOT_DIVIDED	1
3	ED_WITH_CONTINUOUS_LEFT_TURN_LANE	0
4	_UNPROTECTED_PAINTED_4_FEET_MEDIAN	0
5	DED_POSITIVE_MEDIAN_BARRIER	0
99	UNKNOWN	0
	Check Total	1

Code	Weekday	No.
1	Sunday	1
2	Monday	0
3	Tuesday	0
4	Wednesday	0
5	Thursday	0
6	Friday	0
7	Saturday	0
	Check Total	1

Circumstances

Hit & Run?	0
Intersection Related?	0

Code	JunctionRelation	No.
0	NOT_JUNCTION_RELATED	1
1	INTERSECTION_NON_INTERCHANGE	0
2	INTERSECTION_RELATED_NON_INTERCHANGE	0
3	ENTRANCE_EXIT_RAMP_NON_INTERCHANGE	0
4	RAILWAY_GRADE_CROSSING	0
5	CROSSOVER_RELATED	0
6	FRONTAGE_ROAD_NON_INTERCHANGE	0
7	DRIVEWAY	0
8	ALLEY_ACCESS_RELATED	0
9	UNKNOWN_NON_INTERCHANGE	0
10	THRU_ROADWAY	0
11	INTERSECTION_INTERCHANGE	0
12	INTERSECTION_RELATED_INTERCHANGE	0
13	ENTRANCE_EXIT_RAMP_INTERCHANGE	0
14	FRONTAGE_ROAD_INTERCHANGE	0
15	OTHER_PART_OF_INTERCHANGE	0
16	<not defined>	0
17	UNKNOWN_INTERCHANGE	0
18	UNKNOWN_JUNCTION	0
99	UNKNOWN	0
109	OTHER_NON_INTERCHANGE	0
	Check Total	1

Code	CollisionManner	No.
1	SINGLE_VEHICLE	1
2	ANGLE (front to side)(other than left turn)	0
3	LEFT_TURN	0
4	REAR_END	0
5	HEAD_ON	0
6	SIDESWIPE_SAME_DIRECTION	0
7	SIDESWIPE_OPPOSITE_DIRECTION	0
8	REAR_TO_SIDE	0
9	REAR_TO_REAR	0
97	OTHER	0
99	UNKNOWN	0
	Check Total	1

TravelDirection		
1	NORTH	N
2	SOUTH	S
3	EAST	E
4	WEST	W
5	NORTHWEST	NW
6	NORTHEAST	NE
7	SOUTHWEST	SW
8	SOUTHEAST	SE
99	UNKNOWN	99

Code	First Harmful Event	No.
1	OVERTURN_ROLLOVER	0
2	FIRE_EXPLOSION	0
3	IMMERSION	0
4	JACKKNIFE	0
5	CARGO_EQUIPMENT_LOSS_SHIFT	0
6	FELL_JUMPED_FROM_VEHICLE	0
7	THROWN_OR_FALLING_OBJECT	0
8	OTHER_NON_COLLISION	0
9	EQUIPMENT_FAILURE~~_TIRES_BRAKES~~	0
10	SEPARATION_OF_UNITS	0
11	RAN_OFF_ROAD_RIGHT	0
12	RAN_OFF_ROAD_LEFT	0
13	CROSS_MEDIAN	0
14	CROSS_CENTERLINE	0
15	DOWNHILL_RUNAWAY	0
16	MOTOR_VEHICLE_IN_TRANSPORT	0
17	PEDESTRIAN	0
18	PEDALCYCLE	0
19	RAILWAY_VEHICLE_TRAIN_ENGINE	0
20	LIGHT_RAILWAY_RAILCAR_VEHICLE	0
21	ANIMAL_WILD_NON_GAME	1
22	ANIMAL_WILD_GAME	0
23	ANIMAL_PET	0
24	ANIMAL_LIVESTOCK	0
25	PARKED_MOTOR_VEHICLE	0
26	WORK_ZONE_MAINTENANCE_EQUIPMENT	0
27	STRUCK_BY_FALLING_SHIFTING_CARGO_OR_OBJECT	0
28	OTHER_NON_FIXED_OBJECT	0
29	IMPACT_ATTENUATOR_CRASH_CUSHION	0
30	BRIDGE_OVERHEAD_STRUCTURE	0
31	BRIDGE_RAIL	0
32	CULVERT	0
33	CURB	0
34	DITCH	0
35	EMBANKMENT	0
36	GUARDRAIL_FACE	0
37	GUARDRAIL_END	0
38	CONCRETE_TRAFFIC_BARRIER	0
39	CABLE_TRAFFIC_BARRIER	0
40	OTHER_TRAFFIC_BARRIER	0
41	TREE_BUSH_STUMP_STANDING	0
42	TRAFFIC_SIGN_SUPPORT	0
43	TRAFFIC_SIGNAL_SUPPORT	0
44	UTILITY_POLE_LIGHT_SUPPORT	0
45	OTHER_POST_POLE_OR_SUPPORT	0
46	FENCE	0
47	MAILBOX	0
48	BUILDING	0
49	OTHER_FIXED_OBJECT	0
99	UNKNOWN	0
255	Not Reported	0
	Check Total	1

Code	Month	No.
1	January	0
2	February	0
3	March	0
4	April	0
5	May	0
6	June	0
7	July	1
8	August	0
9	September	0
10	October	0
11	November	0
12	December	0
	Total	1

Code	(Unit) SurfaceCondition	No.
1	DRY	1
2	WET	0
3	SNOW	0
4	SLUSH	0
5	ICE_FROST	0
6	WATER_STANDING_MOVING	0
7	SAND	0
8	MUD_DIRT_GRAVEL	0
9	OIL	0
97	OTHER	0
99	UNKNOWN	0
	Total	1

Additional Useful Information

Vehicle Action Codes

1	GOING_STRAIGHT_AHEAD
2	SLOWING_IN_TRAFFICWAY
3	STOPPED_IN_TRAFFICWAY
4	MAKING_LEFT_TURN
5	MAKING_RIGHT_TURN
6	MAKING_U_TURN
7	OVERTAKING_PASSING
8	CHANGING_LANES
9	NEGOTIATING_A_CURVE
10	BACKING
11	Avoiding_Vehicle_Object_Pedestrian
12	ENTERING_PARKING_POSITION
13	LEAVING_PARKING_POSITION
14	PROPERLY_PARKED
15	IMPROPERLY_PARKED
16	DRIVERLESS_MOVING_VEHICLE
17	CROSSING_ROAD
18	WALKING_WITH_TRAFFIC
19	WALKING_AGAINST_TRAFFIC
20	STANDING
21	LYING
22	GETTING_ON_OR_OFF_VEHICLE
23	WORKING_ON_OR_PUSHING_VEHICLE
24	WORKING_ON_ROAD
97	OTHER
99	UNKNOWN

Body Styles

-1	NOT_REPORTED
1	\Passenger Vehicles, including RVs
53	/
54	\TRUCKS
88	/
89	\MOBILEHOME (NOT RVS)
92	/
93	\TRAILERS
120	/
121	\MOTORCYCLES
128	/
254	UNKNOWN
255	NOT REPORTED

<-------- LOCATION -------->							<-DATE & TIME->		<-------- UNITS -------->														<-------- PERSON -------->								<-------- SEVERITY -------->				<----- GENERAL ----->						
INCIDNT	ON STREET	MP	OFF-SET	D R	DIS-TANCE	INTERSECT STREET	OFCR NCIC	OFCR NCIC	YYMMDD	HH:MM	D W	TO-TAL	SRFCND U1	SRFCND U2	ALGMT 1	ALGMT 2	GRADE 1	GRADE 2	DFCTS U1	DFCTS U2	BSTYLE U1	BSTYLE U2	TRDR 1	TRDR 2	UACT U1	UACT U2	TTL MOT	TTL NON	TYP 1	TYP 2	INJR 1	INJR 2	VLTN D1	VLTN D2	PHSCND D1	PHSCND D2	NON LOC	INCIDENTS PDO	INJ	FAT	INJURIES TTL	FATALITIES MOT	FATALITIES NON	H R	LT CN	WE CN	JCT REL	TRF CWY	HE CD	M C
3540845	03W ROUTE 66			M	500	S Woody Mountain Rd	301	301	190714	22:12	1	1	1		1		1		0		31		E		1		1	0	1		1		99		0		1		0	0		N	5	1	0	2	21	1

CRASH STATISTICS

2021

Northwestern Street & Route 66

Involvement

	# Incidents	Totals		# Motorists	# Non-Motorists
Incidents	2	4	Veh	5	0
Fatal	0	0	Ppl	0	0
Injury	1	1	Ppl	0	0
PDO	1	2	Veh		

Peds/Bikes Summary

	Incidents	Persons	Injuries Fatal	Injuries Non-Fatal
Pedestrian:	0	0	0	0
Bicycle:	0	0	0	0

LightCondition	Code	No.
DAYLIGHT	1	2
DAWN	2	0
DUSK	3	0
DARK_LIGHTED	4	0
DARK_NOT_LIGHTED	5	0
DARK_UNKNOWN_LIGHTING	6	0
UNKNOWN	99	0
Check Total		2

Weather		
CLEAR	1	1
CLOUDY	2	1
SLEET_HAIL_FREEZING_RAIN_OR_DRIZZLE	3	0
RAIN	4	0
SNOW	5	0
SEVERE_CROSSWINDS	6	0
BLOWING_SAND_SOIL_DIRT	7	0
FOG_SMOG_SMOKE	8	0
BLOWING_SNOW	9	0
OTHER	97	0
UNKNOWN	99	0
Check Total		2

TrafficWayType		
ONE_WAY_TRAFFICWAY	1	0
TWO_WAY_NOT_DIVIDED	2	1
ED_WITH_CONTINUOUS_LEFT_TURN_LANE	3	1
_UNPROTECTED_PAINTED_4_FEET_MEDIAN	4	0
DED_POSITIVE_MEDIAN_BARRIER	5	0
UNKNOWN	99	0
Check Total		2

Weekday		
Sunday	1	0
Monday	2	1
Tuesday	3	0
Wednesday	4	1
Thursday	5	0
Friday	6	0
Saturday	7	0
Check Total		2

Circumstances

Hit & Run?	0
Intersection Related?	0

JunctionRelation	Code	No.
NOT_JUNCTION_RELATED	0	0
INTERSECTION_NON_INTERCHANGE	1	0
INTERSECTION_RELATED_NON_INTERCHANGE	2	0
ENTRANCE_EXIT_RAMP_NON_INTERCHANGE	3	2
RAILWAY_GRADE_CROSSING	4	0
CROSSOVER_RELATED	5	0
FRONTAGE_ROAD_NON_INTERCHANGE	6	0
DRIVEWAY	7	0
ALLEY_ACCESS_RELATED	8	0
UNKNOWN_NON_INTERCHANGE	9	0
THRU_ROADWAY	10	0
INTERSECTION_INTERCHANGE	11	0
INTERSECTION_RELATED_INTERCHANGE	12	0
ENTRANCE_EXIT_RAMP_INTERCHANGE	13	0
FRONTAGE_ROAD_INTERCHANGE	14	0
OTHER_PART_OF_INTERCHANGE	15	0
<not defined>	16	0
UNKNOWN_INTERCHANGE	17	0
UNKNOWN_JUNCTION	18	0
UNKNOWN	99	0
OTHER_NON_INTERCHANGE	109	0
Check Total		2

CollisionManner	Code	No.
SINGLE_VEHICLE	1	0
ANGLE (front to side)(other than left turn)	2	0
LEFT_TURN	3	2
REAR_END	4	0
HEAD_ON	5	0
SIDESWIPE_SAME_DIRECTION	6	0
SIDESWIPE_OPPOSITE_DIRECTION	7	0
REAR_TO_SIDE	8	0
REAR_TO_REAR	9	0
OTHER	97	0
UNKNOWN	99	0
Check Total		2

TravelDirection		
1	NORTH	N
2	SOUTH	S
3	EAST	E
4	WEST	W
5	NORTHWEST	NW
6	NORTHEAST	NE
7	SOUTHWEST	SW
8	SOUTHEAST	SE
99	UNKNOWN	99

First Harmful Event	Code	No.
OVERTURN_ROLLOVER	1	0
FIRE_EXPLOSION	2	0
IMMERSION	3	0
JACKKNIFE	4	0
CARGO_EQUIPMENT_LOSS_SHIFT	5	0
FELL_JUMPED_FROM_VEHICLE	6	0
THROWN_OR_FALLING_OBJECT	7	0
OTHER_NON_COLLISION	8	0
EQUIPMENT_FAILURE~~_TIRES_BRAKES~~	9	0
SEPARATION_OF_UNITS	10	0
RAN_OFF_ROAD_RIGHT	11	0
RAN_OFF_ROAD_LEFT	12	0
CROSS_MEDIAN	13	0
CROSS_CENTERLINE	14	0
DOWNHILL_RUNAWAY	15	0
MOTOR_VEHICLE_IN_TRANSPORT	16	2
PEDESTRIAN	17	0
PEDALCYCLE	18	0
RAILWAY_VEHICLE_TRAIN_ENGINE	19	0
LIGHT_RAILWAY_RAILCAR_VEHICLE	20	0
ANIMAL_WILD_NON_GAME	21	0
ANIMAL_WILD_GAME	22	0
ANIMAL_PET	23	0
ANIMAL_LIVESTOCK	24	0
PARKED_MOTOR_VEHICLE	25	0
WORK_ZONE_MAINTENANCE_EQUIPMENT	26	0
STRUCK_BY_FALLING_SHIFTING_CARGO_OR_OBJECT	27	0
OTHER_NON_FIXED_OBJECT	28	0
IMPACT_ATTENUATOR_CRASH_CUSHION	29	0
BRIDGE_OVERHEAD_STRUCTURE	30	0
BRIDGE_RAIL	31	0
CULVERT	32	0
CURB	33	0
DITCH	34	0
EMBANKMENT	35	0
GUARDRAIL_FACE	36	0
GUARDRAIL_END	37	0
CONCRETE_TRAFFIC_BARRIER	38	0
CABLE_TRAFFIC_BARRIER	39	0
OTHER_TRAFFIC_BARRIER	40	0
TREE_BUSH_STUMP_STANDING	41	0
TRAFFIC_SIGN_SUPPORT	42	0
TRAFFIC_SIGNAL_SUPPORT	43	0
UTILITY_POLE_LIGHT_SUPPORT	44	0
OTHER_POST_POLE_OR_SUPPORT	45	0
FENCE	46	0
MAILBOX	47	0
BUILDING	48	0
OTHER_FIXED_OBJECT	49	0
UNKNOWN	99	0
Not Reported	255	0
Check Total		2

Month	Code	No.
January	1	0
February	2	0
March	3	1
April	4	0
May	5	0
June	6	0
July	7	0
August	8	0
September	9	0
October	10	0
November	11	0
December	12	1
Total		2

(Unit) SurfaceCondition		
DRY	1	4
WET	2	0
SNOW	3	0
SLUSH	4	0
ICE_FROST	5	0
WATER_STANDING_MOVING	6	0
SAND	7	0
MUD_DIRT_GRAVEL	8	0
OIL	9	0
OTHER	97	0
UNKNOWN	99	0
Total		4

Additional Useful Information

Vehicle Action Codes

1	GOING_STRAIGHT_AHEAD
2	SLOWING_IN_TRAFFICWAY
3	STOPPED_IN_TRAFFICWAY
4	MAKING_LEFT_TURN
5	MAKING_RIGHT_TURN
6	MAKING_U_TURN
7	OVERTAKING_PASSING
8	CHANGING_LANES
9	NEGOTIATING_A_CURVE
10	BACKING
11	Avoiding_Vehicle_Object_Pedestrian
12	ENTERING_PARKING_POSITION
13	LEAVING_PARKING_POSITION
14	PROPERLY_PARKED
15	IMPROPERLY_PARKED
16	DRIVERLESS_MOVING_VEHICLE
17	CROSSING_ROAD
18	WALKING_WITH_TRAFFIC
19	WALKING_AGAINST_TRAFFIC
20	STANDING
21	LYING
22	GETTING_ON_OR_OFF_VEHICLE
23	WORKING_ON_OR_PUSHING_VEHICLE
24	WORKING_ON_ROAD
97	OTHER
99	UNKNOWN

Body Styles

-1	NOT_REPORTED
1	\Passenger Vehicles, including RVs
53	/
54	\TRUCKS
88	/
89	\MOBILEHOME (NOT RVS)
92	/
93	\TRAILERS
120	/
121	\MOTORCYCLES
128	/
254	UNKNOWN
255	NOT REPORTED

<-------- LOCATION -------->									<-DATE & TIME->		<-------- UNITS -------->																				<---------- PERSON ---------->									<------- SEVERITY ------->							<----- GENERAL ----->					
INCIDNT	ON STREET	MP	OFF-SET	D R	DIS-TANCE	INTERSECT STREET	NCIC	OFCR NCIC	YYMMDD	HH:MM	D W	TO-TAL	SRF U1	SRF U2	CND 1	CND 2	ALGMT 1	ALGMT 2	GRADE 1	GRADE 2	DFCTS U1	DFCTS U2	BSTYLE U1	BSTYLE U2	TRDR 1	TRDR 2	UACT U1	UACT U2	TTL MOT	TTL NON	TYP 1	TYP 2	INJR 1	INJR 2	VLTN D1	VLTN D2	PHSCND D1	PHSCND D2	NON LOC	INCIDENTS PDO	INJ	FAT	INJURIES TTL	INJURIES MOT	INJURIES NON	FATALITIES TTL	FATALITIES MOT	FATALITIES NON	H R	LT CN	WE CN	JCT REL	TRF CWY	HE CD	M C
3746416	03W ROUTE 66			P	0	S Northwestern St	301	301	210324	14:23	4	2	1	1	1	1	1	0	0	0	254	44	S	W	4	1	2	0	1	1	2	1	20	1	0	0	0		1		1	0	0	0	0	0	N	1	1	3	3	16	3
3847777	03W ROUTE 66			P	0	S Northwestern St	301	301	211213	12:48	2	2	1	1	1	1	1	0	0	0	44	32	S	W	4	1	3	0	1	1	1	1	5	1	0	0	0	1			0		0			N	1	2	3	2	16	3
																														4		1		0		0																	

APPENDIX G

TRIP GENERATION CALCULATIONS

LIV Timber Sky Apartments

Trip Generation

Proposed

October 2022

Methodology Overview

This form facilitates trip generation estimation using data within the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 11th Edition and methodology described within ITE's Trip Generation Handbook, 3rd Edition. These references will be referred to as Manual and Handbook, respectively. The Manual contains data collected by various transportation professionals for a wide range of different land uses, with each land use category represented by a land use code (LUC). Average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized LUC in various settings and time periods. The Handbook indicates an established methodology for how to use data contained within the Manual when to use the fitted curve instead of the average rate and when to adjustments to the volume of trips are appropriate and how to do so. The methodology steps are represented visually in boxes in Figure 3.1. This worksheet applies calculations for each box if applicable.

Box 1 - Define Study Site Land Use Type & Site Characteristics

The analyst is to pick an appropriate LUC(s) based on the subject's zoning/land use(s)/future land use(s). The size of the land use(s) is described in reference to an independent variable(s) specific to (each) the land use (example: 1,000 square feet of building area is relatively common).

Land Use Types and Size

Proposed Use	Amount	Units	ITE LUC	ITE Land Use Name
LR-Apartments No Rail	214	Dwelling Units	220	Multifamily Housing (Low-Rise Not Close to Rail)

Box 2 - Define Site Context

Context assessment is to "simply determine whether the study sites is in a multimodal setting" and "could have persons accessing the site by walking, bicycling, or riding transit." This assessment is used in Box 4. The Manual separates data into 4 setting categories - Rural, General Urban/Suburban, Dense Multi-Urban Use and Center City Core. This worksheet uses the following abbreviations, respectively: R, G, D, and C. The Manual does not have data for all settings of all land use codes. See the table on the next page titled "Site Context and Time Periods" - if this table is not provided, the "General Urban/Suburban" setting is used by default.

Box 3 - Define Analysis Objectives Types of Trips & Time Period

This tool will focus on vehicular trips for a 24-hour period on a typical weekday as well as its AM peak hour and PM peak hour. Other time period(s) may be of interest.

Box 4 - Is Study Site Multimodal?

Per the Handbook, "if the objective is to establish a local trip generation rate for a particular land use or study site, the simplified approach (Box 9) may be acceptable but the Box 5 through 8 approach is required if the study site is located in an infill setting, contains a mix of uses on-site, or is near significant transit service."

Box 5/Box 9 - Estimate Baseline Trips/Estimate Vehicular Trips (Determine Equation)

Vehicle trips are estimated using rates/equations applicable to each LUC. When the appropriate graph has a fitted curve, the Handbook has a process (Figure 4.2) to determine when to use it versus using the weighted average rate or collecting local data. The methodology requires for engineering judgement in some circumstances and permits engineering judgement to override or make adjustments when appropriate to best project (example 1: study site is expected to operate differently than data in the applicable land use code - such as restaurant that is closed in the morning or in the evening; example 2: LUC data in a localized area fails to be represented by the typically selected fitted curve/weighted average rate - a small shop/LUC 820, AM peak hour is skewed by the high y-intercept).

Equation Type: Equation Used [Equated Rate] (Type Abbreviations: Weighted Average Rate ("WA"), Fitted Curve ("FC"), or Custom ("C"))

Proposed Use	ADT	AM Peak Hour	PM Peak Hour	(not used)
LR-Apartments No Rail	FC: T=6.41*X+75.31 [6.76]	FC: T=0.31*X+22.85 [0.42]	FC: T=0.43*X+20.55 [0.53]	

Box 5/Box 9 - Estimate Baseline Trips/Estimate Vehicular Trips (Apply Equations and in/out Distributions)

Baseline Vehicular Trips

	ADT				AM Peak Hour				PM Peak Hour				(not used)			
Proposed Use	% In	In	Out	Total	% In	In	Out	Total	% In	In	Out	Total	% In	In	Out	Total
LR-Apartments No Rail	50%	724	724	1,448	24%	21	68	89	63%	71	42	113				
Totals		**724**	**724**	**1,448**		**21**	**68**	**89**		**71**	**42**	**113**				

If vehicle trip reductions are not applied for internal capture and alternative mode, vehicle trips may be separtated into vehicle trip subsets (pass-by trips, diverted trips, truck trips, new passenger vehicle trips) as part of Box 10. If vehicle trip reductions are to be applied, continue to Box 6.

APPENDIX H

TRIP DISTRIBUTION CALCULATIONS

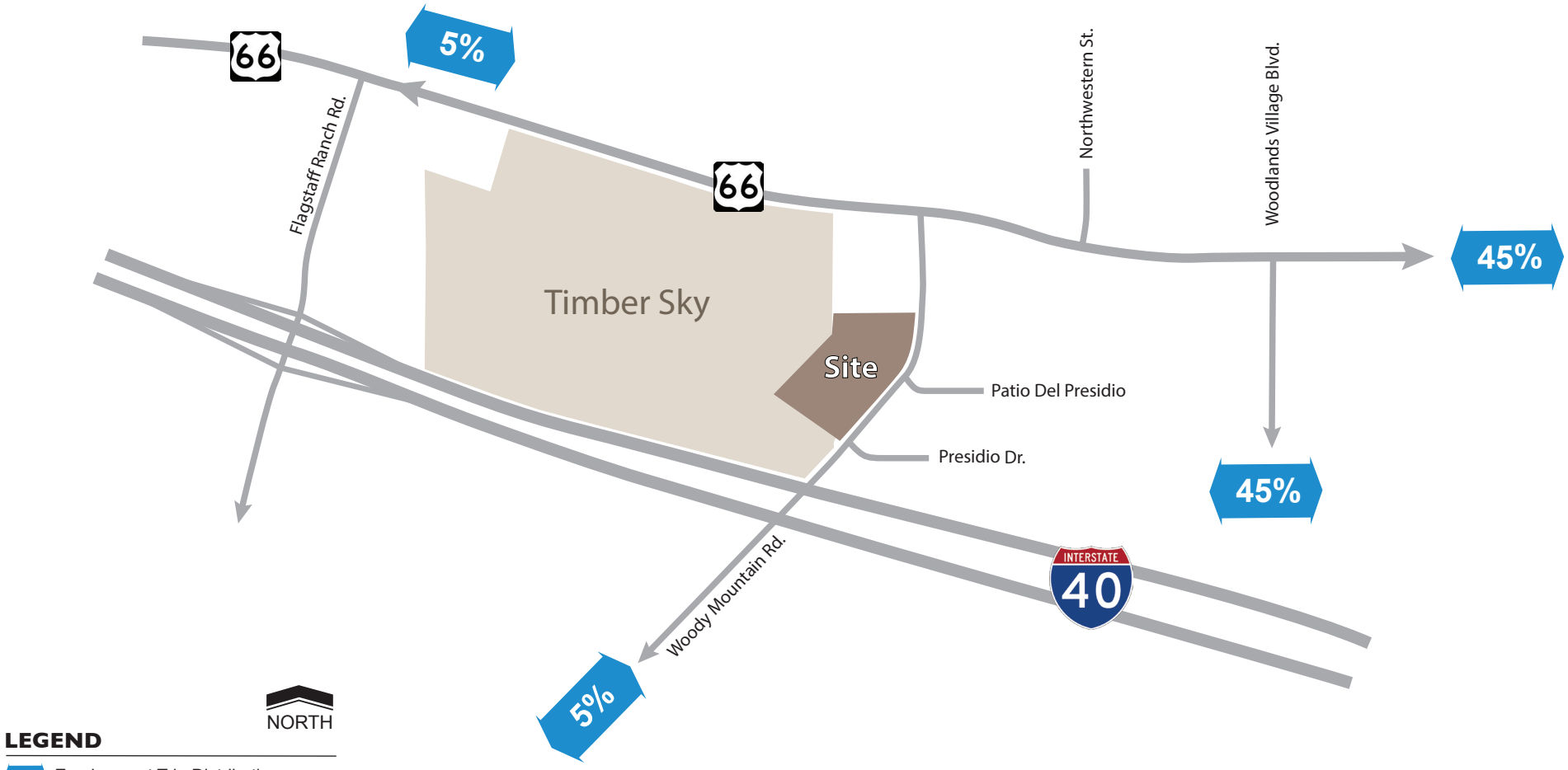


Figure 5: Trip Distribution

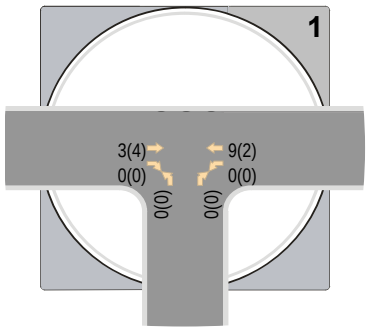
APPENDIX I

GROWTH AND SURROUNDING DEVELOPMENT TRAFFIC

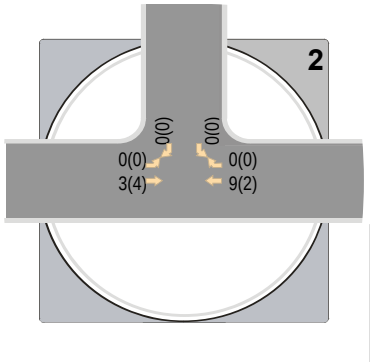
AAGR	2.0%	4.0%
Exp Factor	1.000	1.000

Growth Rate Used	2.0%	4.0%
Per-Year Multiplier	1.020	1.040

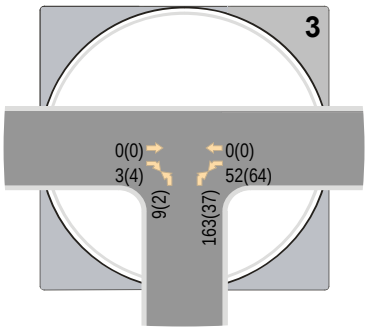
Year	Expansion Factor(s)	
2022	1.000	1.000
2023	1.020	1.040
2024	**1.040**	**1.082**
2025	1.061	1.125
2026	1.082	1.170
2027	**1.104**	**1.217**
2028	1.126	1.265
2029	1.149	1.316
2030	1.172	1.369



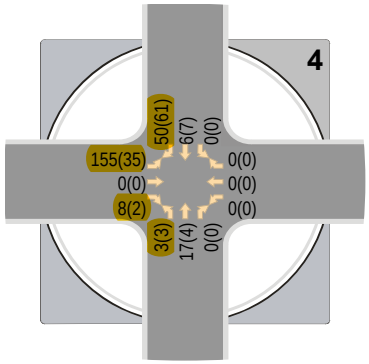
Alvan Clark Blvd & Route 66



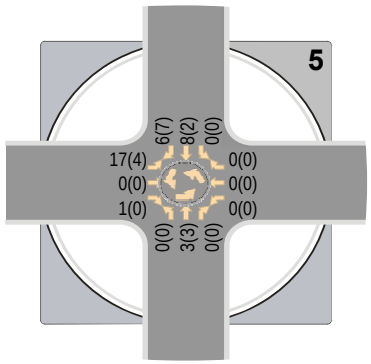
Flagstaff Public Works Drwy & Route 66



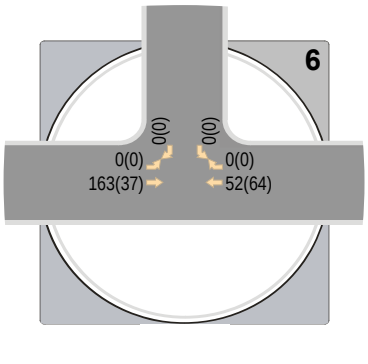
Woody Mountain Rd & Route 66



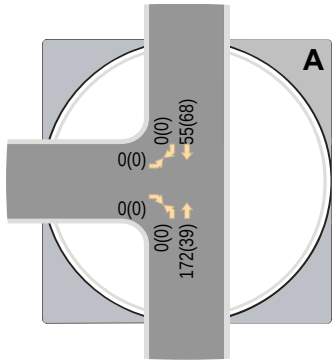
Woody Mountain Rd & Patio Del Presidio



Woody Mountain Rd & Presidio Dr



Northwestern Street & Route 66



Woody Mountain Rd & Dwy A

CivTech

APPENDIX J

FUTURE TRAFFIC SIGNAL WARRANT WORKSHEETS

Timber Sky Apartments

Signal Warrant Analysis

MUTCD Warrants 1-3

Major Street: Route 66 — Speed Limit: 45 — Lanes:* 2
Minor Street: Woody Mountian Road — Speed Limit: 40 — Lanes:* 1
Locale: City of Flagstaff
*Number of Approach Lanes of Moving Traffic:

Major Street vph - total of both approaches	20	27	25	145	82	220	357	686	752	635	659	800	820	732	868	824	761	793	484	356	260	152	84	42
Minor Street volume - higher-volume approach (vph)	4	26	2	4	5	12	22	59	31	35	35	60	58	45	67	57	55	40	29	20	21	10	8	4
Direction of higher-volume minor approach	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB
Beginning of hour	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00

Critical speed of major street traffic above 40 mph X
In built-up area of isolated community less than 10,000 population
Urban x

Warrant 1, Eight-Hour Vehicular Volume

Condition A *Minimum Vehicular Volume*					Criteria	Hour																						
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Minimum Reqmts	500	600	600	500																									
(100%[a])	150	150	200	200																									
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																								
Minimum Reqmts	350	420	420	350	**420**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
(70%[c])	105	105	140	140	**105**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Condition B *Interruption of Cont. Traffic*					Criteria	Hour																						
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Minimum Reqmts	750	900	900	750																									
(100%[a])	75	75	100	100																									
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																								
Minimum Reqmts	525	630	630	525	**630**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
(70%[c])	53	53	70	70	**53**	No	No	No	No	No	No	No	Yes	No	No	No	Yes	Yes	No	Yes	Yes	Yes	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**	**No**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Combination *of Conditions A & B*					Criteria	Hour																						
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Condition A	400	480	480	400																									
(80%[b])	120	120	160	160																									
Condition B	600	720	720	600																									
(80%[b])	60	60	80	80																									
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																								
Condition A	280	336	336	280	**336**	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
(56%[d])	84	84	112	112	**84**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Condition B	420	504	504	420	**504**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
(56%[d])	42	42	56	56	**42**	No	No	No	No	No	No	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Warrant 2, Four Hour Vehicular Volume					Criteria	Hour																						
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
100% *See to the right*																													
70% *See to the right*					**Use**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Warrant 3, Peak Hour					Criteria	Hour																						
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
100% *See to the right*																													
70% *See to the right*					**Use**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Volume-Based Traffic Signal Warrants Analysis Summary

Warrant		Hour(s) of the Day	Hours Required to Meet Warrant	Hours Met	Is Warrant Met?
Warrant 1. Eight-Hour Vehicular Volume	Condition A: Minimum Vehicular Volume	Any Eight Hours	8	0	No
	Condition B: Interruption of Continuous Traffic	Any Eight Hours	8	6	No
	Combination of Condition A & Condition B	Any Eight Hours	8	0	No
	Overall (at least 1 of the 3 conditions required to meet warrant)				**No**
Warrant 2. Four-Hour Vehicular Volume		Any Four Hours	4	0	**No**
Warrant 3. Peak Hour		Any One/Peak Hour	1	0	**No**

Timber Sky Apartments

Signal Warrant Analysis

MUTCD Warrants 1-3

Major Street: Route 66 — Speed Limit: 45 — Lanes:* 2
Minor Street: Woody Mountian Road — Speed Limit: 40 — Lanes:* 1
Locale: City of Flagstaff
*Number of Approach Lanes of Moving Traffic:

Major Street vph - total of both approaches	21	29	26	159	88	238	379	724	800	674	696	850	877	782	924	874	810	844	516	382	279	163	89	45
Minor Street volume - higher-volume approach (vph)	5	34	3	5	6	16	28	76	40	45	45	77	75	58	87	73	71	51	37	25	27	14	10	5
Direction of higher-volume minor approach	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB
Beginning of hour	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00

Critical speed of major street traffic above 40 mph X
In built-up area of isolated community less than 10,000 population
Urban x

Warrant 1, Eight-Hour Vehicular Volume

Condition A *Minimum Vehicular Volume*

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	Criteria	Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Minimum Reqmts	500	600	600	500																										
(100%[a])	150	150	200	200																										
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																									
Minimum Reqmts	350	420	420	350	**420**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
(70%[c])	105	105	140	140	**105**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Condition B *Interruption of Cont. Traffic*

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	Criteria	Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Minimum Reqmts	750	900	900	750																										
(100%[a])	75	75	100	100																										
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																									
Minimum Reqmts	525	630	630	525	**630**	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
(70%[c])	53	53	70	70	**53**	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Combination *of Conditions A & B*

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	Criteria	Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Condition A	400	480	480	400																										
(80%[b])	120	120	160	160																										
Condition B	600	720	720	600																										
(80%[b])	60	60	80	80																										
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																									
Condition A	280	336	336	280	**336**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
(56%[d])	84	84	112	112	**84**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No
Condition B	420	504	504	420	**504**	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
(56%[d])	42	42	56	56	**42**	No	No	No	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Warrant 2, Four Hour Vehicular Volume

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	Criteria **2/1**	Hour 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
100% *See to the right*																													
70% *See to the right*					**Use**	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	No	Yes	Yes	No	No	No	No	No	No	No	No
Warrant met?	**Yes**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Warrant 3, Peak Hour

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	Criteria **2/1**	Hour 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
100% *See to the right*																													
70% *See to the right*					**Use**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Volume-Based Traffic Signal Warrants Analysis Summary

Warrant		Hour(s) of the Day	Hours Required to Meet Warrant	Hours Met	Is Warrant Met?
Warrant 1. Eight-Hour Vehicular Volume	Condition A: Minimum Vehicular Volume	Any Eight Hours	8	0	No
	Condition B: Interruption of Continuous Traffic	Any Eight Hours	8	7	No
	Combination of Condition A & Condition B	Any Eight Hours	8	1	No
	Overall (at least 1 of the 3 conditions required to meet warrant)				**No**
Warrant 2. Four-Hour Vehicular Volume		Any Four Hours	4	4	**Yes**
Warrant 3. Peak Hour		Any One/Peak Hour	1	0	**No**

Timber Sky Apartments

Signal Warrant Analysis

MUTCD Warrants 1-3

Major Street: Route 66 — Speed Limit: 45 — Lanes:* 2
Minor Street: Woody Mountian Road — Speed Limit: 40 — Lanes:* 1
Locale: City of Flagstaff
*Number of Approach Lanes of Moving Traffic:

Major Street vph - total of both approaches	22	30	27	161	90	245	397	764	836	707	732	888	910	813	964	916	845	880	537	395	288	169	93	47
Minor Street volume - higher-volume approach (vph)	4	28	3	4	5	13	23	63	33	37	37	63	62	47	71	60	59	42	31	21	22	11	8	5
Direction of higher-volume minor approach	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB
Beginning of hour	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00

Critical speed of major street traffic above 40 mph X
In built-up area of isolated community less than 10,000 population
Urban x

Warrant 1, Eight-Hour Vehicular Volume

Condition A *Minimum Vehicular Volume*

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	Criteria	Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Minimum Reqmts	500	600	600	500																										
(100%[a])	150	150	200	200																										
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																									
Minimum Reqmts	350	420	420	350	**420**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
(70%[c])	105	105	140	140	**105**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Condition B *Interruption of Cont. Traffic*

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	Criteria	Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Minimum Reqmts	750	900	900	750																										
(100%[a])	75	75	100	100																										
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																									
Minimum Reqmts	525	630	630	525	**630**	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
(70%[c])	53	53	70	70	**53**	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes	Yes	No	Yes	Yes	Yes	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**	**No**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Combination *of Conditions A & B*

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	Criteria	Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Condition A	400	480	480	400																										
(80%[b])	120	120	160	160																										
Condition B	600	720	720	600																										
(80%[b])	60	60	80	80																										
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																									
Condition A	280	336	336	280	**336**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
(56%[d])	84	84	112	112	**84**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Condition B	420	504	504	420	**504**	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
(56%[d])	42	42	56	56	**42**	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Warrant 2, Four Hour Vehicular Volume

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	Criteria **2/1**	Hour 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
100% *See to the right*																													
70% *See to the right*					**Use**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Warrant 3, Peak Hour

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	Criteria **2/1**	Hour 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
100% *See to the right*																													
70% *See to the right*					**Use**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Volume-Based Traffic Signal Warrants Analysis Summary

Warrant		Hour(s) of the Day	Hours Required to Meet Warrant	Hours Met	Is Warrant Met?
Warrant 1. Eight-Hour Vehicular Volume	Condition A: Minimum Vehicular Volume	Any Eight Hours	8	0	No
	Condition B: Interruption of Continuous Traffic	Any Eight Hours	8	6	No
	Combination of Condition A & Condition B	Any Eight Hours	8	0	No
	Overall (at least 1 of the 3 conditions required to meet warrant)				**No**
Warrant 2. Four-Hour Vehicular Volume		Any Four Hours	4	1	**No**
Warrant 3. Peak Hour		Any One/Peak Hour	1	0	**No**

Timber Sky Apartments

Signal Warrant Analysis

MUTCD Warrants 1-3

Major Street: Route 66 — Speed Limit: 45 — Lanes:* 2
Minor Street: Woody Mountian Road — Speed Limit: 40 — Lanes:* 1
Locale: City of Flagstaff
*Number of Approach Lanes of Moving Traffic:

Major Street vph - total of both approaches	23	32	29	174	97	262	419	801	884	745	770	939	967	862	1,021	967	894	932	570	421	308	180	98	49
Minor Street volume - higher-volume approach (vph)	5	35	3	5	6	16	29	80	42	47	47	81	79	60	91	77	75	54	39	27	28	14	10	6
Direction of higher-volume minor approach	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB
Beginning of hour	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00

Critical speed of major street traffic above 40 mph X
In built-up area of isolated community less than 10,000 population
Urban x

Warrant 1, Eight-Hour Vehicular Volume

Condition A *Minimum Vehicular Volume* — Criteria — Hour

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Minimum Reqmts	500	600	600	500																									
(100%[a])	150	150	200	200																									
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																								
Minimum Reqmts	350	420	420	350	**420**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
(70%[c])	105	105	140	140	**105**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Condition B *Interruption of Cont. Traffic* — Criteria — Hour

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Minimum Reqmts	750	900	900	750																									
(100%[a])	75	75	100	100																									
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																								
Minimum Reqmts	525	630	630	525	**630**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
(70%[c])	53	53	70	70	**53**	No	No	No	No	No	No	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Warrant met?	**Yes**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**	**No**	**No**	**No**

Combination *of Conditions A & B* — Criteria — Hour

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Condition A	400	480	480	400																									
(80%[b])	120	120	160	160																									
Condition B	600	720	720	600																									
(80%[b])	60	60	80	80																									
Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**																								
Condition A	280	336	336	280	**336**	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
(56%[d])	84	84	112	112	**84**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No
Condition B	420	504	504	420	**504**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
(56%[d])	42	42	56	56	**42**	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Warrant 2, Four Hour Vehicular Volume

Criteria — Hour

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
100% *See to the right*																													
70% *See to the right*					**Use**	No	No	No	No	No	No	No	Yes	No	No	No	Yes	Yes	No	Yes	Yes	Yes	No	No	No	No	No	No	No
Warrant met?	**Yes**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**	**No**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Warrant 3, Peak Hour

Criteria — Hour

Lanes (**M**/**m**):	1/1	2+/1	2+/2+	1/2+	**2/1**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
100% *See to the right*																													
70% *See to the right*					**Use**	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Warrant met?	**No**					**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Volume-Based Traffic Signal Warrants Analysis Summary

Warrant		Hour(s) of the Day	Hours Required to Meet Warrant	Hours Met	Is Warrant Met?
Warrant 1. Eight-Hour Vehicular Volume	Condition A: Minimum Vehicular Volume	Any Eight Hours	8	0	No
	Condition B: Interruption of Continuous Traffic	Any Eight Hours	8	8	Yes
	Combination of Condition A & Condition B	Any Eight Hours	8	1	No
	Overall (at least 1 of the 3 conditions required to meet warrant)				**Yes**
Warrant 2. Four-Hour Vehicular Volume		Any Four Hours	4	6	**Yes**
Warrant 3. Peak Hour		Any One/Peak Hour	1	0	**No**

APPENDIX K

2024 PROPORTIONAL SHARE ANALYSIS

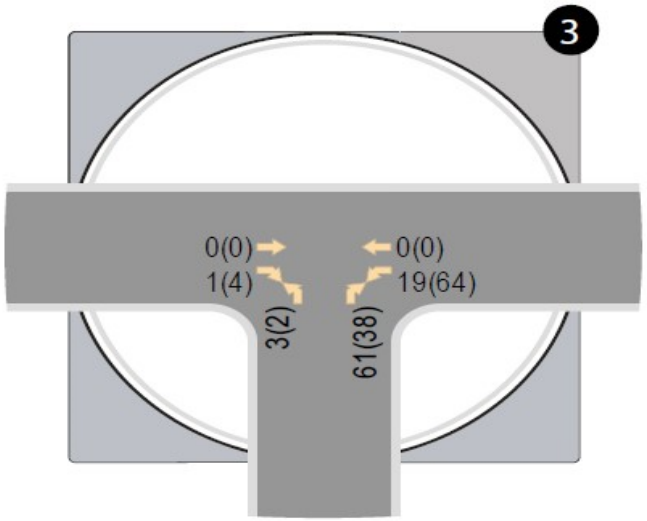
AM													SUM
SITE	3	0	61	0	0	0	0	0	1	19	0	0	84
TOTAL 2024	8	0	223	0	0	0	0	344	7	158	271	0	1011

AM %	**8.31%**

PM													SUM
SITE	2	0	38	0	0	0	0	0	4	64	0	0	108
TOTAL 2024	6	0	219	0	0	0	0	292	30	189	340	0	1076

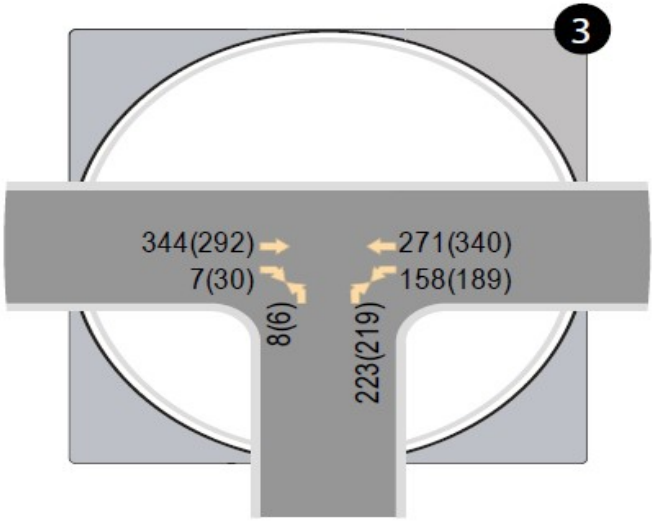
PM %	**10.04%**

Site Volumes



Woody Mountain Rd & Route 66

2024 Total



Woody Mountain Rd & Route 66

Andrew Ferreira

From: Nathan Reisner <nreisner@azdot.gov>
Sent: Thursday, July 14, 2022 10:55 AM
To: Dawn Cartier
Cc: Jeff Bauman; Steph Santana; Bill Selby; Ruth Gutierrez; Guillermo Cortes; Brenden Foley; John Litteer; Stephen Craver; Nathan Reisner; Vernon Dumbeck
Subject: Re: Woody Mountain & Route 66 Traffic Signal

CAUTION: This email originated from outside of the organization.

Dawn,
Some corrections and additions on what is stated below.

1. Timber Sky was stipulated to install all of the underground foundations for the signal including the controller foundation, pole foundations, and pull boxes. The conduit had already been installed by ADOT in 2010 during a pavement preservation project. The foundations have been installed by Timber Sky.
2. Money has been collected (proportional share of signal costs at this intersection) from Presidio, a small amount from Timber Sky (this is supposed to come in Phase III), and from the COF maintenance facility. Last year we were working on how much Timber Sky owed for Phase III but not all of the comments to the costs were addressed by Timber Sky. I am not sure if Phase III ever moved forward.
3. Discussions between Timber Sky, ADOT, and the City sugged that there is enough money collected to install the above ground signal infrastructure and wiring once warrants are met. I do not recall the exact amount collected. If the City can confirm the exact amount so we can ensure there is enough money to install the wire, poles, detection cameras and cabinet, I would appreciate it.
    a. With the money collected from the other developments, ADOT was going to take the lead on installing the rest of the signal equipment once the signal warrants were met. Timber Sky had designed the intersection to full build out and placed the foundations in a location to not conflict with the full build out of the intersection.
    b. The original timeline for the signal warrant being met was assumed as 2023, it may take a couple of extra years due to the absorption rate of the homes in Timber Sky.
    c. If I recall correctly NRT did a signal needs study in 2020 or 2021 and the signal did not meet warrants yet, but I can not find that study in my files.
    d. It may be time for another signal needs study to be performed, as persido and Timber Sky have been infilling.
4. If the amount collected is not enough to install the remaining single infrastructure, I do believe it would be prudent to require any future developments that impact the intersection to contribute proportional funding to the signal funds and or require them to build the intersection to a full build out.

Thanks,

Nate Reisner, P.E.
Sr. Resident Engineer, Construction A & C
ADOT Northcentral District
1959 S. Woodlands Village Boulevard, Suite B.
Flagstaff, AZ 86001
928-714-2290

APPENDIX L

2024 NO BUILD PEAK HOUR ANALYSIS

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	299	8	21	256	11	35
Future Vol, veh/h	299	8	21	256	11	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	75	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	80	80	85	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	352	10	26	301	14	44

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	362	0	555	352
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	203	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1195	-	477	691
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	812	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1195	-	467	691
Mov Cap-2 Maneuver	-	-	-	-	619	-
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	794	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	619	691	-	-	1195	-
HCM Lane V/C Ratio	0.022	0.063	-	-	0.022	-
HCM Control Delay (s)	10.9	10.6	-	-	8.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	299	3	29	320	6	33
Future Vol, veh/h	299	3	29	320	6	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	75	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	80	80	85	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	352	4	36	376	8	41

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	356	0	612	352
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	260	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1201	-	440	691
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	760	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1201	-	427	691
Mov Cap-2 Maneuver	-	-	-	-	593	-
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	737	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	593	691	-	-	1201	-
HCM Lane V/C Ratio	0.013	0.06	-	-	0.03	-
HCM Control Delay (s)	11.1	10.5	-	-	8.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	333	281	12	17	1
Future Vol, veh/h	2	333	281	12	17	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	300	90	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	85	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	370	331	15	21	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	346	0	-	0	707	331
Stage 1	-	-	-	-	331	-
Stage 2	-	-	-	-	376	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1213	-	-	-	402	711
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	694	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1213	-	-	-	401	711
Mov Cap-2 Maneuver	-	-	-	-	507	-
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	694	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1213	-	-	-	507	711
HCM Lane V/C Ratio	0.002	-	-	-	0.042	0.002
HCM Control Delay (s)	8	-	-	-	12.4	10.1
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	320	340	3	8	11
Future Vol, veh/h	2	320	340	3	8	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	300	90	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	356	378	4	10	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	382	0	-	0	740	378
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	362	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1176	-	-	-	384	669
Stage 1	-	-	-	-	693	-
Stage 2	-	-	-	-	704	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1176	-	-	-	383	669
Mov Cap-2 Maneuver	-	-	-	-	493	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	704	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1176	-	-	-	493	669
HCM Lane V/C Ratio	0.002	-	-	-	0.02	0.021
HCM Control Delay (s)	8.1	-	-	-	12.5	10.5
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	344	6	139	271	5	162
Future Vol, veh/h	344	6	139	271	5	162
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	235	175	-	0	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	85	85	80	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	382	8	164	319	6	191

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	390	0	1029	382
Stage 1	-	-	-	-	382	-
Stage 2	-	-	-	-	647	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1169	-	259	665
Stage 1	-	-	-	-	690	-
Stage 2	-	-	-	-	521	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1169	-	223	665
Mov Cap-2 Maneuver	-	-	-	-	342	-
Stage 1	-	-	-	-	690	-
Stage 2	-	-	-	-	448	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.9	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	342	665	-	-	1169	-
HCM Lane V/C Ratio	0.018	0.287	-	-	0.14	-
HCM Control Delay (s)	15.7	12.6	-	-	8.6	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	1.2	-	-	0.5	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	292	26	125	340	4	181
Future Vol, veh/h	292	26	125	340	4	181
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	235	175	-	0	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	80	85	90	80	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	344	33	147	378	5	213

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	377	0	1016	344
Stage 1	-	-	-	-	344	-
Stage 2	-	-	-	-	672	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1181	-	264	699
Stage 1	-	-	-	-	718	-
Stage 2	-	-	-	-	508	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1181	-	231	699
Mov Cap-2 Maneuver	-	-	-	-	347	-
Stage 1	-	-	-	-	718	-
Stage 2	-	-	-	-	445	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	347	699	-	-	1181	-
HCM Lane V/C Ratio	0.014	0.305	-	-	0.125	-
HCM Control Delay (s)	15.5	12.4	-	-	8.5	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0	1.3	-	-	0.4	-

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	155	0	8	5	0	122	3	67	0	30	96	50
Future Vol, veh/h	155	0	8	5	0	122	3	67	0	30	96	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	80	85	85	80	80	80	80	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	182	0	9	6	0	144	4	84	0	38	113	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	383	311	143	315	340	84	172	0	0	84	0	0
Stage 1	219	219	-	92	92	-	-	-	-	-	-	-
Stage 2	164	92	-	223	248	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	575	604	905	638	582	975	1405	-	-	1513	-	-
Stage 1	783	722	-	915	819	-	-	-	-	-	-	-
Stage 2	838	819	-	780	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	480	587	905	618	566	975	1405	-	-	1513	-	-
Mov Cap-2 Maneuver	480	587	-	618	566	-	-	-	-	-	-	-
Stage 1	781	704	-	912	817	-	-	-	-	-	-	-
Stage 2	712	817	-	753	683	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17	9.4	0.3	1.3
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1405	-	-	491	618	975	1513	-	-
HCM Lane V/C Ratio	0.003	-	-	0.391	0.01	0.147	0.025	-	-
HCM Control Delay (s)	7.6	0	-	17	10.9	9.3	7.4	-	-
HCM Lane LOS	A	A	-	C	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.8	0	0.5	0.1	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	0	2	5	0	45	3	148	4	72	71	61
Future Vol, veh/h	35	0	2	5	0	45	3	148	4	72	71	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	85	85	80	80	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	0	3	6	0	56	4	174	5	90	84	72

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	513	487	120	484	518	174	156	0	0	179	0	0
Stage 1	300	300	-	182	182	-	-	-	-	-	-	-
Stage 2	213	187	-	302	336	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	472	481	931	493	462	869	1424	-	-	1397	-	-
Stage 1	709	666	-	820	749	-	-	-	-	-	-	-
Stage 2	789	745	-	707	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	419	449	931	466	431	869	1424	-	-	1397	-	-
Mov Cap-2 Maneuver	419	449	-	466	431	-	-	-	-	-	-	-
Stage 1	707	623	-	818	747	-	-	-	-	-	-	-
Stage 2	736	743	-	660	601	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	9.7	0.1	2.8
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1424	-	-	432	466	869	1397	-	-
HCM Lane V/C Ratio	0.002	-	-	0.107	0.013	0.065	0.064	-	-
HCM Control Delay (s)	7.5	0	-	14.3	12.8	9.4	7.8	-	-
HCM Lane LOS	A	A	-	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0.2	0.2	-	-

Intersection	
Intersection Delay, s/veh	3.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	4	66	42	130
Demand Flow Rate, veh/h	4	68	43	132
Vehicles Circulating, veh/h	162	39	10	34
Vehicles Exiting, veh/h	4	14	156	73
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.1	3.2	2.9	3.5
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	4	68	43	132
Cap Entry Lane, veh/h	1170	1326	1366	1333
Entry HV Adj Factor	0.995	0.970	0.984	0.982
Flow Entry, veh/h	4	66	42	130
Cap Entry, veh/h	1164	1286	1343	1308
V/C Ratio	0.003	0.051	0.031	0.099
Control Delay, s/veh	3.1	3.2	2.9	3.5
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection	
Intersection Delay, s/veh	3.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	45	183	89
Demand Flow Rate, veh/h	0	46	187	91
Vehicles Circulating, veh/h	104	159	28	19
Vehicles Exiting, veh/h	6	56	76	186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	3.5	3.9	3.3
Approach LOS	-	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	0	46	187	91
Cap Entry Lane, veh/h	1241	1173	1341	1353
Entry HV Adj Factor	1.000	0.978	0.978	0.976
Flow Entry, veh/h	0	45	183	89
Cap Entry, veh/h	1241	1148	1312	1321
V/C Ratio	0.000	0.039	0.139	0.067
Control Delay, s/veh	2.9	3.5	3.9	3.3
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	560	409	32	132	14
Future Vol, veh/h	4	560	409	32	132	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	85	85	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	622	481	38	155	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	519	0	-	0	1132	260
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	632	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	1045	-	-	-	210	740
Stage 1	-	-	-	-	575	-
Stage 2	-	-	-	-	529	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1045	-	-	-	209	740
Mov Cap-2 Maneuver	-	-	-	-	413	-
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	529	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	18
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1045	-	-	-	413	740
HCM Lane V/C Ratio	0.005	-	-	-	0.376	0.024
HCM Control Delay (s)	8.5	-	-	-	18.9	10
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	1.7	0.1

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	470	545	126	81	10
Future Vol, veh/h	21	470	545	126	81	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	522	606	140	95	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	746	0	-	0	1250	373
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	574	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	860	-	-	-	177	625
Stage 1	-	-	-	-	468	-
Stage 2	-	-	-	-	562	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	860	-	-	-	172	625
Mov Cap-2 Maneuver	-	-	-	-	369	-
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	562	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	17.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	860	-	-	-	369	625
HCM Lane V/C Ratio	0.031	-	-	-	0.258	0.02
HCM Control Delay (s)	9.3	-	-	-	18.1	10.9
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	344	176	0
Future Vol, veh/h	0	0	0	344	176	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	100	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	90	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	382	207	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	589	207	207	0	-	0
Stage 1	207	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	471	833	1364	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	690	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	471	833	1364	-	-	-
Mov Cap-2 Maneuver	471	-	-	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	690	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1364	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	0	0	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	228	204	0
Future Vol, veh/h	0	0	0	228	204	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	100	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	85	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	268	240	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	508	240	240	0	-	0
Stage 1	240	-	-	-	-	-
Stage 2	268	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	525	799	1327	-	-	-
Stage 1	800	-	-	-	-	-
Stage 2	777	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	525	799	1327	-	-	-
Mov Cap-2 Maneuver	525	-	-	-	-	-
Stage 1	800	-	-	-	-	-
Stage 2	777	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1327	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	0	0	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-

APPENDIX M

2027 NO BUILD PEAK HOUR ANALYSIS

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	336	9	22	288	12	38
Future Vol, veh/h	336	9	22	288	12	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	75	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	80	85	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	373	11	28	339	15	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	384	0	599	373
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	226	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1173	-	448	672
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	791	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1173	-	437	672
Mov Cap-2 Maneuver	-	-	-	-	599	-
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	772	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	599	672	-	-	1173	-
HCM Lane V/C Ratio	0.025	0.071	-	-	0.023	-
HCM Control Delay (s)	11.2	10.8	-	-	8.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	336	3	31	360	7	35
Future Vol, veh/h	336	3	31	360	7	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	75	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	80	85	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	373	4	39	424	9	44

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	377	0	663	373
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	290	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1180	-	410	672
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	735	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1180	-	396	672
Mov Cap-2 Maneuver	-	-	-	-	570	-
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	711	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	570	672	-	-	1180	-
HCM Lane V/C Ratio	0.015	0.065	-	-	0.033	-
HCM Control Delay (s)	11.4	10.7	-	-	8.2	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	375	316	12	17	1
Future Vol, veh/h	2	375	316	12	17	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	300	90	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	417	351	15	21	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	366	0	-	0	774	351
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	423	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1193	-	-	-	367	692
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	661	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1193	-	-	-	366	692
Mov Cap-2 Maneuver	-	-	-	-	479	-
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	661	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1193	-	-	-	479	692
HCM Lane V/C Ratio	0.002	-	-	-	0.044	0.002
HCM Control Delay (s)	8	-	-	-	12.9	10.2
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	360	382	3	8	11
Future Vol, veh/h	2	360	382	3	8	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	300	90	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	400	424	4	10	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	428	0	-	0	830	424
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	406	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1131	-	-	-	340	630
Stage 1	-	-	-	-	660	-
Stage 2	-	-	-	-	673	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1131	-	-	-	339	630
Mov Cap-2 Maneuver	-	-	-	-	458	-
Stage 1	-	-	-	-	658	-
Stage 2	-	-	-	-	673	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1131	-	-	-	458	630
HCM Lane V/C Ratio	0.002	-	-	-	0.022	0.022
HCM Control Delay (s)	8.2	-	-	-	13	10.8
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	3.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	387	7	148	304	6	172
Future Vol, veh/h	387	7	148	304	6	172
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	235	175	-	0	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	85	90	80	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	430	9	174	338	8	202

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	439	0	1116	430
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	686	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1121	-	230	625
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	500	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1121	-	194	625
Mov Cap-2 Maneuver	-	-	-	-	317	-
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	423	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	317	625	-	-	1121	-
HCM Lane V/C Ratio	0.024	0.324	-	-	0.155	-
HCM Control Delay (s)	16.6	13.5	-	-	8.8	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	1.4	-	-	0.5	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	329	28	132	382	4	192
Future Vol, veh/h	329	28	132	382	4	192
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	235	175	-	0	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	85	90	80	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	366	35	155	424	5	226

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	401	0	1100	366
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	734	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1158	-	235	679
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	475	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1158	-	204	679
Mov Cap-2 Maneuver	-	-	-	-	320	-
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	411	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.3	13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	320	679	-	-	1158	-
HCM Lane V/C Ratio	0.016	0.333	-	-	0.134	-
HCM Control Delay (s)	16.4	12.9	-	-	8.6	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0	1.5	-	-	0.5	-

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	155	0	8	6	0	129	3	71	0	32	102	50
Future Vol, veh/h	155	0	8	6	0	129	3	71	0	32	102	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	80	85	85	80	80	80	80	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	182	0	9	8	0	152	4	89	0	40	120	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	403	327	150	331	356	89	179	0	0	89	0	0
Stage 1	230	230	-	97	97	-	-	-	-	-	-	-
Stage 2	173	97	-	234	259	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	558	591	896	622	570	969	1397	-	-	1506	-	-
Stage 1	773	714	-	910	815	-	-	-	-	-	-	-
Stage 2	829	815	-	769	694	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	460	573	896	601	553	969	1397	-	-	1506	-	-
Mov Cap-2 Maneuver	460	573	-	601	553	-	-	-	-	-	-	-
Stage 1	771	695	-	907	813	-	-	-	-	-	-	-
Stage 2	697	813	-	741	675	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.8	9.5	0.3	1.4
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1397	-	-	471	601	969	1506	-	-
HCM Lane V/C Ratio	0.003	-	-	0.407	0.012	0.157	0.027	-	-
HCM Control Delay (s)	7.6	0	-	17.8	11.1	9.4	7.5	-	-
HCM Lane LOS	A	A	-	C	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2	0	0.6	0.1	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	0	2	6	0	47	3	157	4	76	75	61
Future Vol, veh/h	35	0	2	6	0	47	3	157	4	76	75	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	85	85	80	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	0	3	8	0	59	4	185	5	89	88	72

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	527	500	124	497	531	185	160	0	0	190	0	0
Stage 1	302	302	-	193	193	-	-	-	-	-	-	-
Stage 2	225	198	-	304	338	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	462	473	927	483	454	857	1419	-	-	1384	-	-
Stage 1	707	664	-	809	741	-	-	-	-	-	-	-
Stage 2	778	737	-	705	641	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	408	441	927	457	424	857	1419	-	-	1384	-	-
Mov Cap-2 Maneuver	408	441	-	457	424	-	-	-	-	-	-	-
Stage 1	705	622	-	807	739	-	-	-	-	-	-	-
Stage 2	722	735	-	658	600	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.6	9.9	0.1	2.8
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1419	-	-	421	457	857	1384	-	-
HCM Lane V/C Ratio	0.002	-	-	0.11	0.016	0.069	0.065	-	-
HCM Control Delay (s)	7.5	0	-	14.6	13	9.5	7.8	-	-
HCM Lane LOS	A	A	-	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	0.2	0.2	-	-

Intersection	
Intersection Delay, s/veh	3.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	4	70	45	138
Demand Flow Rate, veh/h	4	72	46	141
Vehicles Circulating, veh/h	172	42	11	35
Vehicles Exiting, veh/h	4	15	165	79
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.2	3.2	2.9	3.6
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	4	72	46	141
Cap Entry Lane, veh/h	1158	1322	1364	1331
Entry HV Adj Factor	0.995	0.972	0.983	0.982
Flow Entry, veh/h	4	70	45	138
Cap Entry, veh/h	1152	1285	1342	1307
V/C Ratio	0.003	0.054	0.034	0.106
Control Delay, s/veh	3.2	3.2	2.9	3.6
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection	
Intersection Delay, s/veh	3.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	47	193	94
Demand Flow Rate, veh/h	0	48	197	96
Vehicles Circulating, veh/h	110	168	29	20
Vehicles Exiting, veh/h	6	58	81	196
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	3.5	4.0	3.3
Approach LOS	-	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	0	48	197	96
Cap Entry Lane, veh/h	1233	1163	1340	1352
Entry HV Adj Factor	1.000	0.979	0.979	0.976
Flow Entry, veh/h	0	47	193	94
Cap Entry, veh/h	1233	1138	1311	1320
V/C Ratio	0.000	0.041	0.147	0.071
Control Delay, s/veh	2.9	3.5	4.0	3.3
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	0

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	630	460	32	132	14
Future Vol, veh/h	4	630	460	32	132	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	85	85	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	700	541	38	155	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	579	0	-	0	1270	290
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	710	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	993	-	-	-	172	707
Stage 1	-	-	-	-	536	-
Stage 2	-	-	-	-	486	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	993	-	-	-	171	707
Mov Cap-2 Maneuver	-	-	-	-	375	-
Stage 1	-	-	-	-	533	-
Stage 2	-	-	-	-	486	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	20.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	993	-	-	-	375	707
HCM Lane V/C Ratio	0.005	-	-	-	0.414	0.025
HCM Control Delay (s)	8.6	-	-	-	21.2	10.2
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	2	0.1

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	528	613	126	81	10
Future Vol, veh/h	21	528	613	126	81	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	587	681	140	95	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	821	0	-	0	1390	411
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	639	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	806	-	-	-	145	591
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	525	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	806	-	-	-	140	591
Mov Cap-2 Maneuver	-	-	-	-	334	-
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	525	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	19
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	806	-	-	-	334	591
HCM Lane V/C Ratio	0.033	-	-	-	0.285	0.021
HCM Control Delay (s)	9.6	-	-	-	20	11.2
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	355	184	0
Future Vol, veh/h	0	0	0	355	184	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	100	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	90	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	394	216	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	610	216	216	0	-	0
Stage 1	216	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	458	824	1354	-	-	-
Stage 1	820	-	-	-	-	-
Stage 2	681	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	458	824	1354	-	-	-
Mov Cap-2 Maneuver	458	-	-	-	-	-
Stage 1	820	-	-	-	-	-
Stage 2	681	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1354	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	0	0	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	239	212	0
Future Vol, veh/h	0	0	0	239	212	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	100	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	85	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	281	249	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	530	249	249	0	-	0
Stage 1	249	-	-	-	-	-
Stage 2	281	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	510	790	1317	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	510	790	1317	-	-	-
Mov Cap-2 Maneuver	510	-	-	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	767	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1317	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	0	0	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-

APPENDIX N

2024 BUILD PEAK HOUR ANALYSIS

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	300	8	21	259	11	35
Future Vol, veh/h	300	8	21	259	11	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	75	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	80	80	85	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	353	10	26	305	14	44

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	363	0	558	353
Stage 1	-	-	-	-	353	-
Stage 2	-	-	-	-	205	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1194	-	475	690
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1194	-	465	690
Mov Cap-2 Maneuver	-	-	-	-	617	-
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	792	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	617	690	-	-	1194	-
HCM Lane V/C Ratio	0.022	0.063	-	-	0.022	-
HCM Control Delay (s)	11	10.6	-	-	8.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	303	3	29	322	6	33
Future Vol, veh/h	303	3	29	322	6	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	75	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	80	85	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	337	4	36	379	8	41

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	341	0	599	337
Stage 1	-	-	-	-	337	-
Stage 2	-	-	-	-	262	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1216	-	448	704
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	759	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1216	-	435	704
Mov Cap-2 Maneuver	-	-	-	-	599	-
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	736	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	599	704	-	-	1216	-
HCM Lane V/C Ratio	0.013	0.059	-	-	0.03	-
HCM Control Delay (s)	11.1	10.4	-	-	8.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	334	284	12	17	1
Future Vol, veh/h	2	334	284	12	17	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	300	90	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	85	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	371	334	15	21	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	349	0	-	0	711	334
Stage 1	-	-	-	-	334	-
Stage 2	-	-	-	-	377	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1210	-	-	-	400	708
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	694	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1210	-	-	-	399	708
Mov Cap-2 Maneuver	-	-	-	-	505	-
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	694	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1210	-	-	-	505	708
HCM Lane V/C Ratio	0.002	-	-	-	0.042	0.002
HCM Control Delay (s)	8	-	-	-	12.4	10.1
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	324	342	3	8	11
Future Vol, veh/h	2	324	342	3	8	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	300	90	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	360	380	4	10	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	384	0	-	0	746	380
Stage 1	-	-	-	-	380	-
Stage 2	-	-	-	-	366	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1174	-	-	-	381	667
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	702	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1174	-	-	-	380	667
Mov Cap-2 Maneuver	-	-	-	-	491	-
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	702	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1174	-	-	-	491	667
HCM Lane V/C Ratio	0.002	-	-	-	0.02	0.021
HCM Control Delay (s)	8.1	-	-	-	12.5	10.5
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	4.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	344	7	158	271	8	223
Future Vol, veh/h	344	7	158	271	8	223
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	235	175	-	0	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	85	85	80	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	382	9	186	319	10	262

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	391	0	1073	382
Stage 1	-	-	-	-	382	-
Stage 2	-	-	-	-	691	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1168	-	244	665
Stage 1	-	-	-	-	690	-
Stage 2	-	-	-	-	497	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1168	-	205	665
Mov Cap-2 Maneuver	-	-	-	-	322	-
Stage 1	-	-	-	-	690	-
Stage 2	-	-	-	-	418	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.2	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	322	665	-	-	1168	-
HCM Lane V/C Ratio	0.031	0.395	-	-	0.159	-
HCM Control Delay (s)	16.5	13.9	-	-	8.7	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	1.9	-	-	0.6	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	292	30	189	340	6	219
Future Vol, veh/h	292	30	189	340	6	219
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	235	175	-	0	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	80	85	90	80	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	344	38	222	378	8	258

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	382	0	1166	344
Stage 1	-	-	-	-	344	-
Stage 2	-	-	-	-	822	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1176	-	214	699
Stage 1	-	-	-	-	718	-
Stage 2	-	-	-	-	432	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1176	-	174	699
Mov Cap-2 Maneuver	-	-	-	-	280	-
Stage 1	-	-	-	-	718	-
Stage 2	-	-	-	-	350	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.3	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	280	699	-	-	1176	-
HCM Lane V/C Ratio	0.027	0.369	-	-	0.189	-
HCM Control Delay (s)	18.2	13.1	-	-	8.8	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	1.7	-	-	0.7	-

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	155	0	8	5	0	122	3	68	0	30	99	50
Future Vol, veh/h	155	0	8	5	0	122	3	68	0	30	99	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	80	85	85	80	80	80	80	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	182	0	9	6	0	144	4	85	0	38	116	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	387	315	146	319	344	85	175	0	0	85	0	0
Stage 1	222	222	-	93	93	-	-	-	-	-	-	-
Stage 2	165	93	-	226	251	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	572	601	901	634	579	974	1401	-	-	1512	-	-
Stage 1	780	720	-	914	818	-	-	-	-	-	-	-
Stage 2	837	818	-	777	699	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	477	584	901	614	563	974	1401	-	-	1512	-	-
Mov Cap-2 Maneuver	477	584	-	614	563	-	-	-	-	-	-	-
Stage 1	778	702	-	911	816	-	-	-	-	-	-	-
Stage 2	712	816	-	750	682	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.1	9.4	0.3	1.3
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1401	-	-	488	614	974	1512	-	-
HCM Lane V/C Ratio	0.003	-	-	0.393	0.01	0.147	0.025	-	-
HCM Control Delay (s)	7.6	0	-	17.1	10.9	9.3	7.4	-	-
HCM Lane LOS	A	A	-	C	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.9	0	0.5	0.1	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	0	2	5	0	45	3	152	4	72	73	61
Future Vol, veh/h	35	0	2	5	0	45	3	152	4	72	73	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	85	85	80	80	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	0	3	6	0	56	4	179	5	90	86	72

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	520	494	122	491	525	179	158	0	0	184	0	0
Stage 1	302	302	-	187	187	-	-	-	-	-	-	-
Stage 2	218	192	-	304	338	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	467	476	929	488	458	864	1422	-	-	1391	-	-
Stage 1	707	664	-	815	745	-	-	-	-	-	-	-
Stage 2	784	742	-	705	641	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	444	929	462	427	864	1422	-	-	1391	-	-
Mov Cap-2 Maneuver	414	444	-	462	427	-	-	-	-	-	-	-
Stage 1	705	621	-	813	743	-	-	-	-	-	-	-
Stage 2	731	740	-	658	599	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.5	9.8	0.1	2.8
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1422	-	-	427	462	864	1391	-	-
HCM Lane V/C Ratio	0.002	-	-	0.108	0.014	0.065	0.065	-	-
HCM Control Delay (s)	7.5	0	-	14.5	12.9	9.5	7.8	-	-
HCM Lane LOS	A	A	-	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0.2	0.2	-	-

Intersection	
Intersection Delay, s/veh	3.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	4	66	43	134
Demand Flow Rate, veh/h	4	68	44	137
Vehicles Circulating, veh/h	167	40	10	34
Vehicles Exiting, veh/h	4	14	161	74
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.1	3.2	2.9	3.6
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	4	68	44	137
Cap Entry Lane, veh/h	1164	1325	1366	1333
Entry HV Adj Factor	0.995	0.970	0.984	0.982
Flow Entry, veh/h	4	66	43	134
Cap Entry, veh/h	1158	1285	1343	1308
V/C Ratio	0.003	0.051	0.032	0.103
Control Delay, s/veh	3.1	3.2	2.9	3.6
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection	
Intersection Delay, s/veh	3.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	45	187	91
Demand Flow Rate, veh/h	0	46	191	93
Vehicles Circulating, veh/h	106	163	28	19
Vehicles Exiting, veh/h	6	56	78	190
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	3.5	3.9	3.3
Approach LOS	-	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	0	46	191	93
Cap Entry Lane, veh/h	1238	1169	1341	1353
Entry HV Adj Factor	1.000	0.978	0.978	0.976
Flow Entry, veh/h	0	45	187	91
Cap Entry, veh/h	1238	1143	1312	1321
V/C Ratio	0.000	0.039	0.142	0.069
Control Delay, s/veh	2.9	3.5	3.9	3.3
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	621	428	32	132	14
Future Vol, veh/h	4	621	428	32	132	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	85	85	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	690	504	38	155	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	542	0	-	0	1223	271
Stage 1	-	-	-	-	523	-
Stage 2	-	-	-	-	700	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	1025	-	-	-	184	728
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	491	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1025	-	-	-	183	728
Mov Cap-2 Maneuver	-	-	-	-	387	-
Stage 1	-	-	-	-	557	-
Stage 2	-	-	-	-	491	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	19.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1025	-	-	-	387	728
HCM Lane V/C Ratio	0.005	-	-	-	0.401	0.024
HCM Control Delay (s)	8.5	-	-	-	20.4	10.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	1.9	0.1

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	508	609	126	81	10
Future Vol, veh/h	21	508	609	126	81	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	564	677	140	95	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	817	0	-	0	1363	409
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	616	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	809	-	-	-	150	592
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	538	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	809	-	-	-	145	592
Mov Cap-2 Maneuver	-	-	-	-	338	-
Stage 1	-	-	-	-	416	-
Stage 2	-	-	-	-	538	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	18.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	809	-	-	-	338	592
HCM Lane V/C Ratio	0.032	-	-	-	0.282	0.021
HCM Control Delay (s)	9.6	-	-	-	19.8	11.2
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.1	0.1

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	65	3	1	344	176	20
Future Vol, veh/h	65	3	1	344	176	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	100	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	90	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	81	4	1	382	207	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	591	207	232	0	-	0
Stage 1	207	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	470	833	1336	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	470	833	1336	-	-	-
Mov Cap-2 Maneuver	470	-	-	-	-	-
Stage 1	827	-	-	-	-	-
Stage 2	688	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1336	-	470	833	-	-
HCM Lane V/C Ratio	0.001	-	0.173	0.005	-	-
HCM Control Delay (s)	7.7	-	14.3	9.3	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.6	0	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	2	4	228	204	67
Future Vol, veh/h	40	2	4	228	204	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	100	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	85	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	3	5	268	240	84

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	518	240	324	0	-	0
Stage 1	240	-	-	-	-	-
Stage 2	278	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	518	799	1236	-	-	-
Stage 1	800	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	516	799	1236	-	-	-
Mov Cap-2 Maneuver	516	-	-	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	769	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1236	-	516	799	-	-
HCM Lane V/C Ratio	0.004	-	0.097	0.003	-	-
HCM Control Delay (s)	7.9	-	12.7	9.5	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	0	-	-

APPENDIX O

2027 BUILD PEAK HOUR ANALYSIS

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	337	9	22	291	12	38
Future Vol, veh/h	337	9	22	291	12	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	75	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	80	85	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	374	11	28	342	15	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	385	0	601	374
Stage 1	-	-	-	-	374	-
Stage 2	-	-	-	-	227	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1172	-	447	671
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	790	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1172	-	436	671
Mov Cap-2 Maneuver	-	-	-	-	598	-
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	771	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	598	671	-	-	1172	-
HCM Lane V/C Ratio	0.025	0.071	-	-	0.023	-
HCM Control Delay (s)	11.2	10.8	-	-	8.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	340	3	31	362	7	35
Future Vol, veh/h	340	3	31	362	7	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	75	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	80	85	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	378	4	39	426	9	44

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	382	0	669	378
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	291	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1175	-	407	668
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	734	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1175	-	394	668
Mov Cap-2 Maneuver	-	-	-	-	568	-
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	710	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	568	668	-	-	1175	-
HCM Lane V/C Ratio	0.015	0.065	-	-	0.033	-
HCM Control Delay (s)	11.4	10.8	-	-	8.2	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	376	319	12	17	1
Future Vol, veh/h	2	376	319	12	17	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	300	90	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	418	354	15	21	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	369	0	-	0	778	354
Stage 1	-	-	-	-	354	-
Stage 2	-	-	-	-	424	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1190	-	-	-	365	690
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	660	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1190	-	-	-	364	690
Mov Cap-2 Maneuver	-	-	-	-	477	-
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	660	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1190	-	-	-	477	690
HCM Lane V/C Ratio	0.002	-	-	-	0.045	0.002
HCM Control Delay (s)	8	-	-	-	12.9	10.2
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	364	384	3	8	11
Future Vol, veh/h	2	364	384	3	8	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	300	90	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	404	427	4	10	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	431	0	-	0	837	427
Stage 1	-	-	-	-	427	-
Stage 2	-	-	-	-	410	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1129	-	-	-	337	628
Stage 1	-	-	-	-	658	-
Stage 2	-	-	-	-	670	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1129	-	-	-	336	628
Mov Cap-2 Maneuver	-	-	-	-	456	-
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	670	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1129	-	-	-	456	628
HCM Lane V/C Ratio	0.002	-	-	-	0.022	0.022
HCM Control Delay (s)	8.2	-	-	-	13.1	10.9
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	4.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	387	8	167	304	9	233
Future Vol, veh/h	387	8	167	304	9	233
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	235	175	-	0	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	85	90	80	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	430	10	196	338	11	274

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	440	0	1160	430
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	730	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1120	-	216	625
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	477	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1120	-	178	625
Mov Cap-2 Maneuver	-	-	-	-	298	-
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	394	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.3	15.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	298	625	-	-	1120	-
HCM Lane V/C Ratio	0.038	0.439	-	-	0.175	-
HCM Control Delay (s)	17.6	15.2	-	-	8.9	-
HCM Lane LOS	C	C	-	-	A	-
HCM 95th %tile Q(veh)	0.1	2.2	-	-	0.6	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	329	32	196	382	6	230
Future Vol, veh/h	329	32	196	382	6	230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	235	175	-	0	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	85	90	80	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	366	40	231	424	8	271

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	406	0	1252	366
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	886	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1153	-	190	679
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	403	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1153	-	152	679
Mov Cap-2 Maneuver	-	-	-	-	257	-
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	322	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.1	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	257	679	-	-	1153	-
HCM Lane V/C Ratio	0.029	0.399	-	-	0.2	-
HCM Control Delay (s)	19.4	13.8	-	-	8.9	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	1.9	-	-	0.7	-

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	155	0	8	6	0	129	3	72	0	32	105	50
Future Vol, veh/h	155	0	8	6	0	129	3	72	0	32	105	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	80	85	85	85	85	80	80	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	182	0	9	8	0	152	4	85	0	40	124	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	403	327	154	331	356	85	183	0	0	85	0	0
Stage 1	234	234	-	93	93	-	-	-	-	-	-	-
Stage 2	169	93	-	238	263	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	558	591	892	622	570	974	1392	-	-	1512	-	-
Stage 1	769	711	-	914	818	-	-	-	-	-	-	-
Stage 2	833	818	-	765	691	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	460	574	892	601	553	974	1392	-	-	1512	-	-
Mov Cap-2 Maneuver	460	574	-	601	553	-	-	-	-	-	-	-
Stage 1	767	693	-	911	816	-	-	-	-	-	-	-
Stage 2	701	816	-	737	673	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.8	9.5	0.3	1.3
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1392	-	-	471	601	974	1512	-	-
HCM Lane V/C Ratio	0.003	-	-	0.407	0.012	0.156	0.026	-	-
HCM Control Delay (s)	7.6	0	-	17.8	11.1	9.4	7.4	-	-
HCM Lane LOS	A	A	-	C	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2	0	0.6	0.1	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	0	2	6	0	47	3	161	4	76	77	61
Future Vol, veh/h	35	0	2	6	0	47	3	161	4	76	77	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	85	85	80	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	0	3	8	0	59	4	189	5	89	91	72

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	534	507	127	504	538	189	163	0	0	194	0	0
Stage 1	305	305	-	197	197	-	-	-	-	-	-	-
Stage 2	229	202	-	307	341	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	457	468	923	478	450	853	1416	-	-	1379	-	-
Stage 1	705	662	-	805	738	-	-	-	-	-	-	-
Stage 2	774	734	-	703	639	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	404	436	923	452	419	853	1416	-	-	1379	-	-
Mov Cap-2 Maneuver	404	436	-	452	419	-	-	-	-	-	-	-
Stage 1	703	619	-	803	736	-	-	-	-	-	-	-
Stage 2	719	732	-	656	597	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.7	9.9	0.1	2.8
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1416	-	-	417	452	853	1379	-	-
HCM Lane V/C Ratio	0.002	-	-	0.111	0.017	0.069	0.065	-	-
HCM Control Delay (s)	7.5	0	-	14.7	13.1	9.5	7.8	-	-
HCM Lane LOS	A	A	-	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	0.2	0.2	-	-

Intersection	
Intersection Delay, s/veh	3.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	4	70	46	142
Demand Flow Rate, veh/h	4	72	47	145
Vehicles Circulating, veh/h	176	43	11	35
Vehicles Exiting, veh/h	4	15	169	80
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.2	3.2	3.0	3.6
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	4	72	47	145
Cap Entry Lane, veh/h	1153	1321	1364	1331
Entry HV Adj Factor	0.995	0.972	0.983	0.982
Flow Entry, veh/h	4	70	46	142
Cap Entry, veh/h	1147	1283	1342	1307
V/C Ratio	0.003	0.055	0.034	0.109
Control Delay, s/veh	3.2	3.2	3.0	3.6
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection	
Intersection Delay, s/veh	3.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	47	198	96
Demand Flow Rate, veh/h	0	48	202	98
Vehicles Circulating, veh/h	112	173	29	20
Vehicles Exiting, veh/h	6	58	83	201
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	3.5	4.0	3.3
Approach LOS	-	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	0	48	202	98
Cap Entry Lane, veh/h	1231	1157	1340	1352
Entry HV Adj Factor	1.000	0.979	0.979	0.976
Flow Entry, veh/h	0	47	198	96
Cap Entry, veh/h	1231	1133	1311	1320
V/C Ratio	0.000	0.041	0.151	0.072
Control Delay, s/veh	2.9	3.5	4.0	3.3
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	0

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	691	479	32	132	14
Future Vol, veh/h	4	691	479	32	132	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	85	85	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	768	564	38	155	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	602	0	-	0	1361	301
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	778	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	973	-	-	-	~ 151	696
Stage 1	-	-	-	-	522	-
Stage 2	-	-	-	-	452	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	973	-	-	-	~ 150	696
Mov Cap-2 Maneuver	-	-	-	-	352	-
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	452	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	21.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	973	-	-	-	352	696
HCM Lane V/C Ratio	0.005	-	-	-	0.441	0.025
HCM Control Delay (s)	8.7	-	-	-	23.1	10.3
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	2.2	0.1

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	566	677	126	81	10
Future Vol, veh/h	21	566	677	126	81	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	629	752	140	95	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	892	0	-	0	1503	446
Stage 1	-	-	-	-	822	-
Stage 2	-	-	-	-	681	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	758	-	-	-	123	561
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	502	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	758	-	-	-	119	561
Mov Cap-2 Maneuver	-	-	-	-	307	-
Stage 1	-	-	-	-	380	-
Stage 2	-	-	-	-	502	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	758	-	-	-	307	561
HCM Lane V/C Ratio	0.035	-	-	-	0.31	0.022
HCM Control Delay (s)	9.9	-	-	-	21.9	11.6
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.3	0.1

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	65	3	1	355	184	20
Future Vol, veh/h	65	3	1	355	184	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	100	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	90	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	81	4	1	394	216	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	612	216	241	0	-	0
Stage 1	216	-	-	-	-	-
Stage 2	396	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	456	824	1326	-	-	-
Stage 1	820	-	-	-	-	-
Stage 2	680	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	456	824	1326	-	-	-
Mov Cap-2 Maneuver	456	-	-	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	680	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1326	-	456	824	-	-
HCM Lane V/C Ratio	0.001	-	0.178	0.005	-	-
HCM Control Delay (s)	7.7	-	14.6	9.4	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.6	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	2	4	239	212	67
Future Vol, veh/h	40	2	4	239	212	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	100	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	85	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	3	5	281	249	84

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	540	249	333	0	-	0
Stage 1	249	-	-	-	-	-
Stage 2	291	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	503	790	1226	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	501	790	1226	-	-	-
Mov Cap-2 Maneuver	501	-	-	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	759	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1226	-	501	790	-	-
HCM Lane V/C Ratio	0.004	-	0.1	0.003	-	-
HCM Control Delay (s)	7.9	-	13	9.6	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	0	-	-

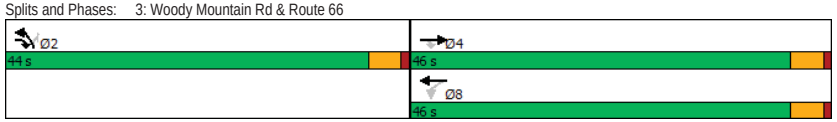
APPENDIX P

2024 & 2027 SIGNAL AT WOODY MOUNTAIN AND ROUTE 66

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	344	7	158	271	8	223
Future Volume (vph)	344	7	158	271	8	223
Turn Type	NA	pm+ov	Perm	NA	Prot	Perm
Protected Phases	4	2		8	2	
Permitted Phases		4	8			2
Detector Phase	4	2	8	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	46.0	44.0	46.0	46.0	44.0	44.0
Total Split (%)	51.1%	48.9%	51.1%	51.1%	48.9%	48.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	Min	None	None	Min	Min
Act Effct Green (s)	12.5	28.8	12.5	12.5	6.9	6.9
Actuated g/C Ratio	0.43	1.00	0.43	0.43	0.24	0.24
v/c Ratio	0.47	0.01	0.43	0.39	0.02	0.45
Control Delay	7.9	0.0	9.2	7.1	10.4	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.9	0.0	9.2	7.1	10.4	5.1
LOS	A	A	A	A	B	A
Approach Delay	7.8			7.9	5.3	
Approach LOS	A			A	A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 28.8	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 7.2	Intersection LOS: A
Intersection Capacity Utilization 42.3%	ICU Level of Service A
Analysis Period (min) 15	

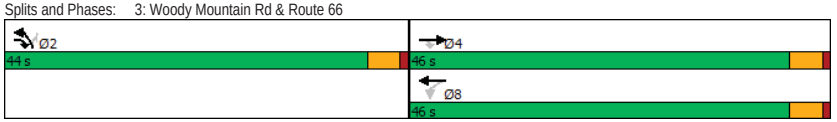
Splits and Phases: 3: Woody Mountain Rd & Route 66



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	292	30	189	340	6	219
Future Volume (vph)	292	30	189	340	6	219
Turn Type	NA	pm+ov	Perm	NA	Prot	Perm
Protected Phases	4	2		8	2	
Permitted Phases		4	8			2
Detector Phase	4	2	8	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	46.0	44.0	46.0	46.0	44.0	44.0
Total Split (%)	51.1%	48.9%	51.1%	51.1%	48.9%	48.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	Min	None	None	Min	Min
Act Effct Green (s)	13.7	30.1	13.7	13.7	6.9	6.9
Actuated g/C Ratio	0.46	1.00	0.46	0.46	0.23	0.23
v/c Ratio	0.41	0.02	0.47	0.45	0.02	0.46
Control Delay	7.0	0.0	9.5	7.4	11.3	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.0	0.0	9.5	7.4	11.3	5.4
LOS	A	A	A	A	B	A
Approach Delay	6.3			8.2	5.6	
Approach LOS	A			A	A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 30.1	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 41.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Woody Mountain Rd & Route 66



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	344	7	158	271	8	223
Future Volume (veh/h)	344	7	158	271	8	223
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	382	8	186	319	10	68
Peak Hour Factor	0.90	0.80	0.85	0.85	0.80	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	888	1050	610	888	334	297
Arrive On Green	0.47	0.47	0.47	0.47	0.19	0.19
Sat Flow, veh/h	1870	1585	1001	1870	1781	1585
Grp Volume(v), veh/h	382	8	186	319	10	68
Grp Sat Flow(s),veh/h/ln	1870	1585	1001	1870	1781	1585
Q Serve(g_s), s	3.6	0.0	4.0	2.9	0.1	1.0
Cycle Q Clear(g_c), s	3.6	0.0	7.6	2.9	0.1	1.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	888	1050	610	888	334	297
V/C Ratio(X)	0.43	0.01	0.30	0.36	0.03	0.23
Avail Cap(c_a), veh/h	2913	2766	1694	2913	2640	2349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.6	1.5	7.1	4.4	8.8	9.2
Incr Delay (d2), s/veh	0.3	0.0	0.3	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	0.9	0.8	0.1	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.0	1.5	7.4	4.7	8.9	9.6
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	390			505	78	
Approach Delay, s/veh	4.9			5.7	9.5	
Approach LOS	A			A	A	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	9.5	17.2	17.2
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	39.5	41.5	41.5
Max Q Clear Time (g_c+I1), s	3.0	5.6	9.6
Green Ext Time (p_c), s	0.2	2.6	3.1

Intersection Summary	
HCM 6th Ctrl Delay	5.7
HCM 6th LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	292	30	189	340	6	219
Future Volume (veh/h)	292	30	189	340	6	219
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	344	29	222	378	8	67
Peak Hour Factor	0.85	0.80	0.85	0.90	0.80	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	918	1066	652	918	324	288
Arrive On Green	0.49	0.49	0.49	0.49	0.18	0.18
Sat Flow, veh/h	1870	1585	1037	1870	1781	1585
Grp Volume(v), veh/h	344	29	222	378	8	67
Grp Sat Flow(s),veh/h/ln	1870	1585	1037	1870	1781	1585
Q Serve(g_s), s	3.2	0.2	4.7	3.5	0.1	1.0
Cycle Q Clear(g_c), s	3.2	0.2	7.8	3.5	0.1	1.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	918	1066	652	918	324	288
V/C Ratio(X)	0.37	0.03	0.34	0.41	0.02	0.23
Avail Cap(c_a), veh/h	2823	2680	1707	2823	2559	2277
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.4	1.5	6.8	4.5	9.2	9.6
Incr Delay (d2), s/veh	0.3	0.0	0.3	0.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.1	1.1	1.0	0.1	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.6	1.5	7.1	4.8	9.3	10.0
LnGrp LOS	A	A	A	A	A	B
Approach Vol, veh/h	373			600	75	
Approach Delay, s/veh	4.4			5.6	9.9	
Approach LOS	A			A	A	

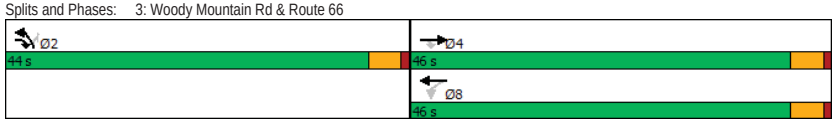
Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	9.5	18.0	18.0
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	39.5	41.5	41.5
Max Q Clear Time (g_c+I1), s	3.0	5.2	9.8
Green Ext Time (p_c), s	0.2	2.4	3.7

Intersection Summary	
HCM 6th Ctrl Delay	5.5
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	387	7	148	304	6	172
Future Volume (vph)	387	7	148	304	6	172
Turn Type	NA	pm+ov	Perm	NA	Prot	Perm
Protected Phases	4	2		8	2	
Permitted Phases		4	8			2
Detector Phase	4	2	8	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	46.0	44.0	46.0	46.0	44.0	44.0
Total Split (%)	51.1%	48.9%	51.1%	51.1%	48.9%	48.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	Min	None	None	Min	Min
Act Effct Green (s)	12.9	29.0	12.9	12.9	6.7	6.7
Actuated g/C Ratio	0.44	1.00	0.44	0.44	0.23	0.23
v/c Ratio	0.52	0.01	0.42	0.41	0.02	0.39
Control Delay	8.3	0.0	9.1	7.0	10.8	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.3	0.0	9.1	7.0	10.8	5.1
LOS	A	A	A	A	B	A
Approach Delay	8.1			7.7	5.3	
Approach LOS	A			A	A	

Intersection Summary		
Cycle Length: 90		
Actuated Cycle Length: 29		
Natural Cycle: 45		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.52		
Intersection Signal Delay: 7.4	Intersection LOS: A	
Intersection Capacity Utilization 44.0%	ICU Level of Service A	
Analysis Period (min) 15		

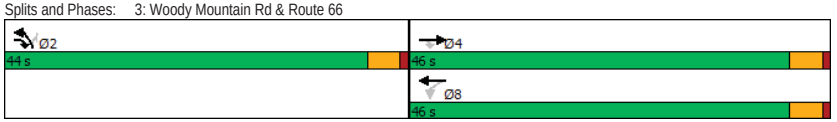
Splits and Phases: 3: Woody Mountain Rd & Route 66



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	329	28	132	382	4	192
Future Volume (vph)	329	28	132	382	4	192
Turn Type	NA	pm+ov	Perm	NA	Prot	Perm
Protected Phases	4	2		8	2	
Permitted Phases		4	8			2
Detector Phase	4	2	8	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	46.0	44.0	46.0	46.0	44.0	44.0
Total Split (%)	51.1%	48.9%	51.1%	51.1%	48.9%	48.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	Min	None	None	Min	Min
Act Effct Green (s)	12.4	28.3	12.4	12.4	6.6	6.6
Actuated g/C Ratio	0.44	1.00	0.44	0.44	0.23	0.23
v/c Ratio	0.45	0.02	0.35	0.52	0.01	0.42
Control Delay	7.5	0.0	7.8	8.4	9.8	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.5	0.0	7.8	8.4	9.8	4.9
LOS	A	A	A	A	A	A
Approach Delay	6.9			8.2	5.0	
Approach LOS	A			A	A	

Intersection Summary		
Cycle Length: 90		
Actuated Cycle Length: 28.3		
Natural Cycle: 45		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.52		
Intersection Signal Delay: 7.2	Intersection LOS: A	
Intersection Capacity Utilization 40.0%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 3: Woody Mountain Rd & Route 66



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	387	7	148	304	6	172
Future Volume (veh/h)	387	7	148	304	6	172
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	430	8	174	338	8	53
Peak Hour Factor	0.90	0.80	0.85	0.90	0.80	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	915	1065	585	915	325	289
Arrive On Green	0.49	0.49	0.49	0.49	0.18	0.18
Sat Flow, veh/h	1870	1585	958	1870	1781	1585
Grp Volume(v), veh/h	430	8	174	338	8	53
Grp Sat Flow(s),veh/h/ln	1870	1585	958	1870	1781	1585
Q Serve(g_s), s	4.2	0.0	4.0	3.1	0.1	0.8
Cycle Q Clear(g_c), s	4.2	0.0	8.2	3.1	0.1	0.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	915	1065	585	915	325	289
V/C Ratio(X)	0.47	0.01	0.30	0.37	0.02	0.18
Avail Cap(c_a), veh/h	2832	2689	1567	2832	2567	2284
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.6	1.5	7.4	4.4	9.2	9.5
Incr Delay (d2), s/veh	0.4	0.0	0.3	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	0.0	0.9	0.8	0.1	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.0	1.5	7.6	4.6	9.2	9.8
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	438			512	61	
Approach Delay, s/veh	5.0			5.6	9.7	
Approach LOS	A			A	A	

Timer - Assigned Phs		2		4		8
Phs Duration (G+Y+Rc), s		9.5		17.9		17.9
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		39.5		41.5		41.5
Max Q Clear Time (g_c+I1), s		2.8		6.2		10.2
Green Ext Time (p_c), s		0.2		3.0		3.2

Intersection Summary		
HCM 6th Ctrl Delay		5.6
HCM 6th LOS		A

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	329	28	132	382	4	192
Future Volume (veh/h)	329	28	132	382	4	192
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	366	26	155	424	5	59
Peak Hour Factor	0.90	0.80	0.85	0.90	0.80	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	873	1042	617	873	339	302
Arrive On Green	0.47	0.47	0.47	0.47	0.19	0.19
Sat Flow, veh/h	1870	1585	1016	1870	1781	1585
Grp Volume(v), veh/h	366	26	155	424	5	59
Grp Sat Flow(s),veh/h/ln	1870	1585	1016	1870	1781	1585
Q Serve(g_s), s	3.4	0.2	3.1	4.1	0.1	0.8
Cycle Q Clear(g_c), s	3.4	0.2	6.5	4.1	0.1	0.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	873	1042	617	873	339	302
V/C Ratio(X)	0.42	0.02	0.25	0.49	0.01	0.20
Avail Cap(c_a), veh/h	2956	2807	1748	2956	2679	2384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.6	1.6	6.8	4.8	8.6	8.9
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.1	0.7	1.2	0.0	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.0	1.6	7.0	5.2	8.6	9.3
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	392			579	64	
Approach Delay, s/veh	4.7			5.7	9.2	
Approach LOS	A			A	A	

Timer - Assigned Phs		2		4		8
Phs Duration (G+Y+Rc), s		9.5		16.8		16.8
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		39.5		41.5		41.5
Max Q Clear Time (g_c+I1), s		2.8		5.4		8.5
Green Ext Time (p_c), s		0.2		2.5		3.7

Intersection Summary		
HCM 6th Ctrl Delay		5.6
HCM 6th LOS		A

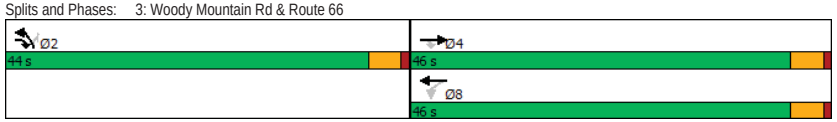
Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	387	8	167	304	9	233
Future Volume (vph)	387	8	167	304	9	233
Turn Type	NA	pm+ov	Perm	NA	Prot	Perm
Protected Phases	4	2		8	2	
Permitted Phases		4	8			2
Detector Phase	4	2	8	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	46.0	44.0	46.0	46.0	44.0	44.0
Total Split (%)	51.1%	48.9%	51.1%	51.1%	48.9%	48.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	Min	None	None	Min	Min
Act Effct Green (s)	14.5	31.2	14.5	14.5	7.1	7.1
Actuated g/C Ratio	0.46	1.00	0.46	0.46	0.23	0.23
v/c Ratio	0.50	0.01	0.46	0.39	0.03	0.48
Control Delay	7.8	0.0	9.5	6.7	12.2	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.8	0.0	9.5	6.7	12.2	5.7
LOS	A	A	A	A	B	A
Approach Delay	7.7			7.8	5.9	
Approach LOS	A			A	A	

Intersection Summary		
Cycle Length: 90		
Actuated Cycle Length: 31.2		
Natural Cycle: 50		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.50		
Intersection Signal Delay: 7.3	Intersection LOS: A	
Intersection Capacity Utilization 45.0%	ICU Level of Service A	
Analysis Period (min) 15		

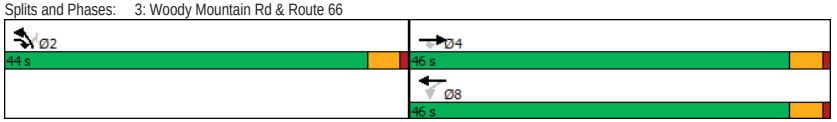
Splits and Phases: 3: Woody Mountain Rd & Route 66



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	329	32	196	382	6	230
Future Volume (vph)	329	32	196	382	6	230
Turn Type	NA	pm+ov	Perm	NA	Prot	Perm
Protected Phases	4	2		8	2	
Permitted Phases		4	8			2
Detector Phase	4	2	8	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	46.0	44.0	46.0	46.0	44.0	44.0
Total Split (%)	51.1%	48.9%	51.1%	51.1%	48.9%	48.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	Min	None	None	Min	Min
Act Effct Green (s)	15.1	31.7	15.1	15.1	7.0	7.0
Actuated g/C Ratio	0.48	1.00	0.48	0.48	0.22	0.22
v/c Ratio	0.41	0.03	0.48	0.48	0.02	0.48
Control Delay	6.8	0.0	9.3	7.5	12.3	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	0.0	9.3	7.5	12.3	5.8
LOS	A	A	A	A	B	A
Approach Delay	6.1			8.1	6.0	
Approach LOS	A			A	A	

Intersection Summary		
Cycle Length: 90		
Actuated Cycle Length: 31.7		
Natural Cycle: 50		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.48		
Intersection Signal Delay: 7.1	Intersection LOS: A	
Intersection Capacity Utilization 43.6%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 3: Woody Mountain Rd & Route 66



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	387	8	167	304	9	233
Future Volume (veh/h)	387	8	167	304	9	233
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	430	8	196	338	11	72
Peak Hour Factor	0.90	0.80	0.85	0.90	0.80	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	941	1079	595	941	316	281
Arrive On Green	0.50	0.50	0.50	0.50	0.18	0.18
Sat Flow, veh/h	1870	1585	958	1870	1781	1585
Grp Volume(v), veh/h	430	8	196	338	11	72
Grp Sat Flow(s),veh/h/ln	1870	1585	958	1870	1781	1585
Q Serve(g_s), s	4.2	0.0	4.7	3.1	0.1	1.1
Cycle Q Clear(g_c), s	4.2	0.0	8.9	3.1	0.1	1.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	941	1079	595	941	316	281
V/C Ratio(X)	0.46	0.01	0.33	0.36	0.03	0.26
Avail Cap(c_a), veh/h	2754	2615	1524	2754	2497	2222
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.5	1.4	7.4	4.2	9.6	10.0
Incr Delay (d2), s/veh	0.3	0.0	0.3	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	0.0	1.1	0.8	0.1	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.9	1.4	7.7	4.5	9.6	10.5
LnGrp LOS	A	A	A	A	A	B
Approach Vol, veh/h	438			534	83	
Approach Delay, s/veh	4.8			5.7	10.4	
Approach LOS	A			A	B	

Timer - Assigned Phs		2		4		8
Phs Duration (G+Y+Rc), s		9.5		18.7		18.7
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		39.5		41.5		41.5
Max Q Clear Time (g_c+I1), s		3.1		6.2		10.9
Green Ext Time (p_c), s		0.2		3.0		3.3

Intersection Summary		
HCM 6th Ctrl Delay		5.7
HCM 6th LOS		A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	329	32	196	382	6	230
Future Volume (veh/h)	329	32	196	382	6	230
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	366	30	231	424	8	71
Peak Hour Factor	0.90	0.80	0.85	0.90	0.80	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	957	1088	650	957	311	276
Arrive On Green	0.51	0.51	0.51	0.51	0.17	0.17
Sat Flow, veh/h	1870	1585	1016	1870	1781	1585
Grp Volume(v), veh/h	366	30	231	424	8	71
Grp Sat Flow(s),veh/h/ln	1870	1585	1016	1870	1781	1585
Q Serve(g_s), s	3.4	0.2	5.1	4.1	0.1	1.1
Cycle Q Clear(g_c), s	3.4	0.2	8.5	4.1	0.1	1.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	957	1088	650	957	311	276
V/C Ratio(X)	0.38	0.03	0.36	0.44	0.03	0.26
Avail Cap(c_a), veh/h	2706	2570	1600	2706	2453	2183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.2	1.4	6.8	4.4	9.8	10.2
Incr Delay (d2), s/veh	0.3	0.0	0.3	0.3	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.1	1.2	1.1	0.1	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.5	1.4	7.2	4.7	9.9	10.7
LnGrp LOS	A	A	A	A	A	B
Approach Vol, veh/h	396			655	79	
Approach Delay, s/veh	4.3			5.6	10.6	
Approach LOS	A			A	B	

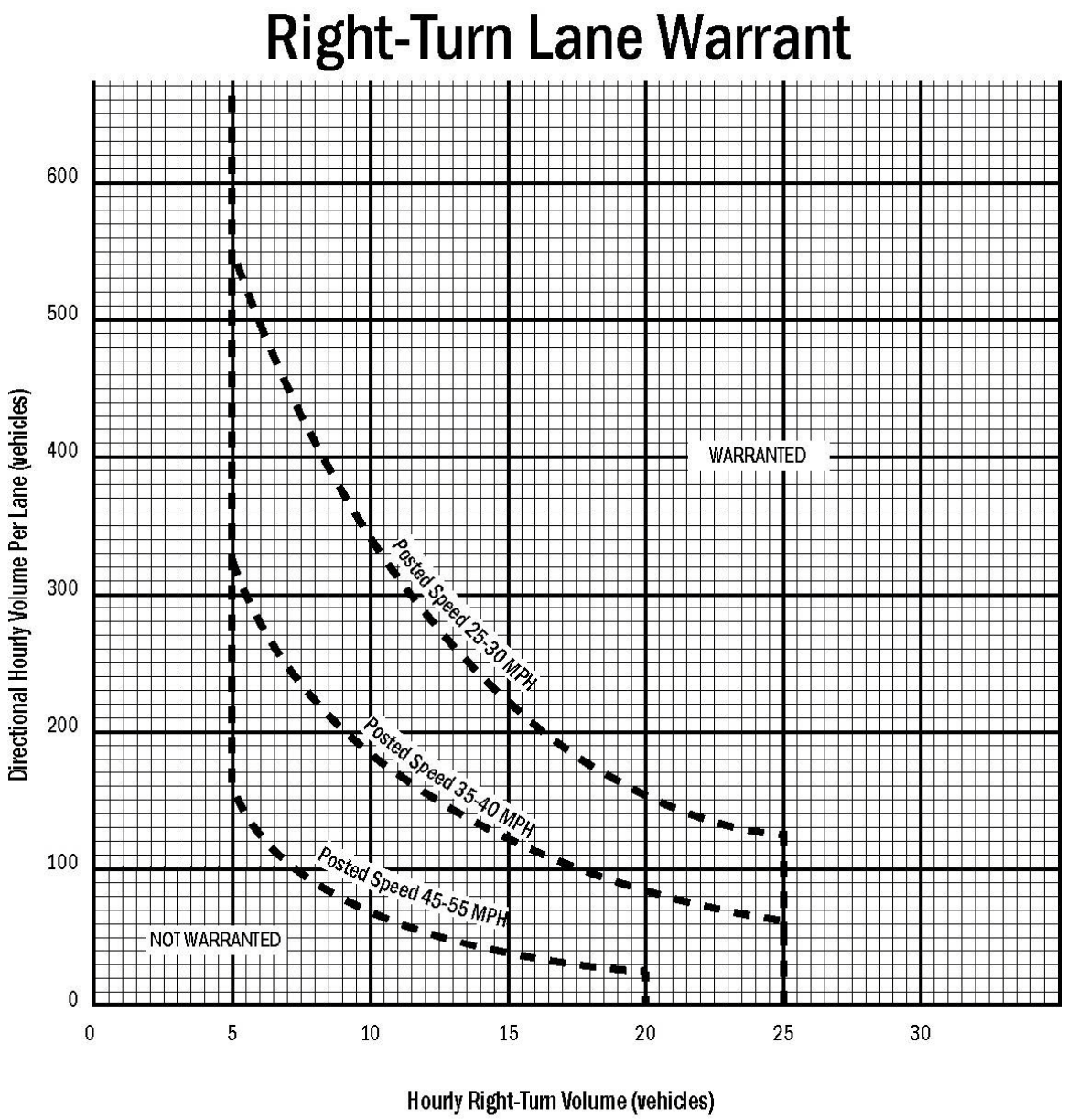
Timer - Assigned Phs		2		4		8
Phs Duration (G+Y+Rc), s		9.5		19.2		19.2
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		39.5		41.5		41.5
Max Q Clear Time (g_c+I1), s		3.1		5.4		10.5
Green Ext Time (p_c), s		0.2		2.5		4.2

Intersection Summary		
HCM 6th Ctrl Delay		5.5
HCM 6th LOS		A

APPENDIX Q

TURN LANE WARRANT GUIDELINES

Figure 10-10-01



Sources: Icaho Transportation Department "Traffic Manual"
Transportation Research Board, NCHRP Report 348, Access Managment Guidelines for Activity Centers.

(Ord. 2017-22, Rep&ReEn, 07/05/2017)

245 TURN LANE WARRANTS

The intent of this document is to offer guidance to warrant the installation of dedicated left or right turn lanes on state routes, whether during new construction, major reconstruction, or in the course of the encroachment permitting process. **The primary determining factors to warrant an exclusive turn lane shall be: (a) the combination of through traffic volume and turning traffic volume, (b) the posted roadway speed, and (c) the number of through lanes on the roadway.** Note: Dual right- or left-turn lanes should be considered when the turning volume exceeds 300 vehicles per hour. In addition to the criteria presented in the tables below, other factors should be taken into consideration when performing a warrant study such as: shoulder width, percentage of trucks, sight distance, highway grade, horizontal and vertical curvature and crash history.

Right-Turn Lane Warrants

Peak Hour Traffic Volume on the Highway in Advancing Direction	Minimum Peak Hour Right-turn Traffic Volume				
	# of thru lanes per direction				
	1		2		3
	< 45 MPH Posted Speed	≥ 45 MPH Posted Speed	< 45 MPH Posted Speed	≥ 45 MPH Posted Speed	All Speeds
≤ 200					
201 – 300	-	30	-	-	-
301 – 400	-	19	-	55	-
401 – 500	85	14	-	30	-
501 – 600	58	12	140	25	-
601 – 700	27	9	80	18	-
701 – 800	20	8	53	15	-
801 – 900	12	7	40	12	-
901 – 1000	9	6	30	11	-
1001 – 1100	8	5	23	9	18
1101 – 1200	7	5	18	8	16
1201 – 1300	6	4	14	8	15
1301 – 1400	6	4	11	6	12
1400+	5	3	8	6	10

ADOT Traffic Guidelines and Processes
January 2019
IDO and TSMO
Section 245 – Turn Lane Warrants

Left-Turn Lane Warrants

Peak Hour Traffic Volume on the Highway in Advancing Direction	Minimum Peak Hour Left-turn Traffic Volume			
	# of thru lanes per direction			
	1		2 (Undivided)*	
	< 45 MPH Posted Speed	≥ 45 MPH Posted Speed	< 45 MPH Posted Speed	≥ 45 MPH Posted Speed
≤ 200	30	15	-	-
201 – 300	12	12	40	30
301 – 400	12	12	30	25
401 – 500	12	12	25	18
501 – 600	12	12	15	12
601 – 1000	12	12	10	8
1000+	12	8	10	8

*On non-freeway divided highways, left-turn or U-turn lanes should be provided at median breaks.

Volumes and traffic factors utilized should be based on data from ADOT's Multimodal Planning Division, or should be based on current traffic counts as approved by the Regional Traffic Engineer. For encroachment permits, analysis of the relevant through and turning traffic volumes should be completed in the design year as identified in ADOT Traffic Guidelines and Processes (TGP) 240. For new construction and major reconstruction, analysis should be performed based on data for the appropriate design year. Turn lane warrant studies should be reviewed and approved by the Regional Traffic Engineer. In cases where the State Highway section in question intersects a route under other jurisdiction, it is recommended that a turning movement analysis be performed on the intersecting route as well.

When it is determined that a turn lane is warranted, shoulder width should be provided as part of the turn lane design in accordance with the ADOT Roadway Design Guidelines, which should be used to determine the minimum continuous usable width of paved shoulder along the turn lanes. Turn lane design should also conform to the guidance in ADOT TGP430.

APPENDIX R

QUEUE STORAGE ANALYSIS

Signalized Intersections

2027

Average Vehicle Length, VL (Per Table 9-23, AASHTO "Green Book" 2018, p 9-99)

Intersection Cycle Length (sec): 90

Cycles per Hour: 40 Queuing Cycles: 2

Truck % = 2% *VL* (ft) = 25 Average Vehicle Length

Table 9-23	
Truck%	**VL (ft)**
0%	25
2%	25
10%	32
15%	35
20%	38
25%	41

Equation Used Storage Length, SL, = 2 x (vehicles/hour)/(cycles/hour) x Average Vehicle Length

Intersection	Cycle Length	Move-ment	AM Peak (veh/hr)	Midday Peak (veh/hr)	PM Peak (veh/hr)	Max vehs per 2 cycles	AASHTO Storage Length (ft)	Turn Lane Length (ft
Woody Mountain Rd & Route 66	90	NB Left	9	0	6	1	25'	145
	90	WB Left	167	0	196	10	250'	403
	90	NB Right	233	0	230	12	300'	420
	90	EB Right	8	0	32	2	50'	203

*Note: Truck/Passenger Vehicle split is projected based on percentage and not reflective of acctual vehicle classification counts.

"Yield" for turns indicates that, while movement may or may not be subject to a Yield sign, vehicles must yield to oncoming traffic and may experience delays.

Unsignalized Intersections

2027

Left Turns (Per AASHTO "Green Book" 2018, pp 9-96 to 9-99)

Equation 9-3 — U.S. Customary

$$c = \frac{V_o e^{-V_o t_c/3600}}{1 - e^{-V_o t_f/3600}}$$

where:

c = left-turn capacity, veh/h

V_o = major-road volume conflicting with the minor movement, assumed to be equal to one-half of the two-way major-road volume, veh/h

t_c = critical gap, s

t_f = follow-up gap, s

Equation 9-4 — U.S. Customary

$$SL = \left\{ \frac{\ln\left[P(n>N)\right]}{\ln\left[\frac{v}{c}\right]} - 1 \right\} \times VL$$

where:

SL = storage length, ft

$P(n>N)$ = probability of turn-lane overflow

v = left-turn vehicle volume, veh/h

c = left-turn capacity, veh/h

VL = average length per vehicle, ft

Table 9-23

Truck%	VL (ft)
0%	25
5%	28
10%	32
15%	35
20%	38
25%	41

Per Section 9.7.2.2 Storage Length

c (veh/hr) =	*calculated*	Left-Turn Capacity
V_O (veh/hr) =	Opposing	Major Road Volume
t_c (sec) =	6.25	85th %-ile Critical Gap
t_f (sec) =	2.50	Follow-Up Gap
SL (ft) =	*calculated*	Storage Length
$P(n>N)$ =	0.005	(a probability, no units)
v (veh/hr) =	*enter below*	Left-Turn Vehicle Volume

Truck % = 2% VL (ft) = 25 Average Vehicle Length

Right Turns: Equation Used: storage length = 2 x (vehicles/hour)/(60 minutes/hour) x average vehicle length

Intersection	Move-ment	AM Peak (veh/hr)	Midday Peak (veh/hr)	PM Peak (veh/hr)	Veh per 2 minutes	Opposing V_O (veh/hr)	AASHTO Storage Length (ft)	Turn Lane Length (ft)
Alvan Clark Blvd & Route 66	NB Left	12	0	7	1	0	25'	85
	WB Left	22	0	31	2	340	25'	223
	NB Right	38	0	35	2	0	50'	110
	EB Right	9	0	3	1	0	25'	223
Flagstaff Public Works Drwy & Route 66	SB Left	17	0	8	1	0	25'	50
	EB Left	2	0	2	1	319	25'	223
	WB Right	12	0	3	1	0	25'	223
Woody Mountain Rd & Patio Del Presidio	SB Left	32	0	76	3	161	25'	115
	WB Left	6	0	6	1	0	25'	115
	NB Right	0	0	4	1	0	25'	115
	WB Right	129	0	47	5	0	125'	215
Northwestern Street & Route 66	EB Left	4	0	21	1	677	25'	178
	SB Right	14	0	10	1	0	25'	50
Woody Mountain Rd & Dwy A	NB Left	1	0	4	1	212	25'	115
	EB Left	65	0	40	3	0	75'	165
	SB Right	20	0	67	3	0	75'	165
	EB Right	3	0	2	1	0	25'	115

*Note: Truck/Passenger Vehicle split is projected based on percentage and not reflective of acctual vehicle classification counts.

"Yield" for turns indicates that, while movement may or may not be subject to a Yield sign, vehicles must yield to oncoming traffic and may experience delays.

Signalized Intersections
Total Traffic: ADOT Queue Storage Calculations
2027

Average Vehicle Length (ft): 25 Cycle Length (sec): 90 Cycles per Hour: 40

Queue Storage Equations:

Queue Length = 1.5 x (vehicles/hour) ÷ (40 cycles/hour) x average vehicle length*

Storage Length = Braking Distance + Queue Length

Turn Lane Length = Storage Length – [Gap – 2/3 Gap]

*** ADOT TGP 430 allows for queues to be calculated for 1.5 to 2.0 cycles.**

Gap Design Speed (mph)	Gap (ft)	2/3 Gap (ft)	Calculated Gap (ft)
< 40mph	60	40	20
40-50mph	90	60	30
> 50mph	140	95	45

	Minimum			Desired	
Design Speed (mph)	Entering Speed (mph)	Braking Speed (mph)	Braking Distance (ft)	Braking Speed (mph)	Braking Distance (ft)
30	20	20	20	29	80
35	25	25	40	34	115
40	30	29	50	38	150
45	35	34	85	43	200
50	40	38	120	47	245
55	45	42	145	52	300
60	50	47	200	56	360
65	55	52	265	60	415
70	60	56	315	64	490
75	65	61	400	70	585

* ADOT Queue length: minimum queue length is 2 vehicles (2 cars or 1 car+1 truck), which can be reduced by 20 feet for a free right turn movement.
Synchro Queue length: is the 95th percentile queue calculated by Synchro sofeware with HCM 6th edition methodology.

Intersection	Movement	Cycle Length	[M]in. or [D]esired	Posted Approach Speed	Gap Length (ft)	Flow of Turn	AM Peak (veh/hr)	Midday Peak (veh/hr)	PM Peak (veh/hr)	Trucks> 10% (Y if Yes)	Max vehs per 1.5 cycles	ADOT Queue Length (ft)*	Minimum Braking Distance (ft)	Turn Lane Length (ft)
Woody Mountain Rd & Route 66	NB Left	90	D	40	**90**		9		6	N	1	50	150	**170**
	WB Left		D	45	**140**		167		196	N	8	200	200	**353**
	NB Right		D	40	**90**		233		230	N	9	225	150	**345**
	EB Right		D	45	**140**		8		32	N	2	50	200	**203**

"Yield" for turns indicates that, while movement may or may not be subject to a Yield sign, vehicles must yield to oncoming traffic and may experience delays.

Unsignalized Intersections
Total Traffic: ADOT Queue Storage Calculations
2027

Average Vehicle Length (ft): 25

Queue Storage Equations:

Queue Length = 1.5 x (vehicles/hour) ÷ (60 minutes/hour) x average vehicle length

Storage Length = Braking Distance + Queue Length

Turn Lane Length = Storage Length – [Gap – 2/3 Gap]

Gap Design Speed (mph)	Gap (ft)	2/3 Gap (ft)	Calculated Gap (ft)
< 40mph	60	40	20
40-50mph	90	60	30
> 50mph	140	95	45

	Minimum			Desired	
Design Speed (mph)	Entering Speed (mph)	Braking Speed (mph)	Braking Distance (ft)	Braking Speed (mph)	Braking Distance (ft)
30	20	20	20	29	80
35	25	25	40	34	115
40	30	29	50	38	150
45	35	34	85	43	200
50	40	38	120	47	245
55	45	42	145	52	300
60	50	47	200	56	360
65	55	52	265	60	415
70	60	56	315	64	490
75	65	61	400	70	585

* ADOT Queue length: minimum queue length is 2 vehicles (2 cars or 1 car+1 truck), which can be reduced by 20 feet for a free right turn movement.
Synchro Queue length: is the 95th percentile queue calculated by Synchro sofeware with HCM 6th edition methodology.

Intersection	Movement		[M]in. or [D]esired	Posted Approach Speed	Gap Length (ft)	Flow of Turn	AM Peak (veh/hr)	Midday Peak (veh/hr)	PM Peak (veh/hr)	Trucks> 10% (Y if Yes)	Max vehs per 1.5 cycles	ADOT Queue Length (ft)*	Desired Braking Distance (ft)	Turn Lane Length (ft)
Alvan Clark Blvd & Route 66	NB Left		D	30	**60**		12		7	N	1	50	80	**110**
	WB Left		D	50	**140**		22		31	N	1	50	245	**248**
	NB Right		D	30	**60**		38		35	N	1	50	80	**110**
	EB Right		D	50	**140**		9		3	N	1	50	245	**248**
Flagstaff Public Works Drwy & Route 66	SB Left		D	25	**60**		17		8	N	1	50	45	**75**
	EB Left		D	50	**140**		2		2	N	1	50	245	**248**
	WB Right		D	50	**140**		12		3	N	1	50	245	**248**
Northwestern Street & Route 66	EB Left		D	45	**140**		4		21	N	1	50	200	**203**
	SB Right		D	25	**60**		14		10	N	1	50	45	**75**

"Yield" for turns indicates that, while movement may or may not be subject to a Yield sign, vehicles must yield to oncoming traffic and may experience delays.

APPENDIX S

SIGHT DISTANCE ANALYSIS

- Case B2—Right turns from the minor road; and
- Case B3—Crossing the major road from a minor-road approach.

Intersection sight distance criteria for stop-controlled intersections are longer than stopping sight distance to allow the intersection to operate smoothly. Minor-road vehicle operators can wait until they can proceed safely without forcing a major-road vehicle to stop.

9.5.3.2.1 Case B1—Left Turn from the Minor Road

Departure sight triangles for traffic approaching from either the right or the left, like those shown in Figure 9-17, should be provided for left turns from the minor road onto the major road for all stop-controlled approaches. The length of the leg of the departure sight triangle along the major road in both directions, shown as distance b in Figure 9-17, is the recommended intersection sight distance for Case B1.

The vertex (decision point) of the departure sight triangle on the minor road should be 14.5 ft [4.4 m] from the edge of the major-road traveled way. This represents the typical position of the minor-road driver's eye when a vehicle is stopped relatively close to the major road. Field observations of vehicle stopping positions found that, where needed, drivers will stop with the front of their vehicle 6.5 ft [2.0 m] or less from the edge of the major-road traveled way. Measurements of passenger cars indicate that the distance from the front of the vehicle to the driver's eye for the current U.S. passenger car population is nearly always 8 ft [2.4 m] or less (*21*). Where practical, it is desirable to increase the distance from the edge of the major-road traveled way to the vertex of the clear sight triangle from 14.5 to 18 ft [4.4 m to 5.4 m]. This increase allows 10 ft [3.0 m] from the edge of the major-road traveled way to the front of the stopped vehicle, providing a larger sight triangle. The length of the sight triangle along the minor road (distance *a* in Figure 9-17) is the sum of the distance from the major road plus $^1/_2$ lane width for vehicles approaching from the left, or $1^1/_2$ lane widths for vehicles approaching from the right.

Field observations of the gaps in major-road traffic actually accepted by drivers turning onto the major road have shown that the values in Table 9-6 provide sufficient time for the minor-road vehicle to accelerate from a stop and complete a left turn without unduly interfering with major-road traffic operations. The time gap acceptance time does not vary with approach speed on the major road. Studies have indicated that a constant value of time gap, independent of approach speed, can be used as a basis for intersection sight distance determinations. Observations have also shown that major-road drivers will reduce their speed to some extent when minor-road vehicles turn onto the major road. Where the time gap acceptance values in Table 9-6 are used to determine the length of the leg of the departure sight triangle, most major-road drivers should not need to reduce speed to less than 70 percent of their initial speed (*21*).

The intersection sight distance in each direction should be equal to the distance traveled at the design speed of the major road during a period of time equal to the applicable time gap shown

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in Table 9-6. The length of the sight triangle leg to the right needed for a left-turn maneuver by a passenger car onto the major road, shown as dimension *b* in the drawing on the right in Figure 9-17, is based on a time gap of 7.5 s. A sight triangle to the left is also needed for the left-turning vehicle to cross the near lane(s) of the major road on which traffic approaches from the left; the length of the leg of this sight triangle along the major road is shown as dimension *b* in the drawing to the left in Figure 9-17. This sight triangle to the left is normally provided by Case B2 for the right-turn maneuver (see below). In the rare case where a right-turn maneuver is not permitted onto a two-way street, Case B2 should still be provided so that sight distance is available for crossing the near lane(s) in a left-turn maneuver. In applying Table 9-6, it can usually be assumed that the minor-road vehicle is a passenger car. However, where substantial volumes of heavy vehicles enter the major road, such as from a ramp terminal, the use of tabulated values for single-unit or combination trucks should be considered.

Table 9-6 includes appropriate adjustments to the gap times for the number of lanes on the major road and for the approach grade of the minor road. The adjustment for the grade of the minor-road approach is needed only if the rear wheels of the design vehicle would be on an upgrade that exceeds 3 percent when the vehicle is at the stop line of the minor-road approach.

Table 9-6. Time Gap for Case B1, Left Turn from Stop

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	7.5
Single-unit truck	9.5
Combination truck	11.5

Note: Time gaps are for a stopped vehicle to turn left onto a two-lane highway with no median and with minor-road approach grades of 3 percent or less. The time gaps are applicable to determining sight distance to the right in left-turn maneuvers. The table values should be adjusted as follows:

For multilane roadways or medians—For left turns onto two-way roadways with more than two lanes, including turn lanes, add 0.5 s for passenger cars or 0.7 s for trucks for each additional lane, from the left, in excess of one, to be crossed by the turning vehicle. Median widths should be converted to an equivalent number of lanes in applying the 0.5 and 0.7 s criteria presented above; for example, an 18-ft [5.5-m] median is equivalent to one and a half lanes, and would require an additional 0.75 s for a passenger to cross and an additional 1.05 s for a truck to cross.

For minor-road approach grades—If the approach grade is an upgrade that exceeds 3 percent, add 0.2 s for each percent grade by which the approach grade exceeds zero percent.

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The intersection sight distance along the major road (distance *b* in Figure 9-17) is determined by:

U.S. Customary	Metric
$ISD = 1.47\ V_{major}\ t_g$	$ISD = 0.278\ V_{major}\ t_g$
where:	where:
ISD = intersection sight distance (length of the leg of sight triangle along the major road) (ft)	ISD = intersection sight distance (length of the leg of sight triangle along the major road) (m)
V_{major} = design speed of major road (mph)	V_{major} = design speed of major road (km/h)
t_g = time gap for minor road vehicle to enter the major road (s)	t_g = time gap for minor road vehicle to enter the major road (s)

(9-1)

For example, a passenger car turning left onto a two-lane major road should be provided sight distance equivalent to a time gap of 7.5 s in major-road traffic. If the design speed of the major road is 60 mph [100 km/h], this corresponds to a sight distance of 1.47(60)(7.5) = 661.5 or 665 ft [0.278(100)(7.5) = 208.5 or 210 m], rounded for design.

A passenger car turning left onto a four-lane undivided roadway will need to cross two near lanes, rather than one. This increases the recommended gap in major-road traffic from 7.5 to 8.0 s. The corresponding value of sight distance for this example would be 706 ft [223 m]. If the minor-road approach to such an intersection is located on a 4 percent upgrade, then the time gap selected for intersection sight distance design for left turns should be increased from 8.0 to 8.8 s, equivalent to an increase of 0.2 s for each percent grade.

The design values for intersection sight distance for passenger cars are shown in Table 9-7.

No adjustment of the recommended sight distance values for the major-road grade is generally needed because both the major- and minor-road vehicle will be on the same grade when departing from the intersection. However, if the minor-road design vehicle is a heavy truck and the intersection is located near a sag vertical curve with grades over 3 percent, then an adjustment to extend the recommended sight distance based on the major-road grade should be considered.

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Table 9-7. Design Intersection Sight Distance—Case B1, Left Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	165.4	170	20	20	41.7	45
20	115	220.5	225	30	35	62.6	65
25	155	275.6	280	40	50	83.4	85
30	200	330.8	335	50	65	104.3	105
35	250	385.9	390	60	85	125.1	130
40	305	441.0	445	70	105	146.0	150
45	360	496.1	500	80	130	166.8	170
50	425	551.3	555	90	160	187.7	190
55	495	606.4	610	100	185	208.5	210
60	570	661.5	665	110	220	229.4	230
65	645	716.6	720	120	250	250.2	255
70	730	771.8	775	130	285	271.1	275
75	820	826.9	830				
80	910	882.0	885				

Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

Sight distance design for left turns at intersections on divided roads or streets should consider multiple design vehicles and median width. If the design vehicle used to determine sight distance for an intersection on a divided road or street is larger than a passenger car, then sight distance for left turns should be checked for that selected design vehicle and for a passenger car as well. If the median on a divided road or street is wide enough to store the design vehicle with a clearance to the through lanes of approximately 3 ft [1 m] at both ends of the vehicle, no separate analysis for the departure sight triangle for left turns is needed on the minor-road approach for the near roadway to the left. In most cases, the departure sight triangle for right turns (Case B2) will provide sufficient sight distance for a passenger car to cross the near roadway to reach the median. Possible exceptions are addressed in the discussion of Case B3.

If the design vehicle can be stored in the median with adequate clearance to the through lanes, a departure sight triangle to the right for left turns should be provided for that design vehicle turning left from the median roadway. Where the median is not wide enough to store the design vehicle, a departure sight triangle should be provided for that design vehicle to turn left from the minor-road approach.

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The median width should be considered in determining the number of lanes to be crossed. The median width should be converted to equivalent lanes. For example, an 18-ft [5.5-m] median should be considered as one and a half additional lanes to be crossed in applying the multilane roadway adjustment for time gaps in Table 9-6. Furthermore, a departure sight triangle for left turns from the median roadway should be provided for the largest design vehicle that can be stored on the median roadway with adequate clearance to the through lanes.

If the sight distance along the major road shown in Figure 9-17, including any appropriate adjustments, cannot be provided, then consideration should be given to installing regulatory speed signing on the major-road approaches.

For left-turns onto a one-way roadway, time gaps based on Case B2 (see below) can be applied in determining the sight triangle needed for looking at vehicles approaching from the right.

9.5.3.2.2 Case B2—Right Turn from the Minor Road

A departure sight triangle for traffic approaching from the left like that shown in Figure 9-17 should be provided for right turns from the minor road onto the major road. The intersection sight distance for right turns is determined in the same manner as for Case B1, except that the time gaps (*tg*) in Table 9-6 should be adjusted. Field observations indicate that, in making right turns, drivers generally accept gaps that are slightly shorter than those accepted in making left turns (*21*). The time gaps in Table 9-6 can be decreased by 1.0 s for right-turn maneuvers without undue interference with major-road traffic. These adjusted time gaps for the right turn from the minor road are shown in Table 9-8. Design values based on these adjusted time gaps are shown in Table 9-9 for passenger cars. This 1.0-s reduction in the time gap applies only where turns are limited to right turns; where left turns are also permitted, the time gaps for Case B1 from Table 9-5 apply. When the minimum recommended sight distance for a right-turn maneuver cannot be provided, even with the reduction of 1.0 s from the values in Table 9-6, consideration should be given to installing regulatory speed signing or other traffic control devices on the major-road approaches.

Table 9-8. Time Gap for Case B2—Right Turn from Stop

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	6.5
Single-unit truck	8.5
Combination truck	10.5

Note: Time gaps are for a stopped vehicle to turn right onto or to cross a two-lane roadway with no median and with minor-road approach grades of 3 percent or less. The table values should be adjusted as follows:

For minor-road approach grades—If the approach grade is an upgrade that exceeds 3 percent, add 0.1 s for each percent grade by which the approach grade exceeds zero percent.

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Table 9-9. Design Intersection Sight Distance—Case B2, Right Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	143.3	145	20	20	36.1	40
20	115	191.1	195	30	35	54.2	55
25	155	238.9	240	40	50	72.3	75
30	200	286.7	290	50	65	90.4	95
35	250	334.4	335	60	85	108.4	110
40	305	382.2	385	70	105	126.5	130
45	360	430.0	430	80	130	144.6	145
50	425	477.8	480	90	160	162.6	165
55	495	525.5	530	100	185	180.7	185
60	570	573.3	575	110	220	198.8	200
65	645	621.1	625	120	250	216.8	220
70	730	668.9	670	130	285	234.9	235
75	820	716.6	720				
80	910	764.4	765				

Note: Intersection sight distance shown is for a stopped passenger car to turn right onto or to cross a two-lane roadway with no median and with grades of 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

9.5.3.2.3 Case B3—Crossing Maneuver from the Minor Road

In most cases, the departure sight triangles for left and right turns onto the major road, as described for Cases B1 and B2, will also provide adequate sight distance for minor-road vehicles to cross the major road. However, in the following situations, it is advisable to check the availability of sight distance for crossing maneuvers:

- where left or right turns or both are not permitted from a particular approach and the crossing maneuver is the only legal maneuver;
- where the crossing vehicle would cross the equivalent width of more than six lanes; or
- where substantial volumes of heavy vehicles cross the roadway and steep grades that might slow the vehicle while its back portion is still in the intersection are present on the departure roadway on the far side of the intersection.

The equation for intersection sight distance in Case B1 (see Equation 9-1) is used again for the crossing maneuver except that time gaps (*tg*) are the same as those for the Right Turn from Stop maneuver, which presents time gaps and appropriate adjustment factors to determine the intersection sight distance along the major road to accommodate crossing maneuvers. At divid-

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ed roadway intersections, depending on the relative magnitudes of the median width and the length of the design vehicle, intersection sight distance may need to be considered for crossing both roadways of the divided roadway or for crossing the near roadway only and stopping in the median before proceeding. The application of adjustment factors for median width and grade is discussed under Case B1.

The time gaps for use in determining intersection sight distance for crossing maneuvers are shown in Table 9-10. Table 9-11 shows the design values for passenger cars for the crossing maneuver based on the unadjusted time gaps in Table 9-10. For major roads with less than six lanes for both directions of travel combined, the provision of sight triangles for Cases B1 and B2 at an intersection will also provide sufficient sight distance for Case B3.

Table 9-10. Time Gap for Case B3, Crossing Maneuver from the Minor Road

Design Vehicle	Time Gap (tg)(s) at Design Speed of Major Road
Passenger car	6.5
Single-unit truck	8.5
Combination truck	10.5

Note: Time gaps are for a stopped vehicle to cross a two-lane highway with no median and with minor-road approach grades of 3 percent or less. The table values should be adjusted as follows:

For multilane roadways or medians—For crossing maneuvers that cross roadways with more than two lanes, including turn lanes, add 0.5 s for passenger cars or 0.7 s for trucks for each additional lane, from the left, in excess of two, to be crossed by the turning vehicle. Median widths should be converted to equivalent lanes; for example, an 18 ft [5.5 m] median would be equal to one and a half lanes and would need an additional time gap of 0.75 s for passenger cars and 1.05 s for trucks.

For minor-road approach grades—If the approach grade is an upgrade that exceeds 3 percent, add 0.2 s for each percent grade by which the approach grade exceeds zero percent.

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Table 9-11. Design Intersection Sight Distance—Case B3, Crossing Maneuver

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	143.3	145	20	20	36.1	40
20	115	191.1	195	30	35	54.2	55
25	155	238.9	240	40	50	72.3	75
30	200	286.7	290	50	65	90.4	95
35	250	334.4	335	60	85	108.4	110
40	305	382.2	385	70	105	126.5	130
45	360	430.0	430	80	130	144.6	145
50	425	477.8	480	90	160	162.6	165
55	495	525.5	530	100	185	180.7	185
60	570	573.3	575	110	220	198.8	200
65	645	621.1	625	120	250	216.8	220
70	730	668.9	670	130	285	234.9	235
75	820	716.6	720				
80	910	764.4	765				

Note: Intersection sight distance shown is for a stopped passenger car to turn right onto or to cross a two-lane roadway with no median and with grades of 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

9.5.3.3 Case C—Intersections with Yield Control on the Minor Road

Drivers approaching yield signs are permitted to enter or cross the major road without stopping, if there are no potentially conflicting vehicles on the major road. The sight distances needed by drivers on yield-controlled approaches exceed those for stop-controlled approaches.

For four-leg intersections with yield control on the minor road, two separate pairs of approach sight triangles like those shown in Figure 9-16 should be provided. One set of approach sight triangles is needed to accommodate crossing the major road and a separate set of sight triangles is needed to accommodate left and right turns onto the major road. Both sets of sight triangles should be checked for potential sight obstructions.

For three-leg intersections with yield control on the minor road, only the approach sight triangles to accommodate left- and right-turn maneuvers need be considered, because the crossing maneuver does not exist.

Both approach and departure sight triangles for intersections with yield control on the minor road should be considered for two situations:

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from these sight conditions, there are generally no other approach or departure sight triangles needed for signalized intersections. Signalization may be an appropriate crash countermeasure for higher volume intersections with restricted sight distance that have experienced a pattern of sight-distance related crashes.

However, if the traffic signal is to be placed on two-way flashing operation (i.e., flashing yellow on the major-road approaches and flashing red on the minor-road approaches) under off-peak or nighttime conditions, then the appropriate departure sight triangles for Case B, both to the left and to the right, should be provided for the minor-road approaches. In addition, if right turns on a red signal are to be permitted from any approach, then the appropriate departure sight triangle to the left for Case B2 should be provided to accommodate right turns from that approach.

9.5.3.5 Case E—Intersections with All-Way Stop Control

At intersections with all-way stop control, the first stopped vehicle on one approach should be visible to the drivers of the first stopped vehicles on each of the other approaches. There are no other sight distance criteria applicable to intersections with all-way stop control and, indeed, all-way stop control may be the best option at a limited number of intersections where sight distance for other control types cannot be attained. However, if the projected traffic volumes indicate that the intersection may need to be signalized within a few years, then consideration should be given to providing sight distances for Case D. The Case D sight distances do not differ markedly from the Case E sight distances except where provision is made to accommodate two-way flashing operation and or right turn on red at the future signal.

9.5.3.6 Case F—Left Turns from the Major Road

All locations along a major roadway from which vehicles are permitted to turn left across opposing traffic, including intersections and driveways, should have sufficient sight distance to accommodate the left-turn maneuver. Left-turning drivers need sufficient sight distance to decide when to turn left across the lane(s) used by opposing traffic. Sight distance design should be based on a left turn by a stopped vehicle, since a vehicle that turns left without stopping would need less sight distance. The sight distance along the major road to accommodate left turns is the distance traversed at the design speed of the major road in the travel time for the design vehicle given in Table 9-16.

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Table 9-16—Time Gap for Case F, Left Turns from the Major Road

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	5.5
Single-unit truck	6.5
Combination truck	7.5

Note: Time gaps are for a stopped vehicle turning left from a two-lane highway with no median

For multilane and/or divided roadways—For left turns on two-way roadways across more than one opposing lane, including turn lanes, add 0.5 s for passenger cars or 0.7 s for trucks for each additional lane to be crossed in the left-turn maneuver in excess of one lane. Where the left-turning vehicle must pass through a median, the median width should be converted to an equivalent number of lanes; for example, an 18-ft [5.5-m] median would be equivalent to one and a half lanes and crossing through the median would require an additional 0.75 s for a passenger car and 1.05 s for a truck. The table also contains appropriate adjustment factors for the number of major-road lanes to be crossed by the turning vehicle. The unadjusted time gap in Table 9-16 for passenger cars was used to develop the sight distances in Table 9-17.

Table 9-17. Intersection Sight Distance—Case F, Left Turn from the Major Road

U.S. Customary			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance	
		Passenger Cars	
		Calculated (ft)	Design (ft)
15	80	121.3	125
20	115	161.7	165
25	155	202.1	205
30	200	242.6	245
35	250	283.0	285
40	305	323.4	325
45	360	363.8	365
50	425	404.3	405
55	495	444.7	445
60	570	485.1	490
65	645	525.5	530
70	730	566.0	570
75	820	606.4	610
80	910	646.8	650

Metric			
Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance	
		Passenger Cars	
		Calculated (m)	Design (m)
20	20	30.6	35
30	35	45.9	50
40	50	61.2	65
50	65	76.5	80
60	85	91.7	95
70	105	107.0	110
80	130	122.3	125
90	160	137.6	140
100	185	152.9	155
110	220	168.2	170
120	250	183.5	185
130	285	198.8	200

Note: Intersection sight distance shown is for a passenger car making a left turn from an undivided roadway. For other conditions and design vehicles, the time gap should be adjusted and the sight distance recalculated.

If stopping sight distance has been provided continuously along the major road and if sight distance for Case B (stop control) or Case C (yield control) has been provided for each minor-road

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approach, sight distance will generally be adequate for left turns from the major road. Therefore, no separate check of sight distance for Case F may be needed.

However, at three-leg intersections or driveways located on or near a horizontal curve or crest vertical curve on the major road, the availability of adequate sight distance for left turns from the major road should be checked. In addition, the availability of sight distance for left turns from divided roadways should be checked because of the possibility of sight obstructions in the median.

At four-leg intersections on divided roadways, opposing vehicles turning left can block a driver's view of oncoming traffic. Figure 9-40, presented in Section 9.7.3, illustrates intersection designs that can be used to offset the opposing left-turn lanes and provide left-turning drivers with a better view of oncoming traffic.

9.5.3.7 Case G—Roundabouts

Similar in application to other intersection types, a roundabout needs intersection sight distance so that drivers on a yield-controlled approach to the roundabout can decide when to proceed into the roundabout. Drivers entering a roundabout need to see and react to the presence of potentially conflicting vehicles. Specifically, drivers entering a roundabout need to see potentially conflicting vehicles along the circulatory roadway and vehicles entering the roundabout from the immediate upstream entry. NCHRP Report 672, *Roundabouts: An Informational Guide* (*41*), presents a procedure for determining sight distances for use in the design of roundabouts. The report indicates that, based on international experience, it is advantageous to provide only the minimum sight distance needed at a roundabout. Additional intersection sight distance could result in higher vehicle speeds that may increase conflicts between motor vehicles, bicyclists, and pedestrians. Landscaping within the central island can be effective in restricting sight distance to the minimum needed while creating a "terminal vista" on the approach to improve visibility of the central island.

9.5.4 Effect of Skew

Where two roadways intersect at an angle less than 75 degrees or greater than 105 degrees, and where conversion to a roundabout or realignment to increase the angle of intersection is not justified, some of the factors for determination of intersection sight distance may need adjustment.

Each of the clear sight triangles described above are applicable to oblique-angle intersections. As shown in Figure 9-18, the legs of the sight triangle will lie along the intersection approaches and each sight triangle will be larger or smaller than the corresponding sight triangle would be at a right-angle intersection. The area within each sight triangle should be clear of potential sight obstructions as described previously.

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City of Flagstaff
Water Services Division

September 20, 2022,

Stephen C. Irwin, PE
Shephard Wesnitzer, Inc.
110 West Dale Avenue
Flagstaff, Arizona 86001

Ref: **Waiver of Water and Sewer Impact Analysis**
Project: LIV Timber Sky
Parcel APN 112-01-019B
Address: S.W. Corner of W Route 66 & Woody Mountain Rd

Dear Mr. Irwin,

The City of Flagstaff Water Services Department agrees to waive the requirement of a Water and Sewer Impact Analysis (WSIA) for the above future development. After reviewing the City water and sewer master model and previous Impact studies conducted in this area, Water Services Engineering Section Director Gary Miller and Water Services Engineering staff is of the opinion that the future proposed demands will have no significant impact to either water or sewer infrastructure off-site as a result of this development beyond what was identified. The land use and intensity proposed for this site in earlier analysis is similar to that of the proposed development. After the Kit Carson to Kaibab Sewer upsizing is completed, there will be adequate line capacity and no additional analysis work will be required for this project.

LIV Timber Sky is a proposed future housing development located at 2701 S Woody Mountain Rd. Plans for the site include the creation of 214 dwelling units. The site is bordered on the North by Route 66, on the East by Woody Mountain Campground, to the West by undeveloped land, and to the South by the Sky Cottages development. Parcel APN 112-01-019B makes up its boundaries. The existing property consists of 13.01 acres of undeveloped land that is zoned rural residential.

After the Kit Carson to Kaibab Sewer upsizing is completed, no additional offsite infrastructure improvements will be required other than that necessary to serve the parcel are required of this development. All on-site infrastructure must be constructed to City of Flagstaff and ADEQ standards. The City of Flagstaff will provide water and sewer service to this site upon acceptance and dedication of all required public improvements. SWI has provide a rough estimate of early 2024 for completing construction and getting this housing development on line. According to the City of Flagstaff's Biosolids Master Plan developed by Carollo in 2019, the City's wastewater

treatment capacity for both treatment plants combined is 6.3 MGD average daily flow based on current conditions and configurations. Average daily flows for both plants measured 5.404 MGD for the calendar year 2021. The remaining treatment capacity of both plants combined has been previously committed. The City is creating additional wastewater treatment capacity currently scheduled for completion by the end of 2024. The additional wastewater demand created can be accommodated within the current wastewater treatment capacity projections. Therefore, the two-year reservation of capacity through the WSIA is not contingent upon the successful construction of improvements by 2024. This WSIA waiver is considered valid for two years from its issuance date, 9/20/2022. All water and sewer utility lines and treatment plant capacity reservations as a result of this waiver will expire at that time. This WSIA waiver will function as place holder for the developer. The capacity assurances discussed within this waiver will be provided by the City for 2 years. At which time the developer will need to have applied for a building permit or will be removed from the list of assured capacity. If this project is removed from the capacity assurance list, the developer will need to re-apply for capacity assurance by getting a new WSIA. Please contact Gary Miller or Jackson Salazar at 928-213-2410 or 928-213-2411 resp. if you have any questions or concerns.

Sincerely,

Jackson Salazar
Water Services Plan Reviewer

Required Signatures per City Code 13-05-002-0001 & 0002

X _____

City Engineer

X _____

Water Services Director

Cc: Gary Miller – Water Services Engineering Section Director
Dana Cole – Development Engineer
Genevieve Pearthree – Senior Planner

Shephard Wesnitzer, Inc.

110 West Dale Avenue
Flagstaff, AZ 86001

928.773.0354
928.774.8934 fax

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Engineering an environment of excellence.

City of Flagstaff
Attention: Douglas Slover
211 W. Aspen Ave.
Flagstaff, AZ 86001

Originally Prepared: August 30, 2022
SWI # 22045

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Re: LIV Timber Sky - Drainage Impact Analysis Letter (COF #PZ-21-00271-02)

Dear Mr. Slover:

This Drainage Impact Analysis Letter is being provided for the proposed LIV Timber Sky multi-family development (Project). The Project consists of approximately 13 acres located at the intersection of S. Woody Mountain Road and West Route 66. The project will include 214 multi-family dwelling units along with associated infrastructure. The Project is comprised of 13.01 acres of Coconino County Assessor's Parcel no. 112-01-019B zoned Rural Residential (RR) and General 10-acre minimum (G). Approximately 1.5 acres of the site is outside City limits and will be annexed. The proposed zoning of the Project will be high density residential (HR). This letter has been prepared to support the Site Plan submittal for this project.

The intent of the Drainage Impact Analysis (DIA) is to determine any potential adverse downstream drainage impacts and to identify mitigation options. DIA scoping coordination was completed via email on July 12, 2022 with the City of Flagstaff Stormwater Division where the City presented Shephard-Wesnitzer, Inc. (SWI) with two options for mitigation. Both options included calculating the difference in runoff volume between the pre-development and post-development conditions for the Project. Option one consisted of analyzing downstream infrastructure with the increase in runoff volume from the project, and option two consisted of retaining the increase in runoff volume and mitigating the runoff rates. Based on discussion with the City, option two has been chosen for this Project.

Based on City of Flagstaff Drainage Basin maps and FEMA mapping, the site is located in the South Fork of Clay Wash watershed. The north portion of the site, Basin 1 (B1), drains to the east/northeast to an existing 24" CMP at the intersection of S. Woody Mountain Road and W. Route 66. The existing storm drain system along W. Route 66 ultimately discharges into the South Fork Clay Wash. The south portion of the site, Basin 2 (B2) drains to the east/southeast to

an existing 4' x 3' concrete box culvert which conveys the stormwater to an existing storm drain system within Presidio in the Pines. This existing storm drain system ultimately discharges into Sinclair Wash. The basin delineation remains similar for the post-development conditions.

The drainage basin was analyzed to compare 100-year hydrograph volumes for the pre- and post-development conditions. Bentley's *PondPack* computer program, utilizing the SCS Unit Hydrograph method and Type II rainfall distribution, was used to determine the hydrograph volumes during the 100-year, 24-hour storm event. The SCS runoff Curve Numbers were weighted based on cover in the pre- and post-development conditions. A runoff curve number of 98 was used for the impervious areas, a curve number of 65 was used for the existing cover, consisting of pine tree cover in a 'C' hydrologic soil group, and a curve number of 75 was used for the existing cover, consisting of pine tree cover in a 'D' hydrologic soil group. The rainfall depth of 4.6" used in the analysis was taken from the City of Flagstaff Stormwater Management Design Manual (CFSMDM). Pre-development basin areas were based on the existing topography, and the post-development basin areas were based on the proposed site layout and preliminary grading. The *PondPack* analysis and Pre- and Post-Development Drainage Exhibits are included with this letter.

Below is a table summarizing the pre- and post-development drainage basin characteristics for the Project.

Table 1 – Pre- and Post-Development Condition

Pre-Development Conditions				
Basin ID	Area (acres)	Tc (min)	Curve Number	Runoff Volume (cf)
B1	12.87	22	70	79,733
B2	6.66	25	65	32,796
Post-Development Conditions				
Area (acres)	Area (acres)	Tc (min)	Curve Number	Runoff Volume (cf)
B1	12.46	23	83.00	125,248
B2	7.06	28	83.00	70,898

The proposed underground chamber systems will be designed to retain the difference between the 100-year pre- and post-development runoff volume.

Low Impact Development (LID) facilities will be designed to capture the first 1 inch of stormwater runoff from the proposed impervious surfaces to meet the requirements of the City of Flagstaff Low Impact Development Manual (LIDM). The LID facilities will be designed to provide water quality treatment of the runoff from the new development before it is discharged downstream. The underground chamber system meets the water quality component by providing a row of chambers that has been wrapped with a filter fabric, called the isolator row. While

water is able to pass through the fabric and flow to the adjacent chambers, sediment and other debris will captured in the isolator row. The basin will be designed to release the LID Runoff Capture Volume (ROCV) between 24-36 hours after the storm event. Based on the proposed impervious cover, the total calculated LID/Runoff Capture Volume (ROCV) required is 36,632 cubic feet. The ROCV will be included within the required runoff volume retained within the proposed basins. Below is a table summarizing the impervious cover analysis:

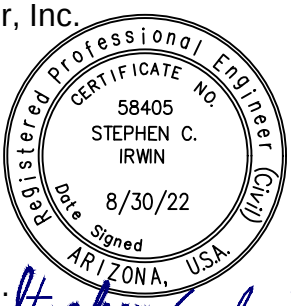
Table 2 –Impervious Area Analysis

Impervious Area & LID Analysis						
						LID Required Depth (ft)
						0.0833
Basin ID	Existing Basin Area (sf)	Proposed Basin Area (sf)	Existing Basin Impervious Area for LID (sf)	Proposed Basin Impervious Area for LID (sf)	Net Impervious Area (sf)	Required LID Volume (cf)
B1	560,512	542,918	33,378	241,767	275,145	22,929
B2	289,990	307,584	4,232	160,212	164,443	13,704
TOTAL	850,502	850,502	37,610	401,979	439,589	36,632
1. Gross required 1" LID volume is for impervious area including proposed half street improvements (Woody Mtn and Route 66), onsite drive aisles, parking, sidewalks, and buildings.						

Although option one was not analyzed, the analysis can still be performed during final design if it is determined that retention of the runoff volume is not feasible at any of the proposed locations. This will need to be coordinated and approved with City Stormwater Staff prior to the analysis.

Please call if you have any questions, comments, or need any additional information.

Sincerely,
Shephard – Wesnitzer, Inc.



Stephen C. Irwin, P.E.
Project Engineer

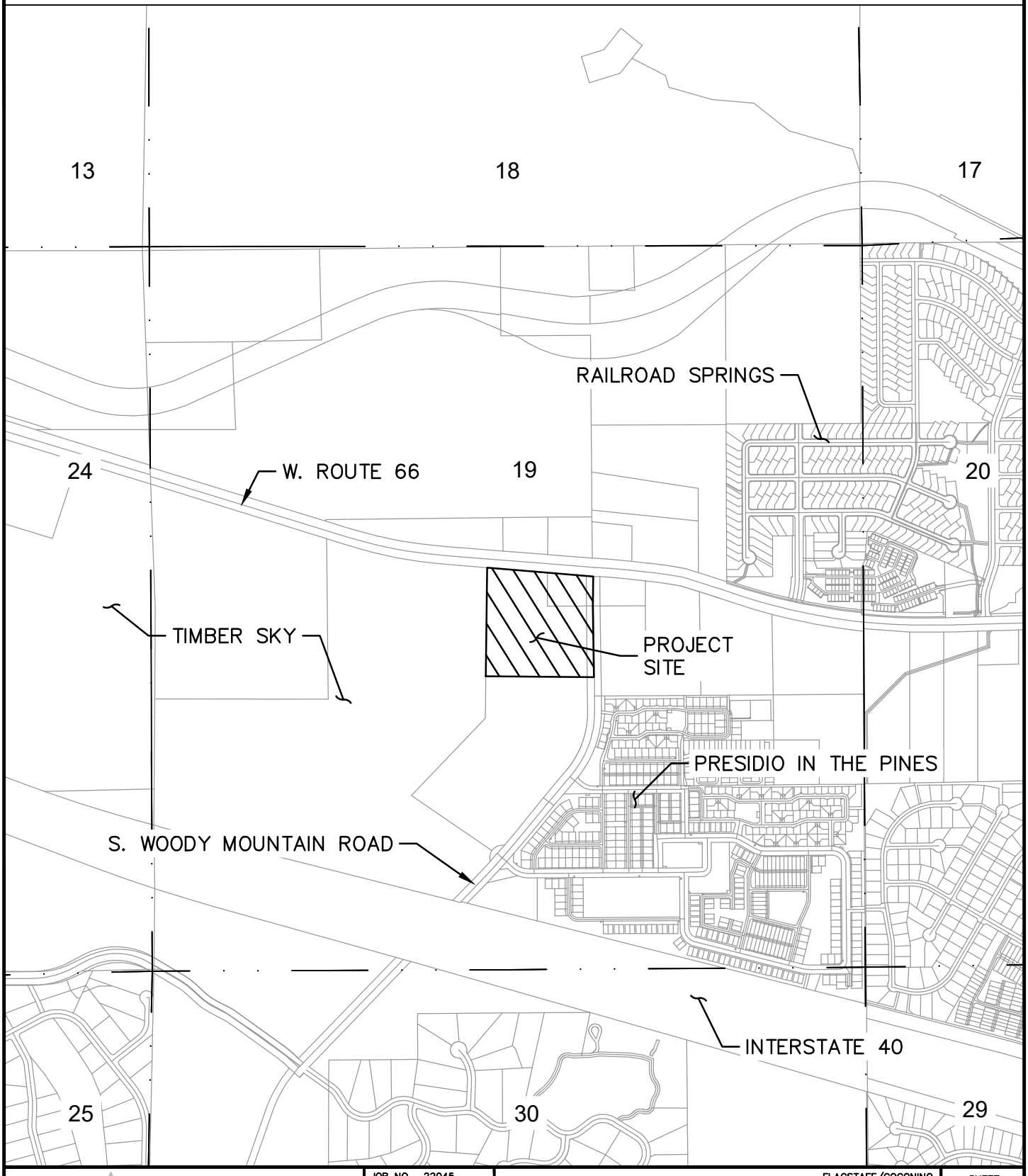
Attachments:
- Vicinity Map
- Drainage Exhibits
- *PondPack* Output

PLOTTED: Aug 25, 2022–8:10pm

FILE: P:\2022\22045\DRAWINGS\DRAINAGE\22045 – VICINITY MAP.DWG KBAYER

NORTH

LOCATED IN SECTION 19, TOWNSHIP 21 NORTH, RANGE 7 EAST, GILA AND SALT BASE MERIDIAN, COCONINO COUNTY, FLAGSTAFF, ARIZONA



SWI
Shephard Wesnitzer, Inc.

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax

www.swiaz.com

JOB NO.	22045
DATE	AUG 22
SCALE	1"=1000'
DRAWN	KMF
DESIGN	KMF
CHECKED	SCI

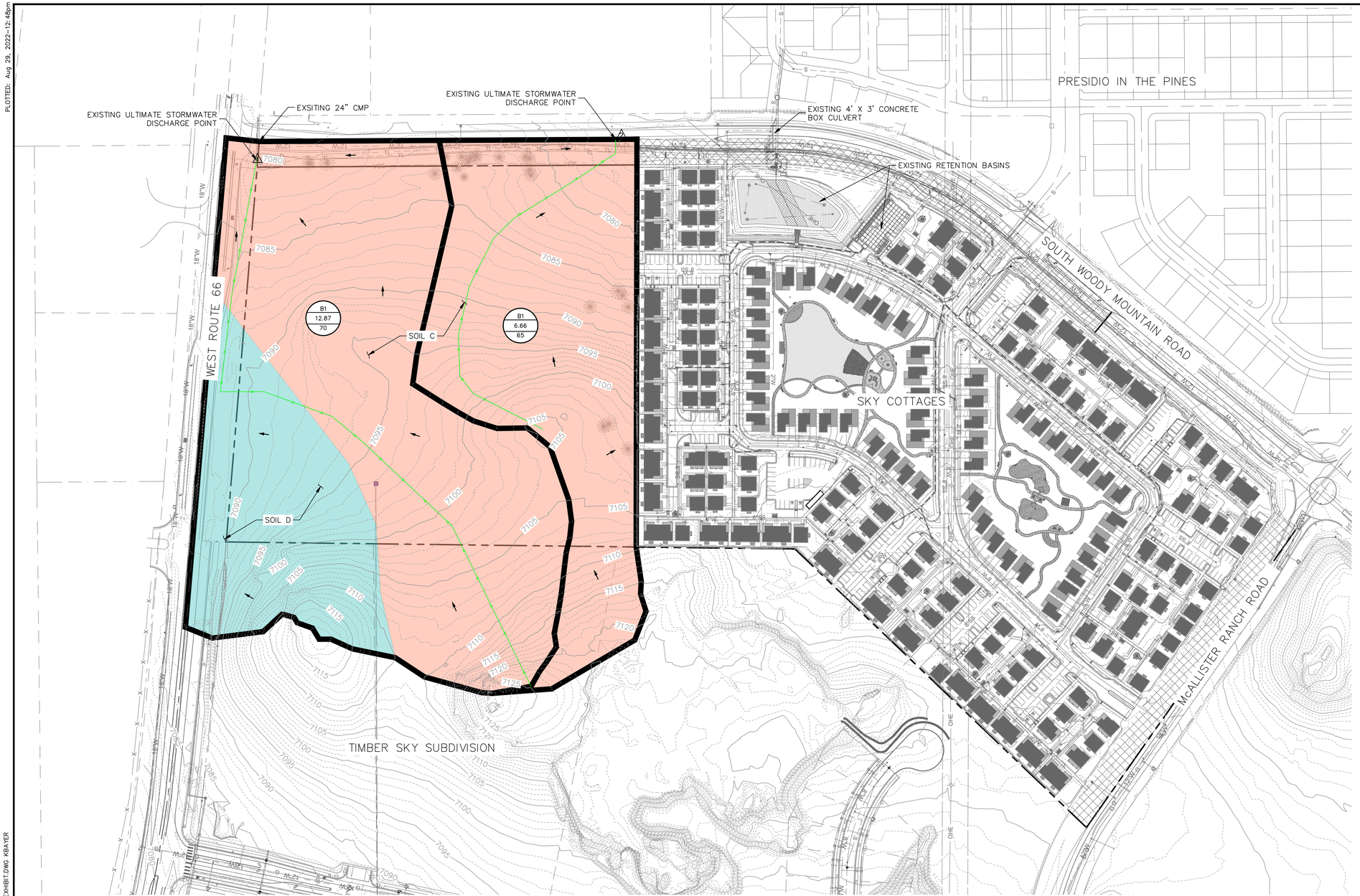
LIV TIMBER SKY

FLAGSTAFF/COCONINO
ARIZONA

VICINITY MAP

SHEET
1
OF 1

PLOTTED: Aug 29, 2022 - 12:48pm



LEGEND

- PRE –DEVELOPMENT TIME OF CONCENTRATION FLOW PATH
- FLOW DIRECTION
- PROPERTY BOUNDARY
- PRE–DEVELOPMENT BASIN BOUNDARY
- ID = BASIN IDENTIFICATION; A = AREA IN ACRES; CN = SCS CURVE NUMBER
- CONCENTRATION POINT

Pre-Development Condition Summary Table

Basin ID	Area (acres)	Tc (min)	CN	Runoff Flows (cfs)
				Q100
B1	12.87	22	70	21.72
B2	6.66	25	65	7.87

SCALE 1" : 100'
0 50 100

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING OR RECORDING

FLAGSTAFF ARIZONA

LIV TIMBER SKY

PRE-DEVELOPMENT DRAINAGE EXHIBIT

JOB NO:	22045
DATE:	AUG 22
SCALE:	AS SHOWN
DRAWN:	KMF
DESIGN:	KMF
CHECKED:	SCI

REVISIONS

NO.	DESCRIPTION	DATE	BY

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0334
928.774.8934 fax
www.swiaz.com

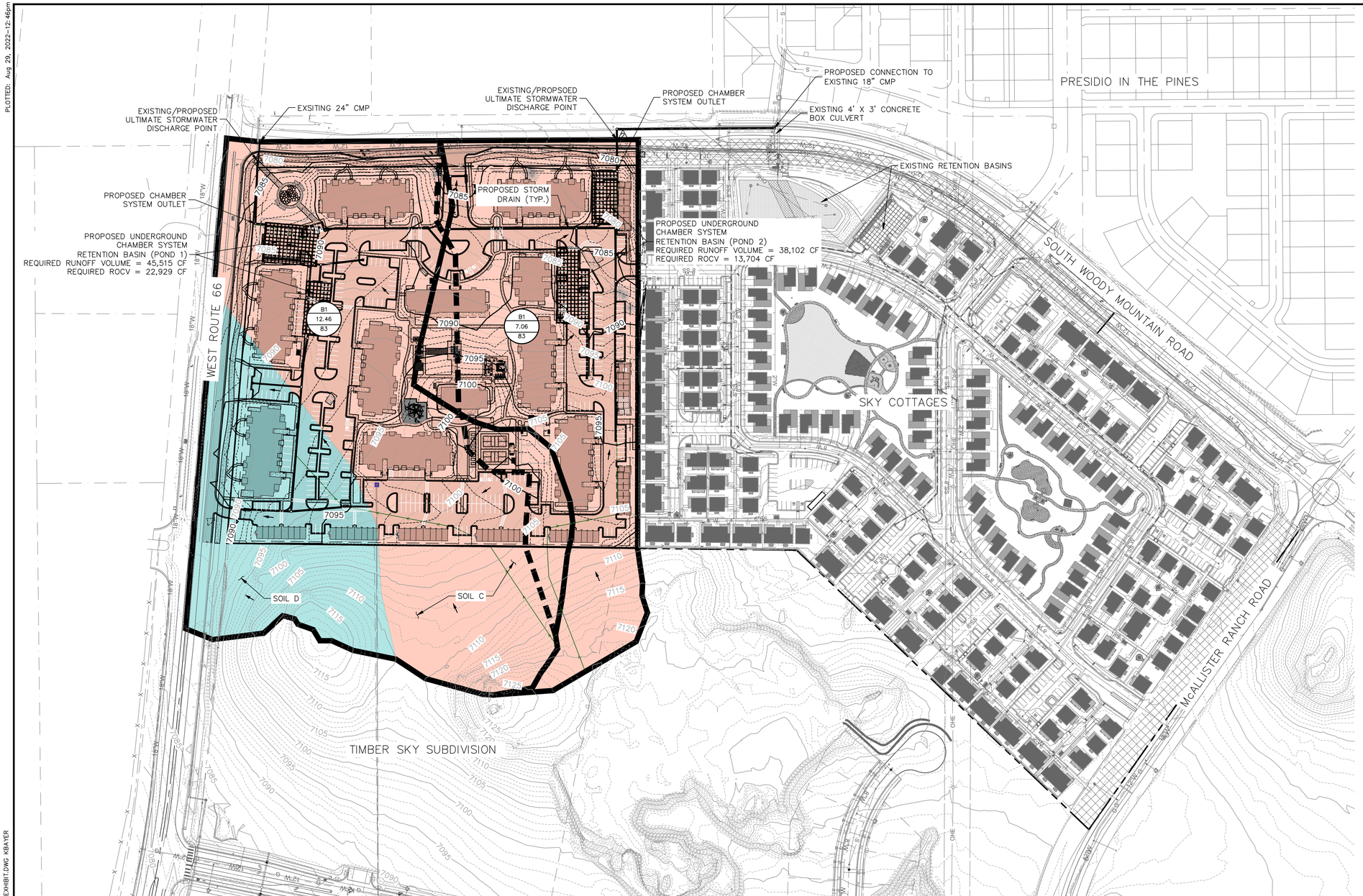
SWI
Shephard Wesnitzer, Inc.

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.
DR01

SHT NO. 1 OF 2

FILE: P:\2022\22045\DRAWINGS\DRAINAGE\22045 - PRE-DEVELOPMENT DRAINAGE EXHIBIT.DWG KBAYER



Post-Development Condition Summary Table

Basin ID	Area (acres)	Tc (min)	CN	Runoff Flows (cfs)
				Q100
B1	12.46	23	83	34.58
B2	7.06	28	83	17.47

Pre-Development Conditions				
Basin ID	Area (acres)	Tc (min)	Curve Number	Runoff Volume (cf)
B1	12.87	22	70	79,733
B2	6.66	25	65	32,796
Post-Development Conditions				
Area (acres)	Area (acres)	Tc (min)	Curve Number	Runoff Volume (cf)
B1	12.46	23	83.00	125,248
B2	7.06	28	83.00	70,898
			B1 Required Runoff Volume (cf)	**45,515**
			Provided Volume (cf)	**47,500**
			B2 Required Runoff Volume (cf)	**38,102**
			Provided Volume (cf)	**40,000**

Impervious Area & LID Analysis

						LID Required Depth (ft)
						0.0833
Basin ID	Existing Basin Area (sf)	Proposed Basin Area (sf)	Existing Basin Impervious Area for LID (sf)	Proposed Basin Impervious Area for LID (sf)	Net Impervious Area (sf)	Required LID Volume (cf)
B1	560,512	542,918	33,378	241,767	275,145	22,929
B2	289,990	307,584	4,232	160,212	164,443	13,704
TOTAL	850,502	850,502	37,610	401,979	439,589	36,632

1. Gross required 1" LID volume is for impervious area including proposed half street improvements (Woody Mtn and Route 66), onsite drive aisles, parking, sidewalks, and buildings.

SCALE 1" : 100'
0 50 100

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING OR RECORDING

FLAGSTAFF ARIZONA

LIV TIMBER SKY

PRE-DEVELOPMENT DRAINAGE EXHIBIT

JOB NO:	22045
DATE:	AUG 22
SCALE:	AS SHOWN
DRAWN:	KMF
DESIGN:	KMF
CHECKED:	SCI

Shephard Wesnitzer, Inc.
110 W. Dale Avenue
Flagstaff, AZ 86001
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www.swiaz.com

REVISIONS

NO.	DESCRIPTION	DATE	BY

Call at least two full working days before you plan to excavate.
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DRAWING NO.
DR01

SHT NO. 1 OF 2

PLOTTED: Aug 29, 2022–12:46pm
FILE: P:\2022\22045\DRAWINGS\DRAINAGE\22045 – POST-DEVELOPMENT DRAINAGE EXHIBIT.DWG KBAYER

Project Summary	
Title	Sky Cottages
Engineer	KMF
Company	Shephard-Wesnitzer, Inc.
Date	8/30/2021

Notes

Table of Contents

	Master Network Summary	2
Time-Depth - 2		
	Time-Depth Curve, 100 years (Post-Development 100 year)	3
	Time-Depth Curve, 100 years (Pre-Development 100 year)	5
Basin B1		
	Time of Concentration Calculations, 100 years (Post-Development 100 year)	7
	Time of Concentration Calculations, 100 years (Pre-Development 100 year)	9
Basin B2		
	Time of Concentration Calculations, 100 years (Post-Development 100 year)	12
	Time of Concentration Calculations, 100 years (Pre-Development 100 year)	14
Basin B1		
	Runoff CN-Area, 100 years (Post-Development 100 year)	16
	Runoff CN-Area, 100 years (Pre-Development 100 year)	17
Basin B2		
	Runoff CN-Area, 100 years (Post-Development 100 year)	18
	Runoff CN-Area, 100 years (Pre-Development 100 year)	19
Basin B1		
	Unit Hydrograph Summary, 100 years (Post-Development 100 year)	20
	Unit Hydrograph Summary, 100 years (Pre-Development 100 year)	22
Basin B2		
	Unit Hydrograph Summary, 100 years (Post-Development 100 year)	24
	Unit Hydrograph Summary, 100 years (Pre-Development 100 year)	26

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft^3)	Time to Peak (hours)	Peak Flow (ft^3/s)
Basin B1	Post-Development 100 year	100	125,248.000	12.100	34.58
Basin B1	Pre-Development 100 year	100	79,733.000	12.100	21.72
Basin B2	Post-Development 100 year	100	70,898.000	12.150	17.47
Basin B2	Pre-Development 100 year	100	32,796.000	12.150	7.87

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft^3)	Time to Peak (hours)	Peak Flow (ft^3/s)
O-1	Post-Development 100 year	100	125,248.000	12.100	34.58
O-1	Pre-Development 100 year	100	79,733.000	12.100	21.72
O-2	Post-Development 100 year	100	70,898.000	12.150	17.47
O-2	Pre-Development 100 year	100	32,796.000	12.150	7.87

Subsection: Time-Depth Curve
Label: Time-Depth - 2
Scenario: Post-Development 100 year

Return Event: 100 years
Storm Event: 100-yr 24 hr

Time-Depth Curve: 100-yr 24 hr	
Label	100-yr 24 hr
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.0	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.1	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.2
3.000	0.2	0.2	0.2	0.2	0.2
3.500	0.2	0.2	0.2	0.2	0.2
4.000	0.2	0.2	0.2	0.2	0.2
4.500	0.3	0.3	0.3	0.3	0.3
5.000	0.3	0.3	0.3	0.3	0.3
5.500	0.3	0.3	0.3	0.3	0.4
6.000	0.4	0.4	0.4	0.4	0.4
6.500	0.4	0.4	0.4	0.4	0.4
7.000	0.5	0.5	0.5	0.5	0.5
7.500	0.5	0.5	0.5	0.5	0.5
8.000	0.5	0.6	0.6	0.6	0.6
8.500	0.6	0.6	0.6	0.6	0.7
9.000	0.7	0.7	0.7	0.7	0.7
9.500	0.7	0.8	0.8	0.8	0.8
10.000	0.8	0.8	0.9	0.9	0.9
10.500	0.9	1.0	1.0	1.0	1.0
11.000	1.1	1.1	1.1	1.2	1.2
11.500	1.3	1.4	1.6	2.0	2.6
12.000	3.0	3.1	3.2	3.3	3.3
12.500	3.4	3.4	3.4	3.5	3.5
13.000	3.5	3.5	3.6	3.6	3.6
13.500	3.6	3.7	3.7	3.7	3.7
14.000	3.7	3.8	3.8	3.8	3.8
14.500	3.8	3.8	3.8	3.9	3.9
15.000	3.9	3.9	3.9	3.9	3.9
15.500	4.0	4.0	4.0	4.0	4.0
16.000	4.0	4.0	4.0	4.0	4.1
16.500	4.1	4.1	4.1	4.1	4.1
17.000	4.1	4.1	4.1	4.1	4.1

Subsection: Time-Depth Curve
Label: Time-Depth - 2
Scenario: Post-Development 100 year

Return Event: 100 years
Storm Event: 100-yr 24 hr

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	4.2	4.2	4.2	4.2	4.2
18.000	4.2	4.2	4.2	4.2	4.2
18.500	4.2	4.2	4.3	4.3	4.3
19.000	4.3	4.3	4.3	4.3	4.3
19.500	4.3	4.3	4.3	4.3	4.3
20.000	4.3	4.3	4.4	4.4	4.4
20.500	4.4	4.4	4.4	4.4	4.4
21.000	4.4	4.4	4.4	4.4	4.4
21.500	4.4	4.4	4.4	4.4	4.4
22.000	4.5	4.5	4.5	4.5	4.5
22.500	4.5	4.5	4.5	4.5	4.5
23.000	4.5	4.5	4.5	4.5	4.5
23.500	4.5	4.5	4.5	4.5	4.6
24.000	4.6	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: Time-Depth - 2
Scenario: Pre-Development 100 year

Return Event: 100 years
Storm Event: 100-yr 24 hr

Time-Depth Curve: 100-yr 24 hr	
Label	100-yr 24 hr
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.0	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.1	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.2
3.000	0.2	0.2	0.2	0.2	0.2
3.500	0.2	0.2	0.2	0.2	0.2
4.000	0.2	0.2	0.2	0.2	0.2
4.500	0.3	0.3	0.3	0.3	0.3
5.000	0.3	0.3	0.3	0.3	0.3
5.500	0.3	0.3	0.3	0.3	0.4
6.000	0.4	0.4	0.4	0.4	0.4
6.500	0.4	0.4	0.4	0.4	0.4
7.000	0.5	0.5	0.5	0.5	0.5
7.500	0.5	0.5	0.5	0.5	0.5
8.000	0.5	0.6	0.6	0.6	0.6
8.500	0.6	0.6	0.6	0.6	0.7
9.000	0.7	0.7	0.7	0.7	0.7
9.500	0.7	0.8	0.8	0.8	0.8
10.000	0.8	0.8	0.9	0.9	0.9
10.500	0.9	1.0	1.0	1.0	1.0
11.000	1.1	1.1	1.1	1.2	1.2
11.500	1.3	1.4	1.6	2.0	2.6
12.000	3.0	3.1	3.2	3.3	3.3
12.500	3.4	3.4	3.4	3.5	3.5
13.000	3.5	3.5	3.6	3.6	3.6
13.500	3.6	3.7	3.7	3.7	3.7
14.000	3.7	3.8	3.8	3.8	3.8
14.500	3.8	3.8	3.8	3.9	3.9
15.000	3.9	3.9	3.9	3.9	3.9
15.500	4.0	4.0	4.0	4.0	4.0
16.000	4.0	4.0	4.0	4.0	4.1
16.500	4.1	4.1	4.1	4.1	4.1
17.000	4.1	4.1	4.1	4.1	4.1

Subsection: Time-Depth Curve
Label: Time-Depth - 2
Scenario: Pre-Development 100 year

Return Event: 100 years
Storm Event: 100-yr 24 hr

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	4.2	4.2	4.2	4.2	4.2
18.000	4.2	4.2	4.2	4.2	4.2
18.500	4.2	4.2	4.3	4.3	4.3
19.000	4.3	4.3	4.3	4.3	4.3
19.500	4.3	4.3	4.3	4.3	4.3
20.000	4.3	4.3	4.4	4.4	4.4
20.500	4.4	4.4	4.4	4.4	4.4
21.000	4.4	4.4	4.4	4.4	4.4
21.500	4.4	4.4	4.4	4.4	4.4
22.000	4.5	4.5	4.5	4.5	4.5
22.500	4.5	4.5	4.5	4.5	4.5
23.000	4.5	4.5	4.5	4.5	4.5
23.500	4.5	4.5	4.5	4.5	4.6
24.000	4.6	(N/A)	(N/A)	(N/A)	(N/A)

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.400
Slope	0.074 ft/ft
2 Year 24 Hour Depth	1.9 in
Average Velocity	0.10 ft/s
Segment Time of Concentration	0.275 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	139.00 ft
Is Paved?	False
Slope	0.055 ft/ft
Average Velocity	3.78 ft/s
Segment Time of Concentration	0.010 hours

Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	1,109.00 ft
Is Paved?	True
Slope	0.025 ft/ft
Average Velocity	3.21 ft/s
Segment Time of Concentration	0.096 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.381 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Time of Concentration Calculations
Label: Basin B1
Scenario: Pre-Development 100 year

Return Event: 100 years
Storm Event: 100-yr 24 hr

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.400
Slope	0.116 ft/ft
2 Year 24 Hour Depth	1.9 in
Average Velocity	0.12 ft/s
Segment Time of Concentration	0.230 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	249.00 ft
Is Paved?	False
Slope	0.049 ft/ft
Average Velocity	3.57 ft/s
Segment Time of Concentration	0.019 hours

Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	542.00 ft
Is Paved?	False
Slope	0.025 ft/ft
Average Velocity	2.55 ft/s
Segment Time of Concentration	0.059 hours

Segment #4: TR-55 Shallow Concentrated Flow	
Hydraulic Length	196.00 ft
Is Paved?	False
Slope	0.012 ft/ft
Average Velocity	1.77 ft/s
Segment Time of Concentration	0.031 hours

Segment #5: TR-55 Shallow Concentrated Flow	
Hydraulic Length	265.00 ft
Is Paved?	False
Slope	0.032 ft/ft
Average Velocity	2.89 ft/s
Segment Time of Concentration	0.026 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.365 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.400
Slope	0.038 ft/ft
2 Year 24 Hour Depth	1.9 in
Average Velocity	0.08 ft/s
Segment Time of Concentration	0.359 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	98.00 ft
Is Paved?	False
Slope	0.079 ft/ft
Average Velocity	4.53 ft/s
Segment Time of Concentration	0.006 hours

Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	59.00 ft
Is Paved?	False
Slope	0.042 ft/ft
Average Velocity	3.31 ft/s
Segment Time of Concentration	0.005 hours

Segment #4: TR-55 Shallow Concentrated Flow	
Hydraulic Length	914.00 ft
Is Paved?	True
Slope	0.020 ft/ft
Average Velocity	2.87 ft/s
Segment Time of Concentration	0.088 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.459 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.400
Slope	0.040 ft/ft
2 Year 24 Hour Depth	1.9 in
Average Velocity	0.08 ft/s
Segment Time of Concentration	0.352 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	273.00 ft
Is Paved?	False
Slope	0.050 ft/ft
Average Velocity	3.61 ft/s
Segment Time of Concentration	0.021 hours

Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	286.00 ft
Is Paved?	False
Slope	0.035 ft/ft
Average Velocity	3.02 ft/s
Segment Time of Concentration	0.026 hours

Segment #4: TR-55 Shallow Concentrated Flow	
Hydraulic Length	158.00 ft
Is Paved?	False
Slope	0.019 ft/ft
Average Velocity	2.22 ft/s
Segment Time of Concentration	0.020 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.419 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Runoff CN-Area
Label: Basin B1
Scenario: Post-Development 100 year

Return Event: 100 years
Storm Event: 100-yr 24 hr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
SOIL D- PONDEROSA PINE	75.000	2.120	0.0	0.0	75.000
IMPERVIOUS AREA	98.000	6.320	0.0	0.0	98.000
SOIL C- PONDEROSA PINE	65.000	4.030	0.0	0.0	65.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	12.470	(N/A)	(N/A)	83.425

Subsection: Runoff CN-Area
Label: Basin B1
Scenario: Pre-Development 100 year

Return Event: 100 years
Storm Event: 100-yr 24 hr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Soil C-Pine	65.000	8.220	0.0	0.0	65.000
Soil D-pine	75.000	3.880	0.0	0.0	75.000
Impervious Area	98.000	0.770	0.0	0.0	98.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	12.870	(N/A)	(N/A)	69.989

Subsection: Runoff CN-Area
Label: Basin B2
Scenario: Post-Development 100 year

Return Event: 100 years
Storm Event: 100-yr 24 hr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Soil C - Pine	65.000	3.290	0.0	0.0	65.000
Impervious	98.000	3.780	0.0	0.0	98.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	7.070	(N/A)	(N/A)	82.644

Subsection: Runoff CN-Area
Label: Basin B2
Scenario: Pre-Development 100 year

Return Event: 100 years
Storm Event: 100-yr 24 hr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Soil C - Pine	65.000	6.560	0.0	0.0	65.000
Impervious Area	98.000	0.100	0.0	0.0	98.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	6.660	(N/A)	(N/A)	65.495

Storm Event	100-yr 24 hr
Return Event	100 years
Duration	24.000 hours
Depth	4.6 in
Time of Concentration (Composite)	0.381 hours
Area (User Defined)	12.470 acres

Computational Time Increment	0.051 hours
Time to Peak (Computed)	12.099 hours
Flow (Peak, Computed)	34.59 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	34.58 ft³/s

Drainage Area	
SCS CN (Composite)	83.000
Area (User Defined)	12.470 acres
Maximum Retention (Pervious)	2.0 in
Maximum Retention (Pervious, 20 percent)	0.4 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.8 in
Runoff Volume (Pervious)	125,794.274 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	125,248.000 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.381 hours
Computational Time Increment	0.051 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	37.06 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.254 hours
Unit receding limb, Tr	1.017 hours
Total unit time, Tb	1.271 hours

Storm Event	100-yr 24 hr
Return Event	100 years
Duration	24.000 hours
Depth	4.6 in
Time of Concentration (Composite)	0.365 hours
Area (User Defined)	12.870 acres

Computational Time Increment	0.049 hours
Time to Peak (Computed)	12.105 hours
Flow (Peak, Computed)	21.89 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	21.72 ft³/s

Drainage Area	
SCS CN (Composite)	70.000
Area (User Defined)	12.870 acres
Maximum Retention (Pervious)	4.3 in
Maximum Retention (Pervious, 20 percent)	0.9 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.7 in
Runoff Volume (Pervious)	80,185.934 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	79,733.000 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.365 hours
Computational Time Increment	0.049 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	39.99 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.243 hours
Unit receding limb, Tr	0.972 hours
Total unit time, Tb	1.215 hours

Storm Event	100-yr 24 hr
Return Event	100 years
Duration	24.000 hours
Depth	4.6 in
Time of Concentration (Composite)	0.459 hours
Area (User Defined)	7.070 acres

Computational Time Increment	0.061 hours
Time to Peak (Computed)	12.167 hours
Flow (Peak, Computed)	17.61 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	17.47 ft³/s

Drainage Area	
SCS CN (Composite)	83.000
Area (User Defined)	7.070 acres
Maximum Retention (Pervious)	2.0 in
Maximum Retention (Pervious, 20 percent)	0.4 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.8 in
Runoff Volume (Pervious)	71,320.397 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	70,898.000 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.459 hours
Computational Time Increment	0.061 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	17.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.306 hours
Unit receding limb, Tr	1.223 hours
Total unit time, Tb	1.529 hours

Storm Event	100-yr 24 hr
Return Event	100 years
Duration	24.000 hours
Depth	4.6 in
Time of Concentration (Composite)	0.419 hours
Area (User Defined)	6.660 acres

Computational Time Increment	0.056 hours
Time to Peak (Computed)	12.181 hours
Flow (Peak, Computed)	7.91 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	7.87 ft³/s

Drainage Area	
SCS CN (Composite)	65.000
Area (User Defined)	6.660 acres
Maximum Retention (Pervious)	5.4 in
Maximum Retention (Pervious, 20 percent)	1.1 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.4 in
Runoff Volume (Pervious)	33,075.432 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	32,796.000 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.419 hours
Computational Time Increment	0.056 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.01 ft³/s

Subsection: Unit Hydrograph Summary
Label: Basin B2
Scenario: Pre-Development 100 year

Return Event: 100 years
Storm Event: 100-yr 24 hr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.279 hours
Unit receding limb, Tr	1.118 hours
Total unit time, Tb	1.397 hours

Index

B

Basin B1 (Runoff CN-Area, 100 years (Post-Development 100 year))...16

Basin B1 (Runoff CN-Area, 100 years (Pre-Development 100 year))...17

Basin B1 (Time of Concentration Calculations, 100 years (Post-Development 100 year))...7, 8

Basin B1 (Time of Concentration Calculations, 100 years (Pre-Development 100 year))...9, 10, 11

Basin B1 (Unit Hydrograph Summary, 100 years (Post-Development 100 year))...20, 21

Basin B1 (Unit Hydrograph Summary, 100 years (Pre-Development 100 year))...22, 23

Basin B2 (Runoff CN-Area, 100 years (Post-Development 100 year))...18

Basin B2 (Runoff CN-Area, 100 years (Pre-Development 100 year))...19

Basin B2 (Time of Concentration Calculations, 100 years (Post-Development 100 year))...12, 13

Basin B2 (Time of Concentration Calculations, 100 years (Pre-Development 100 year))...14, 15

Basin B2 (Unit Hydrograph Summary, 100 years (Post-Development 100 year))...24, 25

Basin B2 (Unit Hydrograph Summary, 100 years (Pre-Development 100 year))...26, 27

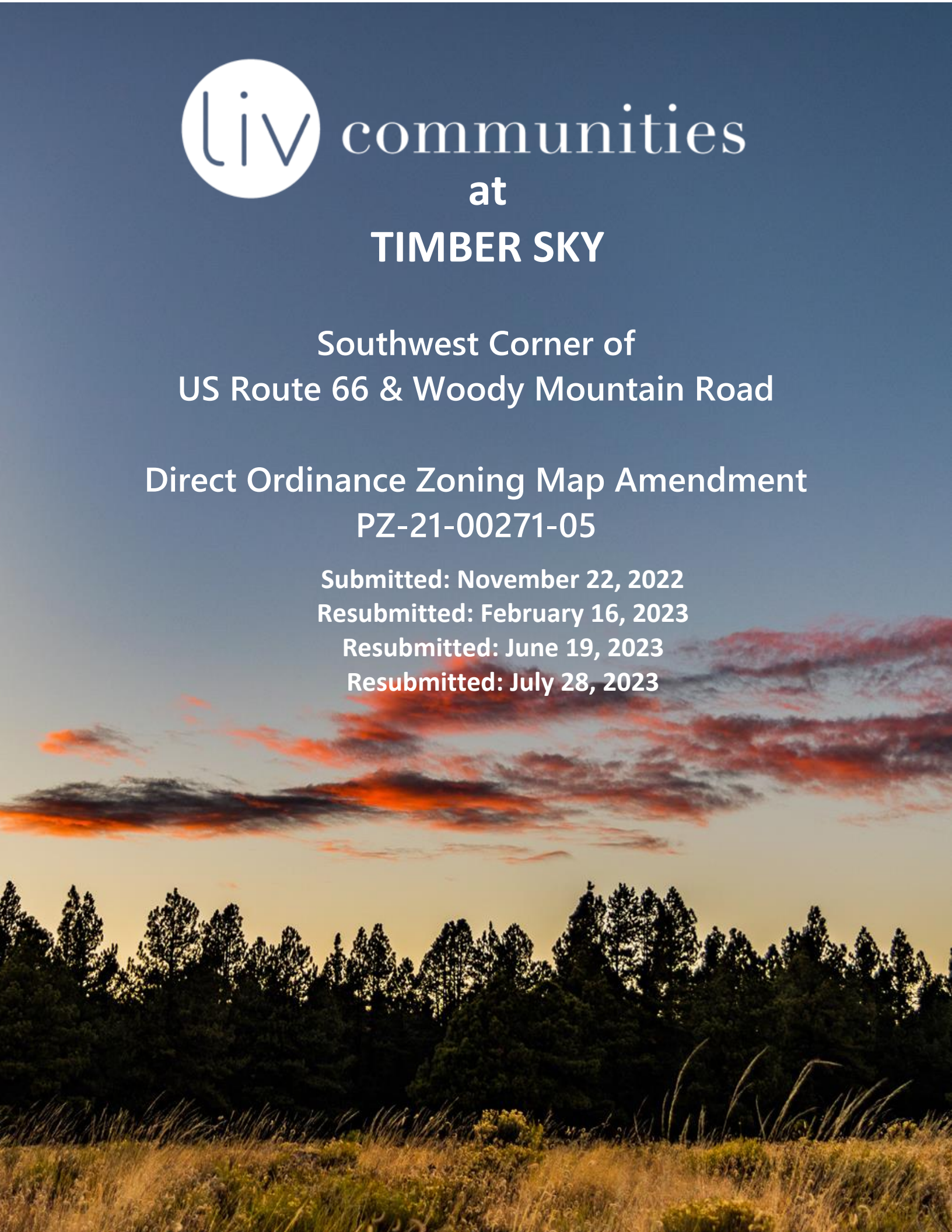
M

Master Network Summary...2

T

Time-Depth - 2 (Time-Depth Curve, 100 years (Post-Development 100 year))...3, 4

Time-Depth - 2 (Time-Depth Curve, 100 years (Pre-Development 100 year))...5, 6



liv communities

at

TIMBER SKY

Southwest Corner of
US Route 66 & Woody Mountain Road

Direct Ordinance Zoning Map Amendment
PZ-21-00271-05

Submitted: November 22, 2022
Resubmitted: February 16, 2023
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TABLE OF CONTENTS

1. INTRODUCTION 1
2. LOCATION AND CONTEXT 3
3. REGIONAL PLAN OVERVIEW 5
4. DEVELOPMENT PROPOSAL 7
   SITE PLAN. 7
   AMENITIES. 9
   RESPONSE TO CARBON NEUTRAILITY PLAN 10
   CIVIC SPACE 11
   ACCESS AND CIRCULATION. 12
   PEDESTRIAN CONNECTIVITY. 13
5. RESOURCE PROTECTION OVERLAY 14
7. INFRASTRUCTURE & PUBLIC SERVICES 14
   WATER / SEWER. 14
   STORMWATER / PRELIMINARY DRAINAGE 15
   MATERIAL MANAGEMENT STRATEGIES. 16
7. CONSTRUCTION LOGISTICS PLAN 17
8. PHASING 18
9. PROJECT BENEFIT TO PUBLIC & COMMUNITY 18
10. CONCLUSION 19

DEVELOPMENT TEAM

PROPERTY OWNER / APPLICANT

Vintage Partners
2501 East Camelback Road, Suite 214
Phoenix, Arizona 85016
Contact: Walter Crutchfield
E. walter@vintagevp.com

DEVELOPER

Liv Communities, LLC
8950 South 52nd Street, Suite 115
Tempe, Arizona 85284
Contact: Beth Heath
E. bheath@livcommunities.com

ARCHITECTURE

Todd & Associates
4019 North 44th Street
Phoenix, Arizona 85018
Contact: Scott Pieart
E. spieart@toddassoc.com

CIVIL ENGINEERING

Shephard-Wesnitzer, Inc. (SWI)
an Ardurra Company
110 West Dale Avenue
Flagstaff, Arizona 86001
Contact: Guillermo Cortes / Stephen Irwin
E. gcortes@swiaz.com / sirwin@swiaz.com

LEGAL REPRESENTATIVE

Gammage & Burnham, PLC
40 North Central Avenue, 20th Floor
Phoenix, Arizona 85004
Contact: Lindsay C. Schube / Nick Sobraske
E. lschube@gblaw.com
P. (602) 256-4471

1. INTRODUCTION

To facilitate the larger community plan of, "all types of housing for all economic levels," Vintage Partners ("Vintage"), in partnership with Liv Communities ("Liv") (collectively, the "Applicant"), is proposing to rezone and develop the approximate 13.01 Development Site Area acres located at the southwest corner of US Route 66 and Woody Mountain Road ("Property").

The approximate 1.815 acres ("1.8 Acres") of the Property, located at the immediate corner of US Route 66 and Woody Mountain Road, are currently located in unincorporated Coconino County and zoned Coconino County G-General Zone. Annexation application PZ-21-00271-04 has been submitted to annex the 1.8 Acres.

The Applicant is proposing to rezone the Property, including the 1.8 Acres, from RR—RPO (Rural Residential—Resource Protection Overlay) to HR—RPO (High-Density Residential—Resource Protection Overlay) ("Application"). See Legal Description.

This Application, which is planned as the final extension of the Timber Sky master-planned community, facilitates the development of Liv Timber Sky, an accessible, outdoor-centric multi-family community consisting of 214 rental dwelling units at +/- 16.44 dwelling units per acre oriented around a centrally located resident amenity, open space area, and clubhouse and fitness area. Liv Timber Sky adds a much needed, additional rental housing option to the Timber Sky master plan. True community

must include all economic levels to be diverse, and Liv Timber Sky will allow individuals to enjoy the lifestyle of Timber Sky before they are able to purchase a home in Timber Sky.

Vintage is a real estate development and investment firm that has extensive experience developing forward-thinking and award-winning projects throughout Arizona for more than 30 years. Projects in Flagstaff include the highly successful Timber Sky master-planned community—the finest Dark Skies compliant community in the State; their innovative public-private partnership with the Arizona Department of Transportation (ADOT) and the City to relocate the former Harkins Theater on Woodlands Village Boulevard and adaptively reuse the building for ADOT and Motor Vehicle Division offices, which also includes the realignment of a major regional roadway in the City; and most recently, Sky Cottages at Timber Sky—a much anticipated single-family rental community, which includes some of the most—if not the most—extensive resident amenities in the City. Other Vintage projects in Arizona include the redevelopment and restoration of Uptown Plaza in midtown Phoenix and the adaptive re-use of two historically significant mid-Century office buildings into the popular Rise Uptown hotel.

Liv, the proposed developer, is an experienced multi-family and senior housing residential development and management company that designs and operates communities that promote eco-friendly, social, and healthy lifestyles for their residents. Liv has developed and operated eight multi-family communities and

four senior housing communities in the greater-Phoenix metropolitan area with two new communities opening soon.

Liv Timber Sky represents an opportunity for complete diversification of housing choices within the Timber Sky master-planned community and the greater City. Liv Timber Sky complements the various other developments within the Timber Sky master-plan, including the already diverse housing offerings that Vintage has strategically contributed to, including: Roers, a 221 affordable unit project; Sky Cottages, a 20 affordable unit and 182 market-rate unit project; Habitat for Humanity, a minimum of 40 affordable starter home project; and variety of single-family for-sale and for-rent homes—there is no other community within the City that has a greater diversity of housing options. The development of this unique parcel of land finalizes Vintage's tireless work efforts on Timber Sky—which is to make places people love, make them widely available, and create diverse economic communities. Liv Timber Sky will expand the attainability of living within the City for all residents, while offering further housing choices for those desirous of calling Timber Sky home.

2. LOCATION AND CONTEXT

The Property is comprised of the approximate 13.01 acres of vacant, unimproved land located at the southwest corner of US Route 66 and Woody Mountain Road, as shown on the below Aerial Map. The Property gently slopes from west to east and contains very few natural resources (trees). There are no known heritage resources on the Property. Of the overall 13.01 acres, the

1.8 Acres, located at the immediate corner of US Route 66 and Woody Mountain Road, are currently located in unincorporated Coconino County (cross-hatched below). The 1.8 Acres will be annexed into the City and are included as part of this Application.

Aerial Map

Moving further outward, surrounding uses include: To the west, Timber Sky, an approved master-planned community containing high-density, medium-density, and single-family residential uses that are planned or under construction zoned HR, MR—Medium Density Residential, R1—Single Family Residential, CS—Commercial Service, and PS—Public Open Space, with the RPO over the entire project; to the south, Sky Cottages at Timber Sky, a single-family for-rent development currently under construction zoned MR—RPO; the City's Public Works Yard to the north across

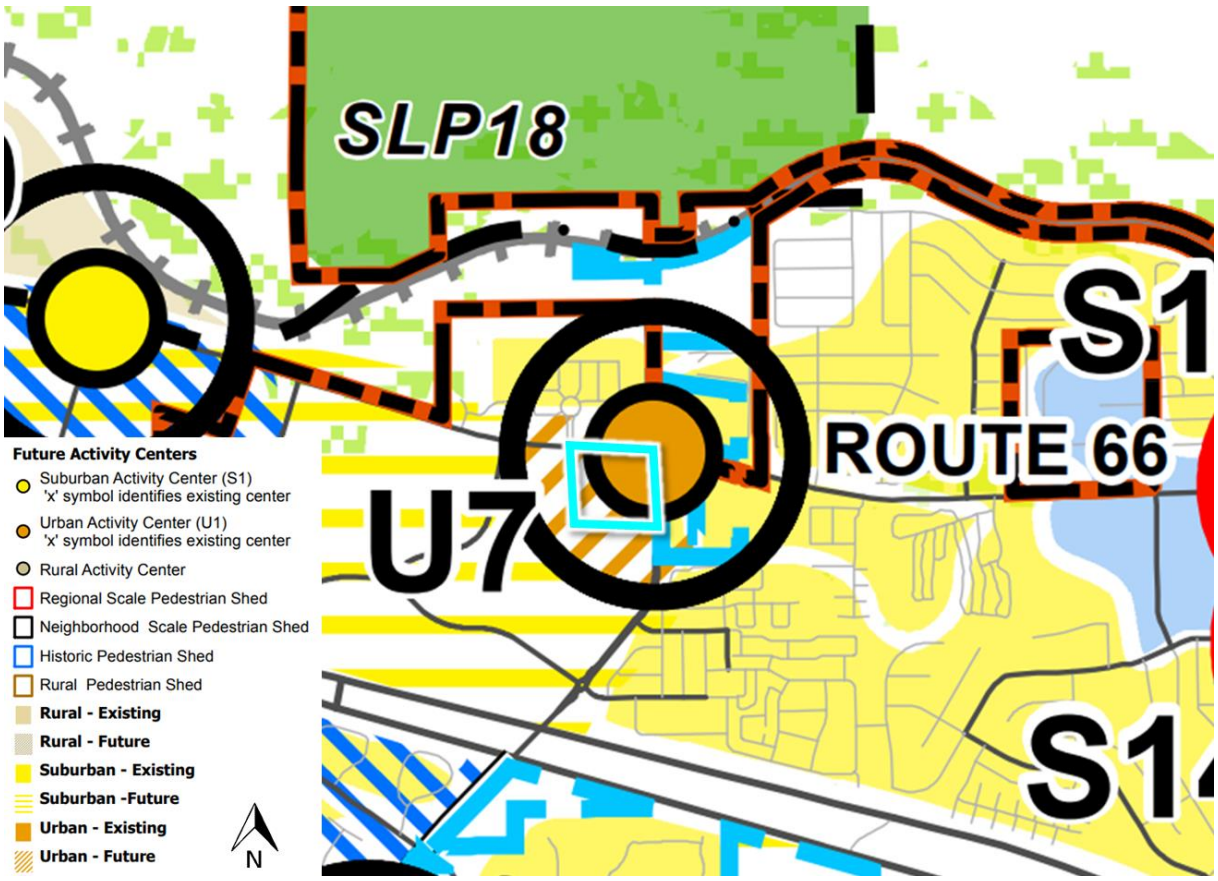
US Route 66; and the Woody Mountain Campground and the Presidio in the Pines residential community zoned HR—RPO to the east across Woody Mountain Road.

View corridors noticeable from the Property include Humphreys and San Francisco Peaks to the north and Mount Elden to the northeast. The Property is accessible and visible from US Route 66 and Woody Mountain Road. The prevailing winds are generally from the southwest and at 7,000 feet. Flagstaff experiences snow and seasonal temperature swings, including periodic freezes and thaw cycles. The relatively limited height of the proposed development will help to maximize sun exposure during these cycles, as to avoid ice build-up on pedestrian walks, including those along the north sides of dwelling units. Precipitation naturally runs to the southeast and northeast of the Property. Subsurface conditions generally consist of rock and/or clay material.

3. REGIONAL PLAN OVERVIEW

The City's 2030 Regional Plan ("Regional Plan") establishes the community's intention for what the region could and should be for future generations and presents a regional context for the preservation and enhancement of the community's character and natural environment while providing for appropriate growth and development. Liv Timber Sky has been thoughtfully and strategically planned to align with the vision and goals set forth in the Regional Plan related to new residential communities within the City's planning boundaries.

The Property is located within the City's Urban Growth Boundary. The Growth Illustration Map within the Regional Plan designates the Property as Urban-Future land use and Neighborhood Scale Urban Activity Center U7, as shown on the below Regional Plan—Growth Illustration Map. Collectively, these designations are intended to promote increased density adjacent to main thoroughfares, such as US Route 66, and, importantly, within pedestrian sheds. The Regional Plan land use designation calls for a minimum of 13 du/ac, which Liv Timber Sky complies with, as described below.



Regional Plan Map

A chapter-by-chapter analysis of the Regional Plan against this application has been conducted that supports Liv Timber Sky's conformance with the Regional Plan. An analysis is as part of this Application demonstrating that the development proposal supports and furthers the goals and policies of the Regional Plan—see Appendix A.

4. DEVELOPMENT PROPOSAL

SITE PLAN. Liv Timber Sky is planned as the final extension of the Timber Sky master-planned community, with a target of 214 multi-family residential dwelling units at an overall density of approximately 16.44 du/ac. Dwellings are planned to consist of a mixture of one-, two-, and three-bedroom units. Specifically, Liv Timber Sky is anticipated to consist of 48 one-bedroom units, 118 two-bedroom units, and 48 three-bedroom units, within two-story carriage units adjacent to the west property line and a series of three-story units evenly distributed through the remainder of the Property. The planned gross residential building square-footage is approximately 281,870, with the total gross square-footage being 298,306. Additionally, the planned lot coverage is 23% (where 50% is the maximum permitted).

Liv Timber Sky is envisioned as a well-connected, village-style urban community anchored around a centrally-located resident amenity and open space areas—all connected by an extensive on-site pedestrian network. Public civic space is also planned at the intersection of US Route 66 and Woody Mountain Road.

The Site Plan includes dwelling units that are strategically located up against the street frontages to help define and reinforce the pedestrian streetscape, along with creating a more urban form and pattern as called for in the Regional Plan. Ground-floor dwelling unit patios are oriented outwards toward US Route 66 and Woody Mountain Road, creating additional interest and interaction with the pedestrian realm.

Numerous pedestrian pathways extend from on-site to the US Route 66 and Woody Mountain Road street frontages giving residents convenient and safe access to the larger Timber Sky pedestrian circulation network and Flagstaff Urban Trail System (FUTS). In addition, Liv Timber Sky is planned to include a comfortable, appealing, and safe pedestrian portal seamlessly connecting residents of both Liv Timber Sky and Sky Cottages. Liv Timber Sky was very intentionally designed not to provide a vehicular connection between the proposed project and Sky Cottages—the planned design promotes clean, multi-modal connectivity, eliminates reliance on automobiles, combustion fuels, and imported energy, and furthers the Carbon Neutrality Plan, all while still providing connectivity between the two projects. This connection is planned as part of a passive open space gathering area, which will include a seating area flanking the walkway and a trellis structure to maximize pedestrian comfort, encourage gathering and social opportunities, and foster community spirit. Liv Timber Sky is designed is purposely designed to welcome people and community, while minimizing vehicular traffic and conflict, which importantly creates a safer, more livable

community for future residents, families, and guests of Liv Timber Sky.

Liv Timber Sky has been designed to integrate into the larger fabric of the area, rather than create an isolated development. This Application recognizes this and that the "edge" of the community is a critical point of interaction between the built and natural environments and requires sensitive consideration. Liv Timber Sky is planned to define this "edge setting" using landscaping, architecture, open spaces, and strategically located pedestrian connections that are specifically intended to integrate Liv Timber Sky into the area as a thoughtful extension of Timber Sky and Sky Cottages. Importantly, Liv Timber Sky uses a minimal amount of perimeter walls, limited to parking screening and decorative theme walls which define the public civic space, thus creating an open and inviting edge to the community. Collectively, these improvements create an "edge setting" that promotes visual and physical connectivity to/from the Property.

AMENITIES. Liv Timber Sky is planned to include a centrally located resident amenity area, open space area, and clubhouse to provide recreational and social opportunities for residents. Liv Timber Sky is anticipated to include various amenities and open space areas for its residences, which are currently planned to include a clubhouse and fitness center, spa, barbeque area and ramadas, fire pit and seating area, pickleball/sports court, game lawn, tot lot/play area, dog park, and other active and passible open space areas. These amenities have been designed to create an inviting resident experience and to encourage social opportunities. In

addition, pedestrian pathways are planned from all dwelling units to these central amenities to ensure safe and convenient access.

RESPONSE TO CARBON NEUTRALITY PLAN. The City has made progress reducing emissions, developing innovative sustainability initiatives, and building community support for climate action policies. The Carbon Neutrality Plan was developed by the City and community to build on key climate action successes and provide a pathway to help with decarbonization. As partners to the City and community, Vintage and Liv are planning to incorporate the following climate-related amenities as part of development of the Property with the goal of helping to reduce greenhouse gas emissions in the City:

Electric Only. Much of the City's greenhouse gas emissions mitigation can be achieved by utilizing electricity (as compared to other forms of power). There are numerous good reasons for units to be all-electric, including the health of the unit's residents and the health of the planet and community. Many homes and businesses in the City burn natural gas and oil for heating, cooking, drying, etc., which results in tons of carbon dioxide emissions annually—overall the use of these fuels is responsible for a considerable amount of the City's emissions. Vintage and Liv intend on providing all units within the development to be constructed and equipped for electricity. No natural gas lines will be installed within the development and no natural gas appliances will be incorporated into the units.

Electric Car Sharing Service. Vintage and Liv intend on contracting with an electric car sharing service and platform, providing electric vehicles to residents. It is planned that these electric vehicles will be conveniently located on the Property with dedicated parking and EV charging stations. Providing an electric car sharing service and platform, while a unique business model, contributes to attracting and retaining residents, while importantly, providing an essential service—affordability, convenience, safe, zero-emission transportation, all of which support the Carbon Neutrality Plan.

Vehicle Charging Stations. Liv and Vintage plan to provide 9-dual-port surface parking lot vehicle charge stations (for a total of 18) and 108 garages with 220v outlets for EV charging for its residents, or until such time is no longer relevant or alternative technology is preferred. EV charging is an important community benefit in that they reduce carbon dioxide emissions and aid the environment—again, supporting the Carbon Neutrality Plan.

CIVIC SPACE. Civic space is planned at the immediate southwest corner of US Route 66 and Woody Mountain Road—the most visually prominent and punctuated location on the Property. This civic space is strategically oriented outward and positioned so that it will be visually and physically connected with the public realm, including the FUTS, as well as be inviting to the public and residents. A hardscape landing is planned to create opportunities for social interaction that fosters a spirit of community, while

allowing pedestrians to be comfortably set back from the adjoining streets. A pathway extending from the landing will connect residents with Liv Timber Sky. By consciously integrating this public space into the development, Liv Timber Sky will feel like an extension of the public realm that creates a sense of place and brings shared value to the community.

ACCESS AND CIRCULATION. Access to Liv Timber Sky is planned via a boulevard-type entry from Woody Mountain Road. The proposed entry will feature landscaping, shade trees, sidewalks, monument signage, and dark skies compliant lighting—creating a distinctive gateway into the Liv Timber Sky community. Vehicular circulation within the community will be provided in a looped configuration around the central amenity area, with a secondary emergency-only access point at the northwest corner of the Property.

Vehicular access at Liv Timber Sky is planned to be gated, which is intended to control and minimize unwanted cut-through or otherwise unsolicited vehicular traffic. The Applicant sees this as an opportunity to minimize vehicular traffic and potential vehicular/pedestrian conflicts, while still welcoming people (through the numerous pedestrian connections discussed above), fostering community spirit, and promoting social opportunities within Liv Timber Sky. Much thought and care has gone in to creating a community for its future residents, families, and guests that is safer and more livable.

In addition, Liv Timber Sky is intentionally designed to include a pedestrian connection between the project and Sky Cottages, which importantly promotes clean, multi-modal connectivity, eliminates reliance on automobiles, combustion fuels, and imported energy, and furthers the Carbon Neutrality Plan, all while still providing connectivity between the two projects.

Off-site roadway improvements will include the south-half street of US Route 66 along the Property's northern frontage and the west-half street of Woody Mountain Road along the Property's eastern frontage. The half-street improvements are also planned to include an extension of the sidewalk from Timber Sky along US Route 66 and an extension of the FUTS from Sky Cottages along Woody Mountain Road, along with landscaping enhancement to create consistent, inviting, and comfortable streetscape and pedestrian corridors.

PEDESTRIAN CONNECTIVITY. The Liv Timber Sky pedestrian circulation network will ensure that residents are afforded readily accessible and proximate access to amenities, adjoining developments, and the greater regional pedestrian network. The internal pedestrian circulation network has been thoughtfully designed to promote and facilitate non-vehicular circulation by Liv Timber Sky residents. Internal roadways will include sidewalks to connect units, civic space, amenities, and parking areas. Off-site pedestrian improvements will include an extension of the sidewalk from Timber Sky along US Route 66 and the FUTS from Sky Cottages along Woody Mountain Road, along with the pedestrian

portal seamlessly connecting residents of both Liv Timber Sky and Sky Cottages.

5. RESOURCE PROTECTION OVERLAY

The Property is bounded by sparse Ponderosa Pine trees on the southern and eastern edges. The tree resources on the Property have been surveyed and accounted for in accordance with the Zoning Code. The tree survey has been used to determine the preserved tree canopy based on the development proposal. Liv Timber Sky has been planned to preserve approximately 52% of the tree resources. Liv Timber Sky intends on utilizing these mature Ponderosa Pine trees as part of the tree resource calculation for the proposed community.

A Natural Resource Survey and Protection Plan accounting for the trees on the Property was included with this Application. In addition, there no steep slope resources on the Property— the Property slopes from 0% to 16.99%.

7. INFRASTRUCTURE & PUBLIC SERVICES

WATER / SEWER. A Water and Sewer Impact Analysis (WSIA) was previously completed by the City for a similar land use on the Property, dated December 20, 2013. On September 20, 2022, the City issued a letter waiving the requirement for a WSIA as part of this Application.

Water to the site will be provided by an 8-inch water main loop within the project site connecting to a new 8-inch PVC water main in the northeast corner of Sky Cottages and to an existing 12-inch DIP water main in Woody Mountain Road. Water meters and domestic service lines will be provided for each building. Water meters and service sizing will be determined during final design. Sewer will be provided by two 8-inch sewer main branches throughout the project site connecting to a new sewer manhole near the northeast corner of Sky Cottages. Sewer service will be provided to each building and sizing will be determined during final design.

Off-site sewer improvements will be required for this development as identified in the Aspen Heights WSIA and as shown in the City of Flagstaff Sewer Project WW3457 Kit Carson to Kaibab Lane Sewer Main. The offsite sewer improvements consist of upsizing approximately 5,500 feet of 10-inch VCP with 1,700 feet of 18-inch PVC, 1,300 feet of 21inch PVC, and 2,500 feet of 24-inch DIP. The offsite sewer improvements will be completed with the construction of the Sky Cottages.

STORMWATER / PRELIMINARY DRAINAGE. The site will be designed to provide positive drainage away from the proposed buildings and will not adversely affect the drainage characteristics of the adjacent properties. The Property drains southeast and northeast toward the South Fork Clay Wash. The proposed drainage path will mimic the existing conditions. Off-site drainage from the west will be routed through the Property via surface flow and storm drain.

The City requires detention/LID for all commercial developments or any developments greater than 1/4 acre in size. The existing Property is undeveloped. With the proposed improvements, approximately 439,589 SF of impervious area will be added. The project will retain the in the 100-year, 24-hour runoff volume and mitigate the post-development peak runoff rates. The Property will require 36,632 CF of LID runoff capture volume. An underground chamber system is planned in both the northeast and southeast corners of the Property. Additionally, native and drought tolerant landscaping will be used throughout the proposed development to minimize watering needs.

MATERIAL MANAGEMENT STRATEGIES. Trash and recycling services will be provided on-site. Liv Timber Sky will also provide a waste compactor that will help to reduce the volume of waste going into landfills, resulting in more efficient waste collection and fewer garbage truck trips.

PUBLIC SERVICES.

ELECTRIC. The Property is located within Arizona Public Services (APS) Electrical Service area. There are existing APS facilities in place to serve the Property.

COMMUNICATION. The Property is located within service area of SuddenLink and CenturyLink for all telecommunication services, including phone, cable, and internet.

FIRE. The City's Fire Department provides fire coverage for the Property. The closest fire station is Station #1, located at 1972 South Thompson Street.

POLICE. The City's Police Department will be the police protection agency for the Property.

SCHOOLS. The project lies within the Flagstaff Unified School District. It is anticipated that elementary age children (K-5) will attend Sechrist Elementary School or De Miguel Elementary School. Middle school age children (6-8) will attend Mt. Elden Middle School. Flagstaff High School will serve grades 9-12.

Approval of this Application will not endanger, jeopardize, or otherwise constitute a hazard to the Property or the surrounding area.

7. CONSTRUCTION LOGISTICS PLAN

The Property is currently undeveloped. It is anticipated that the construction entrance/exit will be provided near the southeast corner of the Property along Woody Mountain Road. The construction driveway will be used and protected, as per SWPPP requirements. A construction trailer is planned near the Woody Mountain Road driveway. The southwest portion of the Property is planned for construction and material storage, layout, and staging. Temporary power will be connected, and construction water will be provided as needed. The Property will be fenced

during construction for security and safety purposes. Refer to the Construction Logistics Map.

8. PHASING

Liv Timber Sky will be developed in one phase, as market conditions warrant. Development plans will be submitted to the City for review to ensure proper and orderly development.

9. PROJECT BENEFIT TO PUBLIC & COMMUNITY

Vintage and Liv recognize that quality community and high-quality development shapes the community character, opens-up economic opportunities, and improves livability for all residents.

Approval of this project will provide numerous community benefits. The project develops a vacant, underutilized Activity Center with a contextually appropriate development that provides additional housing opportunities within the City. The proposed use is compatible with the surrounding area, including access, traffic and parking, and a network of FUTS, pedestrian, bicycle, and vehicular circulation; adequacy of site, civic, and open space; tree resources; landscaping and screening; and efficient use of infrastructure. The architecture, including style, colors, and materials and siting of the buildings, is compatible with and complementary of that built and planned within the Timber Sky master plan. In addition, Vintage and Liv have made meaningful commitment to the Carbon Neutrality Plan, in effort to reduce

emissions, including electric-only units, car sharing, and vehicular car charging stations.

Approval of the project will serve the public interest, health, safety, convenience, and welfare, and will add to the public good. Development of the Property will not only enhance the Timber Sky master plan but will also positively contribute to the City and community.

10. CONCLUSION

The vision for Liv Timber Sky is to create a cohesive, inclusive community that promotes meaningful interaction through shared spaces and amenities, quality living environments, and friendly and responsive community management. Vintage and Liv look forward to partnering together to bring this exciting new housing opportunity to Timber Sky, which will further the City's goal to transition this area into an active, urban environment, as envisioned by the Regional Plan. Approval of Liv Timber Sky will round out the diversity of housing options with the Timber Sky master-plan. With these market-rate rentals, along with the affordable housing, single-family for-rent, single-family affordable starter homes, and single-family homes—there is no other community in the City that has a greater diversity of housing options.

LIV TIMBER SKY

Appendix A—Regional Plan Conformance

The Regional Plan provides the City with guiding policies and goals to assist in its decision-making process. This project involves the rezoning of approximately 13.01 acres of property located at the southwest corner of US Route 66 and Woody Mountain Road. Development proposals should be assessed for consistency with the goals and policies of the Regional Plan. The Property is located within the City's Urban Growth Boundary. The Regional Plan Growth Illustration Map designates the Property as Urban-Future land use and Neighborhood Scale Urban Activity Center U7, as shown on the below Regional Plan—Growth Illustration Map. The proposed development is guided by these land uses. A chapter-by-chapter review of the Regional Plan against this Application has been conducted and the following analysis demonstrates that approval of Liv Timber Sky is consistent with and furthers the goals and policies of the Regional Plan that are intended to apply to development of new communities designated Urban—Future land use.

CHAPTER IV—ENVIRONMENTAL PLANNING & CONSERVATION

Air Quality

Goal E&C.1. Proactively improve and maintain the region's air quality.

REPSONSE: Liv Timber Sky is located in an area of the City that includes large employers, including W.L. Gore, Swire Coca-Cola, Banker Insulation, and the City Public Works Yard. This adjacency will give employees an opportunity to live near their work, thereby reducing their carbon footprint. Additionally, Liv Timber Sky provides connection to a greater pedestrian network, including the FUTs along Woody Mountain Road, which promotes alternative modes of transportation, such as walking, bicycling, etc.

Climate Change & Adaptation

Goal E&C.2. Reduce greenhouse gas emissions.

Policy E&C.2.1. Encourage the reduction of all energy consumption, especially fossil-fuel generated energy, in public, commercial, industrial, and residential sectors.

Goal E&C.3. Strengthen community and natural environment resiliency through climate adaptation efforts.

Policy E&C.3.2. Review and revise existing regulations, standards, and plans (codes, ordinances, etc.) to reduce the community's vulnerability to climate change impacts).

RESPONSE: The Carbon Neutrality Plan was developed by the City and community to build on key climate action successes and provide a pathway to help with decarbonization. As partners to the City and community, Vintage and Liv are planning to incorporate the following climate-related amenities as part of development of the Property, which further the Regional Plan goal of achieving carbon neutrality by 2030:

Electric Only. Much of the City's greenhouse gas emissions mitigation can be achieved by utilizing electricity (as compared to other forms of power). There are numerous good reasons for units to be all-electric, including the health of the unit's residents and the health of the planet and community. Many homes and businesses in the City burn natural gas and oil for heating, cooking, drying, etc., which results in tons of carbon dioxide emissions annually—overall the use of these fuels is responsible for a considerable amount of the City's emissions. Vintage and Liv intend on providing all units within the development to be constructed and equipped for electricity. No natural gas lines will be installed within the development and no natural gas appliances will be incorporated into the units.

Electric Car Sharing Service. Vintage and Liv intend on contracting with an electric car sharing service and platform, providing electric vehicles to residents. It is planned that these electric vehicles will be conveniently located on the Property with dedicated parking and EV charging stations. Providing an electric car sharing service and platform, while a unique business model, contributes to attracting and retaining residents, while importantly, providing an essential service—affordability, convenience, safe, zero-emission transportation, all of which support the Climate & Adaptation Plan.

Vehicle Charging Stations. Liv and Vintage plan to provide electrical vehicle change stations for residents, or until such time is no longer relevant or alternative technology is preferred. EV charging stations are an important community benefit in that they reduce carbon dioxide emissions and aid the environment—again, supporting the Climate & Adaptation Plan.

Multi-Modal Connectivity. The inclusion of designated pedestrian and bike corridors in new residential developments allows residents access to alternative modes of transportation during much of the year. Liv Timber Sky promotes alternatives to traditional motorized forms of transportation by including an on-site pedestrian circulation system that favors pedestrian and bike access, as well as connects to the off-site FUTS trail. This system ensures that residents are afforded readily accessible and proximate access to the growing pedestrian network in the area, thus encouraging various forms of non-vehicular transportation and ultimately helping to reduce greenhouse emissions and minimize climate change.

Additionally, Vintage and Liv understand the important role sustainable development plays in reducing the strain on our natural resources. Accordingly, Liv Timber Sky is planned to be environmentally responsible and resource efficient in order to optimize energy use and reduce waste. Beginning with building construction, Liv Timber Sky will incorporate locally-sourced materials to the greatest extent possible to reduce transportation distances, which in turn lowers greenhouse gas emissions. The community's landscape design also incorporates native, drought-tolerant vegetation and xeriscaping to reduce water consumption and preserves existing natural features including Flagstaff's cherished Ponderosa Pines.

Liv Timber Sky promotes development that helps the City achieve carbon neutrality through strategies that reduce emissions from transportation, energy, and consumption.

Dark Skies

Goal E&C.5. Preserve dark skies as an unspoiled natural resource, basis for an important economic sector, and core element of community character.

Policy E&C.5.1. Evaluate the impacts of the retention of dark skies regarding lighting infrastructure and regulatory changes, land use decisions or changes, and proposed transportation developments within the region.

Policy E&C.5.4. Encourage uses within Lighting Zone 1 of the lighting codes of the City and County that do not require outdoor lighting, and discourage those which require all-night lighting.

RESPONSE: As an extension of Timber Sky, Liv Timber Sky will utilize stringent lighting standards. Liv Timber Sky incorporates the same lighting standards approved for Timber Sky, which is considered the finest Dark Sky Master Planned Community in the United States by dark sky experts. Additionally, given the Property's proximity to the Lowell and Naval Observatories, these standards Will ensure that Liv Timber Sky will not only meet the City's lighting code, but exceed it.

Vintage recognizes the importance of Flagstaff's dark skies as a significant natural, economic, and cultural resource, and further understands that reducing light pollution comes with the added benefit of decreased energy consumption. In an effort to reduce any negative human or environmental impacts from light pollution, Liv Timber Sky will utilize intelligent, low-spectrum lighting that minimizes glare and ecological disturbance.

Ecosystem Health

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.6.7. Use best practices to control the spread of exotic and invasive plants, weeds, and animals, and eradicate where possible.

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 appropriate to the area.

RESPONSE: The Property contains mature Ponderosa Pine trees, which will be preserved through the application of the Resource Protection Overlay requirements to the greatest extent possible. Flagstaff's Ponderosa Pine forests are a valuable natural resource that contribute to the City's healthy plant and animal communities, reduce the risk of wildfire, and maintain the unique woodland feel of the area. Accordingly, Liv Timber Sky has been planned to preserve as many healthy Ponderosa Pine trees as possible, which will in turn protect and enhance the proposed development. Disturbed areas of the development are planned to be planted with native, drought-tolerant, or edible species in accordance with the City's approved planting palette and will adhere to xeriscape principles so that new landscaping will seamlessly blend with the existing natural environment.

CHAPTER VI—WATER RESOURCES

Planning to Meet Future Demands

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 an 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.

RESPONSE: Vintage and Liv are committed to managing water and wastewater efficiently and prudently. Liv Timber Sky aligns with the Regional Plan's goals and policies of coordinating new growth with existing and planned infrastructure in a sensible manner. The existing and planned infrastructure in the immediate and surrounding areas is intended to support existing development, as well as additional growth in this part of the City.

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.5.5. Give preference to regional detention facilities that are designed in conjunction with smaller low-impact development features, rather than numerous smaller dispersed basins. Encourage regional detention basins to incorporate.

RESPONSE: Liv Timber Sky will be improved with an on-site storm drain system that will drain to the northeast and southeast to two underground chamber systems. The northeast basin will convey flows to an existing storm drain system at the US Route 66 & Woody Mountain Road intersection and the southeast basin will convey flows to the existing box culvert in Woody Mountain Road. Ultimately, the Property discharges to the South Fork Clay Wash. The proposed retention basins will be designed to retain the difference between the 100-year, 24-hour pre- and post-development runoff volumes. The Property will be designed to provide positive drainage away from the proposed buildings and will not adversely affect the drainage characteristics of the adjacent off-site properties. Additionally, native and drought tolerant landscaping will be used throughout the site to minimize water needs.

CHAPTER VII—ENERGY

Goal E.1. Increase energy efficiency.

Policy E.1.1. Promote and encourage innovative building practices through instruction on efficient building materials and methodology.

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.1.6. Develop land use regulations promoting land use patterns that increase energy efficiency.

Policy E.1.10. Incentivize energy efficiency and renewable energy technologies in construction projects.

RESPONSE: Vintage and Liv will create harmony between the natural and built environment. The project will include native vegetation and strategic architecture that respects and responds to the natural environment to maximize energy efficiency. Each of the proposed residential buildings have been thoughtfully designed to be space-efficient, utilize natural light and climate control, and provide energy-efficient fixtures and technology that will reduce utility costs and electricity consumption.

Policy E.1.5. Promote and encourage the expansion and use of energy-efficient modes of transportation:

a. Public transportation
b. Bicycles
c. Pedestrians

RESPONSE: Liv Timber Sky promotes energy-efficient alternatives to motorized forms of transportation by including an on-site pedestrian circulation system that favors pedestrian and bike access, as well as

connects to the off-site FUTS trail. To further encourage residents' use of bike, the project includes outdoor bike racks, which are evenly distributed throughout the project, so that all residents have convenient access to their bike.

Liv Timber Sky has been designed to promote a healthy, outdoor lifestyle that inspires physical activity through the provision of ample on-site recreational and open space areas. The pedestrian network seamlessly integrates the community into the City's regional urban trail and bikeway network, which will encourage the use of environmentally-friendly transportation modes such as walking and biking for recreational and practical purposes.

BUILT ENVIRONMENT

CHAPTER VIII—COMMUNITY CHARACTER

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.

RESPONSE: In recognition of the City's growing awareness of environmental and sustainability issues as they relate to the built environment, Liv Timber Sky preserves as many mature Ponderosa Pine trees as possible, which will further maintain the woodland, nature feel of the area. In addition, the project incorporates new xeriscape landscaping, other open space areas, and architecture and materials—rustic colors, maple and slate colored siding, stone veneer, pitched roofs, which contribute to the character of the project and the community. The preservation of the Ponderosa Trees, along with these additional project elements, create spaces where the "form" of the buildings plays a secondary role to the natural setting, landscape, and architecture, which improve resident well-being, health, and comfort, heighten the aesthetics of the project, and enhance overall quality of life.

Policy CC.1.4. Identify, protect, and enhance gateways, gateway corridors, and gateway communities.

RESPONSE: Liv Timber Sky is planned to maintain the noticeable view corridors from the Property to the San Francisco Peaks to the north and Mount Elden to the northeast, as well as the on-site natural environment and resources to the greatest extent possible.

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.

Policy CC.3.3. Emulate the most celebrated design traditions of Flagstaff, particularly the pre-Route 66 and early Route 66 eras.

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.4.3. 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 wherever 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.

Policy CC.4.9. Develop appropriate tools to facilitate the undergrounding of existing overhead utility lines, especially in established viewsheds and in reinvestment areas.

RESPONSE: Route 66 as a Gateway Corridor for the City. Gateway corridors provide the first impression people have as they enter a region and thus warrant special design considerations.

Liv Timber Sky has been designed to seamlessly blend into the larger fabric of the area, rather than create a series of isolated remnants of natural space. Vintage and Liv recognize the "edge" of the community is a critical point of interaction between the natural and built environments that requires thoughtful consideration. Liv Timber Sky has been designed to respect and be compatible with the natural context of the area and Flagstaff's architectural traditions. Building materials have been selectively chosen to include the use of natural elements, including native building stones, woods, and wide, overhanging eaves that create a mountain contemporary design.

The community's landscape design further softens the transition between the natural and built environment through the incorporation of native plants and xeriscaping to create an aesthetically-pleasing natural landscape. The location of the FUTS trail, in conjunction with the preservation of trees in the landscape buffers and hardscape improvements, maintain the woodland feel of the area creating a visually pleasing buffer between the road and development and create a sense of place.

Further, where appropriate along the perimeter of Liv Timber Sky, very limited fencing is provided along the US Route 66 and Woody Mountain Road frontages, in order to preserve forest views.

The combination of these design elements along US Route 66 culminates in an identify for both the project and the surrounding area.

CHAPTER IX—GROWTH AREAS & LAND USE

Goal LU.2. Develop Flagstaff 's Greenfields in accordance with the Regional Plan and within the growth boundary.

Policy LU.2.1. Design new neighborhoods that embody the characteristics of Flagstaff's favorite neighborhoods – that is, with a mix of uses, a variety of housing types and densities, public spaces, and greater connectivity with multimodal transportation options.

RESPONSE: Liv Timber Sky, as an important component of the City's growth, represents a unique opportunity for diversification of housing choices within the larger Timber Sky master-plan community and the City. Vintage, working with Liv, sees this project as an opportunity to provide an additional unique housing option, further diversifying the housing options for individuals, families, etc. wishing to be a part of, and enjoy the amenities of the greater Timber Sky community.

Policy LU.2.2. Design new development to coordinate with existing and future development, in an effort to preserve viewsheds, strengthen connectivity, and

establish compatible and mutually supportive land uses.

RESPONSE: Liv Timber Sky preserves and celebrates the special scenic and view corridors of the area. From within the Property, distant views towards Humphreys Peak to the north and Mount Elden to the northeast will not be impacted.

The on-site pedestrian circulation network within Liv Timber Sky will ensure that residents are afforded readily accessible and proximate access to amenities, adjoining developments, and the greater regional pedestrian network.

The pedestrian circulation network has been thoughtfully designed to promote and facilitate non-vehicular circulation by Liv Timber Sky residents with the surrounding pedestrian network. A series of internal sidewalks connect units, civic spaces, amenities, and the FUTS along Woody Mountain Road. In addition, pedestrian connectivity is planned planned to include a pedestrian portal seamlessly connecting residents of both Liv Timber Sky and Sky Cottages. This connection is planned as part of a passive open space gathering area, which will include seating flanking the walkway and a trellis structure to maximize pedestrian comfort and encourage gathering, social opportunities, and fostering community spirit.

Importantly, the development of Liv Timber Sky serves as the last segment in completing a more than 1-1/4 mile, continuous pedestrian path starting from the southwest corner of Sky Cottages along McAllister Ranch Road to the southwest corner of Aries at Timber Sky, which is a

significant pedestrian and recreational benefit to not only residents of Liv Timber Sky, but to the greater community (Presidio in the Pines, Timber Sky, etc.)

Policy LU.2.4. Utilize Low Impact Development (LID) strategies and stormwater best practices as part of the overall design for new development.

RESPONSE: Liv Timber Sky is committed to managing its stormwater efficiently and prudently, including utilizing Low Impact Development strategies.

Goal LU.3. Continue to enhance the region's unique sense of place within the urban, suburban, and rural context.

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.

Policy LU.3.2. Coordinate land use, master planning, and recreational uses, when feasible, with local, state, and federal land management agencies and tribal land owners.

RESPONSE: Liv Timber Sky improves on the existing and planned connectivity and amenities within Timber Sky and the surrounding area. Vintage recognizes that Liv Timber Sky is within an Urban Activity Center at the immediate southwest corner of US Route 66 and Woody Mountain Road, which is planned to include a higher degree of pedestrian and

bicycle connectivity. Accordingly, Liv Timber Sky includes additional opportunities for points of connection. Liv Timber Sky also includes other non-vehicular points of off-site access, including an opportunity for access to the FUTS and to Sky Cottages. Within Liv Timber Sky, Vintage and Liv offer a unique experience to its residents through a varied collection of active and passive amenities that capitalize on the unparalleled access to the natural environment.

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.5.3. Promote compact development appropriate to and within the context of each area type: urban, suburban, and rural.

Policy LU.5.6. Encourage the distribution of density within neighborhoods in relationship to associated activity centers and corridors, infrastructure, transportation, and natural constraints such as slopes and drainages.

RESPONSE: The Property is located within the designated growth boundary set forth in the Regional Plan and is appropriate for Future Urban development adjacent to an Urban Activity Center. Liv Timber Sky has been designed in a compact form to maximize the residential

development potential, while maintaining the natural environment and providing efficient and easy access to on-site open spaces. The units are evenly distributed and oriented around an expansive, centrally located open space and amenity area, as well as a dual-purpose detention basin, which will serve as a secondary amenity.

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.

RESPONSE: The Property is physically bounded to the north by US Route 66 and to the east by Woody Mountain Road, and Sky Cottages to the south and Timber Sky to the west. While Liv Timber Sky may not appear to be a "traditional" infill project, the Property does maintain the characteristics of an infill project (i.e., surrounding by existing or planned development, with physical barriers precluding expansion). Liv Timber Sky, at 16.45 du/ac supports the appropriate land use transition and gradation of residential development from Timber Sky and Sky Cottages to the intersection of US Route 66 and Woody Mountain Road.

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.6.4. Provide appropriate recreational and cultural amenities to meet the needs of residents.

RESPONSE: Liv Timber Sky provides a mix of residential and active and passive open space uses throughout the Property and adds a much-needed residential option to the Timber Sky master plan. True community must include all economic levels to be diverse—this rental product will allow individuals to enjoy the lifestyle of Timber Sky without the long-term commitment and costs of home ownership. The unique character and lifestyle opportunities within Liv Timber Sky will contribute to the presence of a healthy social mix that will enrich the identity and quality of life for all Timber Sky residents.

Goal LU.7. Provide for public services and infrastructure.

Policy LU.7.1. Concentrate 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 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 nonresidential development proposals.

RESPONSE: Liv Timber Sky is a responsible, natural extension of existing development of Timber Sky and a logical next step in the area's growth pattern. Liv Timber Sky has access to all other existing public infrastructure, which creates efficient and convenient points for Liv Timber Sky's future infrastructure connections and improvements. See City WSIA Waiver Letter.

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.

RESPONSE: Liv Timber Sky supports walkable, compact growth through prioritizing on-site pedestrian connectivity and, importantly, off-site connectivity within an Urban Activity Center at the immediate southwest corner of US Route 66 and Woody Mountain Road. As stated above, the development of Liv Timber Sky completes the last segment of a more than 1-1/4 miles, continuous pedestrian path in the area. In addition, pedestrian connectivity is provided between Liv Timber Sky and Sky Cottages, which further fulfills the intent of providing connectivity within Activity Centers. Recognizing that the Property is within an Urban Activity Center, Vintage and Liv has successfully designed this community with the purpose of connecting and focusing residents around a walkable environment.

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.18.4. Encourage developers to provide activity centers and corridors with 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.18.8. 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.18.13. Promote higher density development in targeted areas where economically viable and desired by the public.

RESPONSE: The Property is located within an Urban Activity Center, which promotes increased density and intensity. The proposed development complies with the Regional Plan land use designation. Liv Timber Sky will bring additional and much needed housing opportunities for the City, which also helps to address the City's ongoing housing shortage.

In December 2020, the City Council declared a Housing Emergency recognizing the need to make housing a leading priority for the organization and community. By February 2022, the City adopted the 10-Year Housing Plan as a comprehensive document summarizing the City's immediate and long-term needs and strategies to improve housing availability. Whereas the employment, business, shopping, civic engagement, and cultural opportunity uses contemplated in Goal LU.18, which are also demand driven, have not given rise to an emergency (and, in fact, there are numerous commercial spaces in the City's much more dense, downtown area, which are currently vacant).

There is no market demand for employment, business, shopping, civic engagement, and cultural opportunity uses on the Property; otherwise, one or more of those uses would be proposed.

CHAPTER X—TRANSPORTATION

Goal T.1. Improve mobility and access throughout the region.

Policy T.1.1. Integrate a balanced, multimodal, regional transportation system.

Policy T.1.2. Apply Complete Street Guidelines to accommodate all appropriate modes of travel in transportation improvement projects.

Policy T.1.3. Transportation systems are consistent with the place type and needs of people.

Policy T.1.6. Provide and promote strategies that increase alternate modes of travel and demand for vehicular travel to reduce peak period traffic.

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.

RESPONSE: Liv Timber Sky has been designed to accommodate multiple modes of transportation, both motorized and non-motorized. The community design includes a well-connected internal pedestrian and bicycle network, as well as numerous non-motorized off-site connections—all of which further the Regional Plan goal of achieving carbon neutrality by 2030 and contribute to the Carbon Neutrality Plan. Through this on-site network and the proposed off-site connections,

multi-modal transportation will be facilitated in a safe, efficient, and convenient manner.

Goal T.3. Provide transportation infrastructure that is conducive to conservation, preservation, and development goals to avoid, minimize, or mitigate impacts on the natural and built environment.

RESPONSE: The on-site transportation system has been thoughtfully designed to preserve as many Ponderosa Pine trees as possible and enhance corridors for multi-modal movement. The proposed transportation improvements will complement the native landscape present on the Property and planned native landscaping.

Goal T.4. Promote transportation infrastructure and services that enhance the quality of life of the communities within the region.

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.

Policy T.4.2. Design all gateway corridors, streets, roads, and highways to safely and attractively accommodate all transportation users with contextual landscaping and appropriate architectural features.

RESPONSE: Access to Liv Timber Sky is planned via a boulevard-type entry off Woody Mountain Road. Entries will include landscaping, shade trees, detached sidewalks, project monument signage, and appropriately scaled lighting for both pedestrian and vehicular traffic.

The access drives connect near the center of the community and serve as the organizing element for an "offshoot" looped drive to Woody Mountain Road. The street and sidewalk network has been specifically designed to provide the highest quality pedestrian environment.

Goal T.5. 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 projects.

Policy T.5.2. Improve pedestrian visibility and safety and raise awareness of the benefits of walking.

Policy T.5.3. Identify specific pedestrian mobility and accessibility challenges and develop a program to build and maintain necessary improvements.

Policy T.5.4. Design streets with continuous pedestrian infrastructure of sufficient width to provide safe, accessible use and opportunities for shelter.

Goal T.6. Provide for bicycling as a safe and efficient means of transportation and recreation.

Policy T.6.1. Expand recognition of bicycling as a legitimate and beneficial form of transportation.

Policy T.6.2. Establish and maintain a comprehensive, consistent, and highly connected system of bikeways and FUTS trails.

Policy T.6.4. Encourage bikeways and bicycle infrastructure to serve the needs of a full range of bicyclist experience levels.

RESPONSE: Vintage recognizes the importance of walking and bicycling as a beneficial form of transportation and recreation, which in addition to supporting a healthy community also furthers the Regional Plan goal of achieving carbon neutrality by 2030 and contributes to the Carbon Neutrality Plan.

The on-site pedestrian circulation network within Liv Timber Sky will ensure that residents are afforded readily accessible and proximate access to amenities, adjoining developments, and the greater regional pedestrian network. The internal pedestrian circulation network has been thoughtfully designed to promote and facilitate non-vehicular circulation by Liv Timber Sky residents. Internal roadways will include a sidewalks to connect units, civic space, amenities, and parking areas. Off-site pedestrian improvements will include an extension of the sidewalk from Timber Sky along US Route 66 and the FUTS from Sky Cottages along Woody Mountain Road. In addition, Liv Timber Sky is planned to include a comfortable, appealing, and safe pedestrian portal seamlessly connecting residents of both Liv Timber Sky and Sky Cottages. Liv Timber Sky was very intentionally designed not to provide a vehicular connection between the proposed project and Sky Cottages—the planned design promotes clean, multi-modal connectivity, eliminates

reliance on automobiles, combustion fuels, and imported energy, and furthers the Carbon Neutrality Plan, all while still providing connectivity between the two projects. This connection is planned as part of a passive open space gathering area, which will include a seating area flanking the walkway and a trellis structure to maximize pedestrian comfort, encourage gathering and social opportunities, and foster community spirit. Liv Timber Sky is designed is purposely designed to welcome people and community, while minimizing vehicular traffic and conflict, which importantly creates a safer, more livable community for future residents, families, and guests of Liv Timber Sky.

Goal T.8. Establish a functional, safe, and aesthetic hierarchy of roads and streets.

Policy T.8.2. Maintain the road and street classification system that is based on context, function, type, use, and visual quality.

Policy T.8.4. Protect rights-of-way for future transportation corridors.

RESPONSE:

Liv Timber Sky contributes to creating a system of streets which encourage and facilitate active transportation and improve safety for all transportation modes, while improving the livability and long-term sustainability of the City.

CHAPTER XI—COST OF DEVELOPMENT

Policy CD.1.5. Require that new development pay for a fair and rough proportional share of public facilities, services, and infrastructure.

RESPONSE: Vintage has contributed and contributes to community public facilities, services, and infrastructure in the area and the greater Flagstaff community. Water to the Property will be provided by a main within the project site connecting to a new water main at the northeast corner of Sky Cottages and to an existing water main in Woody Mountain Road. Sewer will be provided by two main branches throughout the project site connecting to a new sewer manhole near the northeast corner of Sky Cottages. These connections will facilitate the orderly extension of water and sewer, which creates efficient and convenient points for Liv Timber Sky's infrastructure systems.

HUMAN ENVIRONMENT

CHAPTER XII—NEIGHBORHOODS, HOUSING & URBAN CONSERVATION

Goal NH.1. Foster and maintain healthy and diverse urban, suburban, and rural neighborhoods in the Flagstaff region.

Goal NH.3. Make available a variety of housing types at different price points, to provide housing opportunity for all economic sectors.

Goal NH.4. All housing is safe and sanitary.

RESPONSE: Liv Timber Sky—as an accessible, athletic, and outdoor community—fosters points of activity, increased density, off-site connections, and multi-modal transportation appropriately located within an Urban Activity Center as called for in the Regional Plan. This Application promotes these goals by providing a much-needed additional housing opportunity that will allow residents to enjoy the lifestyle of Timber Sky. All units are designed to meet current building codes, therefore making the community safe for all future residents.

***

Vintage and Liv strive to meet the goals and policies of the Regional Plan, ensuring a project that recognizes the importance of cooperation between public interest and private development. The project meets most of the Regional Plan's goals and policies; although, there are portions of the Regional Plan that either simply do not apply to the project or the overall intent of the goal is met, but the detailed policies are not practical for this project, such as:

CHAPTER IX—GROWTH AREAS & LAND USE

Policy LU.18.7. Concentrate commercial, retail, services, and mixed uses within the activity center's commercial core.

Policy LU.18.10. Corridors should increase their variety and intensity of uses as they approach activity centers.

RESPONSE: Within the Urban Activity Center land use designation, residential development with a density of 13+ du/ac may not require include commercial development. Liv Timber Sky, as planned, conforms with the Regional Plan.

***

Policy LU.10.1. Prioritize connectivity within all urban neighborhoods and activity centers.

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.

RESPONSE: Liv Timber Sky, as cohesive, uniformly designed project, is designed in a way that is appropriate to the context and scale of the surrounding area.

Rather than providing a vehicular connection between Liv Timber Sky and Sky Cottages, Liv Timber Sky ***prioritizes*** *on- and off-site pedestrian connectivity, which helps the community in achieving carbon neutrality through strategies that reduce emissions from unncessary transportation, energy, and consumption.*

Live Timber Sky meets the intent of the Regional Plan policy of providing connectivity with surrounding neighborhoods. The Liv Timber Sky pedestrian circulation network ensures that residents are afforded readily accessible and proximate access to amenities, adjoining

developments, and the greater regional pedestrian network. The internal pedestrian circulation network has been thoughtfully designed to promote and facilitate non-vehicular circulation by Liv Timber Sky residents. Internal roadways will include sidewalks to connect units, civic space, amenities, and parking areas. Off-site pedestrian connectivity is planned to include pathways that extend to / from the US Route 66 and Woody Mountain Road frontages giving residents convenient and safe access to the larger Timber Sky pedestrian circulation network and FUTS. In addition, Liv Timber Sky is planned to include a pedestrian portal seamlessly connecting residents of both Liv Timber Sky and Sky Cottages. This connection is planned as part of a passive open space gathering area, which will include a seating area flanking the walkway and a trellis structure to maximize pedestrian comfort, encourage gathering and social opportunities, and foster community spirit.

Liv Timber Sky furthers the Regional Plan goal of achieving carbon neutrality by 2030 and contributes to the Carbon Neutrality Plan through decreased dependence on cars and reduced greenhouse gas emissions by providing thoughtful alternatives to more streets and more vehicular connections, which collectively contribute to climate change.

***

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.

RESPONSE: NAIPTA currently provides transit along US Route 66 up to Thompson Street where it then proceeds south, then east along

University Avenue, then north on Woodlands Village Boulevard where it ultimately reconnects with US Route 66 to proceed back east to the Downtown Connection Center, with the nearest actual transit stop being 1-mile away from the Property.

Recognizing there is no transit stop in the immediate vicinity, Vintage and Liv have strategically and purposely incorporated various climate-sensitive alternatives to public transit, which promote transportation systems that replace the use of fossil fuels with carbon neutral alternatives. The development proposal includes: (1) 9 dual-port surface parking lot electric vehicle charge stations (for a total of 18); (2) 108 garages with electric vehicle chargers; (3) an electric car sharing service; and (4) and a robust on- and off-site multi-modal pedestrian, bicycle, etc. connectivity network, which ties-into the larger Timber Sky, FUTS network, and Sky Cottages.

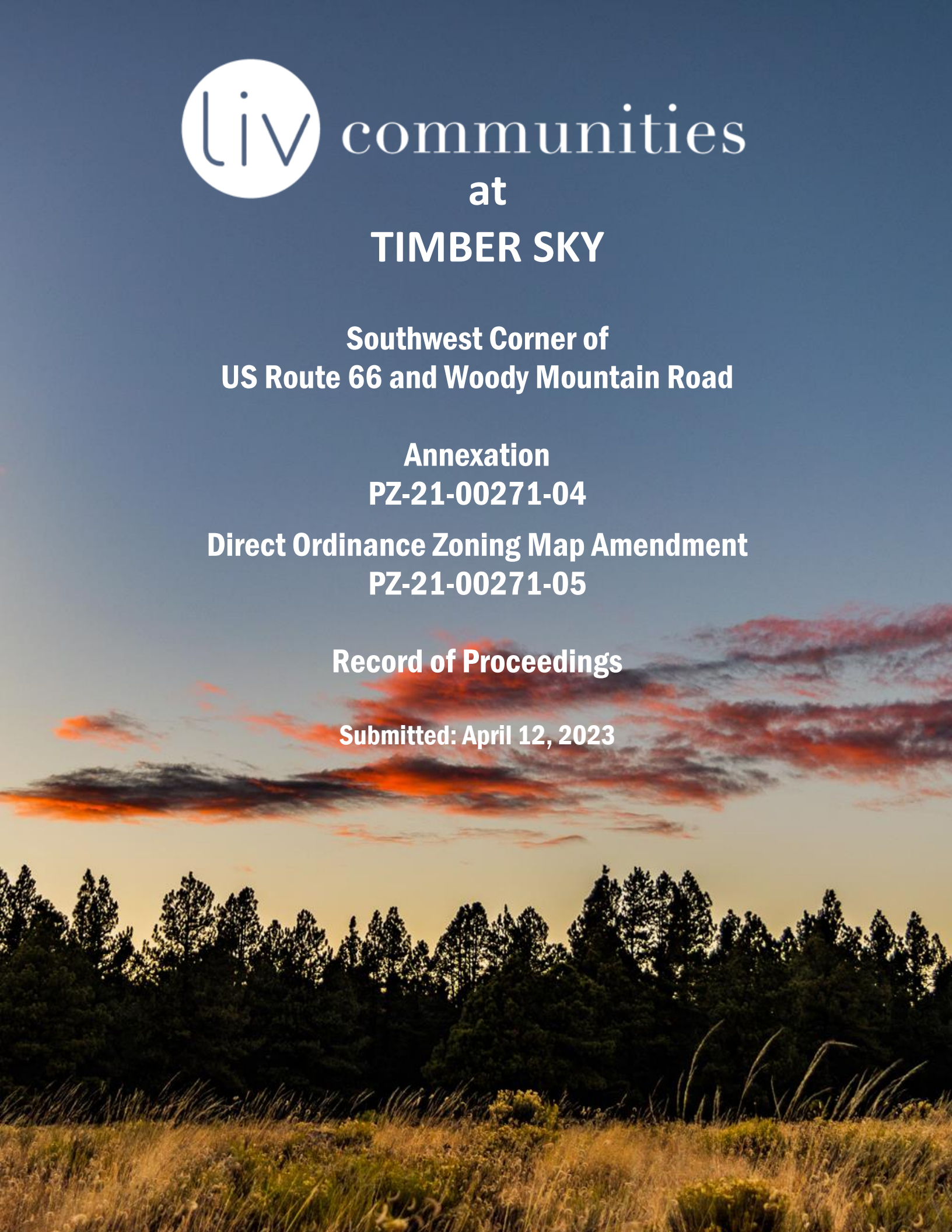
> Policy T.8.3. Design neighborhood streets using appropriate traffic calming techniques and street widths to sustain quality of life while maintaining traffic safety.

Response: Development of Liv Timber Sky contributes to the completion of US Route 66 and Woody Mountain Road along the project's frontages—a public and community benefit that helps to create a transportation system that is safe and accessible for everyone. In addition, the improvement of US Route 66 and Woody Mountain Road encourage forms of active transportation other than vehicles, such as walking, bicycling, and increased connectivity.

The improvement of US Route 66 and Woody Mountain Road have been designed to be context sensitive. Liv Timber Sky is planned to signalize the intersection of US Route 66 & Woody Mountain Road, which the Applicant heard at both of its neighborhood meetings is a strong desire of adjoining property owners, along with residents of both Timber Sky and Presidio in the Pines. The traffic signal will provide for safer, more efficient vehicular travel and turning movements, while importantly improving pedestrian and bicycle crossings and safety. The project's US Route 66 frontage will be fully improved; however, as an interim condition, will be striped so that it ties back into eastbound US Route 66, creating an efficient, connected, safe, and functional roadway network. Finally, the improvement of Woody Mountain Road, which includes a dedicated bike lane, encourages and facilitates the use of non-motorized modes of transportation, which helps to reduce the number of trips made by cars—<u>less cars on the road mean less air pollution, thus helping the City to achieve carbon neutrality by 2030</u>.

***

In addition, the goals and policies for the Heritage Preservation, Urban Area Downtown, and Public Buildings, Services, Facilities, and Safety chapters simply do not apply to this project. The goals and policies provide a comprehensive framework for sustainable development in the City. Vintage and Liv strive to meet the intent of the goals and policies, even if they are not directly applicable to the project.



liv communities

at

TIMBER SKY

Southwest Corner of
US Route 66 and Woody Mountain Road

Annexation
PZ-21-00271-04

Direct Ordinance Zoning Map Amendment
PZ-21-00271-05

Record of Proceedings

Submitted: April 12, 2023

1. INTRODUCTION

In accordance with Section 10-20.30.060.F of the Zoning Code, VP 66 & Woody Mountain LLC d/b/a as Vintage Partners ("Vintage") and Liv Communities ("Liv") (collectively, "Applicant") are submitting this Record of Proceedings related to the proposed development of the approximate 13.86 acres located at the southwest corner of US Route 66 and Woody Mountain Road ("Property").

We filed application case no. PZ-21-00271-04 to Annex the approximate 1.555 acres ("1.5 Acres") located at the southwest corner of US Route 66 & Woody Mountain Road (cross-hatched below). We also filed application case no. PZ-21-00271-05 to rezone the Property (including the 1.5 Acres) from RR—RPO (Rural Residential—Resource Protection Overlay) to HR—RPO (High-Density Residential—Resource Protection Overlay) ("Application") to allow for the development of Liv Timber Sky, a 214-unit, multi-family residential community.

2. NEIGHBORHOOD MEETINGS

In accordance with Section 10-20.30.060.A, the Applicant held two neighborhood meetings.

Neighborhood Meeting Notification. On November 23, 2022, a notice of neighborhood meetings was mailed by first class to properties 300-feet; property owners' associations and homeowner's associations within a 1,000-foot radius; and individuals, groups, etc. on the City's "Registry of Persons and

Groups" as provided by the City (collectively, "Affected Party or Affected Parties"). The letter set forth the purpose and substance of the proposed application, the time, date, and virtual meeting weblink for the neighborhood meetings, and contact information for the Applicant/Representative and the assigned City Planner.

Site Posting Notification. On November 23, 2021, one notification sign was installed on the Property near the intersection of US Route 66 & Woody Mountain Road. The sign set forth the purpose and substance of the proposed application, the time, date, and virtual meeting weblink for the neighborhood meetings, and contact information for the Applicant/Representative and the assigned City Planner. The sign included a tube containing copies of the neighborhood meetings notification letter. See **Tab A** — First Neighborhood Meeting Notification Letter, Mailing List, and Neighborhood Meeting Certification.

Voluntary Neighborhood Meeting Notification. On January 13, 2023, the Applicant mailed a voluntary notice of neighborhood meeting reminder by first class to Affected Parties and individuals that registered for the first neighborhood meeting and provided their address and/or email. See **Tab B** — Voluntary Second Neighborhood Meeting Reminder and Mailing List.

First Neighborhood Meeting Summary. The first neighborhood meeting was held on December 12, 2022 from 6:00 to 7:25 PM. The meeting was held via the Zoom virtual meeting platform. The meeting consisted of an overview of the meeting procedures and instructions for asking questions, a formal presentation, and

concluded with questions & answers and comments. Approximately 13 members of the public registered for and attended the meeting. See **Tab C** — First Virtual Neighborhood Meeting Attendee List.

The Development Team provided a formal presentation, which included presentation of an aerial map, site plan, perspective renderings, building elevations, landscaping, and public civic space area, an overview of the applications and requests, conformance with the Regional Plan, as well as discussion regarding the project's response to the City's Climate Action & Adaptation Plan and the City's Housing Crisis. The Development Team responded to questions and comments regarding: signalization of the intersection of US Route 66 & Woody Mountain Road; traffic; density; building height; commercial users; partnership with Habitat for Humanity; student housing; the site plan; and conformance with the Regional Plan.

Second Neighborhood Meeting Summary. The second neighborhood meeting was held on February 6, 2023 from 6:00 — 6:40 PM. The meeting was held via the Zoom virtual meeting platform. The meeting consisted of an overview of the meeting procedures and instructions for asking questions, a formal presentation, and concluded with questions & answers and comments. Approximately 4 members of the public registered for and attended the meeting. See **Tab D** — Second Virtual Neighborhood Meeting Attendee List.

The Development Team provided a presentation similar to the first neighborhood meeting, as well as addressed traffic and traffic control at the intersection of US Route 66 & Woody Mountain Road. The Development Team responded to questions regarding traffic, access, and signalization of the intersection of US Route 66 & Woody Mountain Road. The Applicant reaffirmed its commitment to install the traffic signal at the intersection, which those participating in the meeting were pleased to hear.

3. NEIGHBORHOOD MEETING SUMMARY LETTER

In accordance with Section 10-20.30.060.F.4, the Applicant mailed a written summary those who registered for the neighborhood meeting(s) and provided their address and/or email. See **Tab E** — Neighborhood Meetings Summary Letter.

4. PUBLIC HEARING NOTIFICATION

Once scheduled for public hearing, the Applicant shall install signs on the Property advising of dates, times, and other pertinent details related to the hearings. In addition, a notification letter will be sent via first class mail to the Affected Parties and residents that registered for and provided their email and/or mailing address for the virtual neighborhood meetings. The public hearing notification letter will include a description of the request and application case number, location and acreage, a conceptual site plan and renderings for the project, details regarding the scheduled public hearings and contact information for the Applicant/Representative and City Planner.

TAB A

First Neighborhood Meeting Notification Letter
Mailing List
Neighborhood Meeting Certification

November 23, 2022

Dear Property Owner, Resident, Neighborhood Association, or Interested Citizen,

VP 66 & Woody Mountain LLC d/b/a as Vintage Partners, in partnership with Liv Communities is proposing to develop the approximate 13.86 acres located at the southwest corner of US Route 66 and Woody Mountain Road ("Property"). Vintage Partners is responsible for developing forward thinking and award-winning projects throughout the State for more than 30 years, including the highly successful Timber Sky master-planned community—the finest Dark Skies compliant master-planned community in the State. In addition, Vintage Partners is in the process of developing Sky Cottages located at the northwest corner of McAllister Ranch and Woody Mountain Roads (directly south of the Property). See enclosed Context Map. Liv Communities is an experienced multi-family and generational housing residential developer and management company that designs communities to promote eco-friendly, social, and healthy lifestyles for their residents. Liv's Arizona development portfolio currently includes 12 communities in the State.

We recently filed application case no. PZ-21-00271-04 to Annex the approximate 1.9 acres located at the southwest corner of US Route 66 & Woody Mountain Road. See enclosed Annexation Map. In addition, we filed application case no. PZ-21-00271-05 to rezone the Property (including the 1.9 acres) from RR-RPO (Rural Residential, Resource Protection Overlay) to HR-RPO (High Density Residential, Resource Protection Overlay) to allow for the development of a market rate, 214 multi-family residential dwelling unit community at a density of approximately 16.45 dwelling units per acre. The 2030 Regional Plan designates the Property as Urban-Future land use—the proposed use and density comply with this designation. Dwelling units will consist of 1, 2, and 3 bedroom units spread throughout a series of 2-story carriage units and 3-story buildings. Amenities are planned to include a centrally located resident amenity area, open space area, clubhouse, fitness center, spa, bbq area and ramadas, fire pit and seating area, pickleball court, and dog park. In addition, civic (public) space, which includes seating, landscaping, and hardscape, is planned at the northeast corner of the Property. See enclosed Site Plan and Building Elevations.

We have scheduled **two virtual neighborhood meetings** to discuss the proposed applications.

VIRTUAL NEIGHBORHOOD MEETING NO. 1: December 12, 2022 from 6:00 – 7:00 PM

VIRTUAL NEIGHBORHOOD MEETING NO. 2: February 6, 2023 from 6:00 – 7:00 PM

Meeting details for BOTH virtual neighborhood meeting are as follows:

Meeting:	Liv Timber Sky—Virtual Neighborhood Meeting
Location:	Meeting to be held virtually in Zoom.
Link:	https://www.gblaw.com/livtimbersky/
Date and Time:	As stated above.

Instructions for Access to Virtual Neighborhood Meetings. The neighborhood meetings will be held on the Zoom video conferencing platform, which can be accessed through your internet browser or through the Zoom app on your mobile device via the above link. For registration assistance, please contact Taylor Manemann at (602) 256-4454 or tmanemann@gblaw.com.

Please note, to access the meetings, you will be required to register. Meeting registration information will be part of the public record and shared with the City. We will also use this information to keep you informed of future meetings and hearings via email, as well as traditional mail. At the beginning of the neighborhood meetings, we will provide a brief overview of the meeting procedures and instructions for asking questions once the formal presentation has concluded.

A follow-up notification letter will be mailed in mid-January 2023 to remind you of the SECOND virtual neighborhood meeting.

Please be advised that future meetings and hearings before the Planning & Zoning Commission and City Council will be scheduled to review this case. Specific meeting and hearing dates have not yet been set. An additional notification letter will be provided identifying the date, time, and location of these meetings and hearings.

The City Planner assigned to this case is Ms. Genevieve Pearthree, Senior Planner. Ms. Pearthree can be reached at (928) 213-2603 or Genevieve.Pearthree@flagstaffaz.gov. She can answer your questions regarding the City's review and hearing process. Should you have any questions in the meantime or are unable to attend either or both of the virtual neighborhood meetings and would like more information, please do not hesitate to contact me at (602) 459-9929 or walter@vintagevp.com.

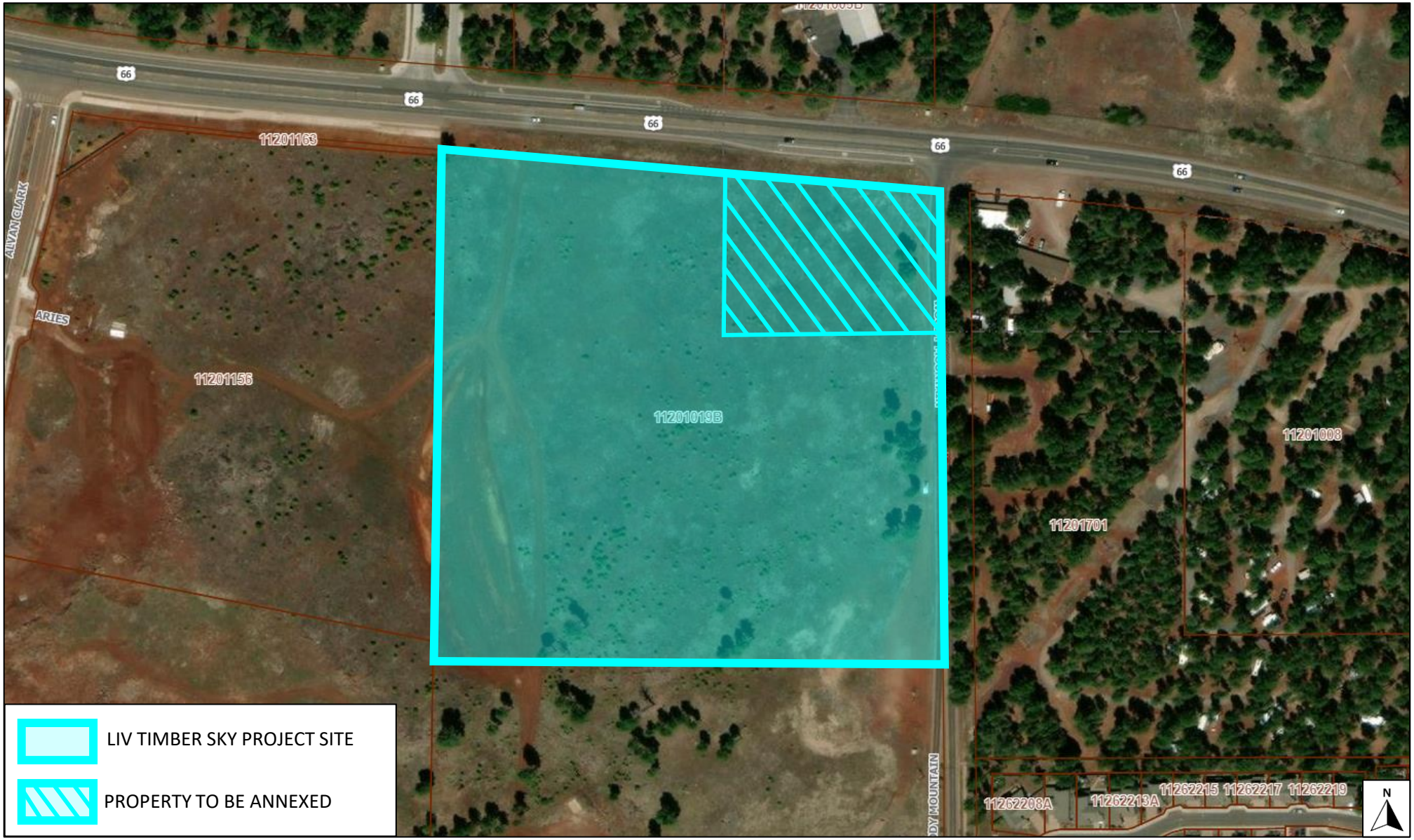
Sincerely,

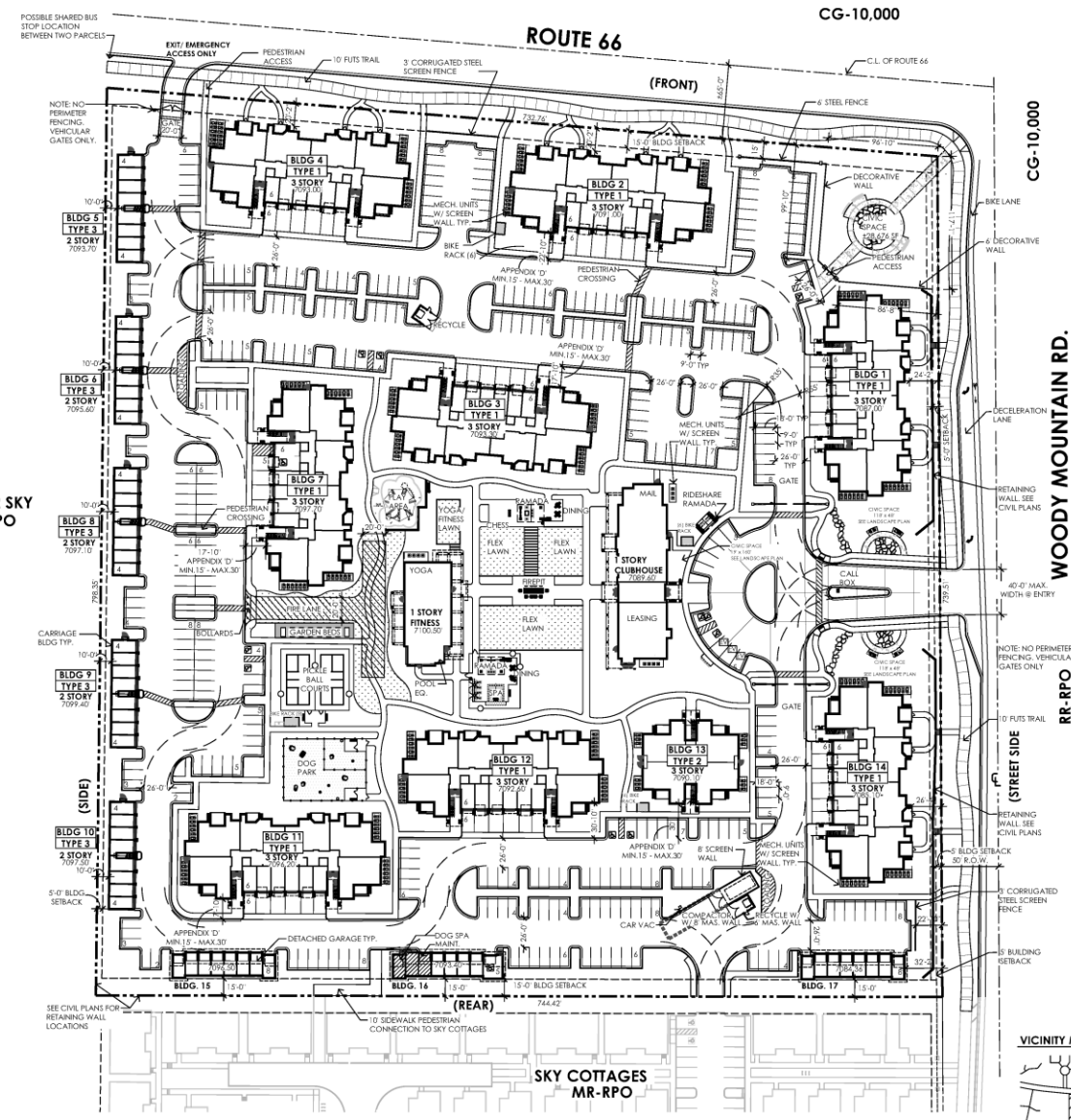
Walter Crutchfield
Vintage Partners

CONTEXT MAP

Timber Sky
Liv Timber Sky
Sky Cottages at Timber Sky
66
40
ALTAIR
ALTAIR
ARIES
ALVANGUARK
ADORA
VEGA
ROCKWOOD
UNNAMED
M GALLISTER RANCH
PUTNAM
CORONADO
ZEPHER
ROCKSUND
RAILROAD SPRINGS
PATIO DEL PRESIDIO
PRESIDIO
MISSION TIMBER
KISTLE
WOODY MOUNTAIN
N

ANNEXATION MAP





DEVELOPMENT TEAM:

DEVELOPER:
LIV COMMUNITIES
1600 S. BEACON BLVD.
SUITE 260
GRAND HAVEN, MI 49417
616-846-6900

ARIZONA OFFICE:
8950 SOUTH 52ND STREET
SUITE 115
TEMPE, AZ 85284
480-739-9240

VINTAGE PARTNERS
2502 E. CAMELBACK RD.
SUITE 214
PHOENIX, AZ 85016
602-459-9929

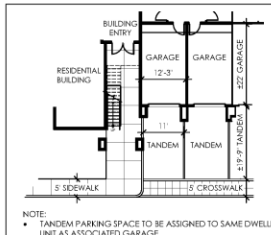
ARCHITECTURE:
TODD & ASSOCIATES
4019 N. 44TH STREET
PHOENIX, AZ 85018
602-952-8280

LANDSCAPE ARCHITECTURE:
NORRIS DESIGN
901 E. MADISON STREET
PHOENIX, AZ 85034
602-254-9600

CIVIL ENGINEER:
SHEPARD-WESNITZER, INC.
110 DALE AVENUE
FLAGSTAFF, AZ 86001
928-773-0354

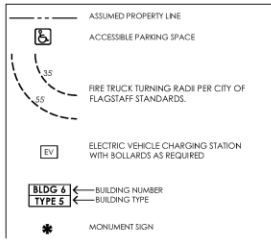
ZONING ATTORNEY:
GAMMAGE & BURNHAM
40 N. CENTRAL AVENUE
20TH FLOOR
PHOENIX, AZ 85004
602-256-0566

DETAIL AT TYPICAL ATTACHED GARAGE

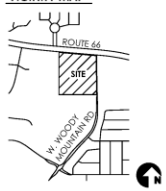


NOTE:
- TANDEM PARKING SPACE TO BE ASSIGNED TO SAME DWELLING UNIT AS ASSOCIATED GARAGE.
- TANDEM PARKING SPACE COUNT HAS NOT BEEN COUNTED TOWARD THE REQUIRED PARKING.

LEGEND



VICINITY MAP



BUILDING S.F. (GROSS)

BUILDING / LEVEL	CONST. TYPE	OCC.
BLDG TYPE 1:		
1ST FLR. 10,250 S.F.	V-A	R-2
2ND FLR. 10,233 S.F.		
3RD FLR. 10,233 S.F.		
SUBTOTAL 30,716 S.F. (x 8 = 245,728 S.F.)		
BLDG TYPE 2:		
1ST FLR. 4,574 S.F.	V-A	R-2
2ND FLR. 4,574 S.F.		
3RD FLR. 4,574 S.F.		
SUBTOTAL 13,722 S.F. (x 1 = 13,722 S.F.)		
BLDG TYPE 3:		
1ST FLR. 2,299 S.F.	V-A	R-2
2ND FLR. 2,185 S.F.		
SUBTOTAL 4,484 S.F. (x 5 = 22,420 S.F.)		
TOTAL RESIDENTIAL:		**281,870 S.F.**
CLUBHOUSE:		
1ST FLR. 6,511 S.F.	V-B	A-3 / B
SUBTOTAL 6,511 S.F. (x 1 = 6,511 S.F.)		
FITNESS:		
1ST FLR. 3,753 S.F.	V-B	A-3
SUBTOTAL 3,753 S.F. (x 1 = 3,753 S.F.)		
DETACHED GARAGES:		
TYPE 1: 2,012 S.F.	V-B	U
SUBTOTAL 2,012 S.F. (x 2 = 4,024 S.F.)		
TYPE 2: 2,148 S.F.	V-B	U
SUBTOTAL 2,148 S.F. (x 1 = 2,148 S.F.)		
TOTAL ALL BUILDINGS:		**298,306 S.F.**

CODE COMPLIANCE:
THE FLAGSTAFF CITY COUNCIL HAS ADOPTED THE FOLLOWING BUILDING CODES WITH AMENDMENTS:
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2017 NFPA 70 / NATIONAL ELECTRICAL CODE
1997 UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS
2018 INTERNATIONAL RESIDENTIAL CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
1997 UNIFORM ADMINISTRATIVE CODE
1997 UNIFORM HOUSE CODE
ICC A117-1-2017 ACCESSIBLE & USABLE BUILDINGS & FACILITIES

SITE DATA:

SITE ADDRESS:
2701 South Woody Mountain Road

APN:
112-01-019B
Note: as of January 1, 2023, this parcel number will be changed to APN 112-01-712

SITE AREA:
GROSS AREA: 13.01 ACRES (567,020 SF)
NET AREA: 13.01 ACRES (567,020 SF)

LOT COVERAGE:
MAX. ALLOWED: 50% (0.50 x 567,020 SF = 283,510 SF)
PROVIDED: 23% (130,737 SF)

LOT COVERAGE CALCULATIONS:

BUILDING 1	11,461 S.F. x 8 =	91,688 S.F.
BUILDING 2	5,780 x 1 =	5,780 S.F.
CARRIAGE	2,277 S.F. x 5 =	11,385 S.F.
CLUBHOUSE	9,249 S.F.	9,249 S.F.
FITNESS	5,930 S.F.	5,930 S.F.
GARAGES	2,035 x 3 =	6,105 S.F.
RAMADAS	600 S.F.	600 S.F.

COMMON OPEN SPACE: (SEE LANDSCAPE OPEN SPACE PLAN)
REQUIRED: 15% (±85,053 SF)
PROVIDED: 16% (±91,109 SF)

CIVIC OPEN SPACE: (SEE LANDSCAPE OPEN SPACE PLAN)
REQUIRED: 5% (±28,351 SF)
PROVIDED: 5% (±28,360 SF)

ZONING:
EXISTING ZONING: COF: Rural Residential - Resource Protection Overlay (RR-RPO) (±11.31 ac.)
CC: General - 10 Ac. Minimum (±1.70 ac.)
PROPOSED: COF: High Density Residential - Resource Protection Overlay (HR-RPO)(± 13.01 ac.)

HEIGHT:
ALLOWED: 60'-0" (65'-0" ALLOWED WITH 6:12 PITCHED ROOFS)
PROVIDED: 3 STORIES - ± 50'-0" / 2 STORIES - ± 30'-0" (AT FINISH GRADE)
(Building height shall be measured vertically from top of any point of a structure or building element, including the top of parapet, top of mansard roof, screened wall or pitched roof to the natural grade directly benefits one point measured under the finished grade abutting the bldg. or structure is below the natural grade.)

UNIT MIX:

1 BEDROOM/ 1 BATH	48 D.U.	(22.4%)
2 BEDROOM/ 2 BATH	118 D.U.	(55.2%)
3 BEDROOM/ 2 BATH	48 D.U.	(22.4%)
TOTAL	**214 D.U.**	**(100%)**

CONSTRUCTION TYPE:
PROPOSED: TYPE V-A/V-B, SPRINKLERED (RESIDENTIAL APARTMENT BLDGS.)

DENSITY:
MAXIMUM ALLOWED: 29 D.U./GROSS ACRE (MAX. WITH RPO, INSIDE PEDESTRIAN SHED OF AN ACTIVITY CENTER)
PROVIDED: ±16.44 D.U./GROSS ACRE

PARKING:
REQUIRED PARKING:
1 BEDROOM/1 BATH (48 D.U. x 1.50 P.S./D.U.) = 72 P.S.
2 BEDROOM/2 BATH (118 D.U. x 2.00 P.S./D.U.) = 236 P.S.
3 BEDROOM/2 BATH (48 D.U. x 2.00 P.S./D.U.) = 96 P.S.
GUEST (2 & 3 BEDROOM - (166 D.U. x 0.25) = 42 P.S.
TOTAL REQUIRED PARKING: 446 P.S.

REQUIRED ACCESSIBLE PARKING:
REQUIRED: PER CITY OF FLAGSTAFF TABLE 10-50.80.080.B:
401-500 TOTAL P.S. = 10 ACC. P.S.
PROVIDED: 10 PARKING SPACES (9 SURFACE, 1 GARAGE)

PROVIDED PARKING:
SURFACE PARKING 390 P.S. (INCLUDES 340 SURFACE P.S., 3 EV CHARGING STATIONS & 47 TANDEM P.S.)
ATTACHED GARAGES 47 P.S.
CARRIAGE BUILDING GARAGES 40 P.S.
DETACHED GARAGE 21 P.S.
TOTAL PROVIDED PARKING 498 P.S.
INCLUDES 10 ACCESSIBLE P.S: 9 SURFACE, 1 GARAGE

GENERAL PARKING DIMENSIONS:
PARKING SPACE: 9' x 18' WITH 1.5' OVERHANG
AISLE WIDTH: 26' FIRE CODE (APPENDIX D)
LANDSCAPE ISLAND RATIO: 8 P.S. PER 1 LANDSCAPE ISLAND

BICYCLE PARKING:
REQUIRED: 5% OF REQUIRED PARKING = 5% x 446 = 22
PROVIDED: 24 BICYCLE PARKING SPACES

BUILDING SETBACK:

	REQUIRED	PROVIDED
- FRONT (ROUTE 66)	15'	±19' - BUILDING
		15' - FENCE (6')
- STREET SIDE (WOODY MTN RD)	5'	±24' - BUILDING
- SIDE (WEST PROPERTY LINE)	5'	10' - BUILDING
- REAR (SOUTH PROPERTY LINE)	15'	15' - DETACHED GARAGE

FIRE CODE:
CITY OF FLAGSTAFF FIRE DEPARTMENT HAS ADOPTED APPENDIX D WITHIN THE 2018 FIRE CODE WHICH REQUIRES THE FOLLOWING:
1. WHERE THE VERTICAL DISTANCE BETWEEN THE GRADE PLANE AND THE HIGHEST ROOF SURFACE EXCEEDS 30', APPROVED AERIAL FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED.
2. AERIAL FIRE APPARATUS ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 26'.
3. FIRE APPARATUS ACCESS ROUTES SHALL BE LOCATED NOT LESS THAN 15' AND NOT GREATER THAN 30' FROM THE BUILDING AND SHALL BE POSITIONED PARALLEL TO ONE ENTIRE SIDE OF THE BUILDING. THE SIDE OF THE BUILDING ON WHICH THE AERIAL FIRE APPARATUS ACCESS ROAD IS POSITIONED SHALL BE APPROVED BY THE FIRE CODE OFFICIAL.

FIRE TRUCK TURNING RADIUS:
INSIDE: 35'
OUTSIDE: 55'

ARCHITECTURAL SITE PLAN

0' 25' 50' 100'
SCALE: 1" = 50'-0"

PROJECT NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES
8950 S 52ND ST. SUITE 115
TEMPE, AZ 85284

SEAL
REGISTERED ARCHITECT CERTIFICATE NO. 13467 GARY D. TODD 11/18/22 ONLY VALID WHEN SIGNED

CONTACT
TODD + ASSOCIATES
CRITICAL THINKING / CREATIVE DESIGN
ARCHITECTURE. PLANNING. LANDSCAPE ARCHITECTURE.
4019 N. 44TH ST. / PHOENIX, AZ 85018
602-952-8280 / TODDASSOC.COM
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PHASE
09-22-2022
SITE PLAN REVIEW SUBMITTAL #1

11-23-2022
SITE PLAN REVIEW SUBMITTAL #2

DATA
Proj Mgr.
Dwn By:

ARCHITECTURAL SITE PLAN

A1.1.1

REAR ELEVATION

LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR		SWATCH
A	Fiber Cement Siding Body 1	MFG.:	Allura Lap Siding - Horizontal Panels Traditional Texture	
		COLOR:	Maple	
B	Fiber Cement Siding Body 2	MFG.:	Allura Lap Siding - Vertical Panels Traditional Texture	
		COLOR:	Slate	
C	Fiber Cement Fascia	MFG.:	Allura - Plycem Fiber Cement Trim	
		COLOR:	Sterling Gray	
		LRV:	48.20	
D	Fiber Cement Trim	MFG.:	Allura - Plycem Fiber Cement Trim	
		COLOR:	Autumn Red	
		LRV:	12.60	
E	Stone Veneer	MFG.:	Coronado - Getty Stone	
		COLOR:	Embassy Blend	
F	Shingle Roof	MFG.:	GAF Timberline - Ultra HD Shingles	
		COLOR:	Charcoal	
G	Metal Roof	MFG.:	MBCI - Slimline Roof Panel	
		COLOR:	Signature 300 "Slate Gray"	
		LRV:	18.76	
H	Metal Railing	MFG.:	Sherwin Williams	
		COLOR:	SW 7578 "Borscht"	
		LRV:	6	

CLUBHOUSE ELEVATIONS

0" 4" 8" 16"

SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES
8950 S 52ND ST. SUITE 115
TEMPE, AZ 85284

SEAL
REGISTERED ARCHITECT
13467
GARY D. TODD
11/18/22
ARIZONA, U.S.A.

CONTACT
TODD + ASSOCIATES
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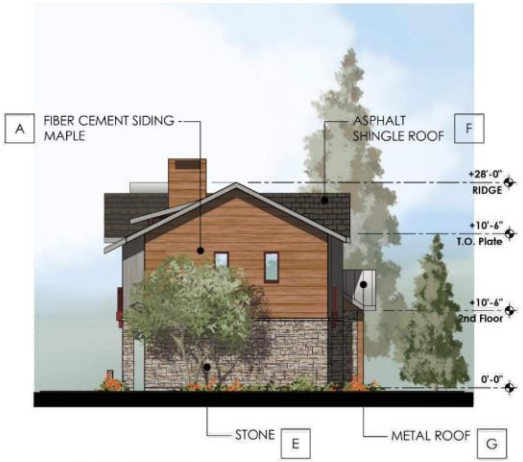
Dwn By:

CLUBHOUSE ELEVATIONS

A3.4.2

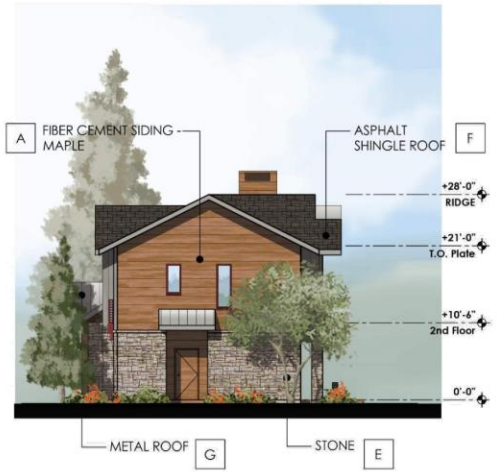


RIGHT ELEVATION

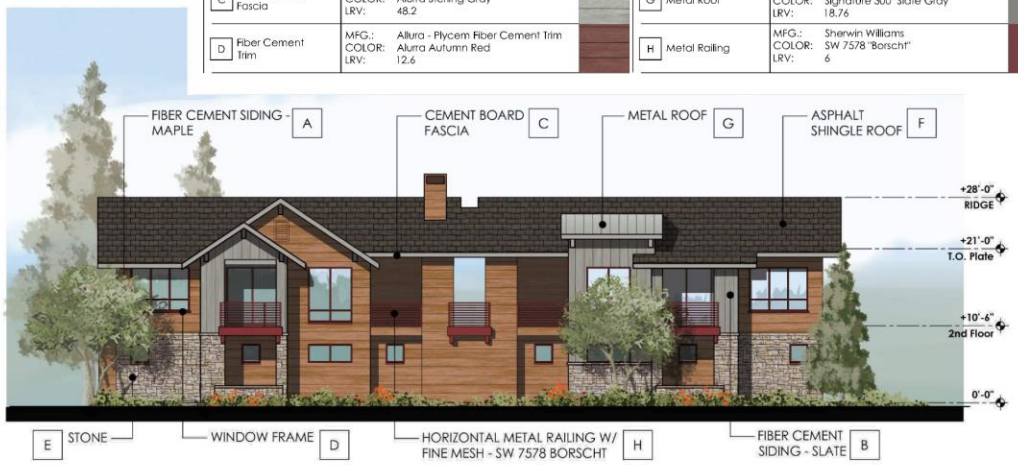
FRONT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	



LEFT ELEVATION



REAR ELEVATION

TYPE 3 ELEVATIONS

0" 4" 8" 16"
SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES
8950 S 52ND ST. SUITE 115
TEMPE, AZ 85284

SEAL
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CONTACT
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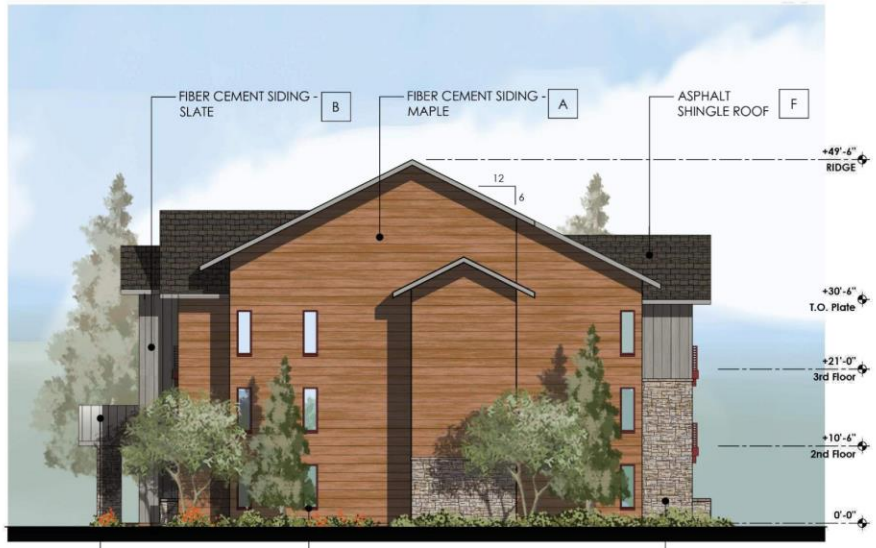
Dwn By:

BUILDING TYPE 3 ELEVATIONS

A3.3.1

REAR ELEVATION



LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	

TYPE 1 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

8950 S 52ND ST. SUITE 115
TEMPE, AZ 85284

SEAL

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CERTIFICATE NO.
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SUBMITTAL #1

11-23-2022
SITE PLAN REVIEW
SUBMITTAL #2

DATA

Proj Mgr.
Dwn By:

BUILDING TYPE 1 ELEVATIONS

A3.1.2

Property Owners within 300-feet					
Property Owner Name	**Mailing Address**	**City**	**Sate**	**ZIP**	**APN**
DUNN SHELLY R	2864 W PICO DEL MONTE CIR	FLAGSTAFF	AZ	86001	11262212A
ESTERLY BRIAN & ROSETTA	24361 N 73RD ST	SCOTTSDALE	AZ	85255	11262208A
FLAGSTAFF CITY OF	211 W ASPEN AVE	FLAGSTAFF	AZ	86001	11201002
HELIN BUILDING LLC	1800 N HEREFORD DR	FLAGSTAFF	AZ	86001	11201003A 11201003B
PRESIDIO IN THE PINES HOMEOWNER'S ASSOC INC	323 S RIVER RUN RD NO 1	FLAGSTAFF	AZ	86001	11262473B
TIMBER SKY COMMUNITY ASSOCIATION	2502 E CAMELBACK RD NO 214	PHOENIX	AZ	85016	11201163
VAN HOY FAMILY REVOCABLE TRUST DTD 01-16-02	14194 W SMOKETREE DR	SURPRISE	AZ	85387	11262207
VP 66 & WOODY MOUNTAIN LLC	2502 E CAMELBACK RD NO 214	PHOENIX	AZ	85016	11201156 11201157
WALKER WINSTON W & MARY M	13450 N KACHINA DR	ORO VALLEY	AZ	85755	11262210A
WOODY MOUNTAIN CAMPGROUND	1425 W FOREST MEADOWS	FLAGSTAFF	AZ	86001	11201701
HOAs and Neighborhood Associations within 1,000-feet					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	
RAILROAD SPRINGS 66 LLLP	1016 W UNIVERSITY AVE NO 203	FLAGSTAFF	AZ	86001	
PRESIDIO IN THE PINES HOMEOWNER'S ASSOC INC	323 S RIVER RUN RD NO 1	FLAGSTAFF	AZ	86001	
TIMBER SKY COMMUNITY ASSOCIATION	2502 E CAMELBACK RD NO 214	PHOENIX	AZ	85016	
Registry of Persons and Groups					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	**Email**
Friends of Flagstaff's Future	P.O. Box 23462	Flagstaff	AZ	86002	info@friendsofflagstaff.org
Friends of Flagstaff's Future ATTN: Michele A. James	P.O. Box 23462	Flagstaff	AZ	86002	
Northern Arizona Building Association	1500 East Cedar Avenue, Suite 86	Flagstaff	AZ	86004	tbociung@nazba.org
Northern Arizona Association of Realtors ATTN: Jeffrey Herd	1515 East Cedar Avenue, Suite C-4	Flagstaff	AZ	86004	naarflag@nazrealtor.com
Tish Bogan-Ozmun	5271 Mt. Pleasant Drive	Flagstaff	AZ	86004	tishflagstaff@gmail.com
Marilyn Weissman	1055 East Apple Way	Flagstaff	AZ	86001	Missymoet@aol.com
Nat White	1120 North Rockridge Road	Flagstaff	AZ	86001	white@lowell.edu
Charlie Silver	720 West Aspen Avenue	Flagstaff	AZ	86001	Cws720@gmail.com
Betsy McKellar	330 S Ash Lane	Flagstaff	AZ	86004	
David Carpenter	1109 W Beal Road	Flagstaff	AZ	86001	dc@hopeaz.com
Arizona Army National Guard, AZAA-FMO ATTN: Dorenda Coleman	5636 E McDowell Rd, M5330	Phoenix	AZ	85008	dorenda.j.coleman.nfg@mail.mil
US Navy, Intergovernmental Branch. ATTN: Mary Beth Dreusike	850 Pacific Highway Building 1 – 5th Floor, Suite 513	San Diego	CA	92132	marybeth.dreusike@navy.mil
Celia Barotz	3354 N Crest Street	Flagstaff	AZ	86001	cbarotz@gmail.com
Norm Wallen	3716 N Grandview	Flagstaff	AZ	86004	normwallenflg@gmail.com
Coconino County Community Development ATTN: Jay Christelman	2500 N Fort Valley Rd. Bldg 1	Flagstaff	AZ	86001-1287	jchristelman@coconino.az.gov
Tyler Denham	800 W Forest Meadows St, Apt 119	Flagstaff	AZ	86001	tyler.b.denham@gmail.com
Coconino County Community Development ATTN: Jess McNeely	2500 N Fort Valley Rd. Bldg 1	Flagstaff	AZ	86001-1287	wmcneely@coconino.az.gov
Flagstaff Lodging, Restaurant & Tourism Association ATTN: Steve Finch	PO Box 30622	Flagstaff	AZ	86003	sfinch@flrta.org
Rachel Bass	3083 W. Easterday Lane	Flagstaff	AZ	86001	rsilverton@gmail.com
Other Interested Parties					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	**Email**
City of Flagstaff Community Development ATTN: Genevieve Pearthree	211 W. Aspen Ave	Flagstaff	AZ	86001	gpearthree@flagstaffaz.gov
Gammage & Burnham, PLC ATTN: Nick Sobraske	40 N Central, 20th Floor	Phoenix	AZ	85004	nsobraske@gblaw.com

Neighborhood Meeting Certification

I, Gammage & Burnham, PLC c/o Lindsay C. Schube, the authorized representative of VP 66 & Woody Mountain LLC, do hereby attest that the neighborhood meeting for Project No. PZ-21-00271-05 and PZ-21-00271-04 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 11/22/2022 and accepted by the City of Flagstaff on 12/8/2022.
- ☑ 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.
- ☑ Notices of the neighborhood meeting were sent via first class mail on 11/23/2022 to all property owners within 1,000 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.
- ☑ A total of 1 neighborhood meeting notification sign(s) were installed on 11/23/2022 at the following location(s):
  - o Near the intersection of US Route 666 & Woody Mountain Road
  - o _____
  - o _____
- ☑ A written summary of the meetings, known as a Citizen Participation Report, was submitted to the City of Flagstaff on 4/12/2023.
- ☑ Copies of the Citizen Participation Report were sent via first class mail on 4/11/2023 to all persons who recorded their names on the neighborhood meeting sign-in sheet.

Authorized Representative of the Applicant:

Lindsay C. Schube

Signature:

LCSchube

TAB B

Voluntary Second Neighborhood Meeting Reminder
Mailing List

January 13, 2023

Dear Property Owner, Resident, Neighborhood Association, or Interested Citizen,

You are receiving this follow-up letter as a courtesy reminder that Vintage Partners is hosting a second virtual neighborhood meeting for the Liv Timber Sky development proposal on the approximate 13.86 acres located at the southwest corner of US Route 66 and Woody Mountain Road ("Property"). VP 66 & Woody Mountain LLC d/b/a as Vintage Partners, in partnership with Liv Communities, is proposing to develop a new, market-rate multi-family residential development on the Property.

We recently filed application case no. PZ-21-00271-04 to Annex the approximate 1.9 acres located at the southwest corner of US Route 66 & Woody Mountain Road. See enclosed Annexation Map. In addition, we filed application case no. PZ-21-00271-05 to rezone the Property (including the 1.9 acres) from RR-RPO (Rural Residential, Resource Protection Overlay) to HR-RPO (High Density Residential, Resource Protection Overlay). Approval of these applications will allow for the development of a 214 multi-family residential dwelling unit community at a density of approximately 16.45 dwelling units per acre. The 2030 Regional Plan designates the Property as Urban-Future land use—the proposed use and density comply with this designation. Dwelling units will consist of 1, 2, and 3 bedroom units spread throughout a series of 2-story carriage units and 3-story buildings. Amenities are planned to include a centrally located resident amenity area, open space area, clubhouse, fitness center, spa, bbq area and ramadas, fire pit and seating area, pickleball court, and dog park. In addition, civic (public) space, which includes seating, landscaping, and hardscape, is planned at the northeast corner of the Property. See enclosed Site Plan and Building Elevations.

The second virtual neighborhood meeting to discuss the development proposal is scheduled as follows:

Meeting:	Liv Timber Sky—Virtual Neighborhood Meeting
Location:	Meeting to be held virtually in Zoom.
Registration Link:	**https://www.gblaw.com/livtimbersky/**
Date and Time:	February 6, 2023 at 6:00 PM

Instructions for Access to Virtual Neighborhood Meetings. The neighborhood meetings will be held on the Zoom video conferencing platform, which can be accessed through your internet browser or through the Zoom app on your mobile device via the above link. For registration assistance, please contact Taylor Manemann at **(602) 256-4454** or **tmanemann@gblaw.com**.

Please note, to access the meeting, you will be required to register. Meeting registration information will be made part of the public record and shared with the City. We will also use this information to keep you informed of future meetings and/or hearings via email, as well as traditional mail. At the beginning of the neighborhood meeting, we will provide a brief overview of the meeting procedures and instructions for asking questions once the formal presentation has concluded.

Please be advised that future hearings before the Planning & Zoning Commission and City Council will be scheduled to review this case. Specific dates have not yet been set. An additional notification letter will be provided identifying the date, time, and location of these meetings and hearings.

The City Planner assigned to this case is Ms. Genevieve Pearthree, Senior Planner. Ms. Pearthree can be reached at (928) 213-2603 or Genevieve.Pearthree@flagstaffaz.gov. She can answer your questions regarding the City's review and hearing process. Should you have any questions in the meantime or are unable to attend this neighborhood meeting and would like more information, please do not hesitate to contact me at (602) 459-9929 or walter@vintagevp.com.

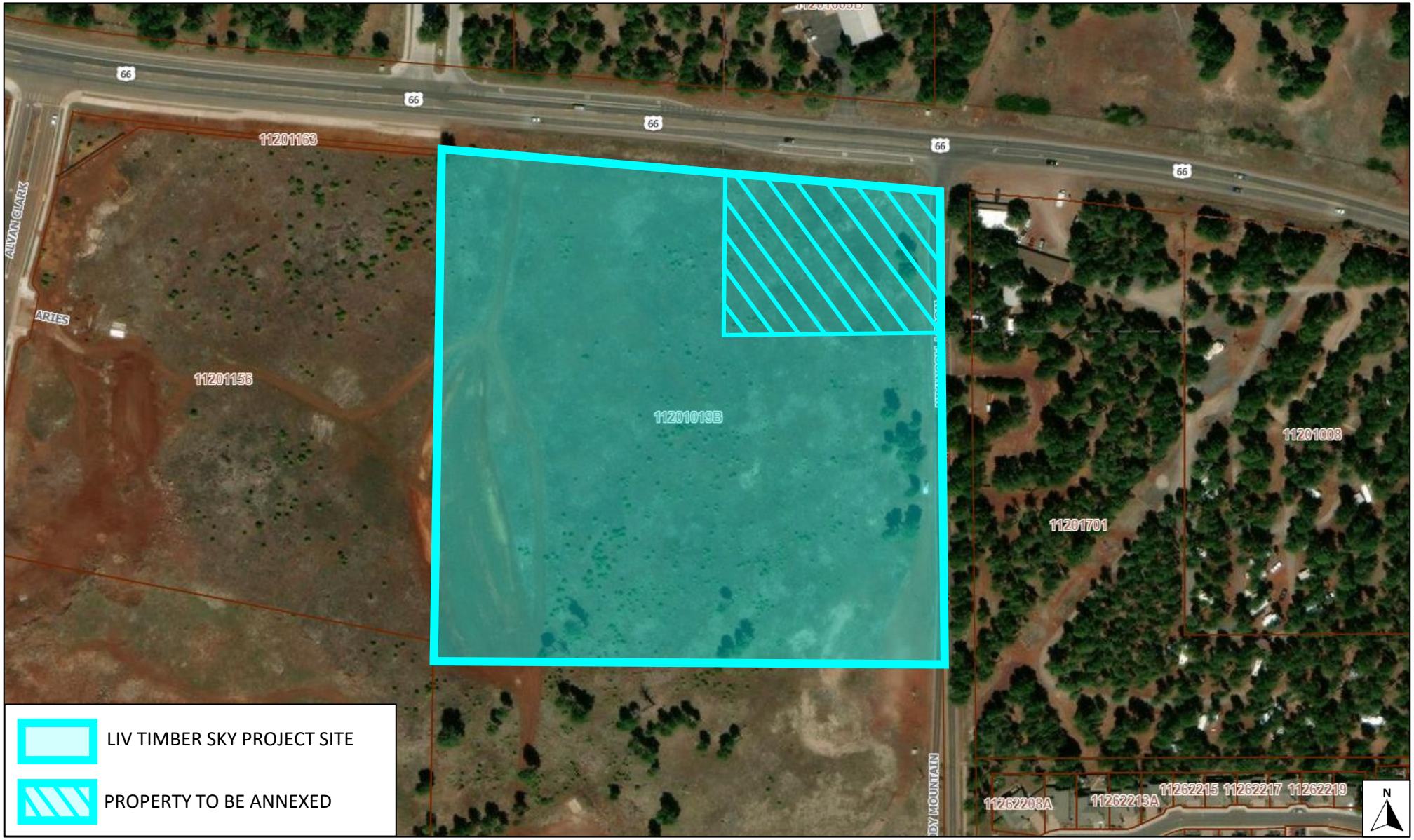
Sincerely,

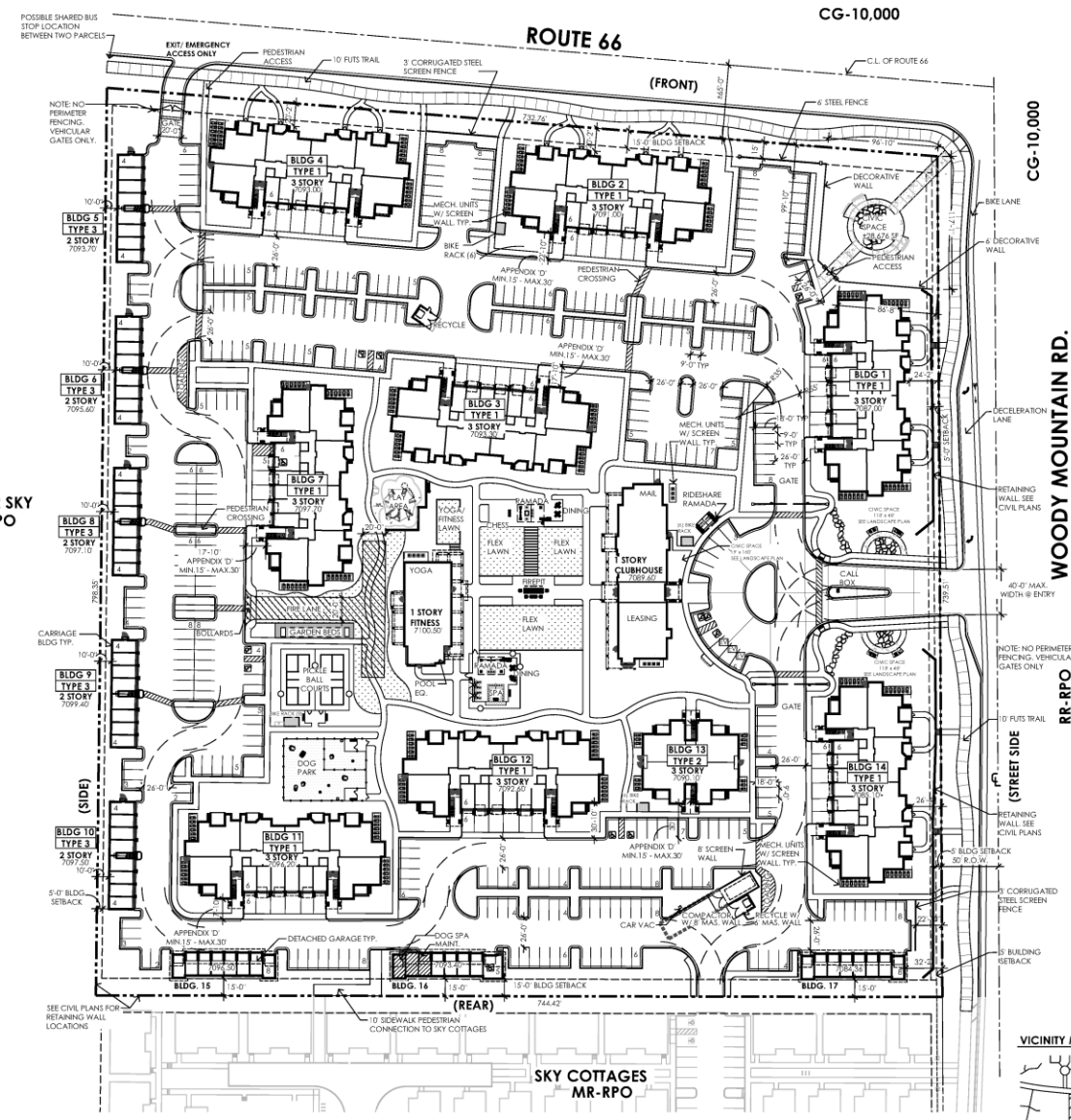
Walter Crutchfield
Vintage Partners

CONTEXT MAP

Timber Sky
Liv Timber Sky
Sky Cottages at Timber Sky
66
40
ALTAIR
ALTAIR
ARIES
ALVANGUARK
ADORA
VEGA
ROCKWOOD
UNNAMED
M GALLISTER RANCH
PUTNAM
CORONADO
ZEPHER
ROCKSUND
RAILROAD SPRINGS
PATIO DEL PRESIDIO
PRESIDIO
MISSION TIMBER
KISTLE
WOODY MOUNTAIN
N

ANNEXATION MAP





DEVELOPMENT TEAM:

DEVELOPER:
LIV COMMUNITIES
1600 S. BEACON BLVD.
SUITE 260
GRAND HAVEN, MI 49417
616-846-6900

ARIZONA OFFICE:
8950 SOUTH 52ND STREET
SUITE 115
TEMPE, AZ 85284
480-739-9240

VINTAGE PARTNERS
2502 E. CAMELBACK RD.
SUITE 214
PHOENIX, AZ 85016
602-459-9929

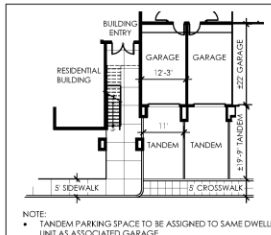
ARCHITECTURE:
TODD & ASSOCIATES
4019 N. 44TH STREET
PHOENIX, AZ 85018
602-952-8280

LANDSCAPE ARCHITECTURE:
NORRIS DESIGN
901 E. MADISON STREET
PHOENIX, AZ 85034
602-254-9600

CIVIL ENGINEER:
SHEPARD-WESNITZER, INC.
110 DALE AVENUE
FLAGSTAFF, AZ 86001
928-773-0354

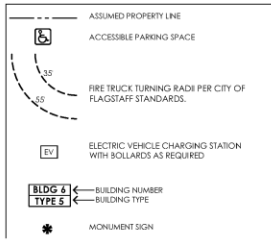
ZONING ATTORNEY:
GAMMAGE & BURNHAM
40 N. CENTRAL AVENUE
20TH FLOOR
PHOENIX, AZ 85004
602-256-0566

DETAIL AT TYPICAL ATTACHED GARAGE

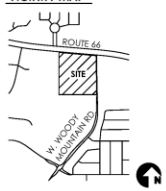


NOTE:
- TANDEM PARKING SPACE TO BE ASSIGNED TO SAME DWELLING UNIT AS ASSOCIATED GARAGE.
- TANDEM PARKING SPACE COUNT HAS NOT BEEN COUNTED TOWARD THE REQUIRED PARKING.

LEGEND



VICINITY MAP



BUILDING S.F. (GROSS)

BUILDING / LEVEL	CONST. TYPE	OCC.
BLDG TYPE 1:		
1ST FLR. 10,250 S.F.	V-A	R-2
2ND FLR. 10,233 S.F.		
3RD FLR. 10,233 S.F.		
SUBTOTAL 30,716 S.F. (x 8 = 245,728 S.F.)		
BLDG TYPE 2:		
1ST FLR. 4,574 S.F.	V-A	R-2
2ND FLR. 4,574 S.F.		
3RD FLR. 4,574 S.F.		
SUBTOTAL 13,722 S.F. (x 1 = 13,722 S.F.)		
BLDG TYPE 3:		
1ST FLR. 2,299 S.F.	V-A	R-2
2ND FLR. 2,185 S.F.		
SUBTOTAL 4,484 S.F. (x 5 = 22,420 S.F.)		
TOTAL RESIDENTIAL:		**281,870 S.F.**
CLUBHOUSE:		
1ST FLR. 6,511 S.F.	V-B	A-3 / B
SUBTOTAL 6,511 S.F. (x 1 = 6,511 S.F.)		
FITNESS:		
1ST FLR. 3,753 S.F.	V-B	A-3
SUBTOTAL 3,753 S.F. (x 1 = 3,753 S.F.)		
DETACHED GARAGES:		
TYPE 1: 2,012 S.F.	V-B	U
SUBTOTAL 2,012 S.F. (x 2 = 4,024 S.F.)		
TYPE 2: 2,148 S.F.	V-B	U
SUBTOTAL 2,148 S.F. (x 1 = 2,148 S.F.)		
TOTAL ALL BUILDINGS:		**298,306 S.F.**

CODE COMPLIANCE:
THE FLAGSTAFF CITY COUNCIL HAS ADOPTED THE FOLLOWING BUILDING CODES WITH AMENDMENTS:
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2017 NFPA 70 / NATIONAL ELECTRICAL CODE
1997 UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS
2018 INTERNATIONAL RESIDENTIAL CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
1997 UNIFORM ADMINISTRATIVE CODE
1997 UNIFORM HOUSE CODE
ICC A117-1-2017 ACCESSIBLE & USABLE BUILDINGS & FACILITIES

SITE DATA:

SITE ADDRESS:
2701 South Woody Mountain Road

APN:
112-01-019B
Note: as of January 1, 2023, this parcel number will be changed to APN 112-01-712

SITE AREA:
GROSS AREA: 13.01 ACRES (567,020 SF)
NET AREA: 13.01 ACRES (567,020 SF)

LOT COVERAGE:
MAX. ALLOWED: 50% (0.50 x 567,020 SF = 283,510 SF)
PROVIDED: 23% (130,737 SF)

LOT COVERAGE CALCULATIONS:

BUILDING 1	11,461 S.F. x 8 =	91,688 S.F.
BUILDING 2	5,780 x 1 =	5,780 S.F.
CARRIAGE	2,277 S.F. x 5 =	11,385 S.F.
CLUBHOUSE	9,249 S.F.	9,249 S.F.
FITNESS	5,930 S.F.	5,930 S.F.
GARAGES	2,035 x 3 =	6,105 S.F.
RAMADAS	600 S.F.	600 S.F.

COMMON OPEN SPACE: (SEE LANDSCAPE OPEN SPACE PLAN)
REQUIRED: 15% (±85,053 SF)
PROVIDED: 16% (±91,109 SF)

CIVIC OPEN SPACE: (SEE LANDSCAPE OPEN SPACE PLAN)
REQUIRED: 5% (±28,351 SF)
PROVIDED: 5% (±28,360 SF)

ZONING:
EXISTING ZONING: COF: Rural Residential - Resource Protection Overlay (RR-RPO) (±11.31 ac.)
CC: General - 10 Ac. Minimum (±1.70 ac.)
PROPOSED: COF: High Density Residential - Resource Protection Overlay (HR-RPO)(± 13.01 ac.)

HEIGHT:
ALLOWED: 60'-0" (65'-0" ALLOWED WITH 6:12 PITCHED ROOFS)
PROVIDED: 3 STORIES - ± 50'-0" / 2 STORIES - ± 30'-0" (AT FINISH GRADE)
(Building height shall be measured vertically from top of any point of a structure or building element, including the top of parapet, top of mansard roof, screened wall or pitched roof to the natural grade directly benefits one point measured under the finished grade abutting the bldg. or structure is below the natural grade.)

UNIT MIX:

1 BEDROOM/ 1 BATH	48 D.U.	(22.4%)
2 BEDROOM/ 2 BATH	118 D.U.	(55.2%)
3 BEDROOM/ 2 BATH	48 D.U.	(22.4%)
TOTAL	**214 D.U.**	**(100%)**

CONSTRUCTION TYPE:
PROPOSED: TYPE V-A/V-B, SPRINKLERED (RESIDENTIAL APARTMENT BLDGS.)

DENSITY:
MAXIMUM ALLOWED: 29 D.U./GROSS ACRE (MAX. WITH RPO, INSIDE PEDESTRIAN SHED OF AN ACTIVITY CENTER)
PROVIDED: ±16.44 D.U./GROSS ACRE

PARKING:
REQUIRED PARKING:
1 BEDROOM/1 BATH (48 D.U. x 1.50 P.S./D.U.) = 72 P.S.
2 BEDROOM/2 BATH (118 D.U. x 2.00 P.S./D.U.) = 236 P.S.
3 BEDROOM/2 BATH (48 D.U. x 2.00 P.S./D.U.) = 96 P.S.
GUEST (2 & 3 BEDROOM - (166 D.U. x 0.25) = 42 P.S.
TOTAL REQUIRED PARKING: 446 P.S.

REQUIRED ACCESSIBLE PARKING:
REQUIRED: PER CITY OF FLAGSTAFF TABLE 10-50.80.080.B:
401-500 TOTAL P.S. = 10 ACC. P.S.
PROVIDED: 10 PARKING SPACES (9 SURFACE, 1 GARAGE)

PROVIDED PARKING:
SURFACE PARKING 390 P.S. (INCLUDES 340 SURFACE P.S., 3 EV CHARGING STATIONS & 47 TANDEM P.S.)
ATTACHED GARAGES 47 P.S.
CARRIAGE BUILDING GARAGES 40 P.S.
DETACHED GARAGE 21 P.S.
TOTAL PROVIDED PARKING 498 P.S.
INCLUDES 10 ACCESSIBLE P.S: 9 SURFACE, 1 GARAGE

GENERAL PARKING DIMENSIONS:
PARKING SPACE: 9' x 18' WITH 1.5' OVERHANG
AISLE WIDTH: 26' FIRE CODE (APPENDIX D)
LANDSCAPE ISLAND RATIO: 8 P.S. PER 1 LANDSCAPE ISLAND

BICYCLE PARKING:
REQUIRED: 5% OF REQUIRED PARKING = 5% x 446 = 22
PROVIDED: 24 BICYCLE PARKING SPACES

BUILDING SETBACK:

	REQUIRED	PROVIDED
- FRONT (ROUTE 66)	15'	±19' - BUILDING
		15' - FENCE (6')
- STREET SIDE (WOODY MTN RD)	5'	±24' - BUILDING
- SIDE (WEST PROPERTY LINE)	5'	10' - BUILDING
- REAR (SOUTH PROPERTY LINE)	15'	15' - DETACHED GARAGE

FIRE CODE:
CITY OF FLAGSTAFF FIRE DEPARTMENT HAS ADOPTED APPENDIX D WITHIN THE 2018 FIRE CODE WHICH REQUIRES THE FOLLOWING:
1. WHERE THE VERTICAL DISTANCE BETWEEN THE GRADE PLANE AND THE HIGHEST ROOF SURFACE EXCEEDS 30', APPROVED AERIAL FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED.
2. AERIAL FIRE APPARATUS ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 26'.
3. FIRE APPARATUS ACCESS ROUTES SHALL BE LOCATED NOT LESS THAN 15' AND NOT GREATER THAN 30' FROM THE BUILDING AND SHALL BE POSITIONED PARALLEL TO ONE ENTIRE SIDE OF THE BUILDING. THE SIDE OF THE BUILDING ON WHICH THE AERIAL FIRE APPARATUS ACCESS ROAD IS POSITIONED SHALL BE APPROVED BY THE FIRE CODE OFFICIAL.

FIRE TRUCK TURNING RADIUS:
INSIDE: 35'
OUTSIDE: 55'

ARCHITECTURAL SITE PLAN

0' 25' 50' 100'
SCALE: 1" = 50'-0"

PROJECT NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES
8950 S 52ND ST. SUITE 115
TEMPE, AZ 85284

SEAL
REGISTERED ARCHITECT CERTIFICATE NO. 13467 GARY D. TODD 11/18/22 ONLY VALID WHEN SIGNED

CONTACT
TODD + ASSOCIATES
CRITICAL THINKING / CREATIVE DESIGN
ARCHITECTURE. PLANNING. LANDSCAPE ARCHITECTURE.
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09-22-2022
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11-23-2022
SITE PLAN REVIEW SUBMITTAL #2

DATA
Proj Mgr.
Dwn By:

ARCHITECTURAL SITE PLAN

A1.1.1

REAR ELEVATION

LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR		SWATCH
A	Fiber Cement Siding Body 1	MFG.:	Allura Lap Siding - Horizontal Panels Traditional Texture	
		COLOR:	Maple	
B	Fiber Cement Siding Body 2	MFG.:	Allura Lap Siding - Vertical Panels Traditional Texture	
		COLOR:	Slate	
C	Fiber Cement Fascia	MFG.:	Allura - Plycem Fiber Cement Trim	
		COLOR:	Sterling Gray	
		LRV:	48.20	
D	Fiber Cement Trim	MFG.:	Allura - Plycem Fiber Cement Trim	
		COLOR:	Autumn Red	
		LRV:	12.60	
E	Stone Veneer	MFG.:	Coronado - Getty Stone	
		COLOR:	Embassy Blend	
F	Shingle Roof	MFG.:	GAF Timberline - Ultra HD Shingles	
		COLOR:	Charcoal	
G	Metal Roof	MFG.:	MBCI - Slimline Roof Panel	
		COLOR:	Signature 300 "Slate Gray"	
		LRV:	18.76	
H	Metal Railing	MFG.:	Sherwin Williams	
		COLOR:	SW 7578 "Borscht"	
		LRV:	6	

CLUBHOUSE ELEVATIONS

0" 4" 8" 16"

SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

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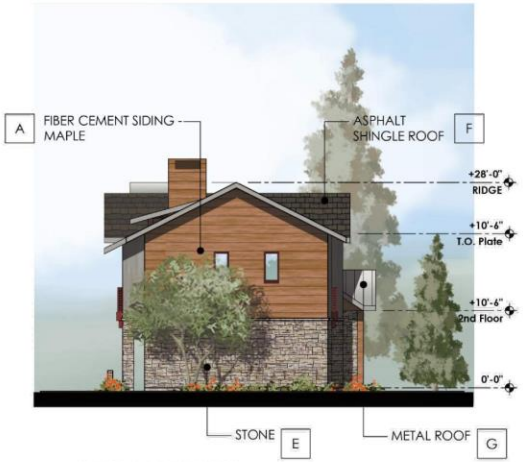
CLUBHOUSE ELEVATIONS

A3.4.2

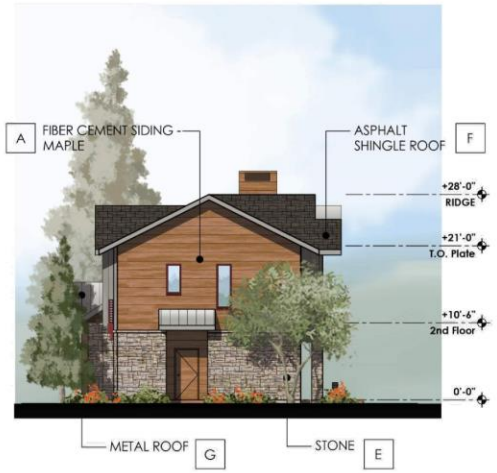


RIGHT ELEVATION

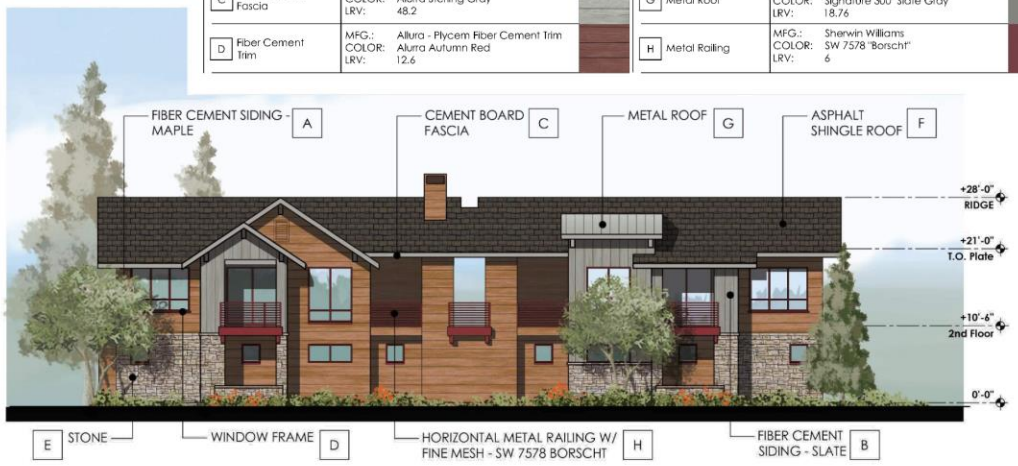
FRONT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	



LEFT ELEVATION



REAR ELEVATION

TYPE 3 ELEVATIONS

0" 4" 8" 16"
SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

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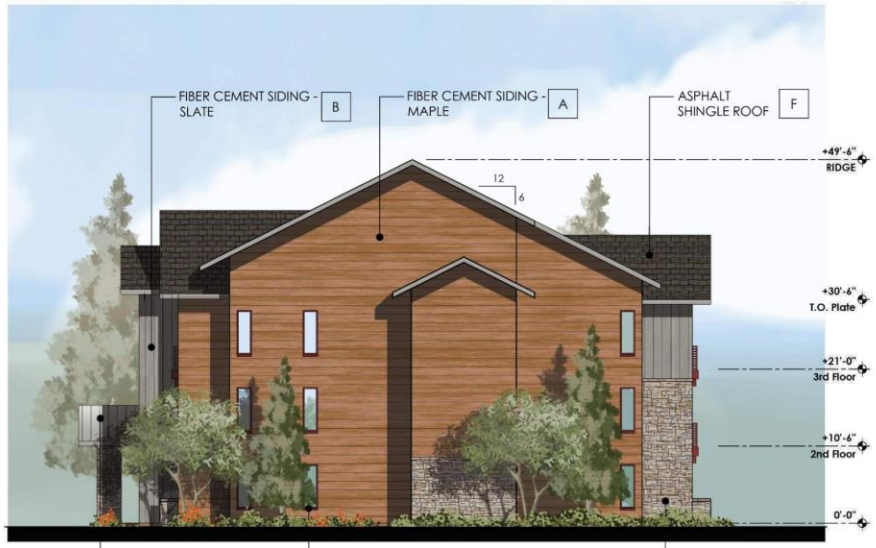
BUILDING TYPE 3 ELEVATIONS

A3.3.1

REAR ELEVATION



LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	

TYPE 1 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

8950 S 52ND ST. SUITE 115
TEMPE, AZ 85284

SEAL

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Dwn By:

BUILDING TYPE 1 ELEVATIONS

A3.1.2

Property Owners within 300-feet					
Property Owner Name	**Mailing Address**	**City**	**Sate**	**ZIP**	**APN**
DUNN SHELLY R	2864 W PICO DEL MONTE CIR	FLAGSTAFF	AZ	86001	11262212A
ESTERLY BRIAN & ROSETTA	24361 N 73RD ST	SCOTTSDALE	AZ	85255	11262208A
FLAGSTAFF CITY OF	211 W ASPEN AVE	FLAGSTAFF	AZ	86001	11201002
HELIN BUILDING LLC	1800 N HEREFORD DR	FLAGSTAFF	AZ	86001	11201003A 11201003B
PRESIDIO IN THE PINES HOMEOWNER'S ASSOC INC	323 S RIVER RUN RD NO 1	FLAGSTAFF	AZ	86001	11262473B
TIMBER SKY COMMUNITY ASSOCIATION	2502 E CAMELBACK RD NO 214	PHOENIX	AZ	85016	11201163
VAN HOY FAMILY REVOCABLE TRUST DTD 01-16-02	14194 W SMOKETREE DR	SURPRISE	AZ	85387	11262207
VP 66 & WOODY MOUNTAIN LLC	2502 E CAMELBACK RD NO 214	PHOENIX	AZ	85016	11201156 11201157
WALKER WINSTON W & MARY M	13450 N KACHINA DR	ORO VALLEY	AZ	85755	11262210A
WOODY MOUNTAIN CAMPGROUND	1425 W FOREST MEADOWS	FLAGSTAFF	AZ	86001	11201701
HOAs and Neighborhood Associations within 1,000-feet					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	
RAILROAD SPRINGS 66 LLLP	1016 W UNIVERSITY AVE NO 203	FLAGSTAFF	AZ	86001	
PRESIDIO IN THE PINES HOMEOWNER'S ASSOC INC	323 S RIVER RUN RD NO 1	FLAGSTAFF	AZ	86001	
TIMBER SKY COMMUNITY ASSOCIATION	2502 E CAMELBACK RD NO 214	PHOENIX	AZ	85016	
Registry of Persons and Groups					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	**Email**
Friends of Flagstaff's Future	P.O. Box 23462	Flagstaff	AZ	86002	info@friendsofflagstaff.org
Friends of Flagstaff's Future ATTN: Michele A. James	P.O. Box 23462	Flagstaff	AZ	86002	
Northern Arizona Building Association	1500 East Cedar Avenue, Suite 86	Flagstaff	AZ	86004	tbociung@nazba.org
Northern Arizona Association of Realtors ATTN: Jeffrey Herd	1515 East Cedar Avenue, Suite C-4	Flagstaff	AZ	86004	naarflag@nazrealtor.com
Tish Bogan-Ozmun	5271 Mt. Pleasant Drive	Flagstaff	AZ	86004	tishflagstaff@gmail.com
Marilyn Weissman	1055 East Apple Way	Flagstaff	AZ	86001	Missymoet@aol.com
Nat White	1120 North Rockridge Road	Flagstaff	AZ	86001	white@lowell.edu
Charlie Silver	720 West Aspen Avenue	Flagstaff	AZ	86001	Cws720@gmail.com
Betsy McKellar	330 S Ash Lane	Flagstaff	AZ	86004	
David Carpenter	1109 W Beal Road	Flagstaff	AZ	86001	dc@hopeaz.com
Arizona Army National Guard, AZAA-FMO ATTN: Dorenda Coleman	5636 E McDowell Rd, M5330	Phoenix	AZ	85008	dorenda.j.coleman.nfg@mail.mil
US Navy, Intergovernmental Branch. ATTN: Mary Beth Dreusike	850 Pacific Highway Building 1 – 5th Floor, Suite 513	San Diego	CA	92132	marybeth.dreusike@navy.mil
Celia Barotz	3354 N Crest Street	Flagstaff	AZ	86001	cbarotz@gmail.com
Norm Wallen	3716 N Grandview	Flagstaff	AZ	86004	normwallenflg@gmail.com
Coconino County Community Development ATTN: Jay Christelman	2500 N Fort Valley Rd. Bldg 1	Flagstaff	AZ	86001-1287	jchristelman@coconino.az.gov
Tyler Denham	800 W Forest Meadows St, Apt 119	Flagstaff	AZ	86001	tyler.b.denham@gmail.com
Coconino County Community Development ATTN: Jess McNeely	2500 N Fort Valley Rd. Bldg 1	Flagstaff	AZ	86001-1287	wmcneely@coconino.az.gov
Flagstaff Lodging, Restaurant & Tourism Association ATTN: Steve Finch	PO Box 30622	Flagstaff	AZ	86003	sfinch@flrta.org
Rachel Bass	3083 W. Easterday Lane	Flagstaff	AZ	86001	rsilverton@gmail.com

First Neighborhood Meeting Attendees/Registrants					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	**Email**
Lori McCorry	2462 W. Clement Cir	Flagstaff	AZ	86001	dl1664@bellsouth.net
Bryan Deley	2914 S Presidio de Calabasas	Flagstaff	AZ	86001	bdeley@tricom-solutions.com
Crystal Graziano	2433 W Bruce Balle Dr	Flagstaff	AZ	86001	crystal.graziano@nau.edu
H & K Mountain	2462 South Polaris Way	Flagstaff	AZ	86001	highlandmary@gmail.com
Leah Rosenfeld	2921 W Paz De Avenida	Flagstaff	AZ	86001	Ldr5020@gmail.com
Richard Pogue	2924 S Camel Dr	Flagstaff	AZ	86001	poguera@gmail.com
Brent Ballard	10838 N 10th Place	Phoenix	AZ	85020	arizonalifestyle@aol.com
Martha Johnson	2845 W. Pico del Monte Circle	Flagstaff	AZ	86001	mej0017@gmail.com
Robert Davis	2912 W Paz de Avenida	Flagstaff	AZ	86001	radavis15@mac.com
Nancy & Bruce Helin	1800 N Hereford Dr	Flagstaff	AZ	86001	bnhelin@msn.com
Dennis Bellamy	2542 W Pollo Circle	Flagstaff	AZ	86001	slammer737@gmail.com
Chris Hedlund	2524 W Josselyn Dr	Flagstaff	AZ	85001	ched12345@aol.com
Axel Anderson	2502 E Camelback Rd #214, Phoenix, AZ 85016	Phoenix	AZ	85016	axel.e.anderson@gmail.com
Barry and Susanna Lutz and Maxwell	3340 S Skye Way	Flagstaff	AZ	86005	maxwell.lutz@gmail.com
John Gartin	2461 W Pollo Cir	Flagstaff	AZ	86001	johnggartin@gmail.com
Neal Kenmore	2562 W Josselyn Dr	Flagstaff	AZ	86001	beartrap4junk@gmail.com
Christina George	2959 S Pepita Dr	Flagstaff	AZ	86001	Christina.george610@gmail.com
Other Interested Parties					
Organization / Contact	**Mailing Address**	**City**	**Sate**	**ZIP**	**Email**
City of Flagstaff Community Development ATTN: Genevieve Pearthree	211 W. Aspen Ave	Flagstaff	AZ	86001	gpearthree@flagstaffaz.gov
Gammage & Burnham, PLC ATTN: Nick Sobraske	40 N Central, 20th Floor	Phoenix	AZ	85004	nsobraske@gblaw.com

TAB C

First Virtual Neighborhood Meeting Attendee List

December 12, 2022 First Virtual Neighborhood Meeting Attendees				
Registrants Name	**Address**	**City**	**State**	**ZIP**
Bryan Deley	2914 S Presidio de Calabasas	Flagstaff	AZ	86001
Crystal Graziano	2433 W Bruce Balle Dr	Flagstaff	AZ	86001
Kevin Mountain	2462 South Polaris Way	Flagstaff	AZ	86001
Leah Rosenfeld	2921 W Paz De Avenida	Flagstaff	AZ	86001
Lori McCorry	2462 W. Clement Cir	Flagstaff	AZ	86001
Mary Highland	2462 South Polaris Way	Flagstaff	AZ	86001
Barry and Susanna Lutz and Maxwell	3340 S Skye Way	Flagstaff	AZ	86005
Brent Ballard	2948 S Camel Dr	Flagstaff	AZ	86001
Bruce Helin	1800 N Hereford Dr	Flagstaff	AZ	86001
Chris Hedlund	2524 W Josselyn Dr	Flagstaff	AZ	85001
Christina George	2959 S Pepita Dr	Flagstaff	AZ	86001
Dennis Bellamy	2542 W Pollo Circle	Flagstaff	AZ	86001
John Gartin	2461 W Pollo Cir	Flagstaff	AZ	86001
Martha Johnson	2845 W. Pico del Monte Circle	Flagstaff	AZ	86001
Nancy Helin	1800 N Hereford Dr	Flagstaff	AZ	86001
Neal Kenmore	2562 W Josselyn Dr	Flagstaff	AZ	86001
Richard Pogue	2924 S Camel Dr	Flagstaff	AZ	86001
Robert Davis	2912 W Paz de Avenida	Flagstaff	AZ	86001

TAB D

Second Virtual Neighborhood Meeting Attendee List

February 6, 2023 Second Virtual Neighborhood Meeting Attendees				
Registrants Name	**Address**	**City**	**State**	**ZIP**
Nancy Helin	2800 W Rt 66	Flagstaff	AZ	86001
Bruce Helin	2800 W Rt 66	Flagstaff	AZ	86001
Robert Davis	2912 W Paz de Avenida	Flagstaff	AZ	86001
David Danker	2400 S Luginbuhl St	Flagstaff	AZ	86001

TAB E

Neighborhood Meetings Summary Letter

April 11, 2023

Dear Property Owner, Resident, Neighborhood Association, or Interested Citizen:

Thank you for your interest in Liv Timber Sky, the development proposal at the southwest corner of US Route 66 & Woody Mountain Road (the "Property"). You are receiving this letter because you attended either or both of the neighborhood meetings for this project. In accordance with the City's requirements for neighborhood meeting proceedings, please find enclosed a summary of the two virtual neighborhood meetings.

Should you have any questions, please do not hesitate to contact me at (602) 256-4471 or lschube@gblaw.com. Thank you, again.

Sincerely,

GAMMAGE & BURNHAM, PLC

Lindsay C. Schube

LIV TIMBER SKY—Summary of Neighborhood Meetings

Southwest corner of US Route 66 & Woody Mountain Road
Case Nos.: PZ-21-00271-04 and -05

Neighborhood Meeting

Vintage Partners and the Development Team held two virtual neighborhood meetings. The first meeting was held on December 12, 2022; the second meeting was held on February 6, 2023. The format for both meetings included a formal presentation followed by questions, comments, and discussion. In general, the formal presentation included an overview of the: (1) applications; (2) site plan; (3) building elevations, architecture, and materials; (4) existing and proposed zoning; (5) Regional Plan land use designation; (6) open space and amenities; and (7) process.

Questions, Comments, and Discussion

Generally, the participants in both meetings were supportive of the use and complimentary of the proposed site plan and architecture. The participants acknowledged a lack of housing in Flagstaff and the need for a diversity of housing opportunities for the community.

Participants primarily commented on the existing traffic at the intersection of US Route 66 & Woody Mountain Road. Vintage Partners has offered to install a traffic light at this intersection for years. The Development Team responded by explaining that a traffic impact analysis was being reviewed by the City and ADOT, which determined that with development of Liv Timber Sky, installation of the traffic signal is warranted. The Development Team further explained to participants that there are benefits of a traffic signal, including increased safety and efficiencies.

Participants that live in Timber Sky or Presidio also inquired about commercial uses at the hard corner of US Route 66 & Woody Mountain Road. The Development Team explained that these uses generally generate more traffic (compared to the proposed multi-family residential use). Instead, the Development Team is planning for civic space open to the public at the hard corner. During the second neighborhood meeting, Vintage Partners announced to participants that it has purchased property at the southeast corner of US Route 66 & Woody Mountain Road (opposite of Liv Timber Sky), and is looking into redevelopment with some commercial uses, which may include the possibility of service uses (e.g., restaurant, retail, etc.). The Development Team expressed that the southeast corner of US Route 66 & Woody Mountain Road is a better location for commercial uses.

Other topics participants inquired about included vehicular access and circulation for the development proposal, density and conformance with the Regional Plan, and possibility of student housing.

A participant inquired about revising the development proposal to provide a right-out only access driveway along US Route 66. In response to this comment, Vintage Partners agreed it would revise the development proposal, provided it was acceptable to both the City and ADOT. The Development Team continues to work with the City and ADOT to see if this is acceptable. However, the Development Team cannot commit to the access point.

The City's Regional Plan designates the Property an Urban Activity Center (U7) with the intent of promoting increased density. This designation calls for a minimum of 13 dwelling units per acre (du/ac) with no maximum density. Vintage Partners acknowledges the delicate balance of meeting the requirements of the Regional Plan, while respecting the community desires. As such, Liv Timber Sky is proposed at a low density, while ensuring compliance with the Regional Plan, with 214 multi-family units at approximately

16.45 du/ac. At this density, the Development Team believes it has found the balance between providing the density desired by the Regional Plan, while balancing the community's interest.

Liv Timber Sky has been designed to attract families and young professionals in the City. Student housing developments have specific programming elements and amenities, such as pool and spa, clubhouse, game room, study room, fitness center, and lobby, as well as units with 4- and 5-bedroom units. Liv Timber Sky features none of these student-targeted amenities. Rather, at Liv Timber Sky, there is a focus on open space and recreation, pedestrian connectivity, and the natural environment.

PLOTTED: May 11, 2023–8:23am

CIVIL SITE PLAN
FOR
LIV TIMBER SKY
FLAGSTAFF, ARIZONA

LOCATED IN SECTION 19, TOWNSHIP 21 NORTH, RANGE 7 EAST GILA AND SALT RIVER MERIDIAN, COCONINO COUNTY, FLAGSTAFF, ARIZONA

PROPERTY DEVELOPER:

LIV COMMUNITIES, LLC.
8950 S. 52ND STREET, SUTIE 115
TEMPE, AZ 85284
CONTACT: BETH HEATH
(480) 750–7269

VINTAGE PARTNERS 2.0, LLC.
2502 E. CAMELBACK ROAD, SUITE 214
PHOENIX, AZ 85016
CONTACT: MARK ORTMAN
(602) 459–9929

PROPERTY OWNER:

LIV SC FLAGSTAFF, LLC
8950 S. 52ND STREET, SUTIE 115
TEMPE, AZ 85284
CONTACT: BETH HEATH
(480) 750–7269

VP66 & WOODY MOUNTAIN, LLC.
2502 E. CAMELBACK ROAD, SUITE 214
PHOENIX, AZ 85016
CONTACT: WALTER CRUTCHFIELD
(480) 231–0814

PROJECT ARCHITECT

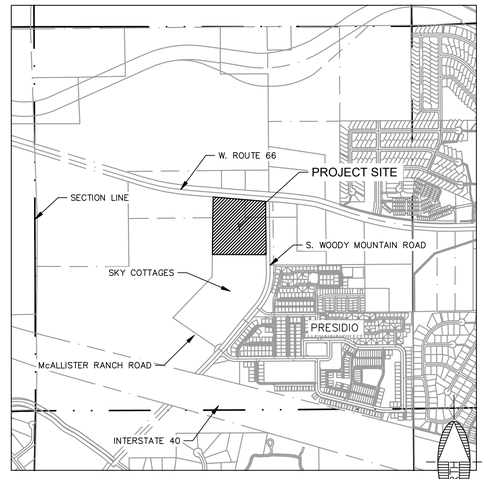
TODD & ASSOCIATES
4019 N. 44TH ST.
PHOENIX, AZ 85018
CONTACT: SCOTT PIEART
(602) 952–8280

PROJECT ENGINEER:

SHEPHARD–WESNITZER INC.
110 WEST DALE AVE
FLAGSTAFF, AZ 86001
CONTACT: STEPHEN IRWIN, PE
(928) 773–0354

PROJECT INFORMATION

SITE ADDRESS:	2701 S. WOODY MOUNTAIN ROAD FLAGSTAFF, AZ 86001
APN:	112–01–712
AREA:	NET: 13.01 ACRES (567,020 SF) GROSS: 13.01 ACRES (567,020 SF)
EXISTING ZONING:	COF: RURAL RESIDENTIAL – RESOURCE PROTECTION OVERLAY (RR–RPO)(+/– 11.45 ACRES) CC: GENERAL– 10 ACRE MINIMUM(+/– 1.56 ACRES)
PROPOSED ZONING:	COF: HIGH DENSITY RESIDENTIAL – RESOURCE PROTECTION OVERLAY (HR–RPO)(+/– 13.01 ACRES)



VICINITY MAP
N.T.S.

LEGEND

- ROW
- EASEMENT
- LOT LINE
- SETBACK
- 6"SS — GRAVITY SEWER LINE
- 6"W — PUBLIC WATER LINE
- G — EX. GAS
- UGE — EX. UNDERGROUND ELEC
- W — EX. WATER LINE
- SS — EX. SEWER LINE
- FIRE HYDRANT
- GATE VALVE
- EX SEWER MANHOLE
- EXISTING FLOW ARROW

FEMA DESIGNATION:

THIS PROJECT IS LOCATED WITHIN ZONE X OF FEMA FIRM MAP #04005C6812G, EFFECTIVE SEPTEMBER 2, 2010. ZONE X IS DESCRIBED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

SOURCE OF PROJECT INFORMATION:

BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY ALTA/ACSM LAND TITLE SURVEY BY WOODSON ENGINEERING AND SURVEY, INC. DATED NOVEMBER 14, 2014. SUPPLEMENTAL TOPOGRAPHY AND TREE SURVEY PREPARED BY SHEPHARD–WESNITZER, INC. DATED NOVEMBER 2020 AND APRIL 2022.

RESOURCE PRESERVATION:

THE PROJECT FALLS WITHIN THE CITY OF FLAGSTAFF RESOURCE PROTECTION OVERLAY ZONE AND THERE ARE RESOURCE WITHIN THE PROJECT THAT REQUIRE PRESERVATION.

BASIS OF BEARING:

NORTH 89–34–20 EAST, 2655.62' FROM THE NORTHWEST CORNER OF SECTION 24 TO THE NORTH QUARTER CORNER OF SECTION 24, TOWNSHIP 21 NORTH, RANGE 7 EAST OF THE GILA AND SALT RIVER MERIDIAN, COCONINO COUNTY, ARIZONA, ACCORDING TO AN ALTA SURVEY PREPARED BY SHEPHARD–WESNITZER, INC. IN MAY 2003, INSTRUMENT NUMBER 3203783, OFFICIAL RECORDS OF COCONINO COUNTY, ARIZONA.

IMPERVIOUS AREA:

LID AND RETENTION ARE REQUIRED AND WILL BE PROVIDED IN UNDERGROUND CHAMBER SYSTEMS.

Impervious Area & LID Analysis

						LID Required Depth (ft)
						0.0833
Basin ID	Existing Basin Area (sf)	Proposed Basin Area (sf)	Existing Basin Impervious Area for LID (sf)	Proposed Basin Impervious Area for LID (sf)	Net Impervious Area (sf)	Required LID Volume (cf)
B1	560,512	542,918	33,378	241,891	275,269	22,939
B2	289,990	307,584	4,232	160,380	164,612	13,718
TOTAL	850,502	850,502	37,610	402,271	439,881	36,657

1. Gross required 1" LID volume is for impervious area including proposed half street improvements (Woody Mtn and Route 66), onsite drive aisles, parking, sidewalks, and buildings.

PRELIMINARY
NOT FOR CONSTRUCTION, BIDDING OR RECORDING

C.O.F. #PZ-21-00271-02

FLAGSTAFF ARIZONA
LIV TIMBER SKY
CIVIL SITE PLAN

JOB NO:	22045
DATE:	MAY 23
SCALE:	AS SHOWN
DRAWN:	HAS
DESIGN:	KMF
CHECKED:	SDI

NO.	DESCRIPTION	DATE	BY
REVISIONS			

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.6934 fax
www.swoz.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.
SP01

SHT NO. 1 OF 2

FILE: P:\2022\22045\DRAWINGS\SITE PLANS\22045 – SITE PLAN.DWG EXEISER

PLOTTED: May 11, 2023–8:23am

APN: 112–01–002
OWNER: FLAGSTAFF CITY OF

APN: 112–01–003A
OWNER: HELIN BUILDING LLC

APN: 112–01–003B
OWNER: HELIN BUILDING LLC

CLEAR VIEW ZONE
D3: 515 FT

WEST ROUTE 66

PROPOSED UNDERGROUND LID/RETENTION BASIN
REQUIRED RETENTION VOLUME= 45,515 CF
PROVIDED RETENTION VOLUME= 47,500 CF

TERMINATION OF PROPOSED RETAINING WALL

N 85°16'49" W 782.95'
450.83'

EXISTING AND PROPOSED STORMWATER DISCHARGE LOCATION

281.93'

50.19'

APN: 112–01–156
OWNER: VP 66& WOODY MOUNTAIN LLC

BLDG 4
FFE: 7093.00
PROPOSED CATCH BASIN (TYP.)

BLDG 2
FFE: 7091.00

BLDG 5
FFE: 7093.70

PROPOSED STORM DRAIN MANHOLE (TYP.)

PROPOSED STORM DRAIN (TYP.)

N 0°14'47" W
253.18'

CITY OF FLAGSTAFF
COCONINO COUNTY

18" PINE

12" PINE

24" PINE

PROPOSED RETAINING WALL (MAX. HEIGHT 4 FT)

BLDG 6
FFE: 7095.60

BLDG 1
FFE: 7086.87

S 89°46'36" W 331.24'
281.24'

50.00'

APN: 112–01–701
OWNER: WOODY MOUNTAIN CAMPGROUND

CLEAR VIEW ZONE
D1: 410 FT

COCONINO COUNTY
CITY OF FLAGSTAFF

1
CP02

RIDGE LINE

BLDG 3
FFE: 7093.30

S 0°42'05" W 798.35'

BLDG 7
FFE: 7097.70

N 0°20'18" W 735.49'
510.62'
N 0°20'18" W 739.51'
510.92'

BLDG 8
FFE: 7097.10

20" PINE

18" PINE
13" PINE

FITNESS BLDG
FFE: 7100.50

CLUBHOUSE
FFE: 7090.30

14" PINE

SOUTH WOODY MOUNTAIN ROAD

16" PINE
18" PINE
16" PINE
18" PINE
18" PINE

APN: 112–01–712
OWNER: VP66 & WOODY MOUNTAIN LLC

PROPOSED RETAINING WALL (MAX. HEIGHT 4 FT)

APN: 112–01–701
OWNER: WOODY MOUNTAIN CAMPGROUND

BLDG 9
FFE: 7099.40

18" PINE
18" PINE

APN: 112–01–157
OWNER: VP 66 & WOODY MOUNTAIN LLC

BLDG 12
FFE: 7092.60

BLDG 13
FFE: 7090.10

20" PINE
18" PINE
20" PINE

CLEAR VIEW ZONE
D2: 550 FT

BLDG 10
FFE: 7097.50

BLDG 11
FFE: 7096.20

BLDG 14
FFE: 7085.10

PROPOSED UNDERGROUND LID/RETENTION BASIN
REQUIRED RETENTION VOLUME= 38,102 CF
PROVIDED RETENTION VOLUME= 40,000 CF

EXISTING AND PROPOSED STORMWATER DISCHARGE LOCATION

20" PINE

24" PINE
18" PINE

FFE: 7096.50

FFE: 7093.40

FFE: 7084.36

20" PINE
22" PINE

N 89°53'02" W 794.41'

744.42'

50.00'

2
CP02

PROPOSED RETAINING WALL (MAX. HEIGHT 11FT)

PROPOSED RETAINING WALL (MAX. HEIGHT 6FT)

TERMINATION OF PROPOSED RETAINING WALL

SKY COTTAGES
APN: 112–01–019A
OWNER: LIV SC FLAGSTAFF, LLC

PROPOSED STORMWATER CONNECTION AT EXISTING STORM DRAIN LATERAL

PRESIDIO IN THE PINES SUBDIVISION
APN: 112–62–473B
OWNER: PRESIDIO IN THE PINES HOME OWNER'S ASSOC INC

SCALE 1" : 60'
0 30 60

DRIVEWAY CLEAR VIEW ZONE CALCULATIONS

ID #	MAJOR STREET	MANEUVER DIRECTION	DESIGN SPEED (V_{MAJOR})[1]	TIME GAP $t_{g\,(unadjusted)}$[2]	Grade ≤ 3%	MULTIPLE LANE CROSSINGS	NO. OF LANES[4]	TIME GAP $t_{g(adjusted)}$[2]	INTERSECTION SIGHT DISTANCE (ISD[3])	STOPPING SIGHT DISTANCE (SSD)
D1	Woody Mountain Road	Right	40	6.5	Yes	No	2	7.0	410	305
D2	Woody Mountain Road	Left	40	7.5	Yes	Yes	3	9.0	550	305
D3	Route 66	Right	50	6.5	Yes	No	2	7.0	515	425

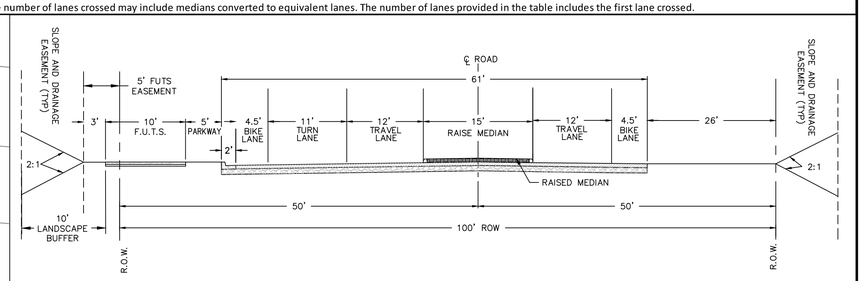
Notes:

(1) The major road speed limits (V_{MAJOR} in MPH) are based on existing conditions in the project vicinity.

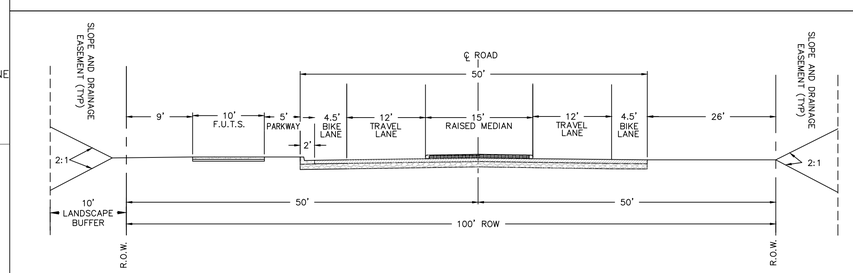
(2) The time gap values, adjusted ($t_{g\,(adjusted)}$ in seconds) and unadjusted ($t_{g\,(unadjusted)}$ in seconds), are based on the current site plan and the *AASHTO-Geometric Design of Highways and Streets* Exhibits 9-54 and 9-57. The first lane crossed does not warrant an adjustment to the time gap.

(3) The intersection site distance (ISD in feet) calculations are based on Equation 9-1 in the *AASHTO-Geometric Design of Highways and Streets*. Equation 9-1: $ISD=1.47*V_{MAJOR}*t_g$

(4) The number of lanes crossed may include medians converted to equivalent lanes. The number of lanes provided in the table includes the first lane crossed.



TYPICAL SECTION 1 - WOODY MOUNTAIN ROAD
(MINOR ARTERIAL PER MODIFIED C.O.F. STD. DTL. 10-09-032)
N.T.S.



TYPICAL SECTION 2 - WOODY MOUNTAIN ROAD
(MINOR ARTERIAL PER MODIFIED C.O.F. STD. DTL. 10-09-032)
N.T.S.

LEGEND

EXISTING TREE TO BE REMOVED

EXISTING TREE TO BE SAVED

EXISTING TREE WITHIN WOODY MTN ROW OR AFFECTED BY ROW IMPROVEMENTS

NOTES:
1. EXISTING SLOPES ON THE SITE DO NOT EXCEED 16.99%.
2. EXISTING TREES WITHIN ROW OR AFFECTED BY ROW IMPROVEMENTS DO NOT APPLY TO CALCULATION PER CITY OF FLAGSTAFF CITY CODE SECTION 10-50.90.020 (B).
3. SITE IS NOT WITHIN A RURAL OR URBAN FLOODPLAIN.

TOTAL ONSITE TREE RESOURCES

TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER EXISTING	0	0	1	11	0
POINTS	1	2	4	8	20
SUM OF POINTS	0	0	4	88	0
				SUBTOTAL TREE POINTS=	92

POST-DEVELOPMENT TREES

TYPE	PINE	PINE	PINE	PINE	PINE
DIAMETER (IN)	6-8	9-12	13-17	18-24	>25
NUMBER EXISTING	0	0	0	6	0
POINTS	1	2	4	8	20
SUM OF POINTS	0	0	0	48	0
				TOTAL TREE POINTS=	92
				TOTAL PRESERVED TREE POINTS=	48
				REQUIRED PRESERVATION RATE=	50%
				PRESERVATION RATE=	**52.2%**

NOTE:
1) PER CITY OF FLAGSTAFF ZONING CODE SECTION 10-50.90.060 RESIDENTIAL ZONES PRESERVATION RATE IS 50%.

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING OR RECORDING

C.O.F. #PZ-21-00271-02

FLAGSTAFF ARIZONA

LIV TIMBER SKY

GRADING AND DRAINAGE

JOB NO: 22045
DATE: MAY 23
SCALE: AS SHOWN
DRAWN: HAS
DESIGN: KMF
CHECKED: SCI

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swoz.com

Shephard Wesnitzer, Inc.

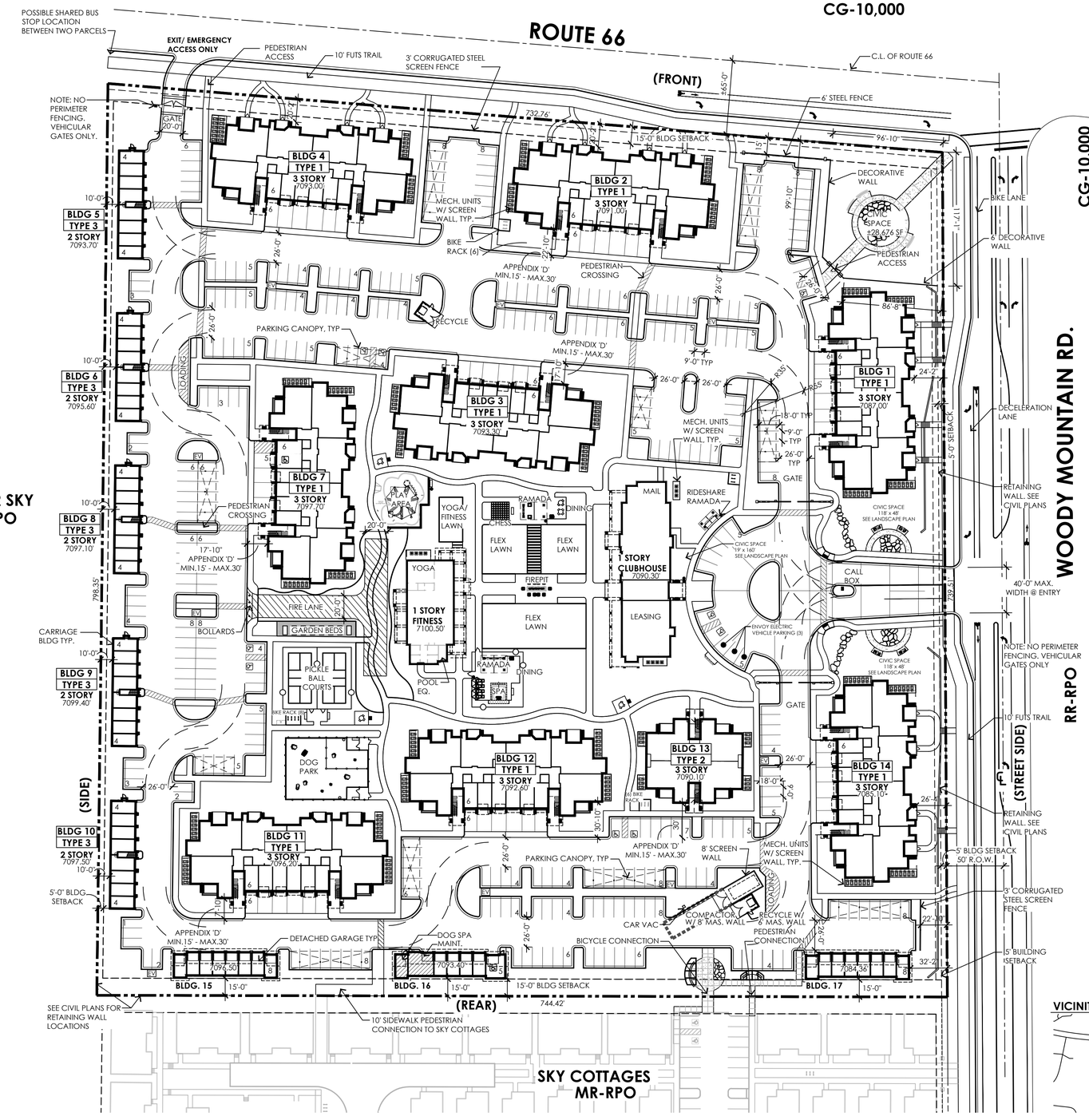
NO.	DESCRIPTION	DATE	BY
	REVISIONS		

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.
SP02

SHT NO. 2 OF 2

FILE: P:\2022\22045\DRAWINGS\SITE PLANS\22045 – SITE ANALYSIS AND NRPP.DWG EXEISER



DEVELOPMENT TEAM:

DEVELOPER:
LIV COMMUNITIES
1600 S. BEACON BLVD.
SUITE 260
GRAND HAVEN, MI 49417
616-846-6900

ARIZONA OFFICE:
8950 SOUTH 52ND STREET
SUITE 115
TEMPE, AZ 85284
480-739-9240

VINTAGE PARTNERS
2502 E. CAMELBACK RD.
SUITE 214
PHOENIX, AZ 85016
602-459-9929

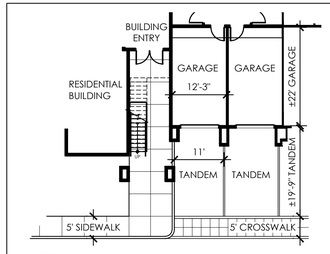
ARCHITECTURE:
TODD & ASSOCIATES
4019 N. 44TH STREET
PHOENIX, AZ 85018
602-952-8280

LANDSCAPE ARCHITECTURE:
NORRIS DESIGN
901 E. MADISON STREET
PHOENIX, AZ 85034
602-254-9600

CIVIL ENGINEER:
SHEPARD-WESNITZER, INC.
110 DALE AVENUE
FLAGSTAFF, AZ 86001
928-773-0354

ZONING ATTORNEY:
GAMMAGE & BURNHAM
40 N. CENTRAL AVENUE
20TH FLOOR
PHOENIX, AZ 85004
602-256-0566

DETAIL AT TYPICAL ATTACHED GARAGE



NOTE:
- TANDEM PARKING SPACE TO BE ASSIGNED TO SAME DWELLING UNIT AS ASSOCIATED GARAGE.
- TANDEM PARKING SPACE COUNT HAS NOT BEEN COUNTED TOWARD THE REQUIRED PARKING.

LEGEND

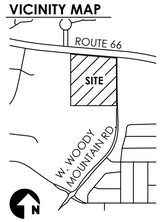
- PARKING CANOPY
- ASSUMED PROPERTY LINE
- ACCESSIBLE PARKING SPACE
- FIRE TRUCK TURNING RADII PER CITY OF FLAGSTAFF STANDARDS. (35', 55')
- EV — DUAL PORT ELECTRIC VEHICLE CHARGING STATION WITH BOLLARDS AS REQUIRED
- BLDG 6 / TYPE 5 — BUILDING NUMBER / BUILDING TYPE
- * — MONUMENT SIGN

BUILDING S.F. (GROSS)

BUILDING / LEVEL		CONST. TYPE	OCC.
BLDG TYPE 1:			
1ST FLR.	10,250 S.F.	V-A	R-2
2ND FLR.	10,233 S.F.		
3RD FLR.	10,233 S.F.		
SUBTOTAL	30,716 S.F. (x 8 = 245,728 S.F.)		
BLDG TYPE 2:			
1ST FLR.	4,574 S.F.	V-A	R-2
2ND FLR.	4,574 S.F.		
3RD FLR.	4,574 S.F.		
SUBTOTAL	13,722 S.F. (x 1 = 13,722 S.F.)		
BLDG TYPE 3:			
1ST FLR.	2,299 S.F.	V-A	R-2
2ND FLR.	2,185 S.F.		
SUBTOTAL	4,484 S.F. (x 5 = 22,420 S.F.)		
TOTAL RESIDENTIAL:		**281,870 S.F.**	
CLUBHOUSE:			
1ST FLR.	6,511 S.F.	V-B	A-3 / B
SUBTOTAL	6,511 S.F. (x 1 = 6,511 S.F.)		
FITNESS:			
1ST FLR.	3,753 S.F.	V-B	A-3
SUBTOTAL	3,753 S.F. (x 1 = 3,753 S.F.)		
DETACHED GARAGES:			
TYPE 1:	2,012 S.F.	V-B	U
SUBTOTAL	2,012 S.F. (x 2 = 4,024 S.F.)		
TYPE 2:	2,148 S.F.	V-B	U
SUBTOTAL	2,148 S.F. (x 1 = 2,148 S.F.)		
TOTAL ALL BUILDINGS:		**298,306 S.F.**	

CODE COMPLIANCE:
THE FLAGSTAFF CITY COUNCIL HAS ADOPTED THE FOLLOWING BUILDING CODES WITH AMENDMENTS:
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2017 NFPA 70 / NATIONAL ELECTRICAL CODE
1997 UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS
2018 INTERNATIONAL RESIDENTIAL CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
1997 UNIFORM ADMINISTRATIVE CODE
1997 UNIFORM HOUSE CODE
ICC A117-1-2017 ACCESSIBLE & USABLE BUILDINGS & FACILITIES

VICINITY MAP



SITE DATA:

SITE ADDRESS:
2701 South Woody Mountain Road

APN:
112-01-712

SITE AREA:
GROSS AREA: 13.01 ACRES (567,020 SF)
NET AREA: 13.01 ACRES (567,020 SF)

LOT COVERAGE:
MAX. ALLOWED: 50% (0.50 x 567,020 SF = 283,510 SF)
PROVIDED: 23% (130,737 SF)

LOT COVERAGE CALCULATIONS:

BUILDING 1	11,461S.F. x 8 =	91,688 S.F.
BUILDING 2	5,780 x 1 =	5,780 S.F.
CARRIAGE	2,277 S.F. x 5 =	11,385 S.F.
CLUBHOUSE	9,249 S.F.	9,249 S.F.
FITNESS	5,930 S.F.	5,930 S.F.
GARAGES	2,035 x 3 =	6,105 S.F.
RAMADAS	600 S.F.	600 S.F.

COMMON OPEN SPACE: (SEE LANDSCAPE OPEN SPACE PLAN)
REQUIRED: 15% (±85,053 SF)
PROVIDED: 16% (±91,109 SF)

CIVIC OPEN SPACE: (SEE LANDSCAPE OPEN SPACE PLAN)
REQUIRED: 5% (±28,351 SF)
PROVIDED: 5% (±28,360 SF)

ZONING:
EXISTING ZONING: COF: Rural Residential - Resource Protection Overlay (RR-RPO) (±11.31 ac.)
CC: General - 10 Ac. Minimum (±1.70 ac.)
PROPOSED: COF: High Density Residential - Resource Protection Overlay (HR-RPO)(± 13.01 ac.)

HEIGHT:
ALLOWED: 60'-0" (65'-0" ALLOWED WITH 6:12 PITCHED ROOFS)
PROVIDED: 3 STORIES - ± 50'-0" / 2 STORIES - ± 30'-0" (AT FINISH GRADE)
(Building height shall be measured vertically from top of any point of a structure or building element, including the top of parapet, top of mansard roof, screened wall or pitched roof to the natural grade directly benefits one point measured under the finished grade abutting the bldg. or structure is below the natural grade.)

UNIT MIX:

1 BEDROOM/ 1 BATH	48 D.U.	(22.4%)
2 BEDROOM/ 2 BATH	118 D.U.	(55.2%)
3 BEDROOM/ 2 BATH	48 D.U.	(22.4%)
TOTAL	**214 D.U.**	**(100%)**

CONSTRUCTION TYPE:
PROPOSED: TYPE V-A/V-B, SPRINKLERED (RESIDENTIAL APARTMENT BLDGS.)

DENSITY:
MAXIMUM ALLOWED: 29 D.U./GROSS ACRE (MAX. WITH RPO, INSIDE PEDESTRIAN SHED OF AN ACTIVITY CENTER)
PROVIDED: ±16.44 D.U./GROSS ACRE

PARKING:
REQUIRED PARKING:

1 BEDROOM/1 BATH (48 D.U. x 1.50 P.S./D.U.) =	72 P.S.
2 BEDROOM/2 BATH (118 D.U. x 2.00 P.S./D.U.) =	236 P.S.
3 BEDROOM/2 BATH (48 D.U. x 2.00 P.S./D.U.) =	96 P.S.
GUEST (2 & 3 BEDROOM - 166 D.U. x 0.25) =	42 P.S.
TOTAL REQUIRED PARKING:	**446 P.S.**

REQUIRED ACCESSIBLE PARKING:
REQUIRED, PER CITY OF FLAGSTAFF TABLE 10-50.80.080.B:
401-500 TOTAL P.S. = 10 ACC. P.S.
PROVIDED: 10 PARKING SPACES (9 SURFACE, 1 GARAGE)

PROVIDED PARKING:

SURFACE PARKING	314 P.S. (INCLUDES 267 SURFACE P.S., & 47 TANDEM P.S.)
CARPORTS	70 P.S.
ATTACHED GARAGES	47 P.S.
CARRIAGE BUILDING GARAGES	40 P.S.
DETACHED GARAGE	21 P.S.
TOTAL PROVIDED PARKING	**492 P.S.**

INCLUDES 10 ACCESSIBLE P.S; 7 SURFACE, 2 CARPORT, 1 GARAGE

PROVIDED EV CHARGING:
SURFACE/CARPORT CHARGING 9 DUAL-PORT CHARGERS
GARAGE CHARGING 108 GARAGE 220V OUTLETS

GENERAL PARKING DIMENSIONS:
PARKING SPACE: 9' x 18' WITH 1.5" OVERHANG
AISLE WIDTH: 26' FIRE CODE (APPENDIX D)
LANDSCAPE ISLAND RATIO: 8 P.S. PER 1 LANDSCAPE ISLAND

BICYCLE PARKING:
REQUIRED: 5% OF REQUIRED PARKING = 5% x 446 = 22
PROVIDED: 26 BICYCLE PARKING SPACES

BUILDING SETBACK:

	REQUIRED	PROVIDED
- FRONT (ROUTE 66)	15'	±19' - BUILDING 15' - FENCE (6')
- STREET SIDE (WOODY MTN RD)	5'	±24' - BUILDING
- SIDE (WEST PROPERTY LINE)	5'	10' - BUILDING
- REAR (SOUTH PROPERTY LINE)	15'	15' - DETACHED GARAGE

FIRE CODE:
CITY OF FLAGSTAFF FIRE DEPARTMENT HAS ADOPTED APPENDIX D WITHIN THE 2018 FIRE CODE WHICH REQUIRES THE FOLLOWING:
1. WHERE THE VERTICAL DISTANCE BETWEEN THE GRADE PLANE AND THE HIGHEST ROOF SURFACE EXCEEDS 30', APPROVED AERIAL FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED.
2. AERIAL FIRE APPARATUS ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 26'.
3. FIRE APPARATUS ACCESS ROUTES SHALL BE LOCATED NOT LESS THAN 15' AND NOT GREATER THAN 30' FROM THE BUILDING ANDSHALL BE POSITIONED PARALLEL TO ONE ENTIRE SIDE OF THE BUILDING. THE SIDE OF THE BUILDING ON WHICH THE AERIAL FIRE APPARATUS ACCESS ROAD IS POSITIONED SHALL BE APPROVED BY THE FIRE CODE OFFICIAL.

FIRE TRUCK TURNING RADIUS:
INSIDE: 35'
OUTSIDE: 55'

ARCHITECTURAL SITE PLAN

0" 25' 50' 100'
SCALE: 1" = 50'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY
FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES
8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

SEAL
REGISTERED ARCHITECT CERTIFICATE NO. 13467 GARY D. TODD 5/1/23 Date Signed ARIZONA, USA

CONTACT
TODD + ASSOCIATES
CRITICAL THINKING / CREATIVE DESIGN
ARCHITECTURE. PLANNING. LANDSCAPE ARCHITECTURE.
4019 N. 44TH ST. / PHOENIX, AZ 85018
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09-22-2022
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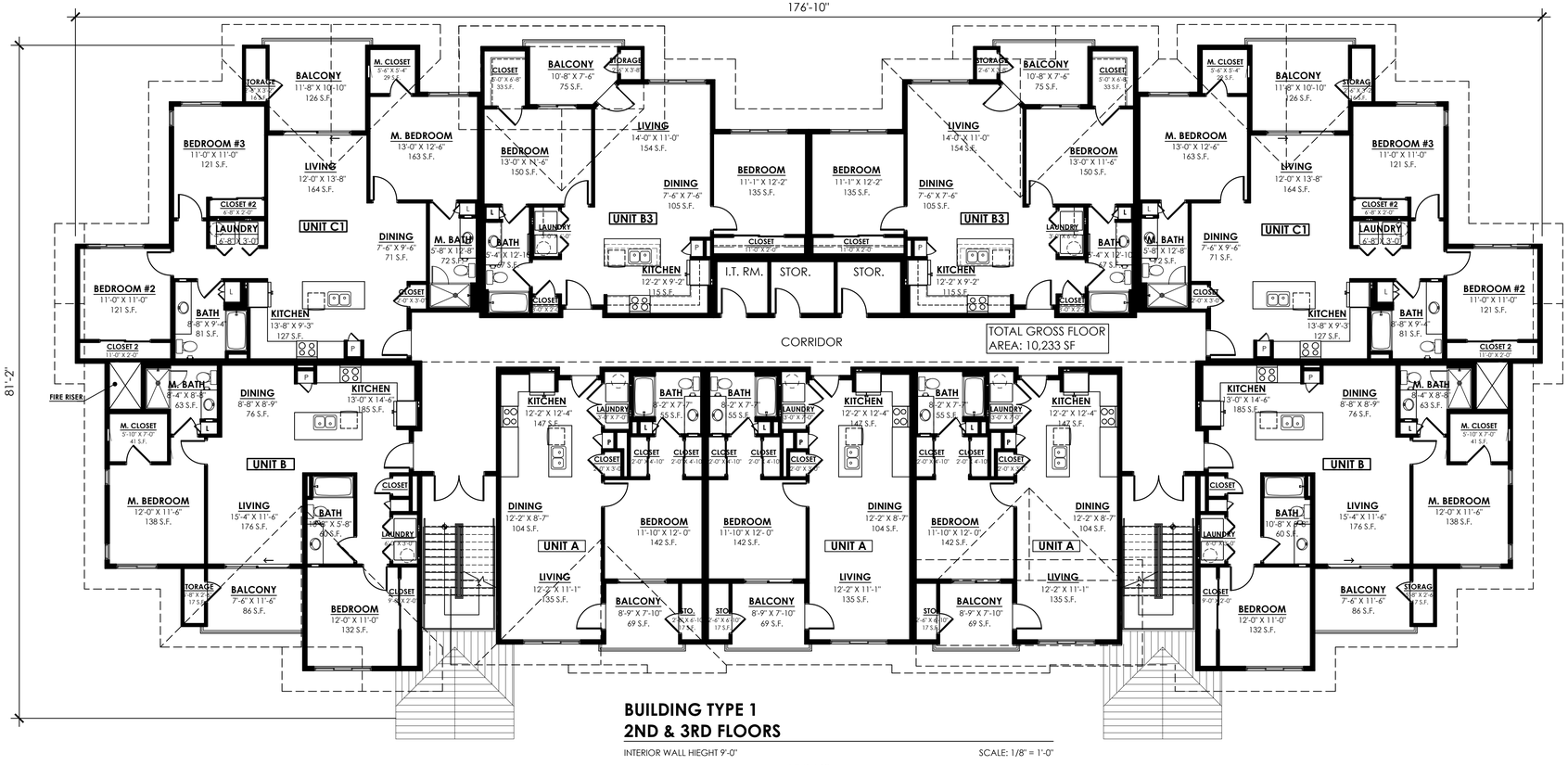
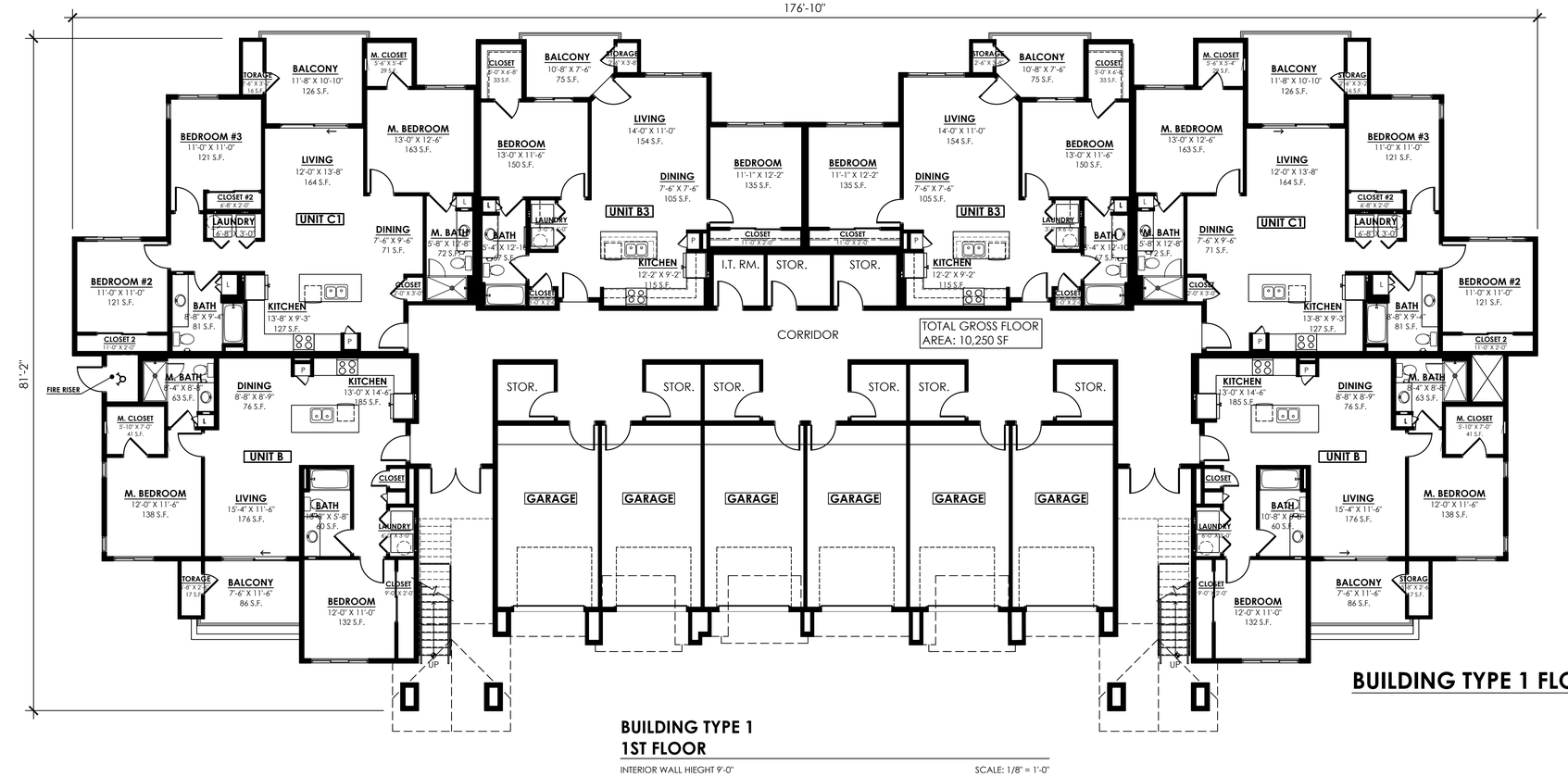
11-23-2022
SITE PLAN REVIEW SUBMITTAL #2
01-05-2023
SITE PLAN REVIEW SUBMITTAL #3
02-16-2023
SITE PLAN REVIEW SUBMITTAL #4
05-11-2023
SITE PLAN REVIEW SUBMITTAL #5

ARCHITECTURAL SITE PLAN
A1.1.1



BUILDING TYPE 1
2ND & 3RD FLOORS

INTERIOR WALL HIEGHT 9'-0" SCALE: 1/8" = 1'-0"



BUILDING TYPE 1
1ST FLOOR

INTERIOR WALL HIEGHT 9'-0" SCALE: 1/8" = 1'-0"

BUILDING TYPE 1 FLOOR PLANS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT

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TEMPE, AZ 85284

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13467
GARY D.
TODD
11/18/22
Date Signed
RENEWAL 6-30-24

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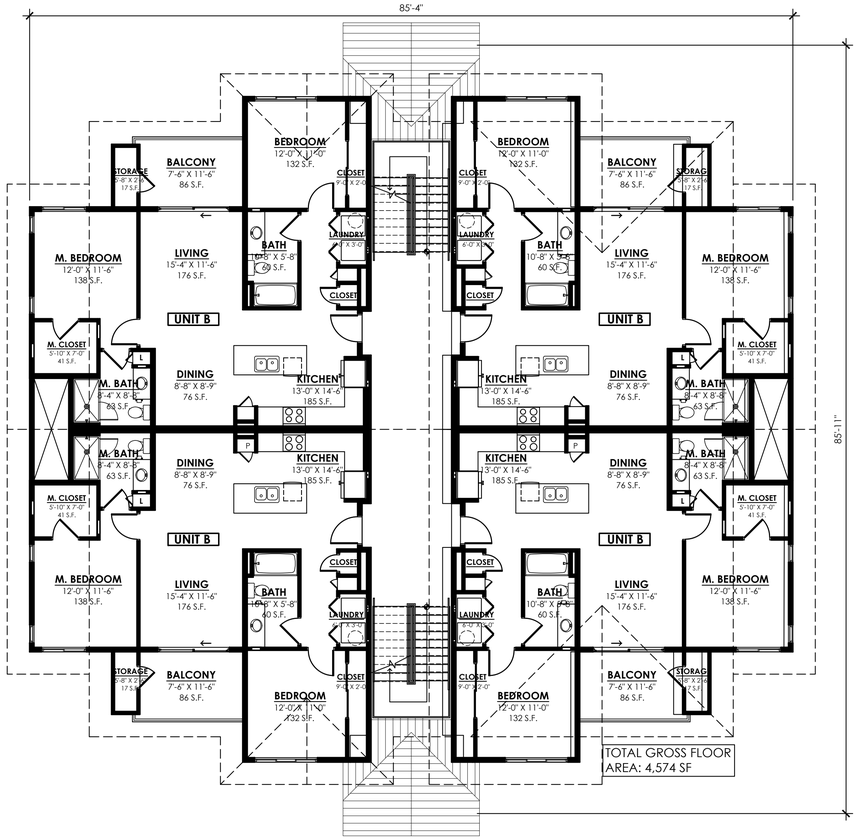
Proj Mgr.
Dwn By:

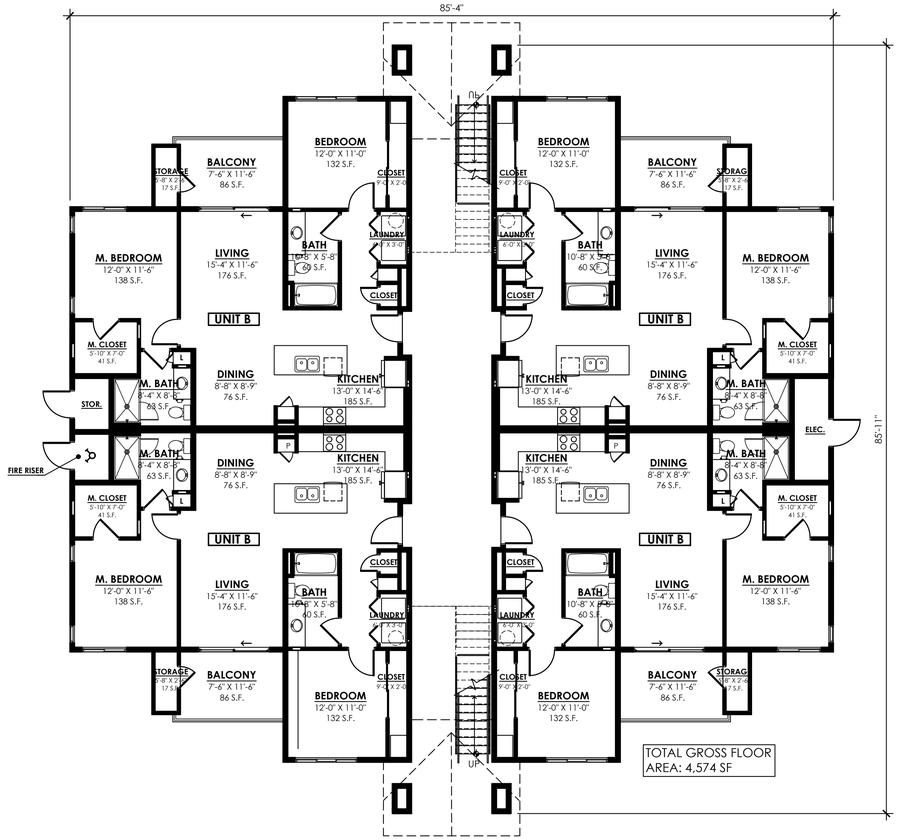
BUILDING TYPE 1
FLOOR PLANS

A2.1.1



BUILDING TYPE 2
2ND & 3RD FLOORS

INTERIOR WALL HIEGHT 9'-0" SCALE: 1/8" = 1'-0"



BUILDING TYPE 2
1ST FLOOR

INTERIOR WALL HIEGHT 9'-0" SCALE: 1/8" = 1'-0"

BUILDING TYPE 2 FLOOR PLANS

0" 4' 8' 16'
SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
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TIMBER SKY

FLAGSTAFF, AZ

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LIV COMMUNITIES

8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

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REGISTERED ARCHITECT CERTIFICATE NO. 13467 GARY D. TODD 11/18/22 Date Signed AZ
RENEWAL 06-30-23

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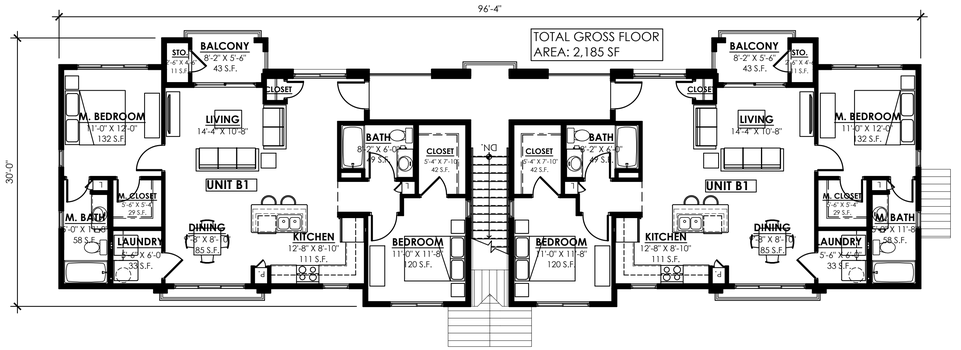
Dwn By:

BUILDING TYPE 2 FLOOR PLANS

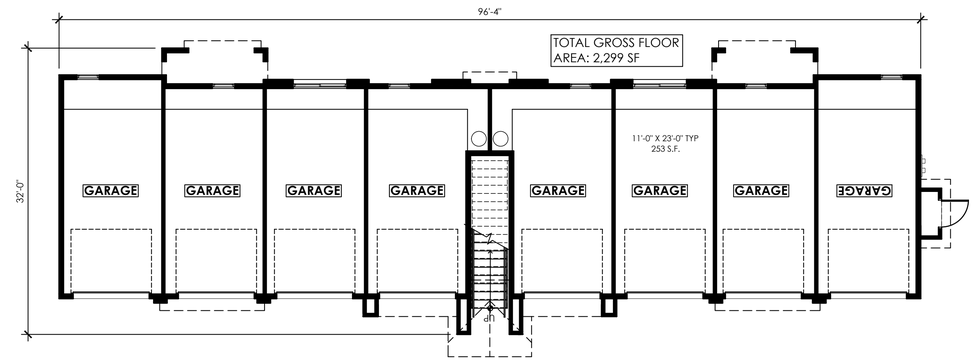
A2.2.1



BUILDING TYPE 3
2ND FLOOR

INTERIOR WALL HIEGHT 9'-0"

SCALE: 1/8" = 1'-0"



BUILDING TYPE 3
1ST FLOOR

INTERIOR WALL HIEGHT 9'-0"

SCALE: 1/8" = 1'-0"

BUILDING TYPE 3 FLOOR PLANS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

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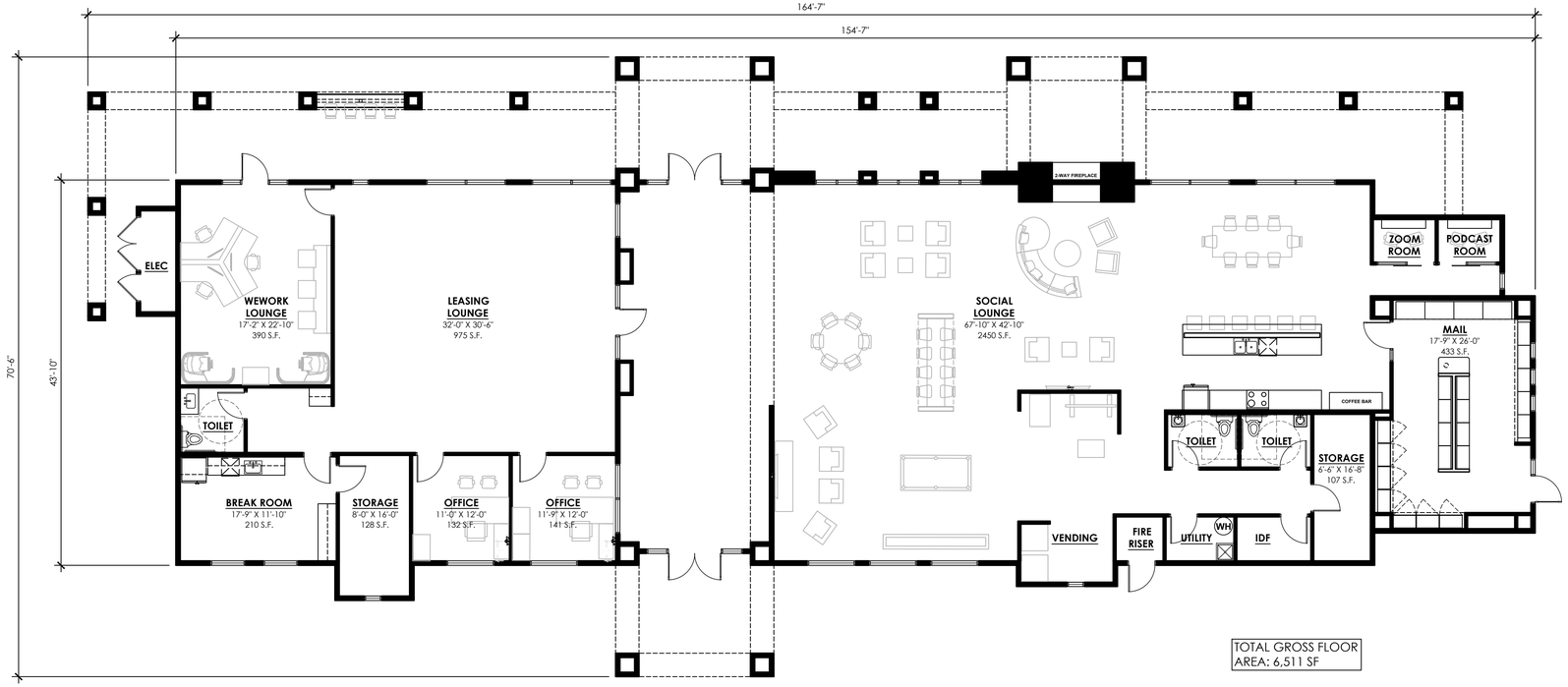
Dwn By:

BUILDING TYPE 3
FLOOR PLANS

A2.3.1



CLUBHOUSE FLOOR PLAN

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

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8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

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GARY D. TODD
11/18/22
Date Signed
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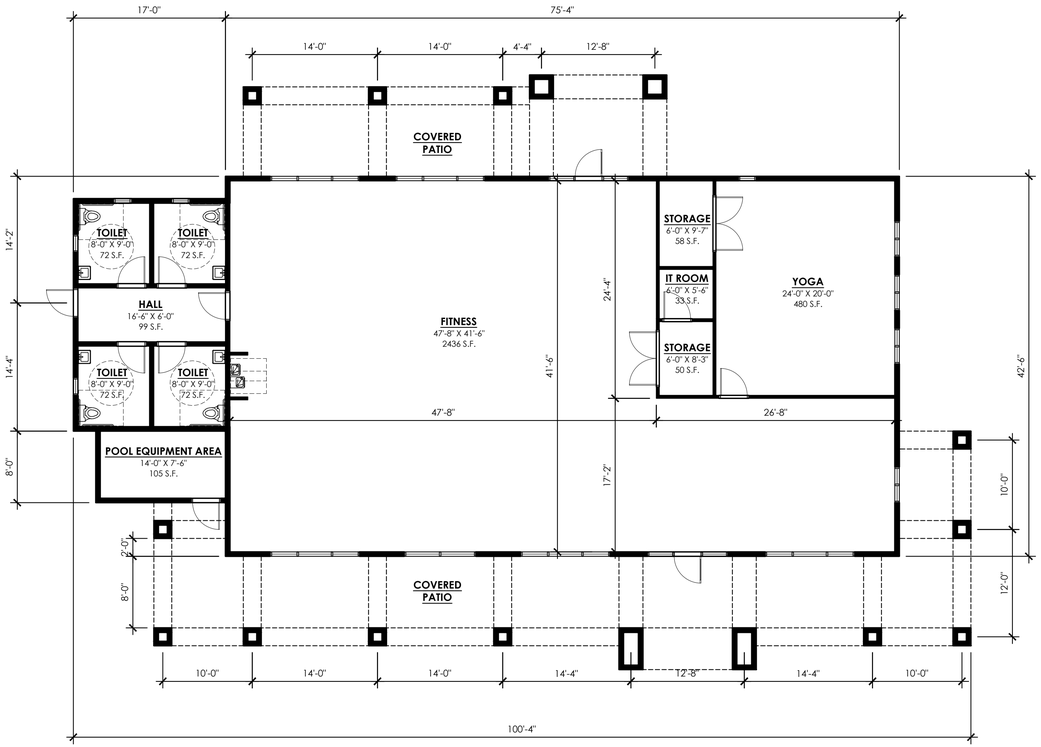
CLUBHOUSE FLOOR PLAN

A2.4.1



TOTAL GROSS FLOOR AREA: 3,760 SF

FITNESS FLOOR PLAN

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

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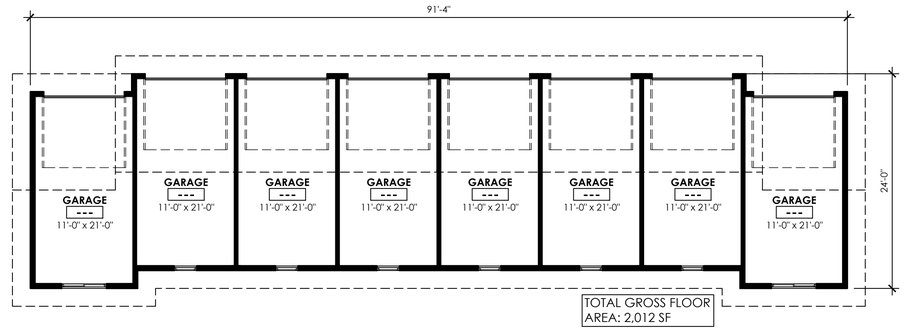
FITNESS FLOOR PLAN

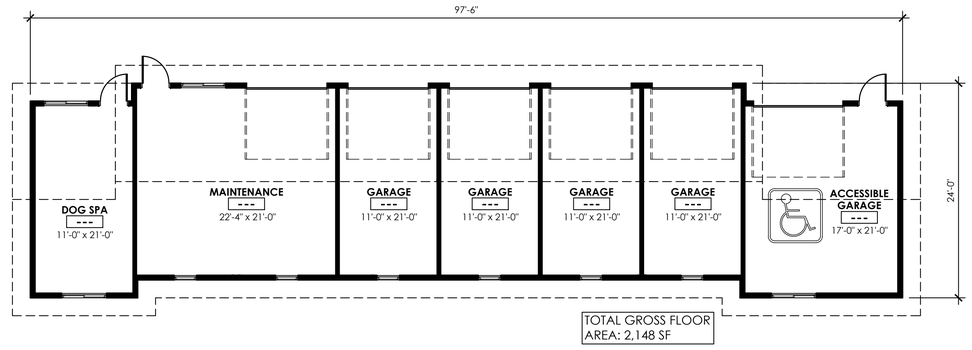
A2.5.1



DETACHED GARAGE 1 FLOOR PLAN

INTERIOR WALL HIEGHT 9'-0"

SCALE: 1/8" = 1'-0"



DETACHED GARAGE 2 FLOOR PLAN

INTERIOR WALL HIEGHT 9'-0"

SCALE: 1/8" = 1'-0"

DETACHED GARAGE FLOOR PLANS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

N

PROJECT

NO. 22-2003-01

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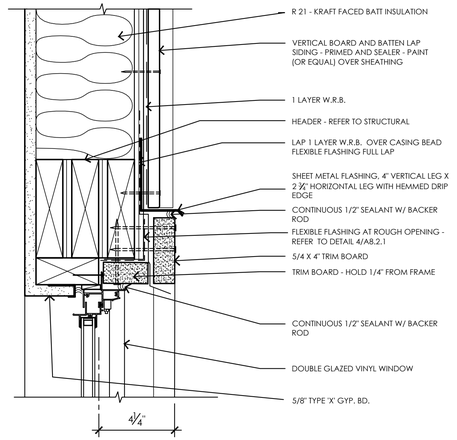
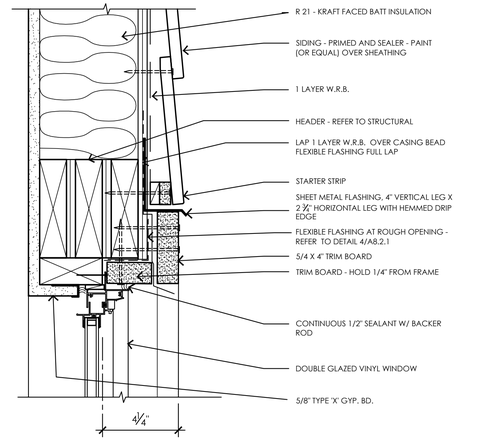
DETACHED GARAGE
FLOOR PLANS

A2.6.1



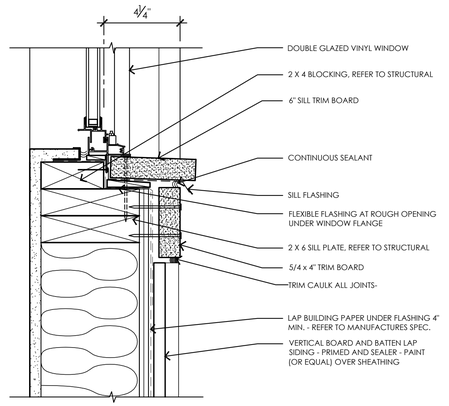
4 WINDOW HEAD AT VER. CEMENT PANEL

SCALE: 3" = 1'-0"



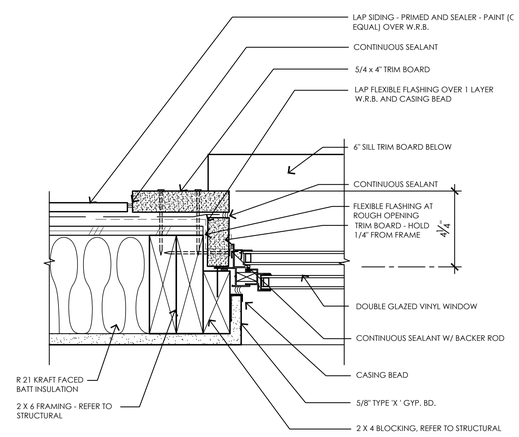
1 WINDOW HEAD AT HOR. SIDING LAP

SCALE: 3" = 1'-0"



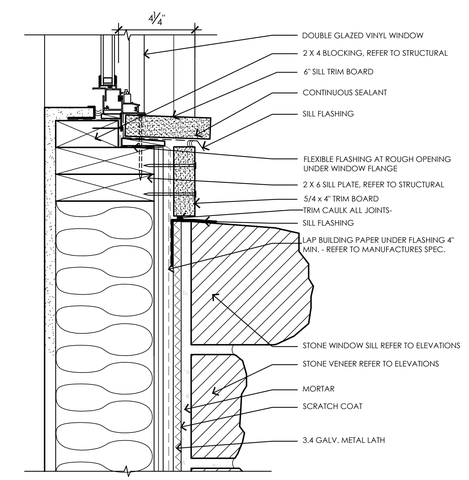
5 WINDOW SILL AT VER. CEMENT PANEL

SCALE: 3" = 1'-0"



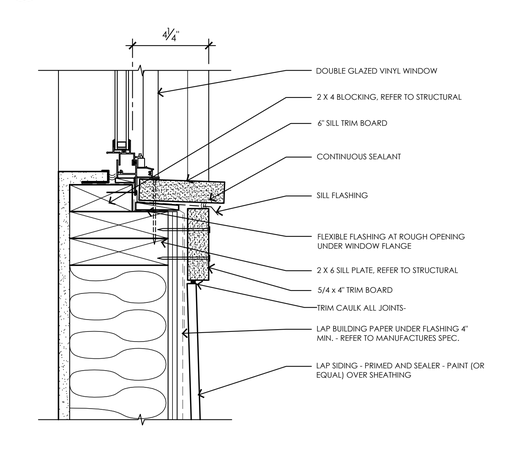
2 WINDOW JAMB AT HOR. / VER. SIDING

SCALE: 3" = 1'-0"



6 WINDOW SILL - STONE VENEER

SCALE: 3" = 1'-0"



3 WINDOW SILL AT HOR. SIDING LAP

SCALE: 3" = 1'-0"

PROJECT

NO. 22-2003-01

LIV
TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

SEAL

REGISTERED ARCHITECT
CERTIFICATE NO.
13467
GARY D.
TODD
11/18/22
Date Signed
ARIZONA U.S.A.

CONTACT

TODD + ASSOCIATES
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SUBMITTAL #1

11-23-2022
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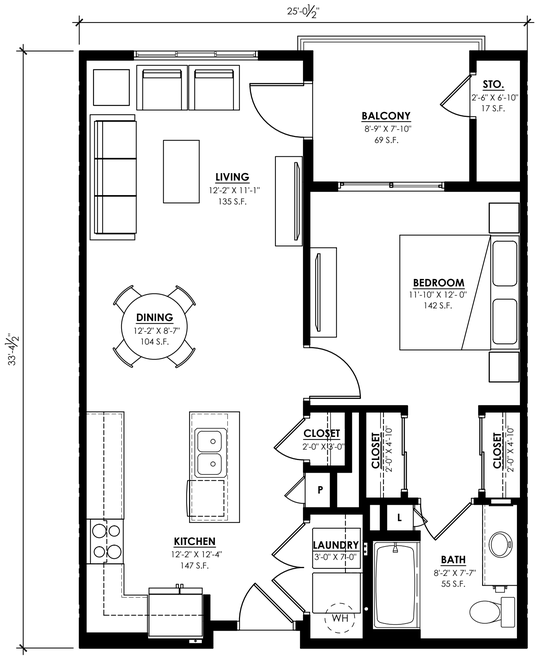
Proj Mgr.:
Drawn By:

TYPICAL WINDOW DETAILS

A3.7.1



UNIT A - 1 BEDROOM / 1 BATH

ACCESSIBILITY SCOPING:
FHAG: COVERED DWELLING UNIT, SPECIFICATION B BATHROOM
IBC: ANSI TYPE B DWELLING UNIT, OPTION B BATHROOM

NET RENTABLE	**743 S.F.**
BALCONY / PATIO	**69 S.F.**
STORAGE	**23 S.F.**
-	**- S.F.**
TOTAL:	**835 S.F.**

NOTE: NET RENTABLE AREA IS CALCULATED FROM CENTERLINE OF DOUBLE STUD AIR SPACE TO OUTSIDE FACE OF EXTERIOR WALLS TO THE OUTSIDE FACE OF THE CORRIDOR WALL AND INCLUDES ALL INTERNAL WALLS AND CAVITIES.

UNIT PLANS

SCALE: 1/4"=1'-0"

PROJECT
NO. 22-2003-01
LIV
TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES

8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

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GARY D. TODD
11/18/22
Date Signed or Sealed
ARIZONA U.S.A.

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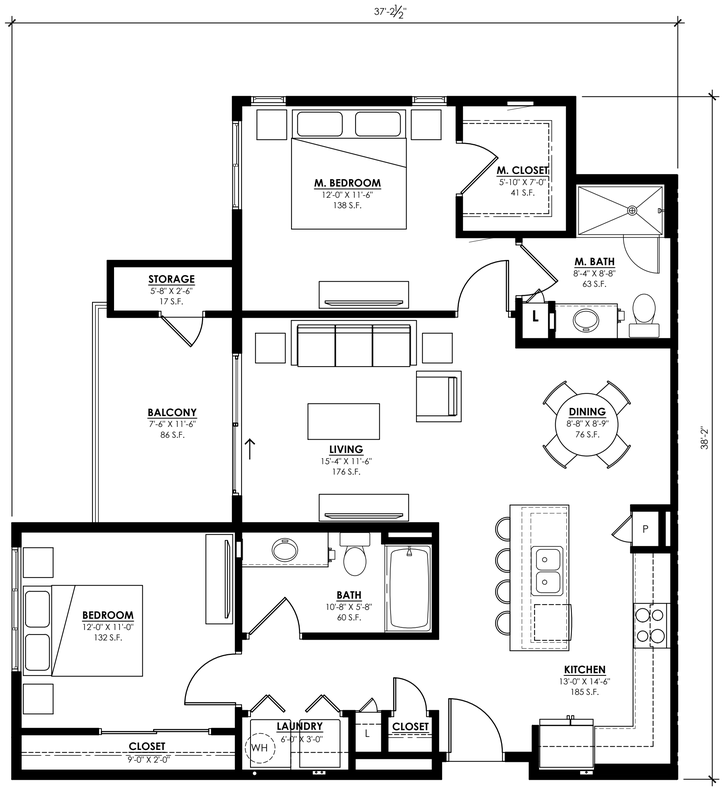
Proj Mgr.
Dwn By:

A & A1 ENLARGED UNIT PLANS

A6.1.1

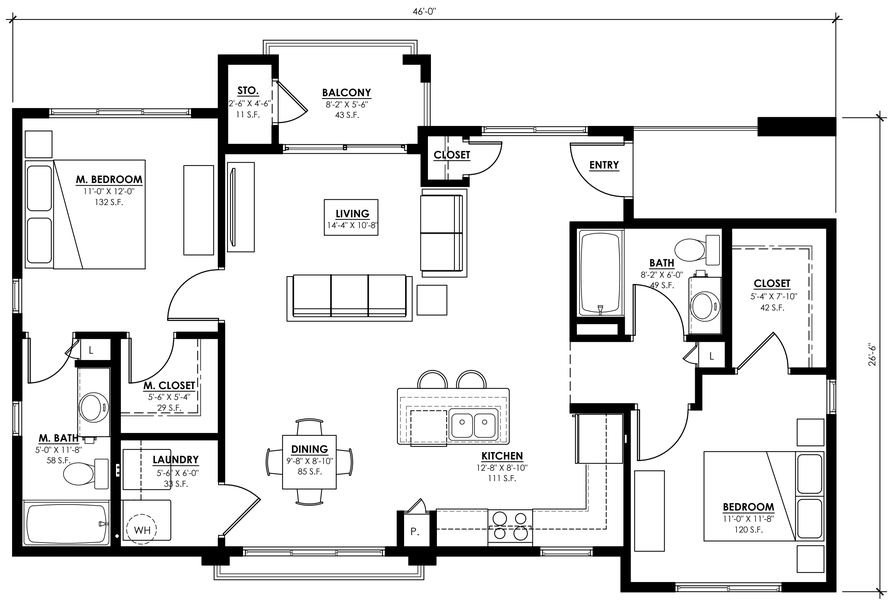


UNIT B - 2 BEDROOM / 2 BATH

ACCESSIBILITY SCOPING:
FHAG: COVERED DWELLING UNIT, SPECIFICATION A BATHROOMS
IBC: ANSI TYPE B DWELLING UNIT, OPTION A BATHROOMS

NET RENTABLE AREA	**1,096 S.F.**
BALCONY / PATIO	**86 S.F.**
STORAGE	**22 S.F.**
-	**- S.F.**
TOTAL:	**1,204 S.F.**

NOTE: NET RENTABLE AREA IS CALCULATED FROM CENTERLINE OF DOUBLE STUD AIR SPACE TO OUTSIDE FACE OF EXTERIOR WALLS TO THE OUTSIDE FACE OF THE CORRIDOR WALL AND INCLUDES ALL INTERNAL WALLS AND CAVITIES.



UNIT B1
2 BEDROOM / 2 BATH (CARRIAGE UNIT)

ACCESSIBILITY SCOPING:
FHAG: NO ACCESSIBILITY REQUIREMENTS
IBC: NO ACCESSIBILITY REQUIREMENTS

GROSS AREA	**1,071 S.F. S.F.**
BALCONY	**43 S.F. S.F.**
STORAGE	**11 S.F.**
	S.F.
TOTAL:	**1,125 S.F. S.F.**

UNIT PLANS

SCALE: 1/4"=1'-0"

PROJECT
NO. 22-2003-01
LIV
TIMBER SKY

FLAGSTAFF, AZ

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LIV COMMUNITIES

8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

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CERTIFICATE NO.
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GARY D.
TODD
11/18/22
Date Signed
REGISTERED ARCHITECT

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SUBMITTAL #1

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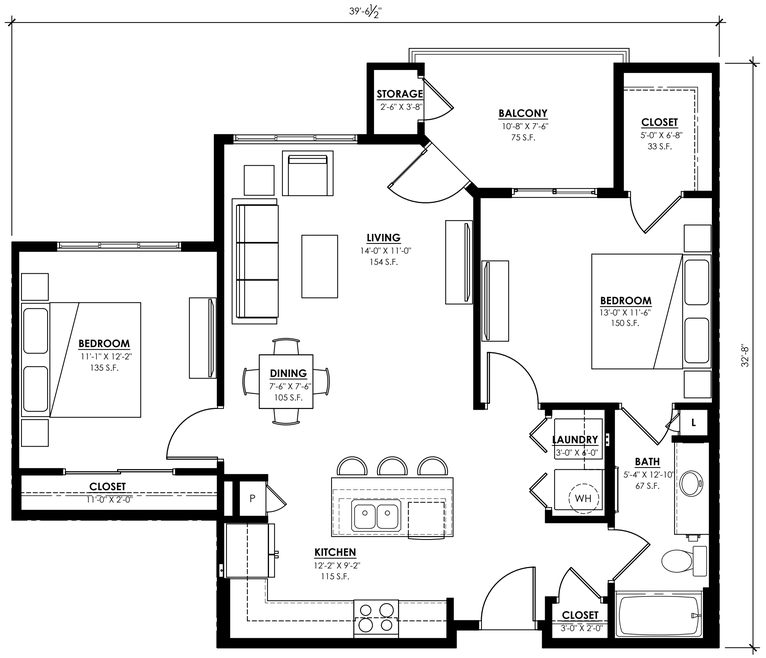
SUBMITTAL #2

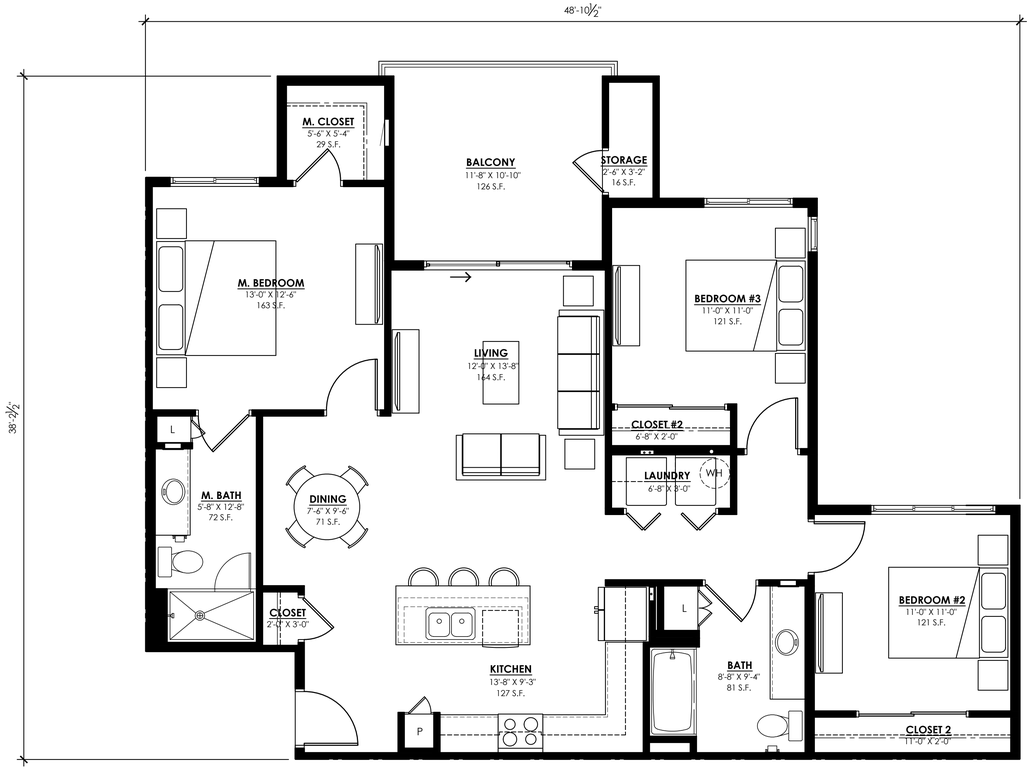
Proj Mgr.
Dwn By:

Rev.	Date:	Description:
△		
△		
△		
△		
△		

B & B1 ENLARGED
UNIT PLANS

A6.1.2





UNIT B3 - 2 BEDROOM / 1 BATH

ACCESSIBILITY SCOPING:
FHAG: COVERED DWELLING UNIT, SPECIFICATION A BATHROOMS
IBC: ANSI TYPE B DWELLING UNIT, OPTION A BATHROOMS

NET RENTABLE AREA	**975 S.F.**
BALCONY / PATIO	**75 S.F.**
STORAGE	**13 S.F.**
-	**- S.F.**
TOTAL:	**1,063 S.F.**

UNIT C1 - 3 BEDROOM / 2 BATH

ACCESSIBILITY SCOPING:
FHAG: COVERED DWELLING UNIT, SPECIFICATION B BATHROOM
IBC: ANSI TYPE B DWELLING UNIT, OPTION B BATHROOM

NET RENTABLE AREA	**1,300 S.F.**
BALCONY / PATIO	**126 S.F.**
STORAGE	**11 S.F.**
-	**- S.F.**
TOTAL:	**1,437 S.F.**

NOTE: NET RENTABLE AREA IS CALCULATED FROM CENTERLINE OF DOUBLE STUD AIR SPACE TO OUTSIDE FACE OF EXTERIOR WALLS TO THE OUTSIDE FACE OF THE CORRIDOR WALL AND INCLUDES ALL INTERNAL WALLS AND CAVITIES.

UNIT PLANS

SCALE: 1/4"=1'-0"

PROJECT
NO. 22-2003-01
LIV
TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES

8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

SEAL

REGISTERED ARCHITECT
CERTIFICATE NO.
13467
GARY D.
TODD
11/18/22
Date Signed
ARIZONA U.S.A.

CONTACT

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CRITICAL THINKING / CREATIVE DESIGN

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SUBMITTAL #2

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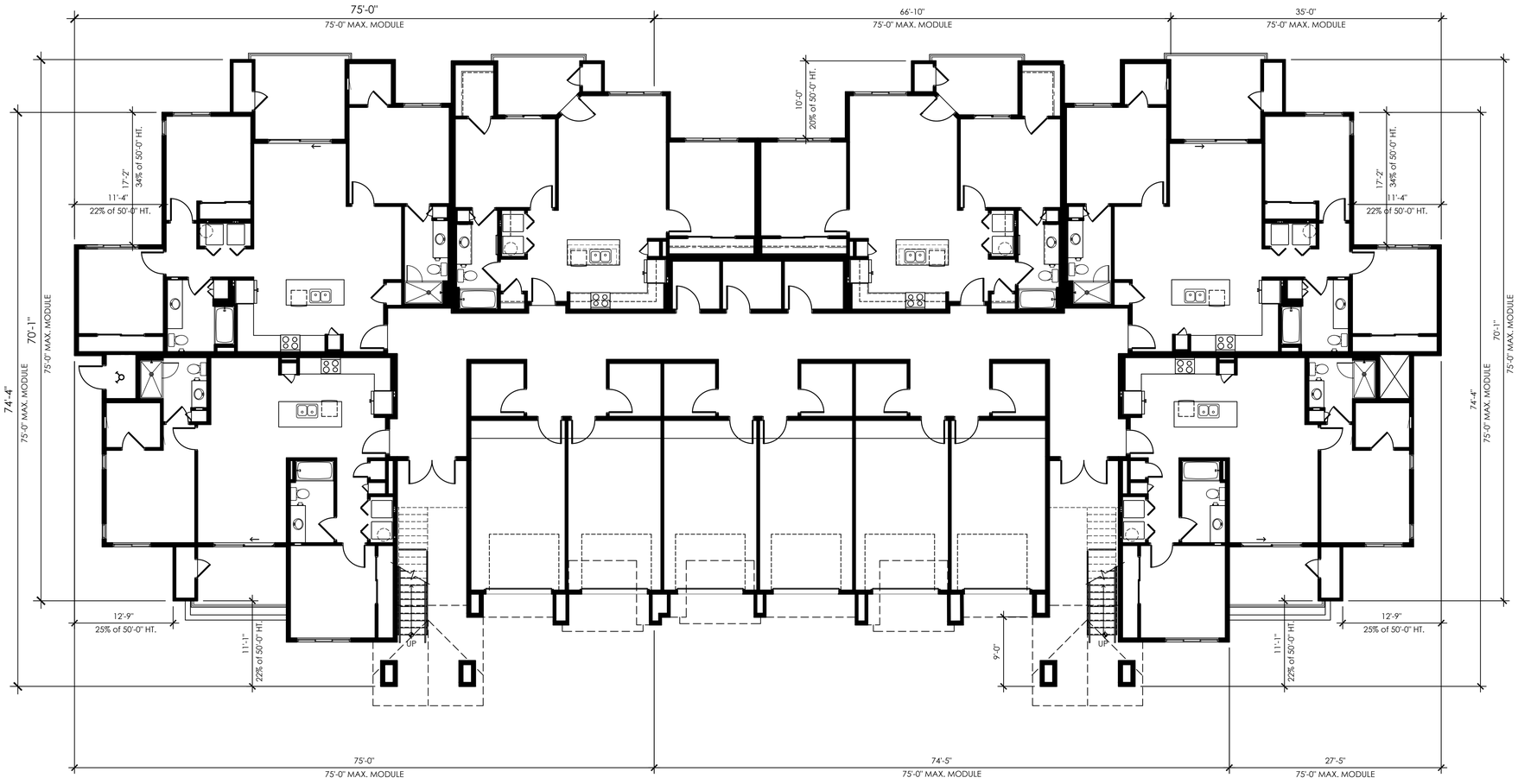
Dwn By:

Rev.	Date:	Description:
△		
△		
△		
△		
△		

B3 & C1 ENLARGED
UNIT PLANS

A6.1.3



-

BUILDING TYPE 1

-

SCALE: 1/8" = 1'-0"

20% MINIMUM WALL OFFSET
ACHIEVED AT ALL FOUR ELEVATIONS
PER ORDINANCE 10-50.20.030 (2)

BUILDING TYPE 1 MASSING STUDY

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV
TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

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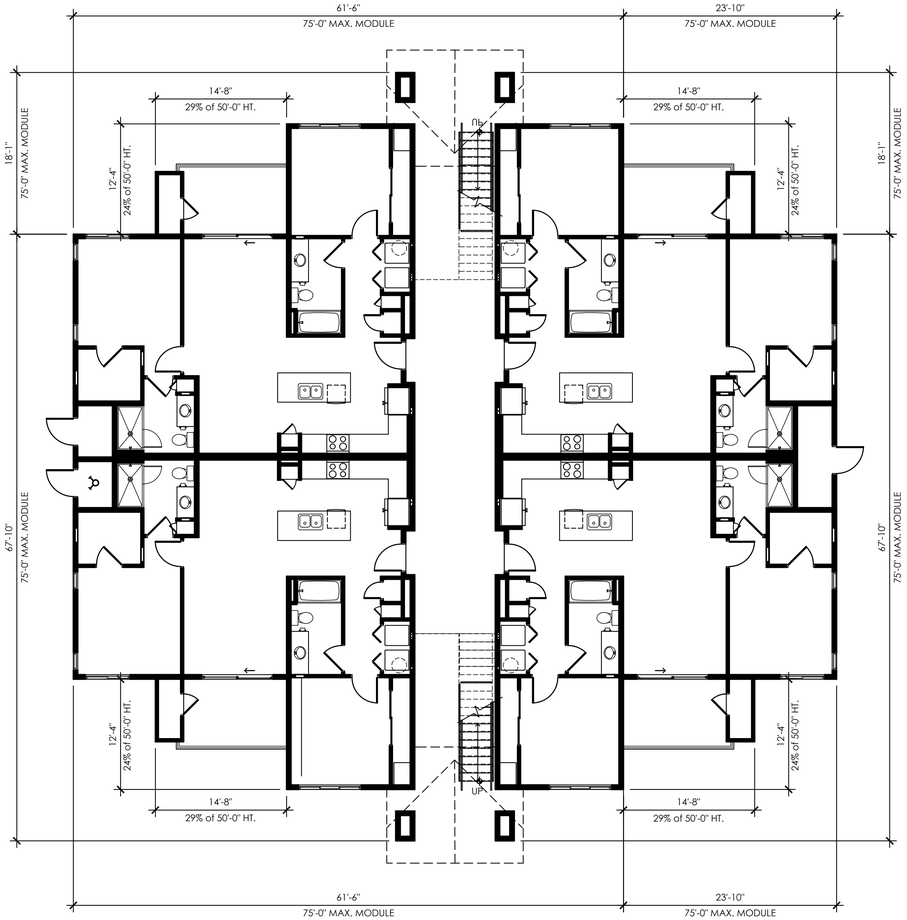
BUILDING TYPE 1
MASSING STUDY

A7.1.1



-

BUILDING TYPE 2

-

SCALE: 1/8" = 1'-0"

20% MINIMUM WALL OFFSET
ACHIEVED AT ALL FOUR ELEVATIONS
PER ORDINANCE 10-50.20.030 (2)

BUILDING TYPE 2 MASSING STUDY

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV
TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

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TEMPE, AZ 85284

SEAL

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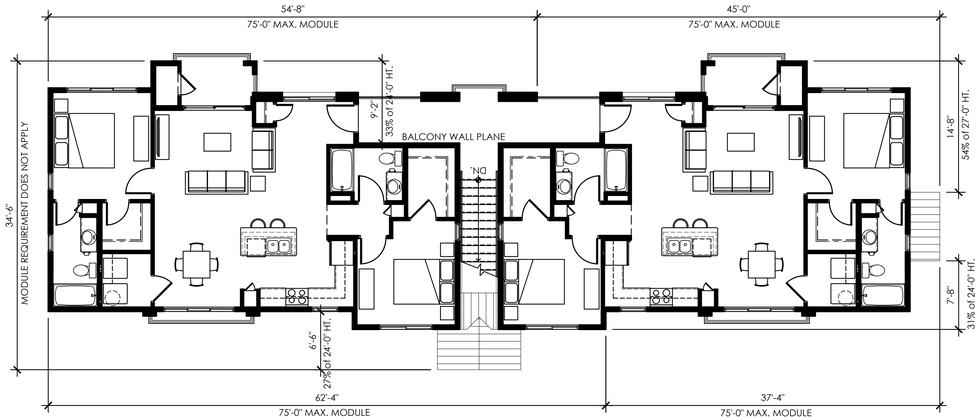
BUILDING TYPE 2
MASSING STUDY

A7.2.1



-

BUILDING TYPE 3

-

SCALE: 1/8" = 1'-0"

20% MINIMUM WALL OFFSET ACHIEVED
AT FRONT AND REAR ELEVATIONS PER
ORDINANCE 10-50.20.030 (2)

BUILDING TYPE 3 MASSING STUDY

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV
TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

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TEMPE, AZ 85284

SEAL

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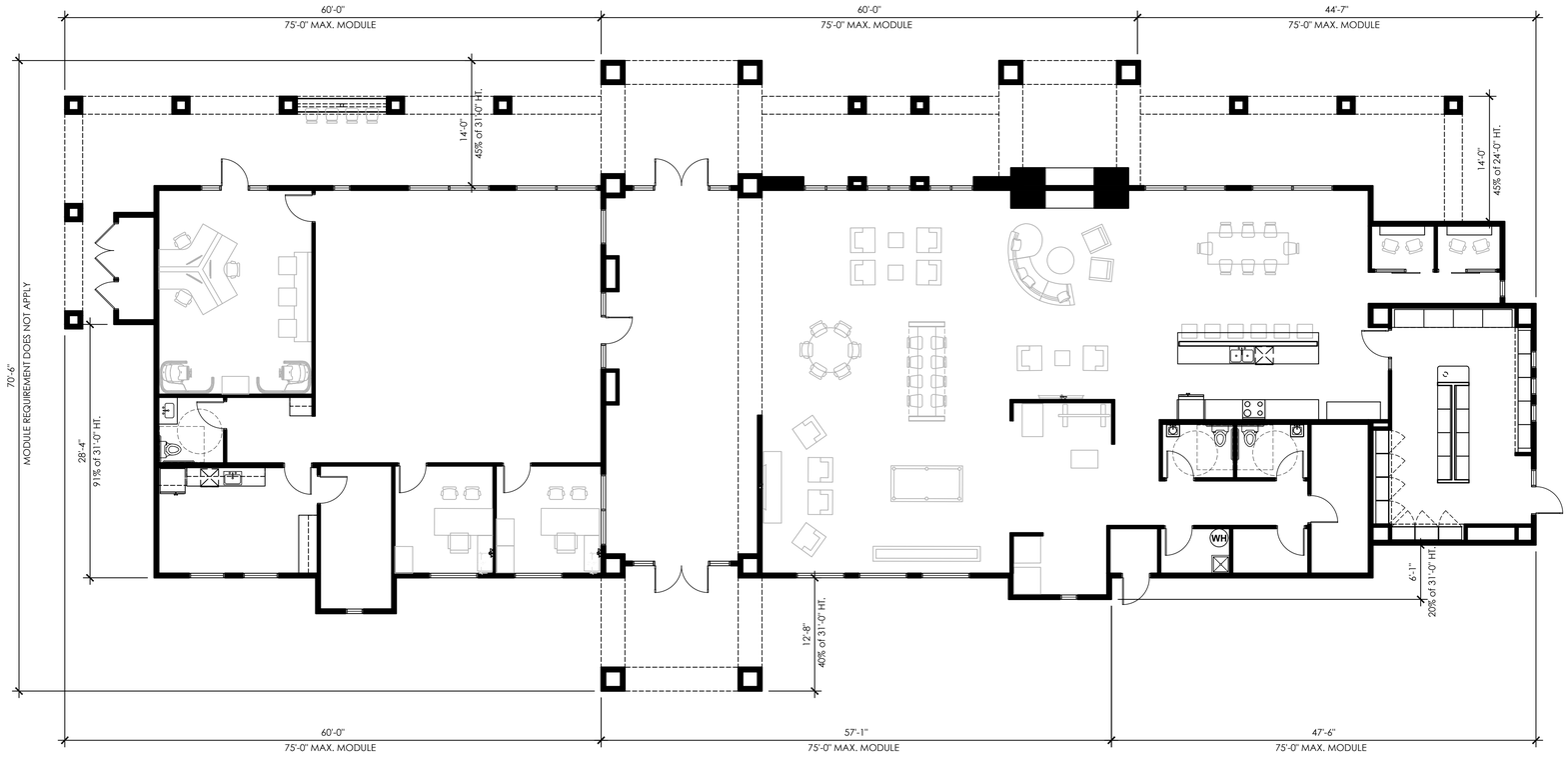
BUILDING TYPE 3
MASSING STUDY

A7.3.1



-

CLUBHOUSE BUILDING

-

SCALE: 1/8" = 1'-0"

20% MINIMUM WALL OFFSET ACHIEVED
AT FRONT AND REAR ELEVATIONS PER
ORDINANCE 10-50.20.030 (2)

CLUBHOUSE MASSING STUDY

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV
TIMBER SKY

FLAGSTAFF, AZ

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LIV COMMUNITIES

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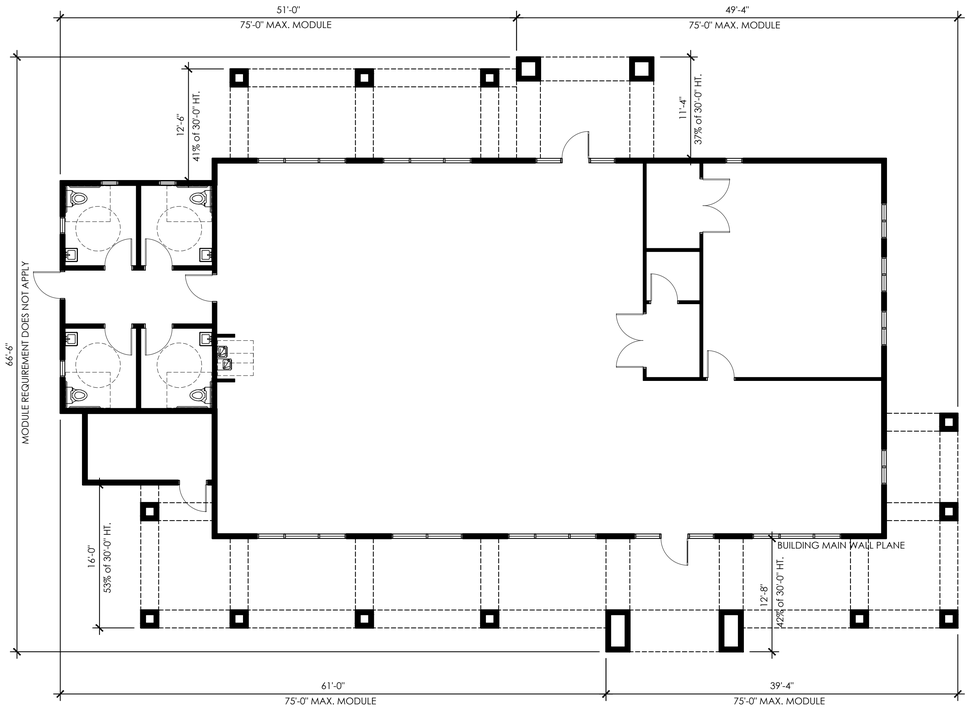
Dwn By:

CLUBHOUSE
MASSING STUDY

A7.4.1



-

FITNESS BUILDING

-

SCALE: 1/8" = 1'-0"

20% MINIMUM WALL OFFSET ACHIEVED
AT FRONT AND REAR ELEVATIONS PER
ORDINANCE 10-50.20.030 (2)

FITNESS MASSING STUDY

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV
TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

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FITNESS
MASSING STUDY

A7.5.1

FRONT ELEVATION

RIGHT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR		SWATCH
A	Fiber Cement Siding Body 1	MFG.: COLOR: LRV:	Allura Lap Siding - Horizontal Panels Traditional Texture PPG Bleached Maple (PPG1089-5) 37	
B	Fiber Cement Siding Body 2	MFG.: COLOR: LRV:	Allura Lap Siding - Vertical Panels Traditional Texture PPG Cloudy Slate (PPG0996-4) 29	
C	Fiber Cement Fascia	MFG.: COLOR: LRV:	Allura - Plycem Fiber Cement Trim Alurra Sterling Gray 48.2	
D	Fiber Cement Trim	MFG.: COLOR: LRV:	Allura - Plycem Fiber Cement Trim Alurra Autumn Red 12.6	
E	Stone Veneer	MFG.: COLOR: LRV:	Coronado - Getty Stone Embassy Blend 45.43	
F	Shingle Roof	MFG.: COLOR: LRV:	GAF Timberline - Ultra HD Shingles Charcoal n/a	
G	Metal Roof	MFG.: COLOR: LRV:	MBCI - Slimline Roof Panel Signature 300 "Slate Gray" 18.76	
H	Metal Railing	MFG.: COLOR: LRV:	Sherwin Williams SW 7578 "Borscht" 6	

TYPE 1 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

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TEMPE, AZ 85284

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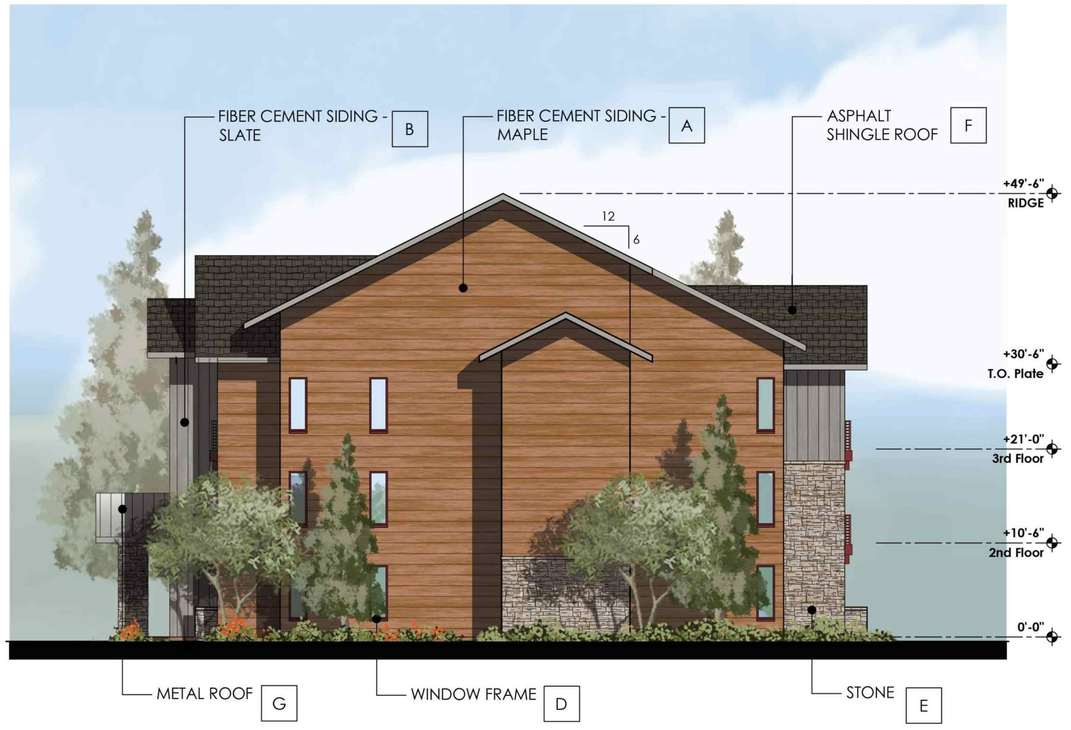
BUILDING TYPE 1 ELEVATIONS

A3.1.1

REAR ELEVATION



LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	

TYPE 1 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

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SEAL

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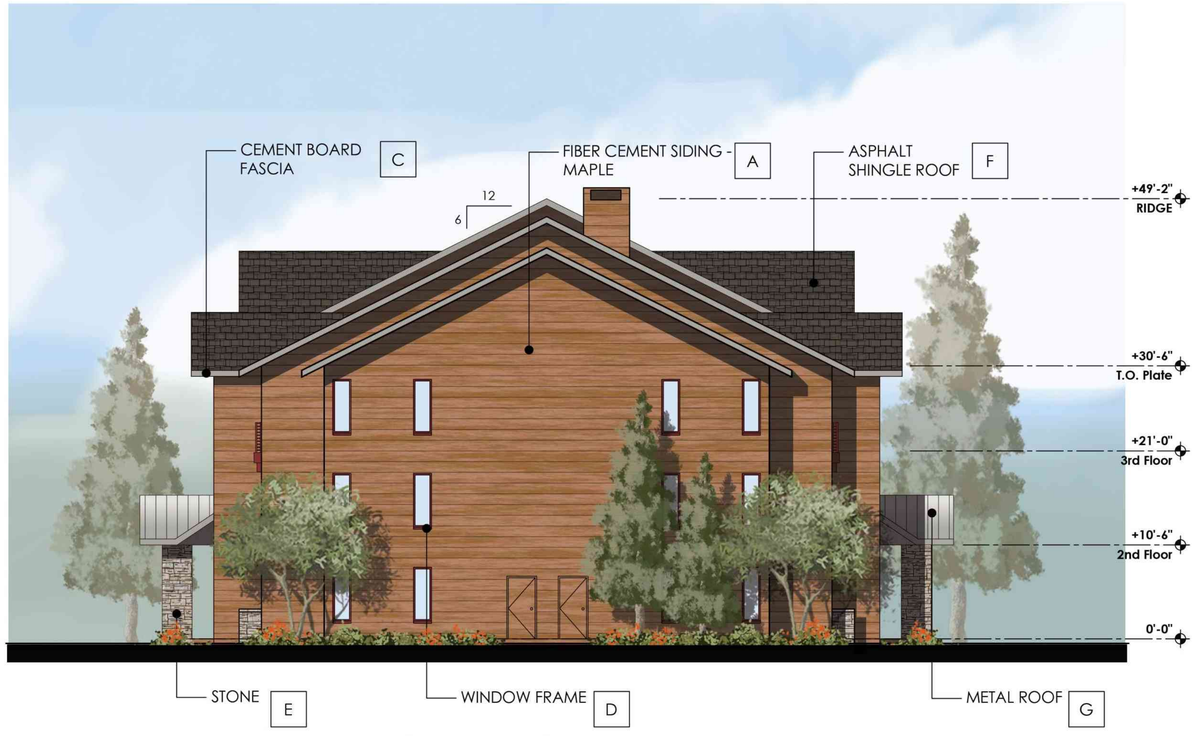
BUILDING TYPE 1 ELEVATIONS

A3.1.2

FRONT ELEVATION



RIGHT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR		SWATCH
A	Fiber Cement Siding Body 1	MFG.: COLOR: LRV:	Allura Lap Siding - Horizontal Panels Traditional Texture PPG Bleached Maple (PPG1089-5) 37	
B	Fiber Cement Siding Body 2	MFG.: COLOR: LRV:	Allura Lap Siding - Vertical Panels Traditional Texture PPG Cloudy Slate (PPG0996-4) 29	
C	Fiber Cement Fascia	MFG.: COLOR: LRV:	Allura - Plycem Fiber Cement Trim Alurra Sterling Gray 48.2	
D	Fiber Cement Trim	MFG.: COLOR: LRV:	Allura - Plycem Fiber Cement Trim Alurra Autumn Red 12.6	
E	Stone Veneer	MFG.: COLOR: LRV:	Coronado - Getty Stone Embassy Blend 45.43	
F	Shingle Roof	MFG.: COLOR: LRV:	GAF Timberline - Ultra HD Shingles Charcoal n/a	
G	Metal Roof	MFG.: COLOR: LRV:	MBCI - Slimline Roof Panel Signature 300 "Slate Gray" 18.76	
H	Metal Railing	MFG.: COLOR: LRV:	Sherwin Williams SW 7578 "Borscht" 6	

TYPE 2 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT

LIV COMMUNITIES

8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

SEAL

REGISTERED ARCHITECT
CERTIFICATE NO.
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BUILDING TYPE 2 ELEVATIONS

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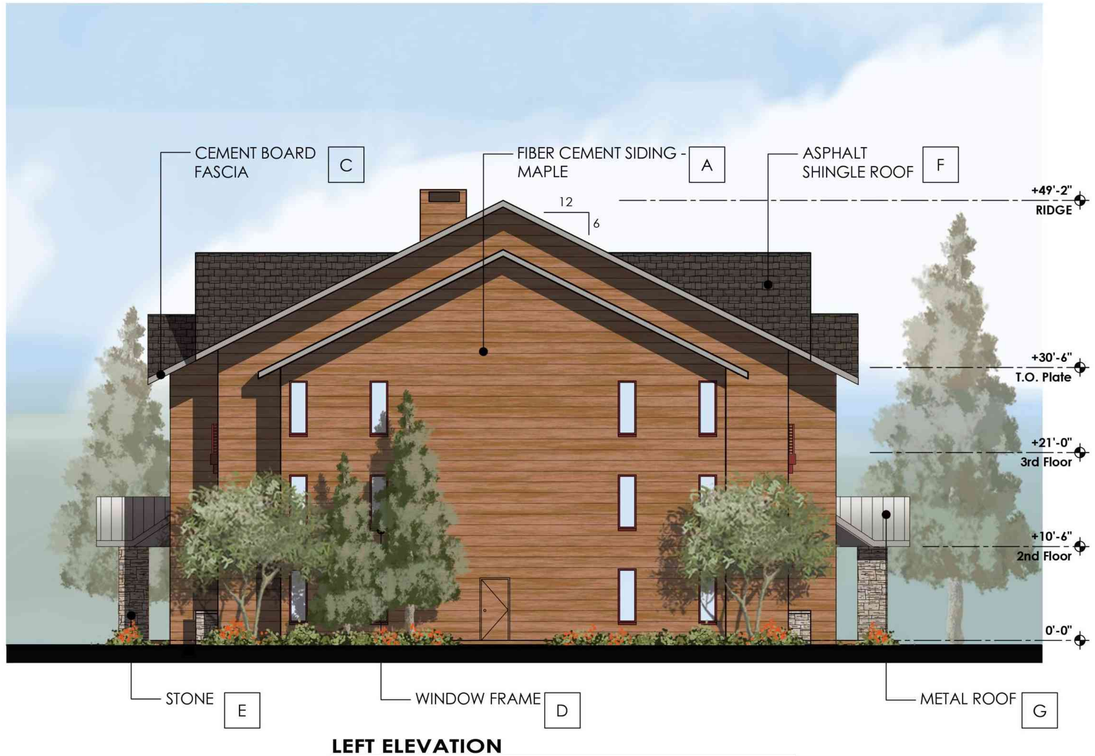
REAR ELEVATION



LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	

TYPE 2 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

NO. 22-2003-01

LIV TIMBER SKY

FLAGSTAFF, AZ

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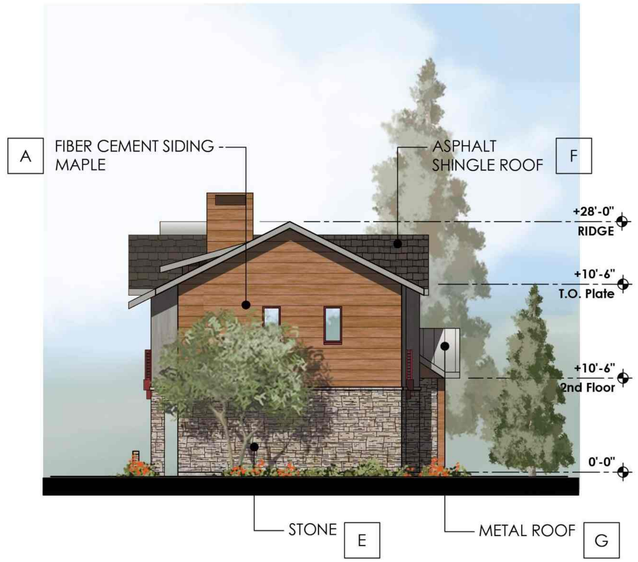
BUILDING TYPE 2 ELEVATIONS

A3.2.2

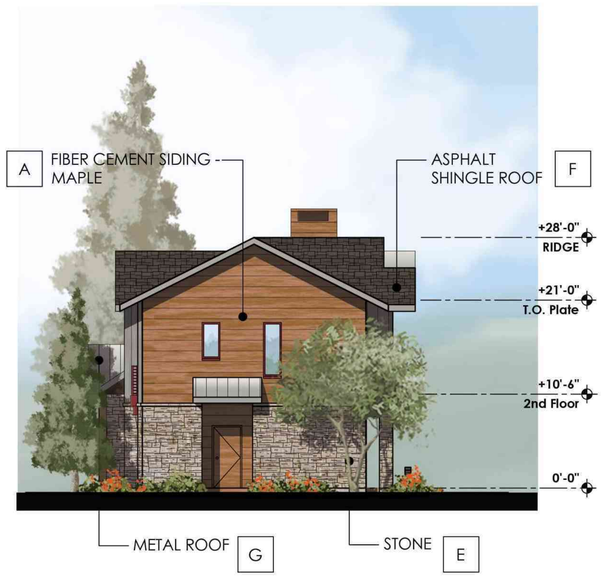


RIGHT ELEVATION

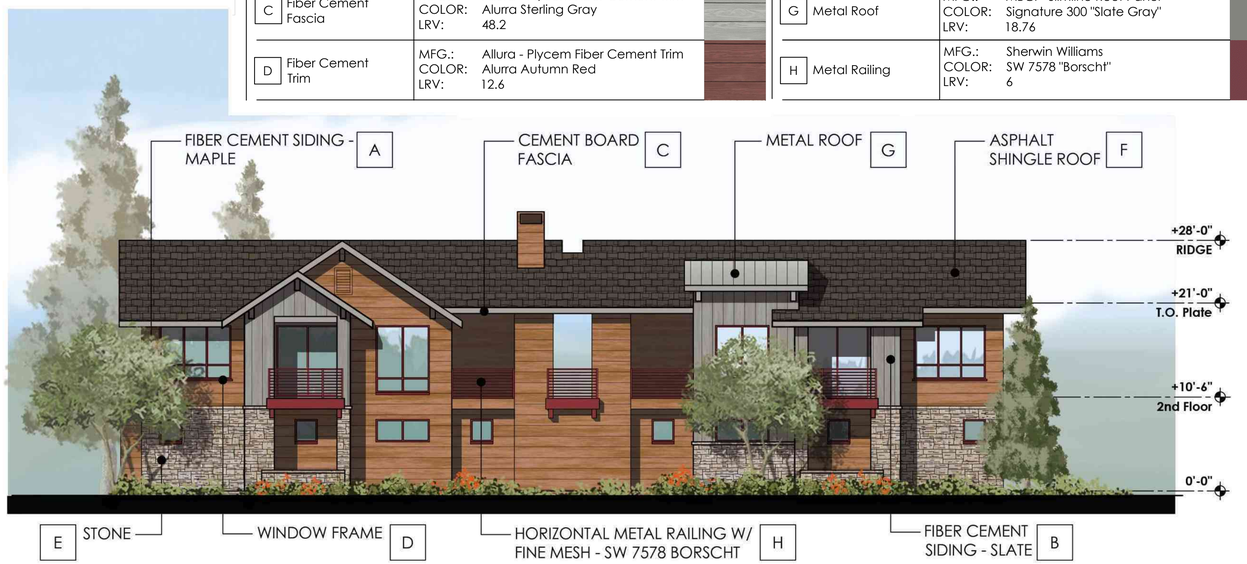
FRONT ELEVATION

COLOR SCHEDULE

LOCATION	COLOR	SWATCH
A Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	



LEFT ELEVATION



REAR ELEVATION

TYPE 3 ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES

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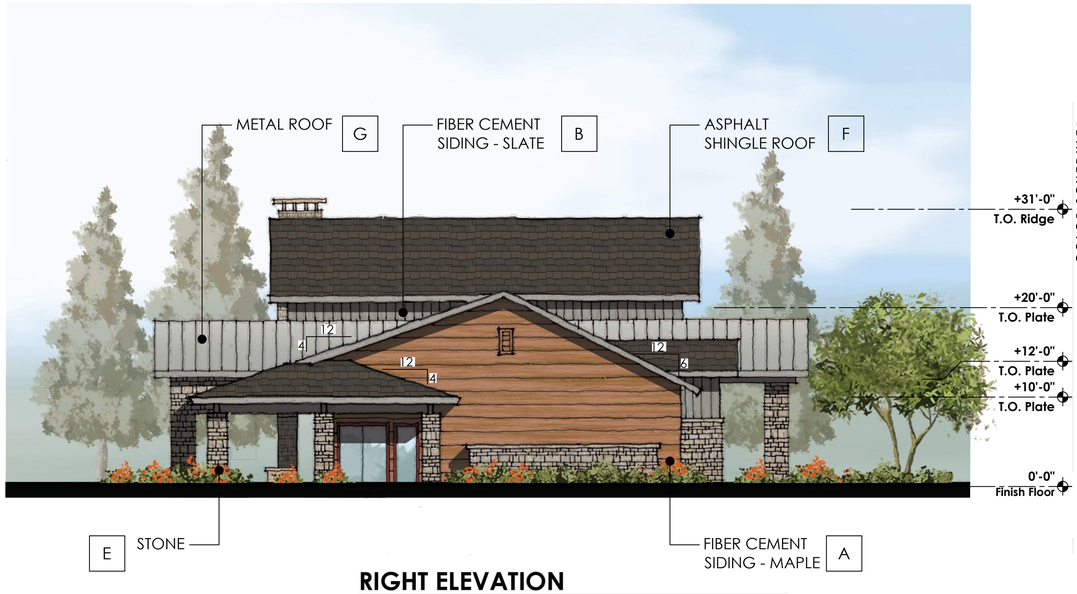
BUILDING TYPE 3 ELEVATIONS

A3.3.1

FRONT ELEVATION



RIGHT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	

CLUBHOUSE ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

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LIV COMMUNITIES

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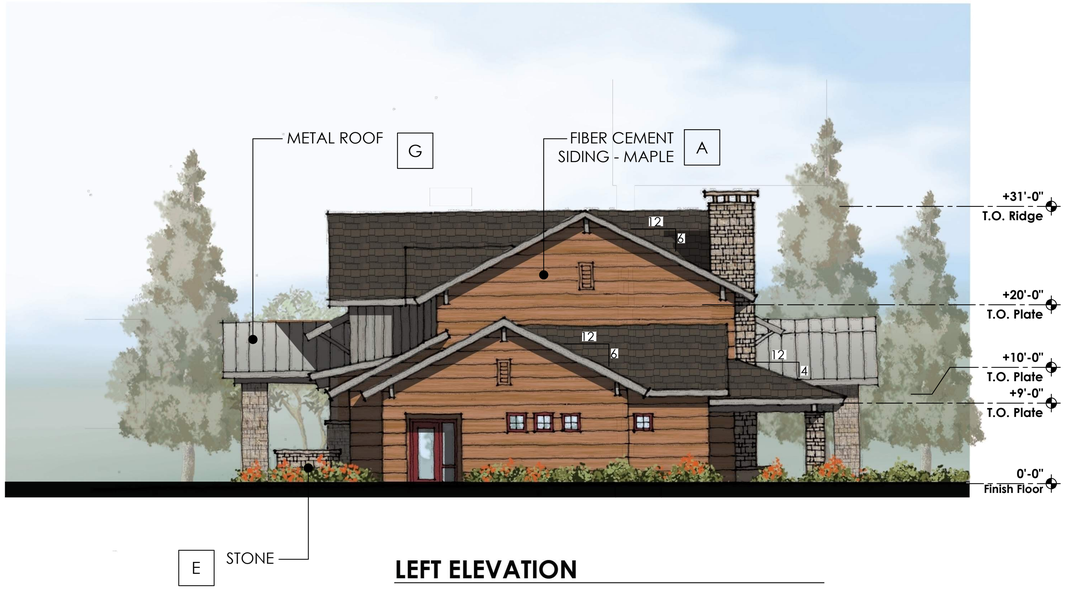
CLUBHOUSE ELEVATIONS

A3.4.1

REAR ELEVATION



LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	

CLUBHOUSE ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

CLIENT
LIV COMMUNITIES

8950 S 52ND ST, SUITE 115
TEMPE, AZ 85284

SEAL

REGISTERED ARCHITECT
CERTIFICATE NO.
13467
GARY D. TODD
09/22/22
Date Signed
ARIZONA U.S.A.

CONTACT
TODD + ASSOCIATES
CRITICAL THINKING / CREATIVE DESIGN

ARCHITECTURE. PLANNING.
LANDSCAPE ARCHITECTURE.

4019 N. 44TH ST. / PHOENIX, AZ 85018
602-952-8280 / TODDASSOC.COM

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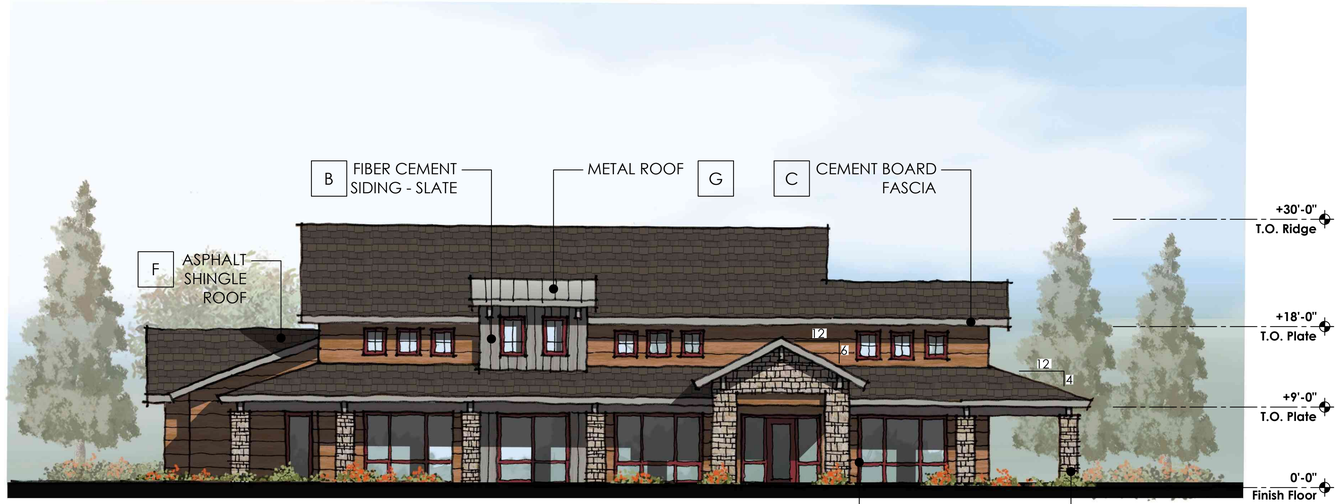
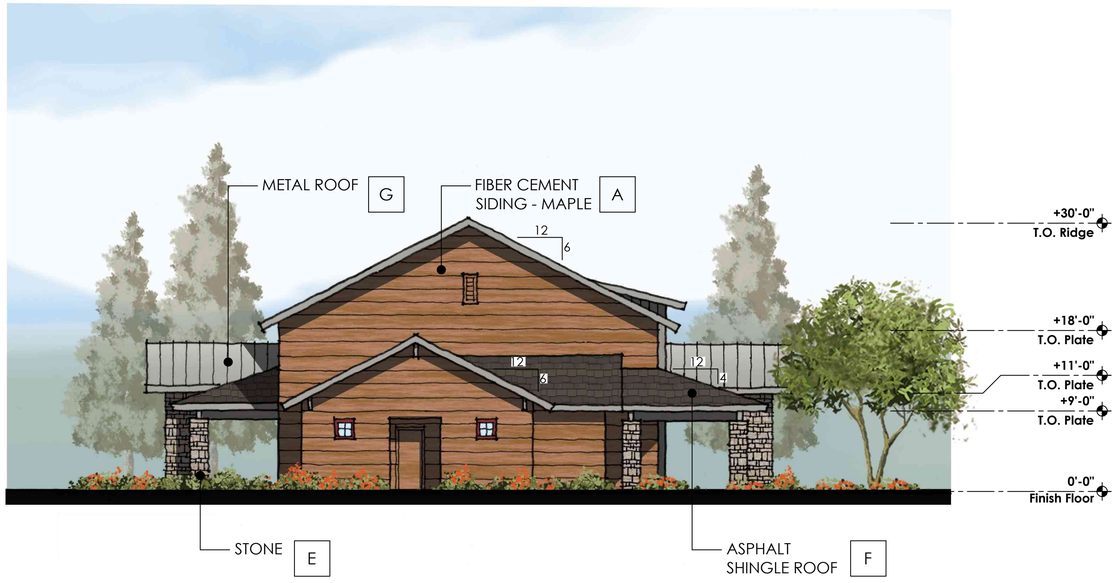
Dwn By:

CLUBHOUSE ELEVATIONS

A3.4.2



FRONT ELEVATION



RIGHT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR	SWATCH
A	Fiber Cement Siding Body 1	MFG.: Allura Lap Siding - Horizontal Panels Traditional Texture COLOR: PPG Bleached Maple (PPG1089-5) LRV: 37	
B	Fiber Cement Siding Body 2	MFG.: Allura Lap Siding - Vertical Panels Traditional Texture COLOR: PPG Cloudy Slate (PPG0996-4) LRV: 29	
C	Fiber Cement Fascia	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Sterling Gray LRV: 48.2	
D	Fiber Cement Trim	MFG.: Allura - Plycem Fiber Cement Trim COLOR: Alurra Autumn Red LRV: 12.6	
E	Stone Veneer	MFG.: Coronado - Getty Stone COLOR: Embassy Blend LRV: 45.43	
F	Shingle Roof	MFG.: GAF Timberline - Ultra HD Shingles COLOR: Charcoal LRV: n/a	
G	Metal Roof	MFG.: MBCI - Slimline Roof Panel COLOR: Signature 300 "Slate Gray" LRV: 18.76	
H	Metal Railing	MFG.: Sherwin Williams COLOR: SW 7578 "Borscht" LRV: 6	

FITNESS ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT
NO. 22-2003-01
LIV TIMBER SKY

FLAGSTAFF, AZ

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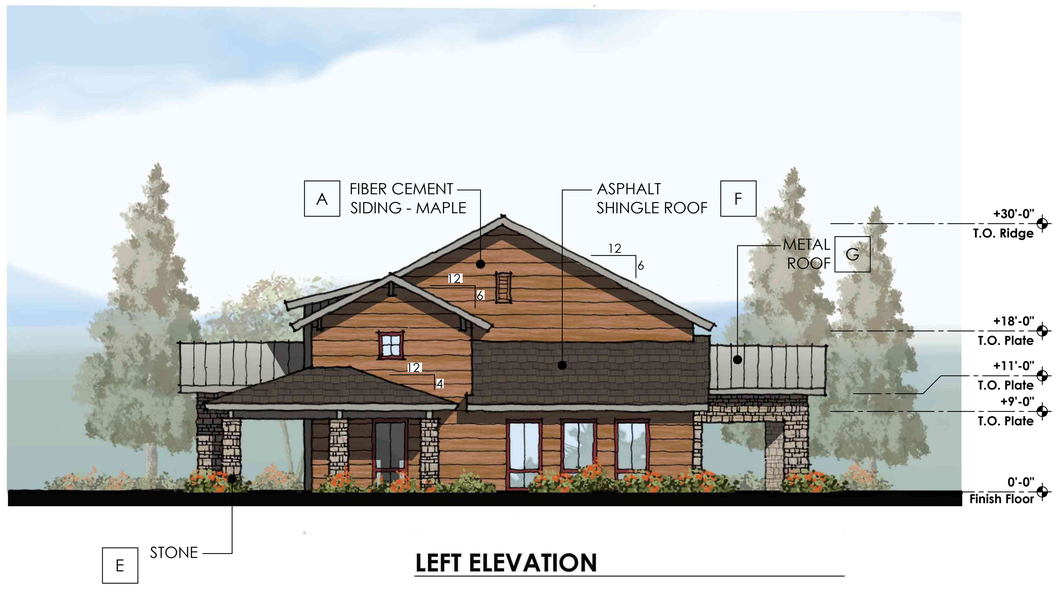
FITNESS ELEVATIONS

A3.5.1

REAR ELEVATION



LEFT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR		SWATCH
A	Fiber Cement Siding Body 1	MFG.: COLOR: LRV:	Allura Lap Siding - Horizontal Panels Traditional Texture PPG Bleached Maple (PPG1089-5) 37	
B	Fiber Cement Siding Body 2	MFG.: COLOR: LRV:	Allura Lap Siding - Vertical Panels Traditional Texture PPG Cloudy Slate (PPG0996-4) 29	
C	Fiber Cement Fascia	MFG.: COLOR: LRV:	Allura - Plycem Fiber Cement Trim Alurra Sterling Gray 48.2	
D	Fiber Cement Trim	MFG.: COLOR: LRV:	Allura - Plycem Fiber Cement Trim Alurra Autumn Red 12.6	
E	Stone Veneer	MFG.: COLOR: LRV:	Coronado - Getty Stone Embassy Blend 45.43	
F	Shingle Roof	MFG.: COLOR: LRV:	GAF Timberline - Ultra HD Shingles Charcoal n/a	
G	Metal Roof	MFG.: COLOR: LRV:	MBCI - Slimline Roof Panel Signature 300 "Slate Gray" 18.76	
H	Metal Railing	MFG.: COLOR: LRV:	Sherwin Williams SW 7578 "Borscht" 6	

FITNESS ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

PROJECT

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LIV TIMBER SKY

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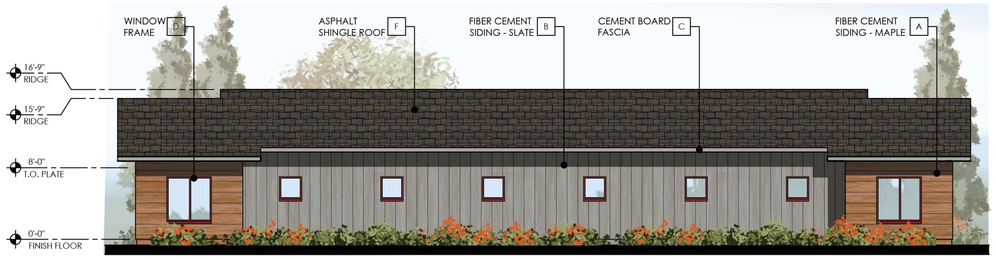
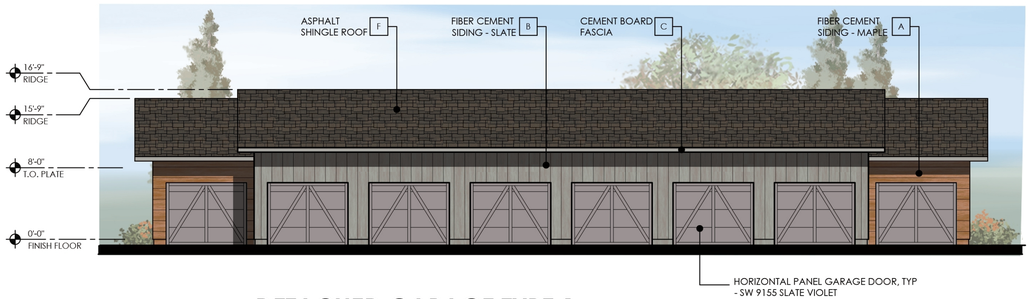
FITNESS ELEVATIONS

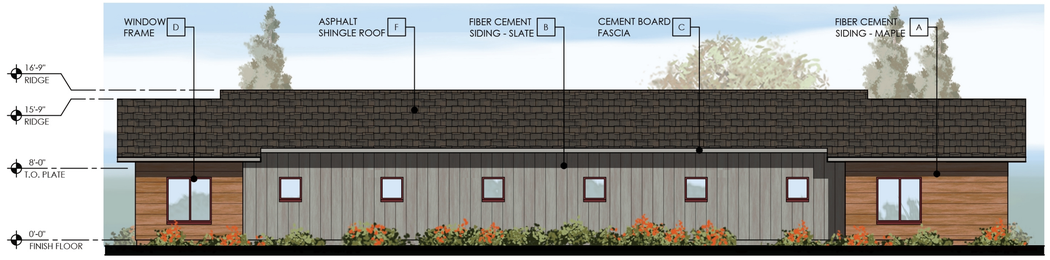
A3.5.2



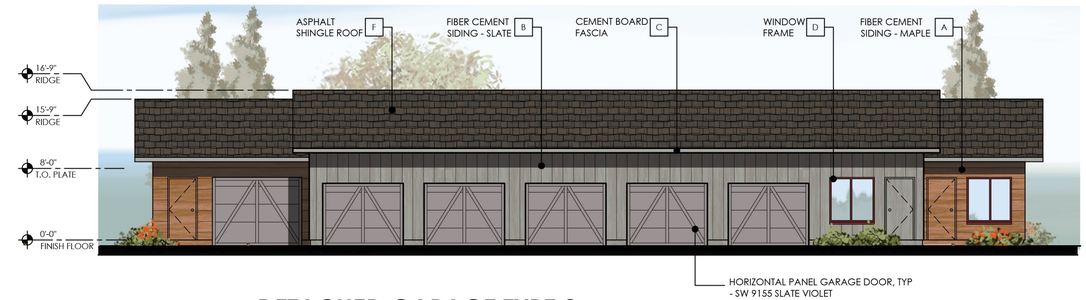
DETACHED GARAGE TYPE 1
REAR ELEVATION



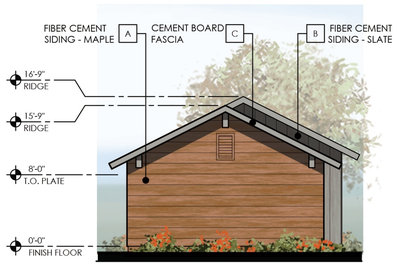
DETACHED GARAGE TYPE 1
FRONT ELEVATION



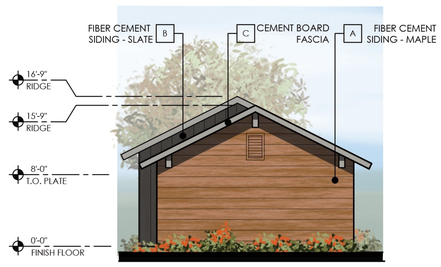
DETACHED GARAGE TYPE 2
REAR ELEVATION



DETACHED GARAGE TYPE 2
FRONT ELEVATION



DETACHED GARAGE TYPICAL
LEFT ELEVATION



DETACHED GARAGE TYPICAL
RIGHT ELEVATION

COLOR SCHEDULE

	LOCATION	COLOR		SWATCH
A	Fiber Cement Siding Body 1	MFG.: COLOR: LRV:	Allura Lap Siding - Horizontal Panels Traditional Texture PPG Bleached Maple (PPG1089-5) 37	
B	Fiber Cement Siding Body 2	MFG.: COLOR: LRV:	Allura Lap Siding - Vertical Panels Traditional Texture PPG Cloudy Slate (PPG0996-4) 29	
C	Fiber Cement Fascia	MFG.: COLOR: LRV:	Allura - Plycem Fiber Cement Trim Alurra Sterling Gray 48.2	
D	Fiber Cement Trim	MFG.: COLOR: LRV:	Allura - Plycem Fiber Cement Trim Alurra Autumn Red 12.6	
E	Stone Veneer	MFG.: COLOR: LRV:	Coronado - Getty Stone Embassy Blend 45.43	
F	Shingle Roof	MFG.: COLOR: LRV:	GAF Timberline - Ultra HD Shingles Charcoal n/a	
G	Metal Roof	MFG.: COLOR: LRV:	MBCI - Slimline Roof Panel Signature 300 "Slate Gray" 18.76	
H	Metal Railing	MFG.: COLOR: LRV:	Sherwin Williams SW 7578 "Borscht" 6	

DETACHED GARAGE ELEVATIONS

0" 4' 8' 16'

SCALE: 1/8" = 1'-0"

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LIV TIMBER SKY

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SITE PLAN REVIEW SUBMITTAL

Proj Mgr.
Dwn By:

DETACHED GARAGE ELEVATIONS

A3.6.1

SITE AMENITIES SCHEDULE

DESCRIPTION	QTY.	MANUFACTURER	CONTACT	MODEL NUMBER	COLOR/FINISH	NOTES
BIKE RACK	13	DUMOR SITE FURNISHINGS www.dumor.com OR APPROVED EQUAL	JUSTIN GALION EXERPLAY, INC. (800)457-5444	BIKE RACK 292-00/S-2	ARGENTO	SURFACE MOUNTED. CONTRACTOR SHALL READ AND UNDERSTAND THE INSTRUCTIONS PROVIDED ON THE MANUFACTURER'S WEBSITE PRIOR TO WORK ASSOCIATED WITH INSTALLING THE EQUIPMENT. CONSULT OWNER'S REPRESENTATIVE FOR FINAL LOCATIONS PRIOR TO INSTALL.
BENCH	13	DUMOR SITE FURNISHINGS www.dumor.com OR APPROVED EQUAL	JUSTIN GALION EXERPLAY, INC. (800)457-5444	BENCH 472-60I-2AR/S-2	SEATING: IPE STEEL FRAME: ARGENTO	SURFACE MOUNTED. CONTRACTOR SHALL READ AND UNDERSTAND THE INSTRUCTIONS PROVIDED ON THE MANUFACTURER'S WEBSITE PRIOR TO WORK ASSOCIATED WITH INSTALLING THE EQUIPMENT. CONSULT OWNER'S REPRESENTATIVE FOR FINAL LOCATIONS PRIOR TO INSTALL.
TRASH RECEPTACLE	5	DUMOR SITE FURNISHINGS www.dumor.com OR APPROVED EQUAL	JUSTIN GALION EXERPLAY, INC. (800)457-5444	287-32SH 32 GALLON STEEL RECEPTACLR WITH SHIELD, SIDE DEPOSIT	ARGENTO	SURFACE MOUNTED. CONTRACTOR SHALL READ AND UNDERSTAND THE INSTRUCTIONS PROVIDED ON THE MANUFACTURER'S WEBSITE PRIOR TO WORK ASSOCIATED WITH INSTALLING THE EQUIPMENT. CONSULT OWNER'S REPRESENTATIVE FOR FINAL LOCATIONS PRIOR TO INSTALL.
FIXED TABLE AND CHAIR SET	2 2	DUMOR SITE FURNISHINGS www.dumor.com OR APPROVED EQUAL	JUSTIN GALION EXERPLAY, INC. (800)457-5444	TABLE 296-42-40I/S-2 42" DIA STEEL TABLE, 4 SEATS, IPE TABLE 296-42-30I/S-2 42" DIA ADA STEEL TABLE, 3 SEATS, IPE	SEATING: IPE STEEL FRAME: ARGENTO SEATING: IPE STEEL FRAME: ARGENTO	SURFACE OR EMBEDMENT MOUNTED PER PLAN. CONTRACTOR SHALL READ AND UNDERSTAND THE INSTRUCTIONS PROVIDED ON THE MANUFACTURER'S WEBSITE PRIOR TO WORK ASSOCIATED WITH INSTALLING THE EQUIPMENT. CONSULT OWNER'S REPRESENTATIVE FOR FINAL LOCATIONS PRIOR TO INSTALL.
PET WASTE STATION	2	DOG WASTE DEPOT www.dogwastedepot.com OR APPROVED EQUAL	DOG WASTE DEPOT www.dogwastedepot.com (800)678.1612	DOG WASTE STATION MODEL: Depot-006-B-GRN	GREEN	EMBEDMENT MOUNTED PER PLAN. CONTRACTOR SHALL READ AND UNDERSTAND THE INSTRUCTIONS PROVIDED ON THE MANUFACTURER'S WEBSITE PRIOR TO WORK ASSOCIATED WITH INSTALLING THE EQUIPMENT. CONSULT OWNER'S REPRESENTATIVE FOR FINAL LOCATIONS PRIOR TO INSTALL.
PLAYGROUND ASSEMBLY	1	LANDSCAPE STRUCTURES www.landscapestructures.com OR APPROVED EQUAL	JUSTIN GALION EXERPLAY, INC. (800)457-5444	MODEL: 220495A	COLOR SCHEME "BO"	PLAYGROUND EQUIPMENT TO BE INSTALLED BY A LICENSED PROFESSIONAL PER MANUFACTURER'S INSTRUCTIONS.
GARDEN TROUGH	8	BEHLEN COUNTRY www.behlencountry.com OR APPROVED EQUAL	BEHLEN COUNTRY ON-LINE SALES TEAM	226 GALVANIZED ROUND END TANK SKU# 50130048	CORRUGATED STEEL	TANK TO SIT ON FINISH GRADE AND DECOMPOSED GRANITE PAD TO BE PLACED AROUND BASE OF TANK TO ANCHOR TANK IN PLACE. CONTRACTOR SHALL READ AND UNDERSTAND THE INSTRUCTIONS PROVIDED ON THE MANUFACTURER'S WEBSITE PRIOR TO WORK ASSOCIATED WITH INSTALLING THE EQUIPMENT. CONSULT OWNER'S REPRESENTATIVE FOR FINAL LOCATIONS PRIOR TO INSTALL.
CHESS/CHECKER BOARD	32 32	MESA PRECAST www.mesaprecast.com OR APPROVED EQUAL MESA PRECAST www.mesaprecast.com OR APPROVED EQUAL	MESA PRECAST (480)968-5400 MESA PRECAST (480)968-5400	MODEL FC-20-4 MODEL FC-20-4	INTEGRAL COLOR - DAVIS GRAPHITE INTEGRAL COLOR - DAVIS PEWTER	
STUMP JUMP DOG PARK EQUIPMENT	3	Dog On It Parks® dog-on-it-parks.com	Dog On It Parks® dog-on-it-parks.com 877-348-3647	NATUREDOG BIG STUMP JUMP (1) AND LITTLE STUMP JUMP (2)		SURFACE MOUNT, INSTALL PER MANUFACTURES RECOMMENDATIONS
LOG TUNNEL DOG PARK EQUIPMENT UGH	1	Dog On It Parks® dog-on-it-parks.com	Dog On It Parks® dog-on-it-parks.com 877-348-3647	NATUREDOG THROUGH THE LOG		SURFACE MOUNT, INSTALL PER MANUFACTURES RECOMMENDATIONS
BIKE REPAIR STATION	1	DERO DERO.COM	DERO DERO.COM (888) 337-6729	AIR KIT PRIME	POWDER COAT - IRON GRAY	SURFACE MOUNT, INSTALL PER MANUFACTURES RECOMMENDATIONS

MATERIALS SCHEDULE

DESCRIPTION	MANUFACTURER	CONTACT	TYPE / FINISH	NOTES
STANDARD GRAY CONCRETE FLATWORK	N/A	N/A	STANDARD GRAY, MEDIUM BROOM FINISH WITH STANDARD MAG TOOLED SCORE JOINTS	REFER TO CIVIL DRAWINGS FOR MORE INFORMATION
ENHANCED CONCRETE FLATWORK	DAVIS COLORS www.daviscolors.com OR APPROVED EQUAL	DAVIS COLORS www.daviscolors.com 323-265-8323	INTEGRALLY COLORED STANDARD DAVIS COLOR: OMAHA TAN 5084 OR APPROVED EQUAL, MEDIUM BROOM FINISH	REFER TO CIVIL DRAWINGS FOR MORE INFORMATION
DECOMPOSED GRANITE	FLAGSTAFF LANDSCAPE PRODUCTS OR APPROVED EQUAL	FLAGSTAFF LANDSCAPE PRODUCTS 6500 HISTORIC ROUTE 66 E FLAGSTAFF, AZ 86004 FLAGLANDSCAPE.COM	1" TABLE MESA BROWN ROCK MULCH, CLEAN/SCREENED	3" DEPTH MIN. W/ NO WEED BARRIER
STABILIZED DECOMPOSED GRANITE	FLAGSTAFF LANDSCAPE PRODUCTS OR APPROVED EQUAL	FLAGSTAFF LANDSCAPE PRODUCTS 6500 HISTORIC ROUTE 66 E FLAGSTAFF, AZ 86004 FLAGLANDSCAPE.COM	STABILIZED 1/4" MINUS MADISON GOLD DECOMPOSED GRANITE	4" DEPTH MIN. W/ NO WEED BARRIER - SEE DETAIL 8/L-300 FOR MORE INFORMATION
BOULDERS	NORTHERN ARIZONA SANDSTONE northernarizonasandstone.com OR APPROVED EQUAL	NORTHERN ARIZONA SANDSTONE northernarizonasandstone.com (928) 862-0216	MOSS 5'x5'x5', 4'x4'x4', 3'x3'x3'	CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT TO APPROVE BOULDERS PRIOR TO FINAL PLACEMENT. SEE DETAIL 9/L-300 FOR MORE DETAIL
STONE VENEER	CORONADO STONE	www.coronado.com (602)732-6558	MODEL: GETTY STONE COLOR: EMBASSY BLEND	INSTALL PER ARCHITECT'S SPECIFICATIONS. STONE VENEER AND GROUT SHALL MATCH STONE VENEER ON BUILDING.
STEEL EDGER	COLMET www.colmet.corp OR APPROVED EQUAL	www.colmet.corp	3/16" THICK, 4" DEPTH, POWDER COATED BROWN	
CONCRETE LANDSCAPE EDGER	N/A	N/A	STANDARD GRAY OR OMAHA TAN 5084 MEDIUM BROOM FINISH WITH STANDARD MAG TOOLED SCORE JOINTS	
ENGINEERED WOOD FIBER	ZEAGER BROS. INC ZEAGER.COM OR APPROVED EQUAL	ZEAGER BROS. INC ZEAGER.COM 800-346-8524	12" DEPTH	
FLAGSTONE	NORTHERN ARIZONA SANDSTONE northernarizonasandstone.com OR APPROVED EQUAL	NORTHERN ARIZONA SANDSTONE northernarizonasandstone.com (928) 862-0216	2"-4" MOSS SELECT	INSTALL PER SUPPLIERS SPECIFICATIONS. GROUT SHALL MATCH STONE VENEER ON BUILDING.
GRASSPAVE	INVISIBLE STRUCTURES INVISIBLESTRUCTURES.COM	BORDER CONSTRUCTION SPECIALTIES (602) 437-1900 WWW.BORDERCORP.COM	GRASSPAVE2	INSTALL PER MANUFACTURER SPECIFICATIONS WITH FESCUE TURF.
ARTIFICIAL TURF	FOREVERLAWN® FOREVERLAWN.COM	FOREVER LAWN DANTE ANGELO RAFFIN DANTE@FOREVERLAWN.COM 330.499.8873	K9 GRASS	INSTALL PER MANUFACTURER SPECIFICATIONS.
POOL COPING	BELGARD	KELLY O'SHAUGHNESSY 480-433-0564	STYLE: LAGUNA POOL COPING COLOR: BELLA	INSTALL PER MANUFACTURER SPECIFICATIONS.
SPA HANDRAIL	SRSMITH	www.srsmith.com	SPA RAIL	INSTALL PER MANUFACTURER SPECIFICATIONS.
SPA WATERLINE TILE AND WATER WALL FACING TILE	MSI STONE	www.srsmith.com	STYLE:AKAYA COPPER INTERLOCKING GLASS TILE	INSTALL PER MANUFACTURER SPECIFICATIONS.
SPA INTERIOR FINISH	PEBBLETEC OR APPROVED BY CLIENT	N/A	COLOR: BLUE LAGOON	INSTALL PER MANUFACTURER SPECIFICATIONS.
WATERWALL CAP	ANASAZI STONE	www.anasazistone.com	TYPE: QUARTZITE COLOR: BLACK GOLD	INSTALL PER SUPPLIERS SPECIFICATIONS. GROUT SHALL MATCH STONE VENEER ON BUILDING.
WATER WALL SCUPPER	BOBE WATER AND FIRE	www.bobewaterandfire.com	MODEL: WEDGE WS-12 COLOR: STAINLESS STEEL QUANTITY: 3	INSTALL PER SUPPLIERS SPECIFICATIONS.

CHECKED BY: AB,CS
DRAWN BY: DP,KW

NORRIS DESIGN
Planning | Landscape Architecture | Branding

6 East Aspen Avenue
Suite 260
Flagstaff, AZ 86001
P 928.233.3021
www.norris-design.com

TIMBER SKY
LIV - TIMBER SKY
FLAGSTAFF, AZ

OWNER:
VINTAGE PARTNERS
C/O WALTER CRUTCHFIELD
2502 E. CAMELBACK RD.
SUITE 214
602.459.9931

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
36936
CHRIS STEBE
Date Signed
ARIZONA, USA
EXPIRES 12/31/2022

NOT RELEASED FOR CONSTRUCTION

DATE:
4/20/2021 1ST CONCEPT PLAN SUBMITTAL
6/9/2022 2ND CONCEPT PLAN SUBMITTAL
08/29/22 1ST SITE PLAN SUBMITTAL
11/22/22 2ND SITE PLAN RESUBMITTAL
01/05/23 3RD SITE PLAN RESUBMITTAL
02/15/23 4TH SITE PLAN RESUBMITTAL

SHEET TITLE:
MATERIALS & AMENITIES SCHEDULES

LA-100B

SITE LANDSCAPE CALCULATIONS

ITEM	REQUIRED	PROVIDED	NOTES
R.O.W. - WOODY MOUNTAIN ROAD (TOTAL LINEAR FEET: 740 (including driveway); TOTAL LANDSCAPE AREA: 11,108 SF)			
TREES: 1 PER 45 LINEAR FEET (2" CAL MIN.**) SHRUBS: 25% (3 GAL MIN) GROUNDCOVER: 25%	16 2,777SF 2,777 SF	17 2,779 SF 2,781 SF	
R.O.W. - W. ROUTE 66 (TOTAL LINEAR FEET: 733 (including driveway); TOTAL LANDSCAPE AREA: 12,170 SF)			
TREES: 1 PER 45 LINEAR FEET (2" CAL MIN.**) SHRUBS: 25% (3 GAL MIN) GROUNDCOVER: 25%	16 3,043 SF 3,043 SF	16 3,046 SF 3,081 SF	
STREET BUFFER - WOODY MOUNTAIN ROAD (TOTAL LINEAR FEET: 740 (including driveway))			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	30 60 60	30* 60 60	TOTAL INCLUDES 29 NURSERY TREES AND 1 EXISTING TREE @18" CALIPER. PLANT QUANTITIES CALCULATION OVERLAPS WITH BUILDING 2 & 4 BUILDING FOUNDATION FOR 374 FEET.
STREET BUFFER - W. ROUTE 66 (TOTAL LINEAR FEET: 733 (including driveway))			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	29 58 58	29 63 58	PLANT QUANTITIES CALCULATION OVERLAPS WITH BUILDING 2 & 4 BUILDING FOUNDATION FOR 374 FEET.
PARKING AREA (TOTAL PARKING SPACES: 390)			
TREES: 2 PER 8 PARKING SPACES (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE MINIMUM LANDSCAPED AREA: (30 SF PER SPACE)	98 196 196 11,700 SF	98* 294 202 29,045 SF	TOTAL INCLUDES 95 NURSERY TREES AND 3 EXISTING TREES (1 @ 18" CALIPER, 1 @ 20" CALIPER, 1 @ 24" CALIPER)
PERIPHERAL BUFFER (TOTAL LINEAR FEET: 1,518)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	61 122 122	61 124 122	
BUILDING FOUNDATION - CLUBHOUSE (TOTAL LINEAR FEET: 461)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	18 36 36	19 87 40	
BUILDING FOUNDATION - FITNESS (TOTAL LINEAR FEET: 266)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	11 22 22	12 64 31	
BUILDING FOUNDATION - RESIDENCE BUILDING 1 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	11 22 22	11 48 35	PLANT QUANTITIES CALCULATION OVERLAPS WITH WOODY MOUNTAIN ROAD STREET BUFF FOR 187 FEET.
BUILDING FOUNDATION - RESIDENCE BUILDING 2 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	11 22 22	15 42 30	PLANT QUANTITIES CALCULATION OVERLAPS WITH ROUTE 66 STREET BUFF FOR 187 FEET.
BUILDING FOUNDATION - RESIDENCE BUILDING 3 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	18 36 36	18 73 37	
BUILDING FOUNDATION - RESIDENCE BUILDING 4 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	11 22 22	11 37 28	PLANT QUANTITIES CALCULATION OVERLAPS WITH ROUTE 66 STREET BUFF FOR 187 FEET.
BUILDING FOUNDATION - RESIDENCE BUILDING 7 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	18 36 36	18 69 38	
BUILDING FOUNDATION - RESIDENCE BUILDING 11 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	18 36 36	18 63 37	
BUILDING FOUNDATION - RESIDENCE BUILDING 12 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	18 36 36	18 55 37	
BUILDING FOUNDATION - RESIDENCE BUILDING 13 (TOTAL LINEAR FEET: 300)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	12 24 24	12 46 24	
BUILDING FOUNDATION - RESIDENCE BUILDING 14 (TOTAL LINEAR FEET: 460)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	11 22 22	15* 56 34	TOTAL INCLUDES 14 NURSERY TREES AND 1 EXISTING TREE @ 18" CALIPER. PLANT QUANTITIES CALCULATION OVERLAPS WITH WOODY MOUNTAIN ROAD STREET BUFF FOR 187 FEET.
BUILDING FOUNDATION - BUILDINGS 5, 6, 8, 9, & 10 (TOTAL LINEAR FEET: 705)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	1 2 2	1 3 4	PLANT QUANTITIES CALCULATION OVERLAPS WITH PLANT IN THE PERIPHERAL BUFF & PARKING LANDSCAPE FOR 682 FEET.
BUILDING FOUNDATION - DETACHED GARAGES (TOTAL LINEAR FEET: 414)			
TREES: 1 PER 25 LINEAR FEET (15 GALLON MIN.**) SHRUBS: 2 PER TREE GROUNDCOVER: 2 PER TREE	2 4 4	2 5 4	PLANT QUANTITIES CALCULATION OVERLAPS WITH PLANT IN THE PERIPHERAL BUFF & PARKING LANDSCAPE FOR 370 FEET.

* EACH EXISTING TREE THAT IS 6"-10" IN DIAMETER AT BREAST HEIGHT (DBH) MAY SUBSTITUTE FOR THE REQUIREMENT OF ONE LANDSCAPE TREE. EACH EXISTING TREE THAT IS 10"-18" DBH MAY SUBSTITUTE FOR THE REQUIREMENT OF TWO LANDSCAPE TREES. EACH EXISTING TREE THAT IS 18" DBH MAY SUBSTITUTE FOR THE REQUIREMENT OF THREE LANDSCAPE TREES. FOR EACH EXISTING TREE RETAINED IN A LANDSCAPE AREA, THE REQUIREMENT FOR SHRUBS AND GROUNDCOVERS ASSOCIATED WITH THAT TREE WILL BE WAIVED. (CITY OF FLAGSTAFF LANDSCAPING STANDARDS SECTION 10-50.60.050.A)

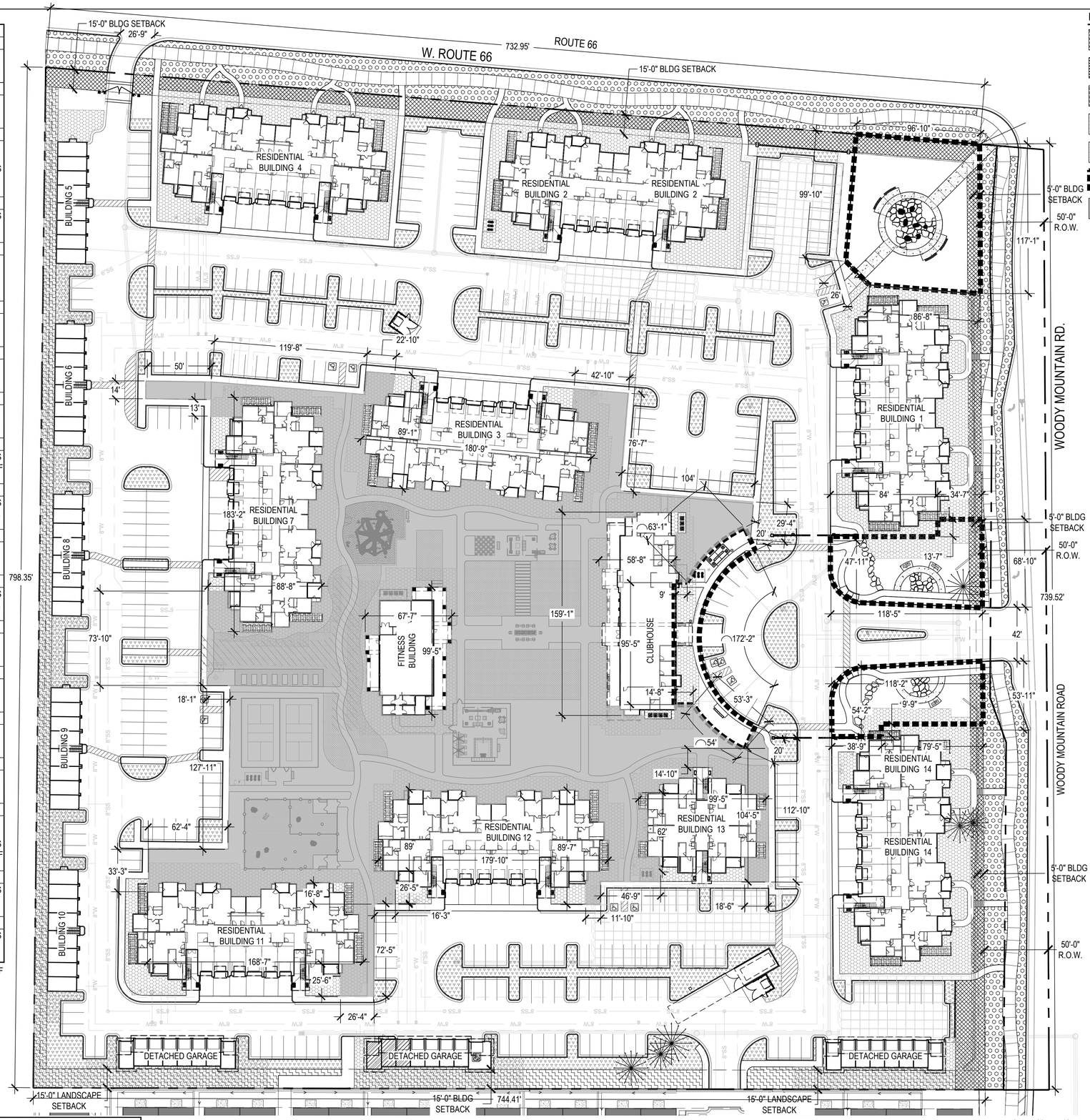
** FOR ON SITE PLANTS, EACH PROPOSED NATIVE TREE TO BE 15 GAL MIN., EACH PROPOSED NON-NATIVE TREE TO BE 6' TALL OR 2" CAL MIN. FOR OFF SITE PLANTS, PROPOSED SINGLE TRUNK TREES TO BE 2" CAL MIN. AND CONIFER TREES TO BE 6' TALL. (CITY OF FLAGSTAFF CHAPTER 13-18 LANDSCAPING STANDARDS FOR RIGHTS-OF-WAY DIVISIONS: 13-18-003)

OVERALL LANDSCAPE CALCULATIONS				
	ON SITE		RIGHTS-OF-WAY	
	REQUIRED	PROPOSED	REQUIRED	PROPOSED
TREE	378	460	32	33
SHRUB	756	1,743	5,820 SF	5,820 SF
GC	756	1,049	5,820 SF	5,862 SF

OPEN SPACE TREES, PLANTS AND GROUNDCOVER QUANTITIES ARE NOT INCLUDED IN THIS OVERALL LANDSCAPE CALCULATION.

SITE DEVELOPMENT REQUIREMENTS	GROSS / NET AREA: 13.01 ac (567,020 sf)	
	REQUIRED	PROVIDED
PEDESTRIAN AMENITY SPACE/CIVIC SPACE	28,351 sf (5.0% of TOTAL AREA)	28,360 sf
OPEN SPACE	85,053 sf (15.0% of TOTAL AREA)	91,109 sf

OASIS CALCULATION
PROPOSED: 18,400 SF (3.24% OF TOTAL AREA) - TURF: 14,947 SF; ARTIFICIAL TURF: 3,453 SF
MAX ALLOWABLE AREA: 28,357 SF (5% OF TOTAL AREA)



LEGEND

- RIGHT OF WAY
- STREET BUFFER
- PERIPHERAL BUFFER
- BUILDING FOUNDATION
- PARKING LOT LANDSCAPING
- CIVIC SPACE
- OPEN SPACE

CHECKED BY: AB,CS
DRAWN BY: DP,KW

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CERTIFICATE NO.
36936
CHRIS STEBE
Date Signed
ARIZONA, USA
EXPIRES 12/31/2024

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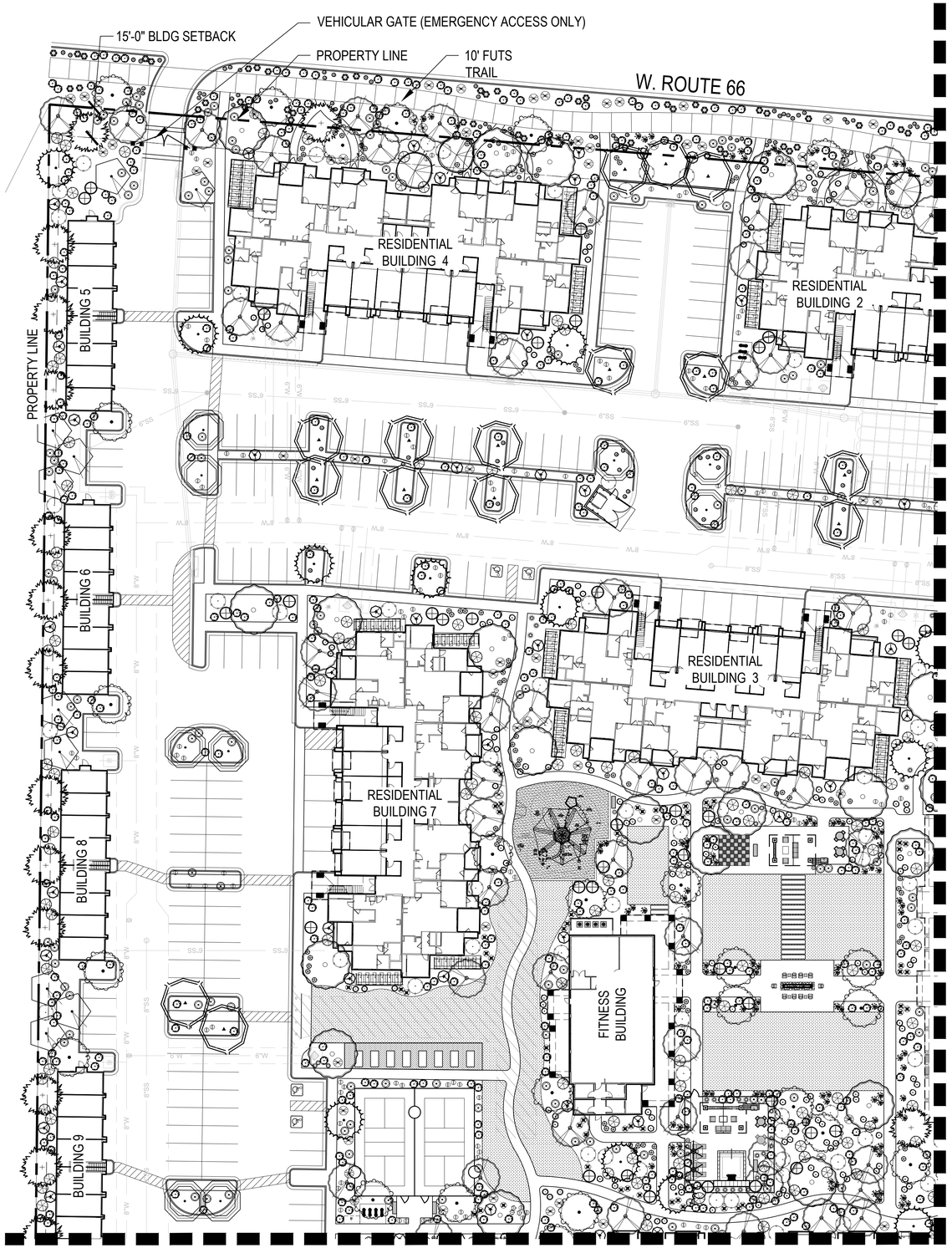
SHEET TITLE:
LANDSCAPE CALCULATIONS

LA-100C



NORTH

0 15 30 60

SCALE 1" = 30'

TOPDRESS SCHEDULE

TYPE 1 - DECOMPOSED GRANITE
ALL PERIMETER LANDSCAPE AREAS
SOURCE: FLAGSTAFF LANDSCAPE PRODUCTS OR APPROVED EQUAL
SIZE: 1" CLEAN/SCREENED
COLOR: TABLE MESA BROWN

TYPE 2 - ENGINEERED WOOD FIBER
SOURCE: ZEAGER BROS. INC
TYPE: WOOD CARPET

TYPE 3 - TURF
TYPE: FESCUE SOD

TYPE 4 - TURF WITH GRASS PAVE 2
TYPE: FESCUE SOD
VEHICULAR RATED

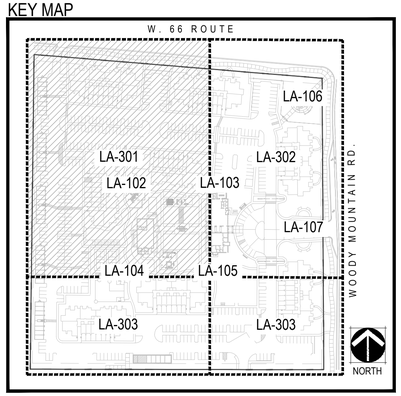
TYPE 5 - ARTIFICIAL TURF - DOG PARK
SUPPLIER: FOREVER LAWN
TYPE: K9 GRASS OR APPROVED EQUAL

TYPE 6 - STABALIZED DG
SUPPLIER: FLAGSTAFF LANDSCAPE PRODUCTS OR APPROVED EQUAL
SIZE: 1/4" MINUS
COLOR: MADISON GOLD

TYPE 7 - BOULDERS
SOURCE: FLAGSTAFF LANDSCAPE PRODUCTS OR APPROVED EQUAL
SIZE: SEE HARDSCAPE PLAN FOR BOULDER SIZES

NOTES:
1. CONTRACTOR TO PROVIDE SAMPLES OF ALL TOPDRESS MATERIALS TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
2. INSTALL 2" DEPTH OF DECOMPOSED GRANITE IN ALL PLANTING AREAS.

KEY MAP



PLANT LEGEND

EXISTING TREES	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	EXISTING TREE TO REMAIN					6	
DECIDUOUS CANOPY	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Acer x freemanii Autumn Blaze Maple	2" CAL, B&B	45` H x 30` W	NAT.	AS SHOWN	39	
	Gleditsia triacanthos inermis `Skyline` TM Skyline Thornless Honey Locust	2" CAL, B&B	45` H x 35` W	NAT.	AS SHOWN	27	
	Populus x acuminata Lanceleaf Poplar	2" CAL, B&B	50` H X 40` W	NAT.	AS SHOWN	23	3
DECIDUOUS ORNAMENTAL	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Cercis occidentalis Western Redbud	2.5" CAL, B&B	15`H X 15`W			106	7
	Populus tremuloides Quaking Aspen	2" CAL, B&B	50`H X 20`W	Y	AS SHOWN	24	7
	Prunus americana American Plum	2.5" CAL, B&B	20`H X 20`W	NAT.		21	
	Robinia x ambigua 'Purple Robe' Pink Flowering Locust	2.5" CAL, B&B	30`H X 20`W	NAT.		59	13
EVERGREEN TREES	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Juniperus scopulorum Rocky Mountain Juniper	6` HT, B&B	15`H X 6`W	Y	AS SHOWN	97	
	Picea pungens `Glauca` Colorado Blue Spruce	6` HT, B&B	40`H X 20`W	NAT.	AS SHOWN	21	
	Pinus ponderosa Ponderosa Pine	6` HT, B&B	60`H X 25`W	Y	AS SHOWN	37	3
DECIDUOUS SHRUBS - LARGE 7`-9`	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Cornus stolonifera Red Twig Dogwood	5 gal	8`H X 8`W	NAT.		140	17
DECIDUOUS SHRUBS - MEDIUM 5`-7`	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Caryopteris x clandonensis Blue Mist Spirea	5 gal	3`H X 6`W	NAT.		255	
	Prunus besseyi `Pawnee Buttes` Pawnee Buttes Sandcherry	5 gal	2` H X 6` W	Y		136	68
	Rhus trilobata `Autumn Amber` * Autumn Amber Sumac	5 gal	2` H X 6` W	NAT.		52	
DECIDUOUS SHRUBS - SMALL 2`-5`	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Euonymus alatus 'Compactus' Compact Burning Bush	5 gal	3`H X 3`W	Y		85	
	Perovskia abrotanoides * Russian Sage	5 gal	4` H X 4` W	NAT.		332	57
	Potentilla fruticosa `Gold Drop` Gold Drop Potentilla	3 gal	3` H X 3` W	Y		353	5
EVERGREEN SHRUBS	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Arctostaphylos x coloradoensis `Panchito` Panchito Manzanita	2 gal	1` H X 3` W	Y		161	
	Mahonia aquifolium Oregon Grape	5 gal	1`H X 6`W	NAT.			112
ORNAMENTAL GRASSES	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Bouteloua gracilis 'Blonde Ambition' *** Blonde Ambition Blue Grama Grass	3 gal	3` H X 3` W	Y		110	59
	Muhlenbergia rigens Deer Grass	1 gal	4` H X 4` W	Y		58	
	Panicum virgatum 'Shenandoah' Shenandoah Switch Grass	1 gal	3` H X 3` W	Y		31	
	Schizachyrium scoparium Little Bluestem	1 gal	3` H X 3` W	Y		60	
PERENNIALS & GROUNDCOVERS	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Achillea tomentosa Woolly Yarrow	1 gal	6" H X 12" W	Y		9	25
	Cerastium tomentosum Snow In Summer	1 gal	1` H X 3` W	NAT.		225	13
	Festuca glauca Blue Fescue	1 gal	12"H X 12"W	NAT.		94	130
	Juniperus horizontalis 'Blue Chip' Blue Chip Juniper	5 gal	1`H X 6`W	NAT.		705	201
ACCENT PERENNIALS	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Gaillardia pulchella * Annual Gaillardia	5 gal	16"H X 16"W	Y		16	

*POLLINATOR FRIENDLY PLANT SPECIES
***POLLINATOR NESTING PLANT SPECIES

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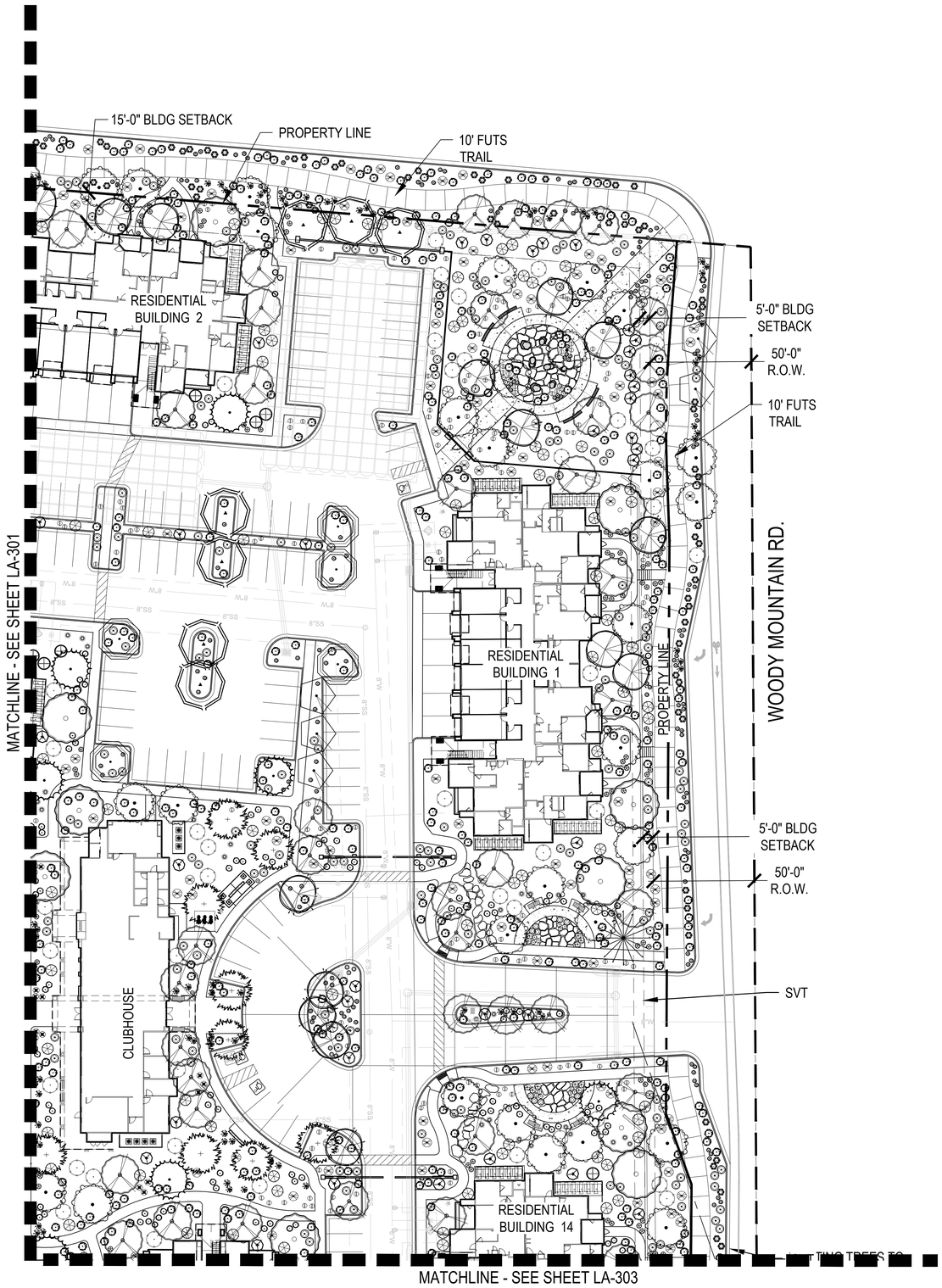
SHEET TITLE:
LANDSCAPE PLAN

LA-301

CHECKED BY: AB,CS
DRAWN BY: DP,KW



TOPDRESS SCHEDULE

TYPE 1 - DECOMPOSED GRANITE
ALL PERIMETER LANDSCAPE AREAS
SOURCE: FLAGSTAFF LANDSCAPE PRODUCTS OR APPROVED EQUAL
SIZE: 1" CLEAN/SCREENED
COLOR: TABLE MESA BROWN

TYPE 2 - ENGINEERED WOOD FIBER
SOURCE: ZEAGER BROS. INC
TYPE: WOOD CARPET

TYPE 3 - TURF
TYPE: FESCUE SOD

TYPE 4 - TURF WITH GRASS PAVE 2
TYPE: FESCUE SOD
VEHICULAR RATED

TYPE 5 - ARTIFICIAL TURF - DOG PARK
SUPPLIER: FOREVER LAWN
TYPE: K9 GRASS OR APPROVED EQUAL

TYPE 6 - STABALIZED DG
SUPPLIER: FLAGSTAFF LANDSCAPE PRODUCTS OR APPROVED EQUAL
SIZE: 1/4" MINUS
COLOR: MADISON GOLD

TYPE 7 - BOULDERS
SOURCE: FLAGSTAFF LANDSCAPE PRODUCTS OR APPROVED EQUAL
SIZE: SEE HARDSCAPE PLAN FOR BOULDER SIZES

NOTES:
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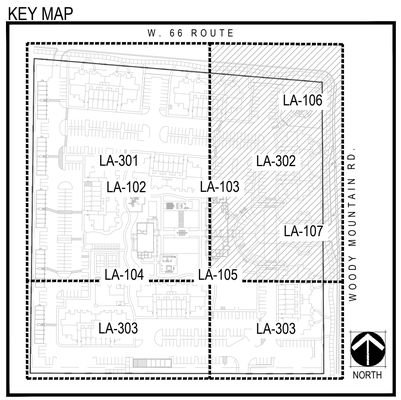
2. INSTALL 2" DEPTH OF DECOMPOSED GRANITE IN ALL PLANTING AREAS.

KEY MAP



PLANT LEGEND

EXISTING TREES	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	EXISTING TREE TO REMAIN					6	
DECIDUOUS CANOPY	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Acer x freemanii Autumn Blaze Maple	2" CAL, B&B	45` H x 30` W	NAT.	AS SHOWN	39	
	Gleditsia triacanthos inermis `Skyline` TM Skyline Thornless Honey Locust	2" CAL, B&B	45` H x 35` W	NAT.	AS SHOWN	27	
	Populus x acuminata Lanceleaf Poplar	2" CAL, B&B	50` H X 40` W	NAT.	AS SHOWN	23	3
DECIDUOUS ORNAMENTAL	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
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	Populus tremuloides Quaking Aspen	2" CAL, B&B	50`H X 20`W	Y	AS SHOWN	24	7
	Prunus americana American Plum	2.5" CAL, B&B	20`H X 20`W	NAT.		21	
	Robinia x ambigua 'Purple Robe' Pink Flowering Locust	2.5" CAL, B&B	30`H X 20`W	NAT.		59	13
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	Prunus besseyi `Pawnee Buttes` Pawnee Buttes Sandcherry	5 gal	2` H X 6` W	Y		136	68
	Rhus trilobata `Autumn Amber` * Autumn Amber Sumac	5 gal	2` H X 6` W	NAT.		52	
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	Perovskia abrotanoides * Russian Sage	5 gal	4` H X 4` W	NAT.		332	57
	Potentilla fruticosa `Gold Drop` Gold Drop Potentilla	3 gal	3` H X 3` W	Y		353	5
EVERGREEN SHRUBS	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Arctostaphylos x coloradoensis `Panchito` Panchito Manzanita	2 gal	1` H X 3` W	Y		161	
	Mahonia aquifolium Oregon Grape	5 gal	1`H X 6`W	NAT.			112
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	Muhlenbergia rigens Deer Grass	1 gal	4` H X 4` W	Y		58	
	Panicum virgatum 'Shenandoah' Shenandoah Switch Grass	1 gal	3` H X 3` W	Y		31	
	Schizachyrium scoparium Little Bluestem	1 gal	3` H X 3` W	Y		60	
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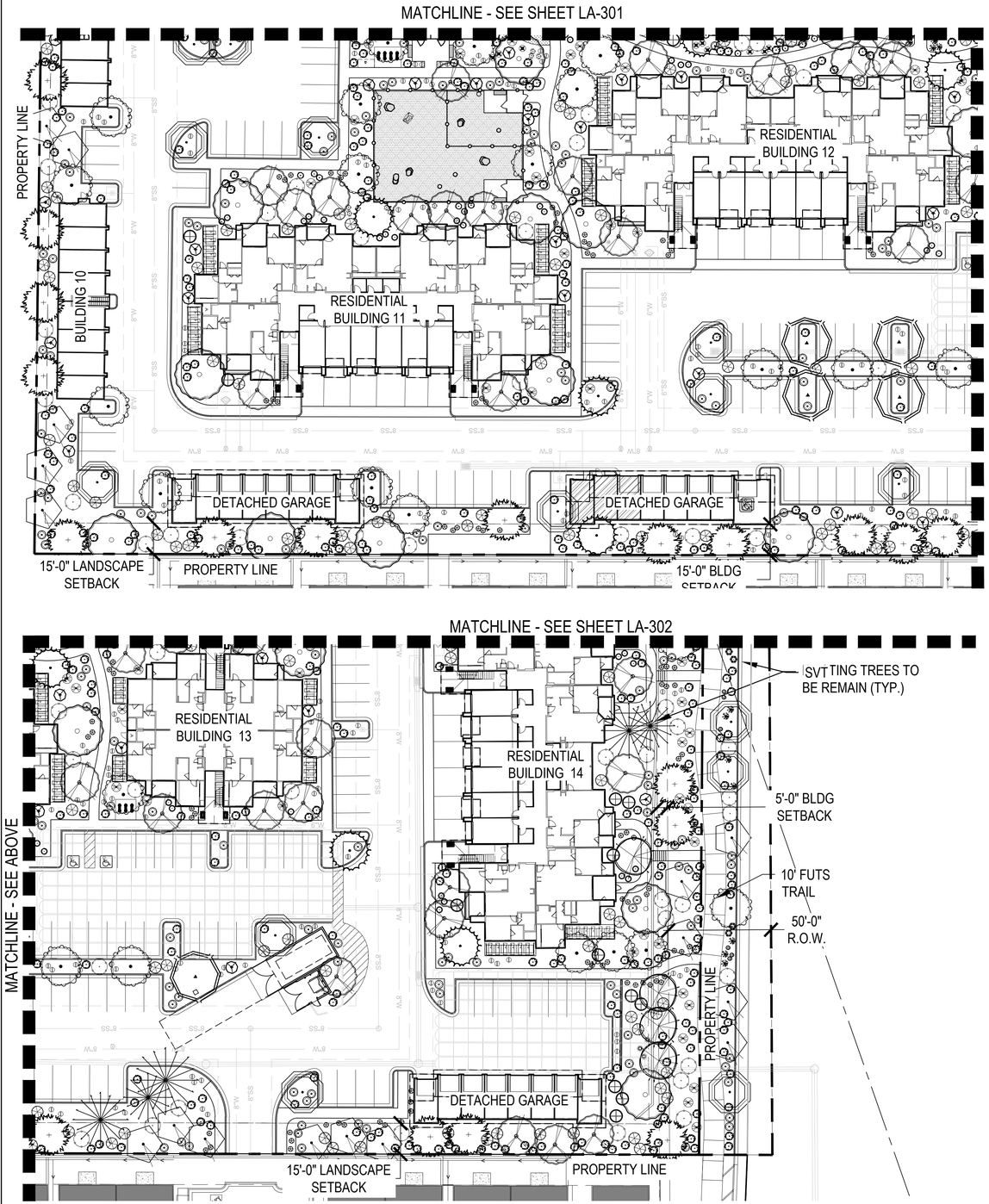
SHEET TITLE:
LANDSCAPE PLAN

811

LA-302

CHECKED BY: AB,CS
DRAWN BY: DP,KW



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PLANT LEGEND

EXISTING TREES	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	EXISTING TREE TO REMAIN					6	
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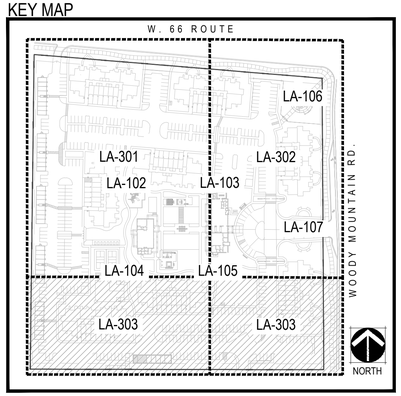
	Acer x freemanii Autumn Blaze Maple	2" CAL, B&B	45` H x 30` W	NAT.	AS SHOWN	39	
	Gleditsia triacanthos inermis `Skyline` TM Skyline Thornless Honey Locust	2" CAL, B&B	45` H x 35` W	NAT.	AS SHOWN	27	
	Populus x acuminata Lanceleaf Poplar	2" CAL, B&B	50` H X 40` W	NAT.	AS SHOWN	23	3
DECIDUOUS ORNAMENTAL	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Cercis occidentalis Western Redbud	2.5" CAL, B&B	15`H X 15`W			106	7
	Populus tremuloides Quaking Aspen	2" CAL, B&B	50`H X 20`W	Y	AS SHOWN	24	7
	Prunus americana American Plum	2.5" CAL, B&B	20`H X 20`W	NAT.		21	
	Robinia x ambigua 'Purple Robe' Pink Flowering Locust	2.5" CAL, B&B	30`H X 20`W	NAT.		59	13
EVERGREEN TREES	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Juniperus scopulorum Rocky Mountain Juniper	6` HT, B&B	15`H X 6`W	Y	AS SHOWN	97	
	Picea pungens `Glauca` Colorado Blue Spruce	6` HT, B&B	40`H X 20`W	NAT.	AS SHOWN	21	
	Pinus ponderosa Ponderosa Pine	6` HT, B&B	60`H X 25`W	Y	AS SHOWN	37	3
DECIDUOUS SHRUBS - LARGE 7`-9`	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Cornus stolonifera Red Twig Dogwood	5 gal	8`H X 8`W	NAT.		140	17
DECIDUOUS SHRUBS - MEDIUM 5`-7`	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Caryopteris x clandonensis Blue Mist Spirea	5 gal	3`H X 6`W	NAT.		255	
	Prunus besseyi `Pawnee Buttes` Pawnee Buttes Sandcherry	5 gal	2` H X 6` W	Y		136	68
	Rhus trilobata `Autumn Amber` * Autumn Amber Sumac	5 gal	2` H X 6` W	NAT.		52	
DECIDUOUS SHRUBS - SMALL 2`-5`	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Euonymus alatus 'Compactus' Compact Burning Bush	5 gal	3`H X 3`W	Y		85	
	Perovskia abrotanoides * Russian Sage	5 gal	4` H X 4` W	NAT.		332	57
	Potentilla fruticosa `Gold Drop` Gold Drop Potentilla	3 gal	3` H X 3` W	Y		353	5
EVERGREEN SHRUBS	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Arctostaphylos x coloradoensis `Panchito` Panchito Manzanita	2 gal	1` H X 3` W	Y		161	
	Mahonia aquifolium Oregon Grape	5 gal	1`H X 6`W	NAT.			112
ORNAMENTAL GRASSES	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Bouteloua gracilis 'Blonde Ambition' *** Blonde Ambition Blue Grama Grass	3 gal	3` H X 3` W	Y		110	59
	Muhlenbergia rigens Deer Grass	1 gal	4` H X 4` W	Y		58	
	Panicum virgatum 'Shenandoah' Shenandoah Switch Grass	1 gal	3` H X 3` W	Y		31	
	Schizachyrium scoparium Little Bluestem	1 gal	3` H X 3` W	Y		60	
PERENNIALS & GROUNDCOVERS	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Achillea tomentosa Woolly Yarrow	1 gal	6" H X 12" W	Y		9	25
	Cerastium tomentosum Snow In Summer	1 gal	1` H X 3` W	NAT.		225	13
	Festuca glauca Blue Fescue	1 gal	12"H X 12"W	NAT.		94	130
	Juniperus horizontalis 'Blue Chip' Blue Chip Juniper	5 gal	1`H X 6`W	NAT.		705	201
ACCENT PERENNIALS	BOTANICAL / COMMON NAME	SIZE	EST`D MAT. SIZE	NATIVE	SPACING	ONSITE QTY	ROW QTY
	Gaillardia pulchella * Annual Gaillardia	5 gal	16"H X 16"W	Y		16	

*POLLINATOR FRIENDLY PLANT SPECIES
***POLLINATOR NESTING PLANT SPECIES

KEY MAP



CHECKED BY: AB,CS
DRAWN BY: DP,KW

NORRIS DESIGN
Planning | Landscape Architecture | Branding
6 East Aspen Avenue
Suite 260
Flagstaff, AZ 86001
P 928.233.3021
www.norris-design.com

TIMBER SKY
LIV - TIMBER SKY
FLAGSTAFF, AZ

OWNER:
VINTAGE PARTNERS
C/O WALTER CRUTCHFIELD
2502 E. CAMELBACK RD.
SUITE 214
602.459.9931

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
36936
CHRIS STEBE
STATE OF ARIZONA, USA
EXPIRES 12/31/2022

CONSTRUCTION

DATE:
4/20/2021 1ST CONCEPT PLAN SUBMITTAL
6/9/2022 2ND CONCEPT PLAN SUBMITTAL
08/29/22 1ST SITE PLAN SUBMITTAL
11/22/22 2ND SITE PLAN RESUBMITTAL
01/05/23 3RD SITE PLAN RESUBMITTAL
02/15/23 4TH SITE PLAN RESUBMITTAL

SHEET TITLE:
LANDSCAPE PLAN

811

LA-303

When recorded, mail to:

City Clerk
City of Flagstaff
211 West Aspen Avenue
Flagstaff, Arizona 86001

DEVELOPMENT AGREEMENT

between

CITY OF FLAGSTAFF

And

VP 66 & Woody Mountain, LLC

for

LIV TIMBER SKY

THIS DEVELOPMENT AGREEMENT ("Agreement") is entered into this _____ day of _____, 2023, by and between the City of Flagstaff, an Arizona municipal corporation ("City") and VP 66 & Woody Mountain, LLC, an Arizona limited liability company ("Developer"). City and Developer may be referred to in this Agreement as "Party" in the singular, and collectively as the "Parties."

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. Developer owns an approximately 13.01 acre parcel of land generally located at the southwest corner of Woody Mountain Road and US Route 66, and legally described in ***Exhibit "A"*** attached hereto (collectively the "**Property**").

C. Developer intends to develop the Property for use as a high-density multi-family residential community (the "**Project**"). The Property is currently zoned Rural Residential, Resource Protection Overlay (RR RPO) zone. The Developer is requesting to rezone the Property to High Density Residential, Resource Protection Overlay (HR RPO) zone in Direct to Ordinance Zoning Map Amendment Application No. PZ-21-00271-05.

D. The Parties desire to enter into this Agreement in order to, among other things, facilitate development of the Property as depicted in the preliminary plan for the Project, a copy of which is attached as ***Exhibit "B"*** (the "**Site Plan**"), and as set forth in this Agreement and in

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the Project Narrative, a copy of which is attached as ***Exhibit "B"*** (the "**Project Narrative**"), and as conditioned by Ordinance No. [_____].

E. 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.

F. The Developer desires to comply with the strategies and goals of the City Carbon Neutrality Plan.

G. The Developer desires to respond to the City's "Housing Crisis Emergency Declaration" (Resolution No. 2020-66) by higher density housing options for all members of the City.

H. 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.

I. 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.

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

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:

1. INCORPORATION OF RECITALS

Each of the recitals, including the attached Exhibits, set forth above is incorporated into this Agreement as though fully set forth herein.

2. DEFINITIONS

The following terms shall have the meanings set forth below whenever used in this Agreement, except where the context clearly indicates otherwise:

2.1 Certificate of Occupancy" shall mean a document issued by an authorized City official setting forth that a building or structure legally complies with the City's building codes, the Flagstaff Zoning Code, and other pertinent state and local requirements, and that the same may be used for the purpose(s) therein.

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2.2 "**City**" shall mean and refer to the City of Flagstaff, an Arizona municipal corporation, and any successor public body or entity.

2.3 "**Developer**" shall mean and refer to VP 66 & Woody Mountain, LLC, an Arizona limited liability company, and any successor or assignee of VP 66 & Woody Mountain, LLC, an Arizona limited liability company, or any subsequent "Developer", as contemplated pursuant to Section 9.14.

2.4 "**Project**" shall mean and refer to the development of the Property for the uses, intensities, and densities currently shown and described in the Site Plan, the Project Narrative, this Agreement, and as conditioned by Ordinance No. [_____].

3. ENTITLEMENTS

3.1 Zoning Map Amendment. Developer hereby agrees to be subject to all the terms, conditions, and stipulations of the Ordinance No. [_____], this Agreement, and the Site Plan (PZ-21-00271-03), including any approved minor modifications to development standards or engineering variances (collectively, the "Entitlements"). In addition to the provisions for reversion set forth in the Ordinance and the Flagstaff City Code, 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 High Density Residential zoning on the Property to its former zoning classification of Rural Residential (RR), in accordance with Arizona Revised Statutes § 9-462.01.

3.2 Zoning. Developer intends to develop the Property for use as a high-density multi-family residential community. The Property is currently zoned Rural Residential, Resource Protection Overlay (RR RPO) zone. The Developer is requesting a Rezone to High Density Residential, Resource Protection Overlay (HR RPO) zone in the Zoning Map Amendment Application No. PZ-21-00271-05.

3.3 Development Standards. For a period of five (5) years from the Effective Date, development 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 (5) 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.

4. DEVELOPMENT PLAN

4.1 Scope of Development. Developer will construct a multi-family development, including any necessary onsite and offsite improvements, as set forth in the Site Plan approved by the City with conditions, subject to any minor modifications approved by the City and as set forth in impact analyses completed for the Project and approved by the City. The Project is further conditioned by the rezoning ordinance, the Project Narrative and this Agreement. The Project will consist of approximately 214 multi-family residential dwelling units, consisting of a mix of 1, 2, and 3-bedroom dwelling units; forty-eight (48) 3-bedroom dwelling units, one-hundred eighteen

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(118) 2-bedroom dwelling units, and forty-eight (48) 1-bedroom dwelling units and approximately 47 attached garage spaces, 40 carriage building garage spaces, and 21 detached garage spaces. The parking spaces, number of units, and unit mix may each change by ten percent (10%) through the minor modification process so long as Zoning Code minimum requirements are met.

4.2 Open Space/Common Area. The Project shall provide various amenities and open space areas for its residents which amenities and open space areas are currently planned to include a clubhouse and fitness center, spa, barbeque area and ramadas, fire pit and seating area, pickleball / sports court, game lawn, tot lot / play area, dog park, and other active and passive open space areas, all as more particularly shown on the Site Plan. The foregoing amenities and open space are subject to such modifications as may be agreed upon by Developer and the City. In the event of any conflict between this section and the final Site Plan for the Project, the Site Plan shall control.

4.3 Public-Civic Space. The Project shall provide a civic space located near the north-east corner of the Property, as shown on the Site Plan.

5. DEVELOPER OBLIGATIONS

5.1 Off-Site Sewer Modifications. If the "Developer" under the Development Agreement for The Sky Cottages at Timber Sky recorded May 27, 2021 at Instrument No. 3916900 in the official records of the Coconino County Recorder's Office has not previously completed the construction of the Sewer Improvements (as defined herein), then Developer shall be responsible to construct offsite sewer improvements as shown in the Water and Sewer Impact Analysis for Aspen Heights dated December 20, 2013 (the "WSIA"), attached hereto as *Exhibit "E"* and as set forth in more detail in the Technical Memo Regarding Required Offsite Sewer Improvements dated August 17, 2023, attached hereto as Exhibit C (collectively the "Sewer Improvements"). The City civil plan approval and Arizona Department of Environmental Quality approval to construct for the civil plan drawings in Exhibit C have expired. Developer must obtain approval to construct from the Arizona Department of Environmental Quality. Upon obtaining the approval to construct or concurrent with Developer seeking this approval, Developer shall submit updated civil plans to both the City and the Arizona Department of Transportation for approval prior to obtaining any permits for construction. The Sewer Improvements must be completed and accepted by the City prior to the issuance of the first Certificate of Occupancy for the Project. The Sewer Improvements shall be designed and built in accordance with the City Engineering Standards and ADEQ requirements.

5.2 Construction of General Off-Site Roadway Improvements. Developer shall be responsible for the following roadway improvements (the "Off-Site Roadway Improvements") shown in the Traffic Impact Analysis dated June 9, 2023 (the "TIA"), including:

5.2.1 Dedication of any necessary right(s) of way and easement(s) for construction of Off-site Roadway Improvements along the Property's Woody Mountain Road and Route 66 frontages as shown on the Site Plan.

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5.2.2 Construction of a new northbound left-turn lane at the driveway access point on Woody Mountain Road to City standards and as set forth in the approved Site Plan, subject to final City approval of civil plans.

5.2.3 Construction of a new eastbound right turn lane with a four-lane cross section on Route 66, at the intersection of Woody Mountain Road and Route 66, to Arizona Department of Transportation standards and as set forth in approved the Site Plan, subject to final City approval of civil plans.

5.2.4 Extenon of the left and right turn lanes on Woody Mountain Road at Route 66 to 150 feet of storage, subject to final City approval of civil plan extension of the median on Woody Mountain Road from current location to Route 66, subject to final City approval of civil plans.

5.2.5 Prior to the issuance of the first permit on the Project (including any at-risk permit), Developer will pay a proportional share for a new traffic signal at Woody Mountain Road and Route 66 in the amount of $36,800.

5.3 Sustainability. Developer agrees to incorporate the following sustainable practices to help implement the strategies and goals of the Flagstaff Carbon Neutrality Plan, including helping to reduce greenhouse gas emissions and contributing to the City's neighborhoods and resources being more resilient to climate change impacts.

5.3.1 Materials Management. Developer agrees to incorporate infrastructure to support recycling activities on-site in order to help divert waste materials from landfills. This includes providing recycling receptacles within each dwelling unit and may include recycling/trash valet pick-up service. Any area(s) dedicated for recycling/trash dumpsters should be properly signed with information on items accepted in each stream. Developer agrees to work with the City's Sustainability Section to utilize best practices in diverting debris produced in the construction of the development. Following construction, Developer will work with the City's Sustainability Section to ensure that the property management of the Project utilizes best-practices in communicating proper recycling protocol to tenants and obtains from the Sustainability Section resources available at no cost to assist in this communication. The Project shall also provide a waste compactor to help reduce the volume of waste going into landfills.

5.3.2 Mobility. Developer agrees to contract with Envoy, LLC, a technology startup, for a minimum of three (3) years to provide two (2) on-demand electric vehicles on the Property for short-term rental use by qualified residents, as determined by the Developer and/or property management. Should Envoy, LLC cease operation, fail to provide on-demand electric vehicles on the Property, or otherwise default under the contract with the Developer, the Developer shall no longer be obligated to provide on-demand electric vehicles on the Property.

5.3.3 Electrical Vehicle Charging. Developer shall provide and maintain nine (9) dual-port Level 2 electric vehicle charging stations for the term of the Agreement as set

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forth in the Site Plan, or until such technology is no longer relevant or alternative technology is preferred, as determined by the City's Sustainability Division Director.

5.3.4 Bicycle Parking. Developer shall provide no less than twenty-six (26) bicycle parking spaces. Zoning Code section 10-50.80.050 requires a minimum of 22 bicycle parking spaces for this Project.

5.3.5 Electrified Units. All units within the development shall be constructed and equipped as fully electric residences. No natural gas lines will be installed within the development and no natural gas appliances will be incorporated into the units. Amenities including fire pit, grills and spa may be heated using a propane tank if necessary.

5.3.6 Pollinator Friendly Landscaping. The final landscaping plan for the development submitted with Civil Engineering Plan Review shall include at least ten (10) percent of the total number of individual plants installed as landscaping, not a percentage of the number of species included, which qualify as plant species in support of the City of Flagstaff Mayor's Monarch Pledge, as part of a pollinator landscaping area.

5.3.7 Electric Bicycles. Developer agrees to provide two (2) electric bicycles and charging stations for short term rental use by adult residentsfor a minimum of three (3) years.

5.3.8 Department of Energy / EPA. Developer shall install smart thermostats and ENERGY STAR certified dishwashers, clothes' dryers, and bathroom fans in each unit.

5.3.9 Water Conservation. Developer shall only install showers and faucets in the Project that meet the EPA's WaterSense standards. Developer shall manage irrigation through WaterSense qualifying irrigation controllers.

5.4 Rental / Management. No lease or rental agreement shall be for a period of less than thirty (30) days.

5.5 Crime Free Multi Housing Plan. Developer agrees to participate in the City Crime-Free Multi-Housing Program and agrees to have the Crime Free Multi Housing Plan approved by the City Police Department prior to a Certificate of Occupancy.

5.6 Lighting Plan. The Project shall comply with all applicable Zone 1 requirements in Section 10-50.070 of the City Zoning Ordinance, except that the total lumen output of all exterior light fixtures installed in the Project shall not exceed 180,000 lumens. The provisions of this Section are required by the City in order to create certain Dark Sky Standards that will apply to the Project. The City will require an Outdoor Lighting Plan for the Project that will establish maximum lumens, not to exceed the total maximum set forth above.

5.7 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.

6. CITY OBLIGATIONS

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6.1 Reimbursement Agreement. The requirements for the Project include a minimum requirement to install a new 12-inch sewer line running east-west along Route 66 and a new 21-inch sewer line running north-south along Thompson Street from Route 66 to Kaibab Lane. Provided the developer complies with City code Section 7-08-001-0005(A), and if the City determines that surrounding private property owners benefit from these sewer improvements, the City hereby will enter into a reimbursement agreement with Developer as set forth in Title 7.

6.2 Maintenance of Sewer Improvements. The City, at its sole cost and expense, shall be responsible for the maintenance, repair, and/or replacement of Sewer Improvements once completed and accepted by the City.

7. DEFAULT; REMEDIES

7.1 Events Constituting Default. A party hereunder shall be deemed to be in default under this Agreement if such party breaches any obligation required to be performed by the respective party hereunder within any time period required for such performance and such breach or default continues for a period of thirty (30) days after written notice thereof from the party not in default hereunder; provided, however, that if the nature of the default is such that it cannot reasonably be cured within the 30-day period, no default shall be deemed to exist if the party failing to perform commences a cure within such 30-day period and thereafter diligently and expeditiously pursues such cure to completion within sixty (60) days.

7.2 Dispute Resolution. In the event that there is a dispute hereunder which the parties cannot resolve between themselves, the parties agree that there shall be a forty-five (45) 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 mediations shall be held under the commercial mediation rules of the American Arbitration Association. The mediator selected shall have at least five (5) years' experience in mediating or arbitrating disputes relating to commercial property development. The costs of any such mediation shall be divided equally between the City and the Developer or in such other fashion as the mediator may order. The results of the mediation shall be nonbinding on the parties and any party shall be free to initiate litigation upon the conclusion of mediation.

7.3 Developer's Remedies. In the event that the City is in default under this Agreement and fails to cure any such default within the time period required therefore as set forth in Section 7.1 above, then, in that event, in addition to all other legal and equitable remedies which the Developer may have, the Developer may terminate this Agreement by written notice delivered to the City.

7.4 City's Remedies. In the event that the Developer is in default under this Agreement, and the Developer thereafter fails to cure any such default within the time period described in Section 7.1 above, then the City may pursue all legal and equitable remedies which the City may have by written notice delivered to Developer.

7.5 Development Rights in the Event of Termination. Upon the termination of this Agreement as provided herein, Developer shall have no rights to develop the Property pursuant to this Agreement

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7.6 No Personal Liability. No current or former member, manager, officer, director, agent, representative, official, employee or other natural person of the 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 the City or Developer, as applicable; (b) for any amount which may become due to the nonbreaching party or its successor or assign; or (c) pursuant to any obligation of the City or Developer, as applicable, under the terms of this Agreement.

7.7 Liability and Indemnification. Developer shall indemnify, protect, defend and hold harmless the City, its Council members, officers, employees, and agents for, from and against any and all 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 the Developer.

8. GENERAL PROVISIONS

8.1 Effective Date and Term. This Agreement shall be effective (the "Effective Date") upon execution by the Parties hereto and recordation in accordance with 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 (30) years from such date.

8.2 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:

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To City:	To Developer:
City Manager	**VP 66 & Woody Mountain, LLC**
City of Flagstaff	Liv Timber Sky
211 West Aspen Avenue	2502 East Camelback Road, Suite 214
Flagstaff, Arizona 856001	Phoenix, Arizona 85016
City of Flagstaff	**Gammage & Burnham PLC**
Attn: City Attorney	Lindsay C. Schube
211 W. Aspen Ave.	40 North Central Avenue, 20th Floor
Flagstaff, AZ 86001	Phoenix, Arizona 85004

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.

8.3 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.

8.4 Headings. The descriptive headings of the paragraphs of this Agreement are inserted for convenience only, and shall not control or affect the meaning or construction of any of the provisions of the Agreement.

8.5 Authority. The **Parties** represent to each other that they have full power and authority to enter into this Agreement, and that all necessary actions have been taken to give full force and effect to this Agreement. The Developer represents and warrants that it is duly formed and validly existing under the laws of the State of Arizona and that it is duly qualified to do business in the State of Arizona and is in good standing under applicable state laws. The Developer and the City warrant to each other that the individuals executing this Agreement on behalf of their respective parties are authorized and empowered to bind the party on whose behalf each individual is signing. The Developer represents to the City that by entering into this Agreement, the Developer has bound the Property and all persons and entities having any legal or equitable interest therein to the terms of the Agreement.

8.6 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 has no effect on them.

Exhibit "A" Legal Description of Property

Exhibit "B" Approved Site Plan & Project Narrative

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Exhibit "C" Sewer Improvements

Exhibit "D" [Reserved]

Exhibit "E" Water and Sewer Impact Analysis for Aspen Heights dated December 20, 2013

Exhibit "F" Site Plan Sheets _____

8.7 Amendment. This Agreement may be amended, in whole or in part and with respect to all or any portion of the Property, only with the mutual written consent of the parties to this Agreement or by their successors in interest or assigns. The City shall record the amendment or cancellation in the official records of the Coconino County Recorder.

8.8 Severability. If any other provision of the Agreement is declared void or unenforceable, such provision shall be severed from this Agreement, which shall otherwise remain in full force and effect.

8.9 Governing Law. The laws of the State of Arizona shall govern the interpretation and enforcement of this Agreement. This Agreement has been made and entered into in Coconino County, Arizona, and any lawsuit to dispute or enforce any provision of this Agreement must be brought in Coconino County, Arizona.

8.10 Recordation of Agreement and Subsequent Amendment; Cancellation. The City will record this Agreement, and any amendment or cancellation of it, in the official records of the Coconino County Recorder no later than ten (10) days after the City and the Developer execute the Agreement, amendment, or cancellation, as required by A.R.S. § 9-500.05.

8.11 No Partnership; Third-Party. It is not intended by this Agreement to, and nothing contained in this Agreement shall, create any partnership, joint venture or other arrangement between Developer and the City. No term or provision of this Agreement is intended to, or shall, be for the benefit of any person, firm, organization or corporation not a party hereto, and no such other person, firm, organization or corporation shall have any right or cause of action hereunder.

8.12 Conflict of Interest. Pursuant to Arizona law, rules and regulations, no member, official or employee of the City shall have n 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.

8.13 Compliance with All Laws. Developer will comply with all applicable Federal, State, and County laws, as well as with all applicable City ordinances, regulations and policies.

8.14 Successors and Assigns; Restriction on Assignment by Developer. The rights and obligations of the Parties under this Agreement are covenants that run with the land. 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

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completion of construction of the Project, the right of Developer to assign its rights, duties, and obligations under this Agreement shall be limited to the following:

(a) Assignment made by the Developer as security in connection with obtaining financing and the exercise of lender remedies with respect thereto;

(b) An assignment of all rights and obligations of Developer under this Agreement to a person or entity reasonably acceptable to and approved by the City; however, that if Developer retains an ownership interest and management control in such real estate developer, then, in that event, the City's prior approval shall not be required; or

(c) An assignment by Developer of its rights and obligations 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 Developer.

With the exception of those instances set forth 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, 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 Developer under this Agreement shall release Developer, its successors, or assigns, from its obligations hereunder, unless specifically agreed to by the City.

Notwithstanding the foregoing, Developer may transfer or assign any or all of its rights and obligations under this Agreement to Liv Communities, LLC, without the consent of the City, but Developer shall provide notice of any such transfer or assignment to the City.

8.15 Restriction on Assignment by City. The City shall not transfer or assign all or any part of its rights and obligations under this Agreement without the prior written consent of the Developer, which consent may not be unreasonably withheld, conditioned, or delayed.

8.16 Time of the Essence. Time is of the essence in implementing the terms of this Agreement.

9. WAIVER OF CLAIM FOR DIMINUTION IN VALUE

Developer hereby waives and fully releases any and all 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 the City's existing land use laws and including the Ordinance No. [ ] regarding the Property. This waiver constitutes a complete release of any and all claims and causes of action that may arise or may be asserted under the Act with regard to the subject Property. Developer agrees to indemnify, hold harmless, and defend City, its officers, employees, and agents, from any and all claims, causes of actions, demands, losses, and expenses, including attorney's fees and litigation costs, that may be

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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 the City's existing land use laws, including the [Development and Rezoning Ordinance], upon the Property.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first written above.

City of Flagstaff

_____

Mayor Becky Daggett

Attest:

_____

City Clerk

Approved as to form and authority:

_____

City Attorney

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IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first written above.

VP 66 & Woody Mountain, LLC, an Arizona limited liability company

By: Vintage Partners, LLC, an Arizona limited liability company

Its: Manager

By: Edward & Company, LLC, an Arizona limited liability company

Its: Administrative Member

By:_____

Its:_____

STATE OF _____)
) ss.
County of _____)

The foregoing instrument was acknowledged before me this ____ day of _____, 2023 by _____, as _____ of Edward & Company, LLC, an Arizona limited liability company, the Administrative Member of Vintage Partners, LLC, an Arizona limited liability company, the Manager of VP 66 & Woody Mountain, LLC, an Arizona limited liability company, on behalf of the company.

_____
Notary Public

My Commission Expires:

_____

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Exhibit "A"

Legal Description of Project

LOT 2 OF THE FINAL PLAT FOR @LIV RECORDED ON JULY 15, 2022 AT INSTRUMENT #3955182 IN THE OFFICIAL RECORDS OF THE COCONINO COUNTY RECORDER'S OFFICE.

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Exhibit "B"

Approved Site Plan & Project Narrative

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Exhibit "C"

Sewer Improvements

DRAFT

Exhibit "D"

[RESERVED]

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Exhibit "E"

Water and Sewer Impact Analysis for Aspen Heights
dated December 20, 2013

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Exhibit "F"

Site Plan Sheets _____

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CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Alaxandra Pucciarelli, Current Planning Manager
Date:	09/26/2023
Meeting Date:	10/03/2023

TITLE:

Consideration and Adoption of Resolution No. 2023-50: A resolution authorizing the execution of the Development Agreement between City of Flagstaff and VP 66 & Woody Mountain, LLC for Liv Timber Sky, related to the development of approximately 13.01 acres of real property generally located at 2445 S Woody Mountain Road.

STAFF RECOMMENDED ACTION:

1) Read Resolution No. 2023-50 by title only
2) City Clerk reads Resolution No. 2023-50 by title only (if approved above)
3) Adopt Resolution No. 2023-50

Executive Summary:

State law allows the City to enter into development agreements by resolution. The proposed agreement governs the terms and conditions for the development of the property including off-site sewer improvements, off-site roadway improvements including the proportional share of the new traffic signal, and sustainability standards.

Financial Impact:

There are no financial impacts identified as part of this request.

Policy Impact:

There are no policy impacts identified as part of this request.

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

Priority Based Budget Key Community Priorities and Objectives

- Safe and Healthy Community: Support social services, community partners, and housing opportunities.
- 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: Provide amenities and activities that support a healthy lifestyle

Carbon Neutrality Plan

- DD-2 Create inclusive networks for walking and biking that are continuous, attractive, safe, comprehensive and convenient for people of all ages.
- FS-2 Encourage new buildings to rely on the electric grid as their main energy source.

Regional Plan

A complete analysis of the Regional Plan goals and policies can be found in the associated Zoning Map Amendment Planning and Zoning Commission staff report dated July 7, 2023.

Has There Been Previous Council Decision on This:

There have been no previous Council decisions on this Development Agreement.

Options and Alternatives:

1. The City Council may approve the Development Agreement as presented.
2. The City Council may approve the Development Agreement with additional, modified, or deleted terms.
3. The City Council may remand the Development Agreement back to staff for additional negotiations with the applicant.
4. The City Council may deny the Development Agreement.

Background/History:

A detailed background of this project is included in the Annexation and Zoning Map Amendment reports.

Key Considerations:

A draft development agreement, attached to this report, has been prepared. The primary purpose of this agreement is to set out roles and responsibilities regarding the following (not limited to):
- off-site sewer improvements
- off-site roadway improvements including the proportional share of the new traffic signal
- sustainability standards including:

- materials management
- on-demand electric vehicle rentals
- electric vehicle charging
- bicycle parking
- electrified units
- pollinator friendly landscaping
- electric bicycles for short term rental use

Community Benefits and Considerations:

Community benefits and considerations related to this request are addressed in more detail in the Planning & Zoning Staff Report, dated July 7, 2023, and attached to the Zoning Map Amendment staff summary.

Community Involvement:

Inform. This Development Agreement was noticed to the public as is required in the Zoning Code.

Attachments: Res. 2023-50
Ex. A - Development Agreement
Presentation

RESOLUTION NO. 2023-50

A RESOLUTION OF THE FLAGSTAFF CITY COUNCIL, AUTHORIZING A DEVELOPMENT AGREEMENT BETWEEN THE CITY OF FLAGSTAFF AND VP 66 & WOODY MOUNTAIN, LLC FOR THE LIV TIMBER SKY, RELATED TO THE DEVELOPMENT OF APPROXIMATELY 13.01 ACRES OF REAL PROPERTY GENERALLY LOCATED AT 2445 SOUTH WOODY MOUNTAIN ROAD AND ESTABLISHING AN EFFECTIVE DATE

RECITALS:

WHEREAS, VP 66 & Woody Mountain, LLC ("Owner") is the owner of approximately 13.01 acres of real property generally located at 2445 South Woody Mountain Road, designated as Coconino County Assessor Parcel Number 112-01-712 (the "Property"); and

WHEREAS, the Owner has submitted an Annexation application to annex a portion of Coconino County Assessor Parcel Number 112-01-712 into the City of Flagstaff corporate boundaries further described in Ordinance 2023-21; and

WHEREAS, the Owner has submitted a Direct to Ordinance Zoning Map Amendment application to rezone approximately 13.01 acres of Coconino County Assessor Parcel Number 112-01-712 from Rural Residential zoning with a Resource Protection Overlay (RR, RPO)) to High Density Residential zoning with a Resource Protection Overlay (HR, RPO) further described in Ordinance 2023-22; and

WHEREAS, the Owner and the City wish to enter into a development agreement, in the form attached to this Resolution as Exhibit A ("Development Agreement"), to provide for the terms and conditions under which the Property will be developed and to set forth in detail certain obligations of Developer and the City; and

WHEREAS, developing the Property under the terms and conditions of the proposed Development Agreement would be consistent with the Flagstaff Regional Plan 2030, and Developer and the City acknowledge that the Development Agreement would operate to the benefit of both parties; and

WHEREAS, Arizona Revised Statutes § 9-500.05 authorizes the City to enter into development agreements in order to facilitate the orderly and effective development of properties.

ENACTMENTS:

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF FLAGSTAFF AS FOLLOWS:

SECTION 1. The Development Agreement provides benefit to the City of Flagstaff.

SECTION 2. The Development Agreement is consistent with the purpose, intent, goals, policies, programs and land use designations of the General Plan, any applicable specific plans, and the Zoning Code.

SECTION 3. The Development Agreement complies with the requirements of A.R.S. § 9-500.05.

SECTION 4. That the City of Flagstaff be hereby authorized to enter into the Development Agreement in the form attached to this Resolution as Exhibit A ("Development Agreement").

SECTION 5. The Mayor, the City Manager, the City Clerk and the City Attorney are hereby authorized and directed to take all steps necessary to cause the execution of the Development Agreement and its related documents and to take all steps necessary to carry out the purpose and intent of this Resolution.

SECTION 6. That City Clerk be hereby directed to record a copy of the agreement with the Coconino County recorder no later than ten days after the development agreement is executed.

SECTION 7. This Resolution shall become effective thirty (30) days following adoption by the City Council.

PASSED AND ADOPTED by the City Council of the City of Flagstaff this 3rd day of October, 2023.

_____
MAYOR

ATTEST:

_____
CITY CLERK

APPROVED AS TO FORM:

_____
CITY ATTORNEY

Exhibits:
Development Agreement

When recorded, mail to:

City Clerk
City of Flagstaff
211 West Aspen Avenue
Flagstaff, Arizona 86001

DEVELOPMENT AGREEMENT

between

CITY OF FLAGSTAFF

And

VP 66 & Woody Mountain, LLC

for

LIV TIMBER SKY

THIS DEVELOPMENT AGREEMENT ("Agreement") is entered into this _____ day of _____, 2023, by and between the City of Flagstaff, an Arizona municipal corporation ("City") and VP 66 & Woody Mountain, LLC, an Arizona limited liability company ("Developer"). City and Developer may be referred to in this Agreement as "Party" in the singular, and collectively as the "Parties."

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. Developer owns an approximately 13.01 acre parcel of land generally located at the southwest corner of Woody Mountain Road and US Route 66, and legally described in ***Exhibit "A"*** attached hereto (collectively the "**Propert**y").

C. Developer intends to develop the Property for use as a high-density multi-family residential community (the "**Project**"). The Property is currently zoned Rural Residential, Resource Protection Overlay (RR RPO) zone. The Developer is requesting to rezone the Property to High Density Residential, Resource Protection Overlay (HR RPO) zone in Direct to Ordinance Zoning Map Amendment Application No. PZ-21-00271-05.

D. The Parties desire to enter into this Agreement in order to, among other things, facilitate development of the Property as depicted in the preliminary plan for the Project, a copy of which is attached as ***Exhibit "B"*** (the "**Site Plan**"), and as set forth in this Agreement and in

the Project Narrative, a copy of which is attached as ***Exhibit "B"*** (the "**Project Narrative**"), and as conditioned by Ordinance No. [_____].

E. 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.

F. The Developer desires to comply with the strategies and goals of the City Carbon Neutrality Plan.

G. The Developer desires to respond to the City's "Housing Crisis Emergency Declaration" (Resolution No. 2020-66) by higher density housing options for all members of the City.

H. 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.

I. 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.

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

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:

1. INCORPORATION OF RECITALS

Each of the recitals, including the attached Exhibits, set forth above is incorporated into this Agreement as though fully set forth herein.

2. DEFINITIONS

The following terms shall have the meanings set forth below whenever used in this Agreement, except where the context clearly indicates otherwise:

2.1 Certificate of Occupancy" shall mean a document issued by an authorized City official setting forth that a building or structure legally complies with the City's building codes, the Flagstaff Zoning Code, and other pertinent state and local requirements, and that the same may be used for the purpose(s) therein.

2.2 "**City**" shall mean and refer to the City of Flagstaff, an Arizona municipal corporation, and any successor public body or entity.

2.3 "**Developer**" shall mean and refer to VP 66 & Woody Mountain, LLC, an Arizona limited liability company, and any successor or assignee of VP 66 & Woody Mountain, LLC, an Arizona limited liability company, or any subsequent "Developer", as contemplated pursuant to Section 8.14.

2.4 "**Project**" shall mean and refer to the development of the Property for the uses, intensities, and densities currently shown and described in the Site Plan, the Project Narrative, this Agreement, and as conditioned by Ordinance No. [_____]**.**

3. ENTITLEMENTS

3.1 Zoning Map Amendment. Developer hereby agrees to be subject to all the terms, conditions, and stipulations of the Ordinance No. [_____], this Agreement, and the Site Plan (PZ-21-00271-03), including any approved minor modifications to development standards or engineering variances (collectively, the "Entitlements"). In addition to the provisions for reversion set forth in the Ordinance and the Flagstaff City Code, 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 High Density Residential zoning on the Property to its former zoning classification of Rural Residential (RR), in accordance with Arizona Revised Statutes § 9-462.01.

3.2 Zoning. Developer intends to develop the Property for use as a high-density multi-family residential community. The Property is currently zoned Rural Residential, Resource Protection Overlay (RR RPO) zone. The Developer is requesting a Rezone to High Density Residential, Resource Protection Overlay (HR RPO) zone in the Zoning Map Amendment Application No. PZ-21-00271-05.

3.3 Development Standards. For a period of five (5) years from the Effective Date, development 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 (5) 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.

4. DEVELOPMENT PLAN

4.1 Scope of Development. Developer will construct a multi-family development, including any necessary onsite and offsite improvements, as set forth in the Site Plan approved by the City with conditions, subject to any minor modifications approved by the City and as set forth in impact analyses completed for the Project and approved by the City. The Project is further conditioned by the rezoning ordinance, the Project Narrative and this Agreement. The Project will consist of approximately 214 multi-family residential dwelling units, consisting of a mix of 1, 2, and 3-bedroom dwelling units; forty-eight (48) 3-bedroom dwelling units, one-hundred eighteen

(118) 2-bedroom dwelling units, and forty-eight (48) 1-bedroom dwelling units and approximately 47 attached garage spaces, 40 carriage building garage spaces, and 21 detached garage spaces. The parking spaces, number of units, and unit mix may each change by ten percent (10%) through the minor modification process so long as Zoning Code minimum requirements are met.

4.2 Open Space/Common Area. The Project shall provide various amenities and open space areas for its residents which amenities and open space areas are currently planned to include a clubhouse and fitness center, spa, barbeque area and ramadas, fire pit and seating area, pickleball / sports court, game lawn, tot lot / play area, dog park, and other active and passive open space areas, all as more particularly shown on the Site Plan. The foregoing amenities and open space are subject to such modifications as may be agreed upon by Developer and the City. In the event of any conflict between this section and the final Site Plan for the Project, the Site Plan shall control.

4.3 Public-Civic Space. The Project shall provide a civic space located near the north-east corner of the Property, as shown on the Site Plan.

5. DEVELOPER OBLIGATIONS

5.1 Off-Site Sewer Modifications. If the "Developer" under the Development Agreement for The Sky Cottages at Timber Sky recorded May 27, 2021 at Instrument No. 3916900 in the official records of the Coconino County Recorder's Office has not previously completed the construction of the Sewer Improvements (as defined herein), then Developer shall be responsible to construct offsite sewer improvements as shown in the Water and Sewer Impact Analysis for Aspen Heights dated December 20, 2013 (the "WSIA"), attached hereto as *Exhibit "E"* and as set forth in more detail in the Technical Memo Regarding Required Offsite Sewer Improvements dated August 17, 2023, attached hereto as Exhibit C (collectively the "Sewer Improvements"). The City civil plan approval and Arizona Department of Environmental Quality approval to construct for the civil plan drawings in Exhibit C have expired. Developer must obtain approval to construct from the Arizona Department of Environmental Quality. Upon obtaining the approval to construct or concurrent with Developer seeking this approval, Developer shall submit updated civil plans to both the City and the Arizona Department of Transportation for approval prior to obtaining any permits for construction. The Sewer Improvements must be completed and accepted by the City prior to the issuance of the first Certificate of Occupancy for the Project. The Sewer Improvements shall be designed and built in accordance with the City Engineering Standards and ADEQ requirements.

5.2 Construction of General Off-Site Roadway Improvements. Developer shall be responsible for the following roadway improvements (the "Off-Site Roadway Improvements") shown in the Traffic Impact Analysis dated June 9, 2023 (the "TIA"), including:

5.2.1 Dedication of any necessary right(s) of way and easement(s) for construction of Off-site Roadway Improvements along the Property's Woody Mountain Road and Route 66 frontages as shown on the Site Plan.

5.2.2 Construction of a new northbound left-turn lane at the driveway access point on Woody Mountain Road to City standards and as set forth in the approved Site Plan, subject to final City approval of civil plans.

5.2.3 Construction of a new eastbound right turn lane with a four-lane cross section on Route 66, at the intersection of Woody Mountain Road and Route 66, to Arizona Department of Transportation standards and as set forth in approved the Site Plan, subject to final City approval of civil plans.

5.2.4 Extension of the left and right turn lanes on Woody Mountain Road at Route 66 to 150 feet of storage, subject to final City approval of civil plan extension of the median on Woody Mountain Road from current location to Route 66, subject to final City approval of civil plans.

5.2.5 Prior to the issuance of the first permit on the Project (including any at-risk permit), Developer will pay a proportional share for a new traffic signal at Woody Mountain Road and Route 66 in the amount of $36,800.

5.3 Sustainability. Developer agrees to incorporate the following sustainable practices to help implement the strategies and goals of the Flagstaff Carbon Neutrality Plan, including helping to reduce greenhouse gas emissions and contributing to the City's neighborhoods and resources being more resilient to climate change impacts.

5.3.1 Materials Management. Developer agrees to incorporate infrastructure to support recycling activities on-site in order to help divert waste materials from landfills. This includes providing recycling receptacles within each dwelling unit and may include recycling/trash valet pick-up service. Any area(s) dedicated for recycling/trash dumpsters should be properly signed with information on items accepted in each stream. Developer agrees to work with the City's Sustainability Section to utilize best practices in diverting debris produced in the construction of the development. Following construction, Developer will work with the City's Sustainability Section to ensure that the property management of the Project utilizes best-practices in communicating proper recycling protocol to tenants and obtains from the Sustainability Section resources available at no cost to assist in this communication. The Project shall also provide a waste compactor to help reduce the volume of waste going into landfills.

5.3.2 Mobility. Developer agrees to contract with Envoy, LLC, a technology startup, for a minimum of three (3) years to provide two (2) on-demand electric vehicles on the Property for short-term rental use by qualified residents, as determined by the Developer and/or property management. Should Envoy, LLC cease operation, fail to provide on-demand electric vehicles on the Property, or otherwise default under the contract with the Developer, the Developer shall no longer be obligated to provide on-demand electric vehicles on the Property.

5.3.3 Electrical Vehicle Charging. Developer shall provide and maintain nine (9) dual-port Level 2 electric vehicle charging stations for the term of the Agreement as set

forth in the Site Plan, or until such technology is no longer relevant or alternative technology is preferred, as determined by the City's Sustainability Division Director.

5.3.4 Bicycle Parking. Developer shall provide no less than twenty-six (26) bicycle parking spaces. Zoning Code section 10-50.80.050 requires a minimum of 22 bicycle parking spaces for this Project.

5.3.5 Electrified Units. All units within the development shall be constructed and equipped as fully electric residences. No natural gas lines will be installed within the development and no natural gas appliances will be incorporated into the units. Amenities including fire pit, grills and spa may be heated using a propane tank if necessary.

5.3.6 Pollinator Friendly Landscaping. The final landscaping plan for the development submitted with Civil Engineering Plan Review shall include at least ten (10) percent of the total number of individual plants installed as landscaping, not a percentage of the number of species included, which qualify as plant species in support of the City of Flagstaff Mayor's Monarch Pledge, as part of a pollinator landscaping area.

5.3.7 Electric Bicycles. Developer agrees to provide two (2) electric bicycles and charging stations for short term rental use by adult residents for a minimum of three (3) years.

5.3.8 Department of Energy / EPA. Developer shall install smart thermostats and ENERGY STAR certified dishwashers, clothes' dryers, and bathroom fans in each unit.

5.3.9 Water Conservation. Developer shall install only showers and faucets in the Project that meet the EPA's WaterSense standards. Developer shall manage irrigation through WaterSense qualifying irrigation controllers.

5.4 Rental / Management. No lease or rental agreement shall be for a period of less than thirty (30) days.

5.5 Crime Free Multi Housing Plan. Developer agrees to participate in the City Crime-Free Multi-Housing Program and agrees to have the Crime Free Multi Housing Plan approved by the City Police Department prior to a Certificate of Occupancy.

5.6 Lighting Plan. The Project shall comply with all applicable Zone 1 requirements in Section 10-50.070 of the City Zoning Ordinance, except that the total lumen output of all exterior light fixtures installed in the Project shall not exceed 180,000 lumens. The provisions of this Section are required by the City in order to create certain Dark Sky Standards that will apply to the Project. The City will require an Outdoor Lighting Plan for the Project that will establish maximum lumens, not to exceed the total maximum set forth above.

5.7 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.

6. CITY OBLIGATIONS

6.1 Reimbursement Agreement. The requirements for the Project include a minimum requirement to install a new 12-inch sewer line running east-west along Route 66 and a new 21-inch sewer line running north-south along Thompson Street from Route 66 to Kaibab Lane. Provided the developer complies with City code Section 7-08-001-0005(A), and if the City determines that surrounding private property owners benefit from these sewer improvements, the City hereby will enter into a reimbursement agreement with Developer as set forth in Title 7.

6.2 Maintenance of Sewer Improvements. The City, at its sole cost and expense, shall be responsible for the maintenance, repair, and/or replacement of Sewer Improvements once completed and accepted by the City.

7. DEFAULT; REMEDIES

7.1 Events Constituting Default. A party hereunder shall be deemed to be in default under this Agreement if such party breaches any obligation required to be performed by the respective party hereunder within any time period required for such performance and such breach or default continues for a period of thirty (30) days after written notice thereof from the party not in default hereunder; provided, however, that if the nature of the default is such that it cannot reasonably be cured within the 30-day period, no default shall be deemed to exist if the party failing to perform commences a cure within such 30-day period and thereafter diligently and expeditiously pursues such cure to completion within sixty (60) days.

7.2 Dispute Resolution. In the event that there is a dispute hereunder which the parties cannot resolve between themselves, the parties agree that there shall be a forty-five (45) 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 mediations shall be held under the commercial mediation rules of the American Arbitration Association. The mediator selected shall have at least five (5) years' experience in mediating or arbitrating disputes relating to commercial property development. The costs of any such mediation shall be divided equally between the City and the Developer or in such other fashion as the mediator may order. The results of the mediation shall be nonbinding on the parties and any party shall be free to initiate litigation upon the conclusion of mediation.

7.3 Developer's Remedies. In the event that the City is in default under this Agreement and fails to cure any such default within the time period required therefore as set forth in Section 7.1 above, then, in that event, in addition to all other legal and equitable remedies which the Developer may have, the Developer may terminate this Agreement by written notice delivered to the City.

7.4 City's Remedies. In the event that the Developer is in default under this Agreement, and the Developer thereafter fails to cure any such default within the time period described in Section 7.1 above, then the City may pursue all legal and equitable remedies which the City may have by written notice delivered to Developer.

7.5 Development Rights in the Event of Termination. Upon the termination of this Agreement as provided herein, Developer shall have no rights to develop the Property pursuant to this Agreement

7.6 No Personal Liability. No current or former member, manager, officer, director, agent, representative, official, employee or other natural person of the 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 the City or Developer, as applicable; (b) for any amount which may become due to the nonbreaching party or its successor or assign; or (c) pursuant to any obligation of the City or Developer, as applicable, under the terms of this Agreement.

7.7 Liability and Indemnification. Developer shall indemnify, protect, defend and hold harmless the City, its Council members, officers, employees, and agents for, from and against any and all 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 the Developer.

8. GENERAL PROVISIONS

8.1 Effective Date and Term. This Agreement shall be effective (the "Effective Date") upon execution by the Parties hereto and recordation in accordance with 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 (30) years from such date.

8.2 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	**VP 66 & Woody Mountain, LLC**
City of Flagstaff	Liv Timber Sky
211 West Aspen Avenue	2502 East Camelback Road, Suite 214
Flagstaff, Arizona 86001	Phoenix, Arizona 85016
City of Flagstaff	**Gammage & Burnham PLC**
Attn: City Attorney	Lindsay C. Schube
211 W. Aspen Ave.	40 North Central Avenue, 20th Floor
Flagstaff, AZ 86001	Phoenix, Arizona 85004

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.

8.3 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.

8.4 Headings. The descriptive headings of the paragraphs of this Agreement are inserted for convenience only, and shall not control or affect the meaning or construction of any of the provisions of the Agreement.

8.5 Authority. The Parties represent to each other that they have full power and authority to enter into this Agreement, and that all necessary actions have been taken to give full force and effect to this Agreement. The Developer represents and warrants that it is duly formed and validly existing under the laws of the State of Arizona and that it is duly qualified to do business in the State of Arizona and is in good standing under applicable state laws. The Developer and the City warrant to each other that the individuals executing this Agreement on behalf of their respective parties are authorized and empowered to bind the party on whose behalf each individual is signing. The Developer represents to the City that by entering into this Agreement, the Developer has bound the Property and all persons and entities having any legal or equitable interest therein to the terms of the Agreement.

8.6 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 has no effect on them.

Exhibit "A" Legal Description of Property

Exhibit "B" Approved Site Plan & Project Narrative

Exhibit "C" Technical Memo Regarding Required Offsite Sewer Improvements

Exhibit "D" [Reserved]

Exhibit "E" Water and Sewer Impact Analysis for Aspen Heights dated December 20, 2013

8.7 Amendment. This Agreement may be amended, in whole or in part and with respect to all or any portion of the Property, only with the mutual written consent of the parties to this Agreement or by their successors in interest or assigns. The City shall record the amendment or cancellation in the official records of the Coconino County Recorder.

8.8 Severability. If any other provision of the Agreement is declared void or unenforceable, such provision shall be severed from this Agreement, which shall otherwise remain in full force and effect.

8.9 Governing Law. The laws of the State of Arizona shall govern the interpretation and enforcement of this Agreement. This Agreement has been made and entered into in Coconino County, Arizona, and any lawsuit to dispute or enforce any provision of this Agreement must be brought in Coconino County, Arizona.

8.10 Recordation of Agreement and Subsequent Amendment; Cancellation. The City will record this Agreement, and any amendment or cancellation of it, in the official records of the Coconino County Recorder no later than ten (10) days after the City and the Developer execute the Agreement, amendment, or cancellation, as required by A.R.S. § 9-500.05.

8.11 No Partnership; Third-Party. It is not intended by this Agreement to, and nothing contained in this Agreement shall, create any partnership, joint venture or other arrangement between Developer and the City. No term or provision of this Agreement is intended to, or shall, be for the benefit of any person, firm, organization or corporation not a party hereto, and no such other person, firm, organization or corporation shall have any right or cause of action hereunder.

8.12 Conflict of Interest. Pursuant to Arizona law, rules and regulations, no member, official or employee of the City shall have n 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.

8.13 Compliance with All Laws. Developer will comply with all applicable Federal, State, and County laws, as well as with all applicable City ordinances, regulations and policies.

8.14 Successors and Assigns; Restriction on Assignment by Developer. The rights and obligations of the Parties under this Agreement are covenants that run with the land. 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 Developer to assign its rights, duties, and obligations under this Agreement shall be limited to the following:

(a) Assignment made by the Developer as security in connection with obtaining financing and the exercise of lender remedies with respect thereto;

(b) An assignment of all rights and obligations of Developer under this Agreement to a person or entity reasonably acceptable to and approved by the City; however, that if Developer retains an ownership interest and management control in such real estate developer, then, in that event, the City's prior approval shall not be required; or

(c) An assignment by Developer of its rights and obligations 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 Developer.

With the exception of those instances set forth 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, 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 Developer under this Agreement shall release Developer, its successors, or assigns, from its obligations hereunder, unless specifically agreed to by the City.

Notwithstanding the foregoing, Developer may transfer or assign any or all of its rights and obligations under this Agreement to Liv Timber Sky, LLC, a Michigan limited liability company, without the consent of the City, but Developer shall provide notice of any such transfer or assignment to the City.

8.15 Restriction on Assignment by City. The City shall not transfer or assign all or any part of its rights and obligations under this Agreement without the prior written consent of the Developer, which consent may not be unreasonably withheld, conditioned, or delayed.

8.16 Time of the Essence. Time is of the essence in implementing the terms of this Agreement.

9. WAIVER OF CLAIM FOR DIMINUTION IN VALUE

Developer hereby waives and fully releases any and all 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 the City's existing land use laws and including the Ordinance No. [ ] regarding the Property. This waiver constitutes a complete release of any and all claims and causes of action that may arise or may be asserted under the Act with regard to the subject Property. Developer agrees to indemnify, hold harmless, and defend City, its officers, employees, and agents, from any and all 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 the City's existing land use laws, including the [Development and Rezoning Ordinance], upon the Property.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first written above.

City of Flagstaff

_____

Mayor Becky Daggett

Attest:

City Clerk

Approved as to form and authority:

City Attorney

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first written above.

VP 66 & Woody Mountain, LLC, an Arizona limited liability company

By: Vintage Partners, LLC, an Arizona limited liability company

Its: Manager

By: Edward & Company, LLC, an Arizona limited liability company

Its: Administrative Member

By:_____

Its:_____

STATE OF _____)
) ss.
County of _____)

The foregoing instrument was acknowledged before me this ____ day of _____, 2023 by _____, as _____ of Edward & Company, LLC, an Arizona limited liability company, the Administrative Member of Vintage Partners, LLC, an Arizona limited liability company, the Manager of VP 66 & Woody Mountain, LLC, an Arizona limited liability company, on behalf of the company.

_____
Notary Public

My Commission Expires:

_____

Exhibit "A"

Legal Description of Project

LOT 2 OF THE FINAL PLAT FOR @LIV RECORDED ON JULY 15, 2022 AT INSTRUMENT #3955182 IN THE OFFICIAL RECORDS OF THE COCONINO COUNTY RECORDER'S OFFICE.

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Exhibit "B"

Approved Site Plan & Project Narrative

Exhibit "C"

Sewer Improvements

Exhibit "D"

[RESERVED]

Exhibit "E"

Water and Sewer Impact Analysis for Aspen Heights
dated December 20, 2013

Exhibit "F"

Site Plan Sheets _____

LIV Timber Sky

Resolution for a Development Agreement

Alaxandra Pucciarelli
Current Planning Manager

TEAM FLAGSTAFF
WE MAKE THE CITY BETTER

Development Agreement

Purpose of the agreement:

- off-site sewer improvements
- off-site roadway improvements including the proportional share of the new traffic signal
- sustainability standards including: materials management, on-demand electric vehicle rentals, electric vehicle charging, bicycle parking, electrified units, pollinator friendly landscaping, electric bicycles for short term rental use

Council Options

1. Approve the Development Agreement as presented.
2. Approve the Development Agreement with additional, modified, or deleted terms.
3. Remand the Development Agreement back to staff for additional negotiations with the owner.
4. Deny the Development Agreement

10. A.

CITY OF FLAGSTAFF

STAFF SUMMARY REPORT

To:	The Honorable Mayor and Council
From:	Stacy Saltzburg, City Clerk
Date:	09/26/2023
Meeting Date:	10/03/2023

TITLE:

Future Agenda Item Request (F.A.I.R.): A request by Councilmember House to place on a future agenda a discussion about the Walk Friendly Community Designation, the levels within the designation, and working toward the next level.

STAFF RECOMMENDED ACTION:

Council direction.

Executive Summary:

Rule 4.01, Procedures for Preparation of Council Agendas, of the City of Flagstaff City Council Rules of Procedure outlines the process for bringing items forward to a future agenda. Councilmember House has requested this item be placed on an agenda under Future Agenda Item Requests (F.A.I.R.) to determine if there are two other members of Council interested in placing it on a future agenda.

Staff has attached some background information, including previous applications and feedback/report cards.

Financial Impact:

Policy Impact:

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

Previous Council Decision on This:

Attachments: Walk Friendly Community Information

ENGINEERING DIVISION
CITY OF FLAGSTAFF

DATE: 20 September 2023

TO: Mayor and Council

FROM: Martin Ince, Multimodal Transportation Planner

SUBJECT: **Walk Friendly Communities**

Walk Friendly Communities (WFC) is a national recognition program intended to encourage communities to support safe and comfortable walking environments.

Walk Friendly Communities website: https://www.walkfriendly.org/
Flagstaff WFC page: https://www.walkfriendly.org/communities/flagstaff-az/

The City of Flagstaff first applied for WFC status in 2010 and was designated at the bronze level. This was the first year of the program, so we are one of the inaugural walk friendly communities. Flagstaff remains the only WFC in Arizona.

In 2015, the City submitted an application for renewal of WFC status, and was redesignated at the bronze level.

In 2022, we were given an option to submit a short renewal survey to remain at the bronze level, or submit a complete application to potentially move up in level. Following consultation with the Pedestrian Advisory Committee, we opted to complete the renewal survey at the bronze level. The decision was made, in part because our focus at the time was completing and gaining approval of the Active Transportation Master Plan, and in part because we considered we had a better opportunity to move up from bronze following adoption of the ATMP.

Our current designation is good for five years, through 2027. However, we can submit a new application prior to expiration if we think we can move up in level. During the renewal discussion, PAC indicated its desire to apply to move up prior to 2027.

One of the ATMP's targets is for Flagstaff to achieve gold level status by 2027, and platinum status by 2042, in both the walk friendly and bicycle friendly community programs.

Attachments
- 2010 WFC application
- 2010 Community feedback and report card
- 2015 WFC application
- 2022 WFC renewal survey

Walk Friendly Communities

Last updated 12/15/2010

Print This Page

Community Profile

This section is intended to provide applicants with a chance to describe their communities. Having an understanding of the geographic, demographic, and economic make up of the community can help explain the challenges and opportunities that the community faces when planning for walking.

Contact Information

Name of Community:	City of Flagstaff
Mayor or Top Official:	Mayor Sara Presler *Please include the person's title*
Mayor's Phone:	928 779 7600
Community Contact Name:	Martin Ince
Position/Employer:	City of Flagstaff
Contact Address:	211 West Aspen Avenue
Address (line 2):	
City:	Flagstaff
State:	Arizona
Zip code:	86001
Phone/Fax:	928 226 4850
Email:	mince@flagstaffaz.gov
Web site:	www.flagstaff.az.gov

Pedestrian Coordinator & Government Staff

List your official pedestrian coordinator or pedestrian issues contact person on government staff, and identify his/her department.

Contact Person: Martin Ince

Contact Person Dept: Community Development

How many hours are spent per year in this capacity?

1040

Is this person also the bicycle coordinator?

(•) Yes ( ) No

List all other government staff or contractors whose primary duties are devoted to walkability and pedestrian safety issues:

Kim Austin
Safe Routes to School Coordinator
Coconino County Health Department
2625 North King Street
Flagstaff, AZ 86004
928-679-7213

Do you have a Pedestrian Advisory Committee, Ped/Bike Council or other venue for citizen input?

(•) Yes ( ) No

If yes, please provide the name of the Chair and their contact information:

Pedestrian Advisory Committee

Heather Taylor, Co-Chair
Coconino County Health Department
2625 North King Street
Flagstaff, AZ 86004
928-679-7262

Kim Austin, Co-Chair
Coconino County Health Department
2625 North King Street
Flagstaff, AZ 86004
928-679-7213

Do you have an independent pedestrian advocacy organization?

(•) Yes ( ) No

If yes, please provide the name and contact information:

Scalawags
Jack Welch
928-714-0504

Community Profile

Population:	63,505	
Area of municipality:	64.4	*(square miles)*
Population Density:	986.1	
Total Area:	64.4	*(square miles)*
Park Land:	2.2	*(square miles)*
Land Area:	64.3	*(square miles)*
Avg Temperature January:	29	*°F*
Avg Precipitation January:	2.1	*inches*
Avg Temperature April:	43	*°F*
Avg Precipitation April:	1.3	*inches*
Avg Temperature July:	66	*°F*
Avg Precipitation July:	2.5	*inches*
Avg Temperature October:	48	*°F*
Avg Precipitation October:	1.6	*inches*
Median Household Income: [?]	49,885	

Age Distribution: [?]

under 20:	29.5	*%*
age 20-64:	64.0	*%*
age 65-84:	5.7	*%*
0ver 85:	0.8	*%*

Race/Ethnicity (categories based on the U.S. Census) [?]

Hispanic or Latino (of any race):	17.3	*%*

Not Hispanic or Latino:

82.7 %

White: 76.1 %

Black or African-American: 2.2 %

Asian: 2.2 %

American Indian/Alaska Native: 14.4 %

Pacific Islander: 0.2 %

Other: 7.5 %

One race: 97.6 %

Two or more races: 2.4 %

Last updated 12/15/2010

Status of Walking

This assessment tool seeks to learn how *much* people are walking and how *safe* they are when they are doing so. Therefore, the outcomes that are most significant for the purposes of this tool are the numbers of walkers and the number of pedestrian crashes. Walk Friendly Communities is looking for communities that have created environments in which many people walk *and* pedestrian crash rates are low, or those communities that are making significant progress towards those ends. These two questions focus on these specific outcomes, while other questions in this survey address what measures are used by communities to facilitate walking and improve safety.

Question 1

According to the 1990 and 2000 Census, what percentage of residents used the following modes for their commute to work?

Walking 1990:	10.4	%
Walking 2000:	7.2	%
Bicycling 1990:	2.8	%
Bicycling 2000:	3.7	%
Public transit 1990:	0.7	%
Public transit 2000:	0.6	%
Single-occupant vehicles 1990:	70.1	%
Single-occupant vehicles 2000:	69.4	%
Carpool 1990:	12.6	%
Carpool 2000:	14.7	%

Please also provide the latest walking percentage of commuting to work from the most recent 3-year estimates of the American Community Survey:

6.7 %

If your community conducts its own travel counts, please include a link, attachment or description of those count results:

Web Link:

Current travel count file:
Flagstaff Trip Diary Survey of Community Travel Patterns.pdf

File Upload:
Browse...
Only RTF, PDF, and word documents are permitted

Count Results Description:

Single occupant vehicle: 55.1%
Multiple occupant vehicle: 19.8%
Transit: 2.7%
Bicycle: 9.0%
Walk: 13.3%

Question 2

How many pedestrian/motor vehicle crashes were reported in each of the last five years; and how many of these crashes resulted in injuries and fatalities?

Number of Pedestrian Motor Vehicle Crashes – 2009:	23
Number of Pedestrian Motor Vehicle Crashes – 2008:	34
Number of Pedestrian Motor Vehicle Crashes – 2007:	51
Number of Pedestrian Motor Vehicle Crashes – 2006:	23
Number of Pedestrian Motor Vehicle Crashes – 2005:	48
Number of Pedestrian Injuries – 2009:	18
Number of Pedestrian Injuries – 2008:	22
Number of Pedestrian Injuries – 2007:	42
Number of Pedestrian Injuries – 2006:	22
Number of Pedestrian Injuries – 2005:	45
Number of Pedestrian Fatalities – 2009:	2
Number of Pedestrian Fatalities – 2008:	1

Number of Pedestrian Fatalities – 2007: 1

Number of Pedestrian Fatalities – 2006: 1

Number of Pedestrian Fatalities – 2005: 7

Question 3

What trends, major changes, or significant progress in walking volumes and pedestrian/motor vehicle crashes has your community witnessed over the past 20 years or since it has begun addressing pedestrian issues and concerns in a comprehensive way?

We believe that walking trips, as a percentage of all trips, are increasing, and we will be monitoring trends over time through the trip diary survey. We also anticipate that crash rates will decline.

Other trends indicate an increasing acknowledgement of the importance of pedestrian accommodation and walkability for the community:

- Increased enforcement and citations for pedestrian safety violations

- Coconino County's Safe Routes to School and Safe Kids Coalition efforts to educate and increase awareness for both pedestrians and motorists

- Opportunities for public involvement through the Pedestrian Advisiory Committee

- Better pedestrian accommodation in street design and transportation planning

- Revisions to City plans and ordinances that address good land use policies and regulations to support walkable environments.

Last updated 12/15/2010

Planning

Pedestrian issues are addressed at many different levels of planning, ranging from neighborhood plans to city, county, state, and federal policies and plans. A comprehensive pedestrian plan should address all five Es (education, encouragement, enforcement, engineering and evaluation) along with public involvement. With thorough planning, a community can become proactive rather than reactive in addressing issues of pedestrian accessibility, safety, and aesthetics. Planning involves soliciting public input, collecting information about current and future conditions, and considering what policies, plans, programs and resources a municipality will require to meet your community's needs.

Question 1

Has your community adopted a pedestrian plan or pedestrian safety action plan?

☑ Yes

Please provide a link or attachment of the plan.

Link to action plan:
http://www.flagstaff.az.gov/DocumentVie

Action plan file upload:
Browse...
Only RTF, PDF, and word documents are permitted

What year was the plan adopted: 2001 | 2009

What performance indicators or other techniques does your community use to monitor completion?

As a follow-up to adoption of the Regional Transportation Plan, the Flagstaff Metropolitan Planning Organization is preparing performance measures to help assess implementation and completion of the plan.

Does your community's pedestrian plan or other adopted plan or policy establish a target mode share for walking?

(•) Yes ( ) No

If so, what is the target walking share? 15 %

Does the plan have a safety goal (such as the reduction in pedestrian crashes)?

( ) Yes (•) No

What elements of the plan are complete?
(Indicate what percent of the plan is complete, if possible.)

The City's five-year capital plan for FUTS trails accounts for completion of the primary system of FUTS trails, as well as completion of missing segments of other trails, within the next 5-7 years.

The City is also working to comprehensively inventory sidewalks and other pedestrian facilities, as well as existing pedestrian levels of service, to assist in a process to comprehensively identify deficiencies and plan improvements.

Question 2

Has your community adopted an ADA Transition Plan for the public right of way?

☐ **Yes**

There are state roads in most communities. Has your state DOT adopted an ADA Transition Plan?

☐ **Yes**

Question 3

Has your community adopted a Complete Streets policy or ordinance?

☑ **Yes**

If yes, please provide a link or attachment of the document.

Link to document:
http://www.flagstaff.az.gov/DocumentVie

Document upload:
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Is the Complete Streets Ordinance being implemented and to what degree?

○ Yes ◉ No

Percent implemented: 50 %

Who is responsible for the implementation of the Complete Streets Ordinance?

Community Development Division - Cur

How is Complete Streets work funded? (i.e., is it routinely funded as part of the project, funded with other set-aside funds, etc.?)

Typically funded as part of the project; sidewalk, bike lane, and trail projects are also independently funded through the 2000 Transportation Tax

Question 4

Please briefly describe how public input is used in the municipality's planning process. Mention the role that citizen participation, advisory board review, and/or the municipality's pedestrian/bicycle advisory council play in the process. How do you assure that individuals with disabilities are included in the public input process?

Both the Pedestrian and Bicycle Advisory Committees host monthly meetings that are open to the public.

The City's pedestrian, bicycle, and urban trails programs each maintain their own pages on the city's website.

The public can sign up through the City's website to receive monthly agendas for the Pedestrian and Bicycle Advisory Committees, as well as other information and notices of interest. At present about 150 individuals are sent PAC agendas and 300 are sent BAC agendas.

Both committees are advisory to the City's Transportation Commission.

The City has a Disability Awareness Commission to assure that individuals with disabilities are included in the public input process.

Provide any relevant links or attachments that indicate the formal and informal public participation and advocacy efforts in your community (i.e., a link to the pedestrian and bicycle advisory board website, if it exists, or documented guidelines for public participation in the planning process).

Website link:

http://www.flagstaff.az.gov/pedestrian |

Participation file upload:

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Only RTF, PDF, and word documents are permitted

Question 5

Does the city have a policy requiring sidewalks on both sides of arterial streets?

(•) Yes ( ) No

On both sides of collector streets?

(•) Yes ( ) No

Sidewalk funding and installation: (if applicable, please provide a link or attachment of the relevant ordinance or policy)

Sidewalk funds link:
http://www.flagstaff.az.gov/index.aspx?r

Sidewalk funds file upload:
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Only RTF, PDF, and word documents are permitted

Does the city require sidewalks to be constructed or upgraded with all (or the vast majority of) new private development?

(•) Yes ( ) No

Does the city have a sidewalk retrofit policy to fill gaps, repair sidewalks, and provide new sidewalks as needed?

( ) Yes (•) No

Question 6

Has your community established a connectivity policy, pedestrian-friendly block length standards and connectivity standards for new developments, or convenient pedestrian access requirements?

☑ **Yes**

If yes, please provide a link or attachment of the policy or ordinance.

Link to document:
http://www.flagstaff.az.gov/DocumentVie

Document upload:
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Only RTF, PDF, and word documents are permitted

Question 7

Do you have a trails plan?

(•) Yes ( ) No

Is it routine policy to preserve rail corridors no longer needed for railroad purposes?

( ) Yes (•) No

How many miles of trails (paved/hard surface/natural) currently exist in your community?

28.8 / 28.7 / 85.1 *miles*

How many miles of trails are included in your current planning documents?

320 *miles*

Please provide a link or attachment of relevant plan, if available.

Link to document:

http://www.flagstaff.az.gov/index.aspx?N

Trail plan document upload:

Browse...

Only RTF, PDF, and word documents are permitted

Briefly describe trails and paths that are provided around the following locations. Include any relevant internet links that illustrate trail networks.

Lakes and waterways:

Almost 13 miles of planned and existing FUTS (Flagstaff Urban Trails System) trails generally follow the course of the Rio de Flag through Flagstaff

A short section of the Rio North FUTS trail passes a small pond just northwest of downtown, and a short spur trail makes a loop around the pond

A series of privately owned and maintained trails circle two small lakes on the east side of town

Utility corridors:

A number of planned and existing trails follow water/sewer line easements, gas pipelines, and overhead electrical corridors

Municipal golf courses:

Flagstaff does not have a municipal golf course. There is a public and a private golf, but neither includes any public trails

Private development (e.g. office parks, hospitals, residential developments):

The system of existing and planned FUTS trails is intended to provide trail access to neighborhoods, shipping and employment areas, schools, parks, and open space throughout the community:

At present there are just over 50 miles of existing trails, and the master plan call for a total of 145 miles.

60 percent of all residences in Flagstaff are within one-quarter mile of an existing FUTS trail, and 80 percent are within one-quarter mile of an existing or planned FUTS trail.

68 percent of all non-residential buildings are within one-quarter mile of an existing FUTS trail, and 86 percent are within one-quarter mile of an existing or planned FUTS trail.

The FUTS master plan includes a number of access trails to provide better connectivity to the system, and opportunities for connection to the system is routinely addressed in review of new development.

Other open space:

The City's trails plan and open space plan have been developed together, so many trails are within an open space corridor, and existing and planned open space typically includes trail access.

There are many miles of singletrack trails in the Coconino National Forest, which virtually encircles Flagstaff. A number of these trails are easily accessible from town and link to the City's FUTS system.

Is it routine policy to build trails and paths with all new and major re-developments?

(•) Yes ( ) No

Is it required through zoning regulations?

(•) Yes ( ) No

Are incentives provided to encourage trail construction?

( ) Yes (•) No

If so please provide a link or attachment of the policy or ordinance.

Link to trail incentive:

Incentive file upload:

Browse...

Only RTF, PDF, and word documents are permitted

Question 8

Is your community served by public transportation?

☑ **Yes**

If yes, please list the agencies and whether they are city, regional, or both.

Mountain Line provides bus service on 6 fixed routes throughout Flagstaff, and Mountain lift provides door-to-door paratransit service for the disabled in Flagstaff.

Both services are operated by the Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA), a regional transit agency.

Please provide the following performance indicators and details to indicate how well your community is served by public transportation.

Percent of population living within a quarter mile of a bus stop or 1/2 mile of a rail station:
57 %

Service miles per capita: 9.9

Hours of operation for transit service:

Weekday: 6:15 am - 10:0(*range of hours*

Weekend: 7:15 am - 8:00 *range of hours*

Average headway on bus routes: 30 *minutes*

Average headway on train routes: N/A *minutes*

Average peak period bus headway 30 *minutes*

On time performance (%): 82 %

Percent of bus stops that have wheelchair accessible shelters:
35 %

What route planning software and trip information is provided?
Google Transit; route schedules posted

Sidewalk, curb ramps, and street crossings around the majority of bus stops are ADA compliant (check one):

○ None ○ Few ○ Some ◉ Most ○ All

Question 9

Which of the following approaches does your community use when planning for parking? Please provide a link or attachment of relevant ordinance or policy and describe when and where these strategies are used. (check all that apply)

☑ Maximum parking standards or absence of minimum parking standard

Link to standard:

http://www.flagstaff.az.gov/DocumentVie

File upload:

Browse...

Only RTF, PDF, and word documents are permitted

Description of standards:

For major site developments, parking supply cannot exceed the minimum requirements by more than 5%, unless provided in structured parking.

☑ Parking location requirements (i.e., parking below, beside, or behind a building; allowing on-street parking to meet minimum parking requirements)

Link to location requirements:

http://www.flagstaff.az.gov/DocumentVie

File upload:

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Only RTF, PDF, and word documents are permitted

Description of requirements:

Design review standards require new buildings to be built at the sidewalk edge when feasible; and most or all parking must be to the side or behind the building.

☑ Surface lot size and design requirements, including pedestrian and vehicle separation, locating lots to the side or behind businesses, alternative use of parking lot, landscaping, etc.

Link to size/design requirements:

http://www.flagstaff.az.gov/DocumentVie

File upload:

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Only RTF, PDF, and word documents are permitted

Description of requirements:

Major developments must provide clear, continuous routes through parking lots to building entrances, including enhanced gateways and drive aisle crossings

Most or all parking is to be located to side or behind buildings

A single parking area cannot exceed 200 by 200 feet without landscape buffers; larger areas must be broked by landscape buffers at least 20 feet in width with a sidewalk or 12 feet in width without a sidewalk

---

☑ Shared parking allowances

Definition: Shared parking lots can reduce the total number of parking spaces needed in a particular area by coordinating peak parking demand times between different buildings and different uses. For instance, an office building might be able to share a parking lot with a restaurant that operates only in the evenings, as the former would use the lot during the day and the latter would use it at night.

Link to allowances:

http://www.flagstaff.az.gov/DocumentVie

File upload:

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Description of allowances:

Design review guidelines encouraged shared parking to reduce the number of parking spaces provided on site.

☐ Priced public parking

☐ Parking cashout incentives

Definition: Parking cashout is a financial incentive in which employees who do not drive and park at work receive a subsidy that approximates the cost employers bear to provide free parking to employees.

☐ Remote parking and/or park and ride

☐ Other (please describe)

Question 10

Approximately what percentage of development in the last five years has been infill?

40 %

What measures does your community use to encourage dense, mixed-use development? (check all that apply)

☑ Secondary or accessory dwelling units are permitted
Definition: These units are self-contained apartments on an owner occupied single-family lots.

Link to measure: http://www.flagstaff.az.gov/DocumentVie

File upload: Browse...

Only RTF, PDF, and word documents are permitted

Description of measure:

Accessory dwelling units are allowed in all single and multiple-family residential zoning districts, subject to the standards of 10-03-005-0001 (F)

☑ Retail/commercial uses are required on the ground floor of residential buildings in mixed use corridors or districts

Link to measure:

http://www.flagstaff.az.gov/DocumentVie

File upload:

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Only RTF, PDF, and word documents are permitted

Description of measure:

In the TND district, residential uses must be located above the first floor in mixed-use districts.

☑ Density bonuses to developers are provided for providing amenities that enhance walkability and liveability

Definition: Density bonuses are used by local governments to allow a developer to build at a higher density than zoning permits in exchange for providing affordable residences or walk-friendly amenities.

Link to measure:

http://www.flagstaff.az.gov/DocumentVie

File upload:

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Only RTF, PDF, and word documents are permitted

Description of measure:

Design review guidelines include a number of "Flexible Measures" that allow reductions in required parking, increases in building height, reductions in building setbacks, and other modifications in exchange for good design and other amenities.

☑ Form-based or design-based codes are used

Definition: These codes are an alternative to conventional zoning that can be used to ensure a walk friendly environment by regulating the form, scale and massing of buildings rather than the use. They are typically presented with both diagrams and words.

Link to measure:

http://www.flagstaff.az.gov/DocumentVie

File upload:

Browse...

Only RTF, PDF, and word documents are permitted

Description of measure:

The City's Land Development Code (LDC) includes a Traditional Neighborhood District, which is form-based. A major overhaul of the LDC is currently in progress; the new draft code include additional form-based regulations.

☐

Neighborhood school siting policies

Other (please describe)

Question 11

Please briefly describe any urban design features or pedestrian amenities that your community uses or requires to create a comfortable and attractive walking environment. Include features such as sidewalk furniture, landscaping, art, and lighting; building and facade design requirements; and amenities like public restrooms, water fountains, and signs or wayfinding systems.

The City's Design Review Guidelines include a number of requirments to provide pedestrian amenities and a comfortable, convenient walking environment:

- Provide convenient connections to regional pedestrian and bikeway circulation systems.

- Provide convenient pedestrian and bikeway connections to abutting properties when feasible.

- Provide a convenient walkway to an abutting public transit stop.

- Where two or more buildings will be located on a major site development, arrange them in a cluster to define outdoor spaces.

- Organize the public edges of a site to provide visual interest to pedestrians.

- Locate a building entry at the sidewalk edge when feasible.

- Provide an outdoor public space on a major site, development when feasible. A minimum of 5% of the site shall be outdoor public space.

- Provide outdoor seating that is usable for extended periods of the year.

- Link the various functions and spaces on a site with pedestrian ways in a coordinated system.

- Position the streetside and internal walkways to encourage pedestrian use.

- Use walkway hard surface materials that will encourage use by pedestrians.

- Clearly define a key pedestrian gateway into a major site development with distinctive landscape elements.

- Enhance a key pedestrian way at a street or drive crossing.

- In major site developments, provide a clear, continuous, pedestrian route through a parking lot to a building entrance.

- Orient the primary entrance of a building to face a street, plaza or pedestrian way.

- Develop the street level of a building to provide visual interest to pedestrians.

Please provide a link or attachment of the ordinance or policy that addresses these features.

Link:

http://www.flagstaff.az.gov/DocumentVie

File Upload:

Browse...

Only RTF, PDF, and word documents are permitted

Question 12

Please briefly describe any other planning policies related to promoting or enhancing walking in your community.

The Regional Transportation Plan, which was prepared by the Flagstaff Metropolitan Planning Organization and adopted in 2009 by the City of Flagstaff and Coconino County, includes a number of tables that establish Level of Service policies for pedestrian, bicycle, and transit service.

The plan divides the region into one of 3 area types - urban, suburban, and rural - and assigned a target future level of service for pedestrian, bicycle, and transit accommodation. the tables describe appropriate facilities and standards for each combination of area type and LOS, for example moderate pedestrian LOS in an urban area.

Last updated 12/15/2010

Education & Encouragement

Education and encouragement are primary components in creating a successful walk friendly community. This section seeks information about the programs, policies and strategies your community uses to inform, inspire, motivate or reward walkers and other users of the public right of way. It also asks the question "Do your efforts result in a safe walking environment?" Effective pedestrian safety education begins at an early age, is age-specific, and continues through the years across all modes (i.e., motorists educated about pedestrian safety contribute to a safer, more pleasant walking environment for pedestrians; this environment enables and encourages more people to walk).

Encouragement programs can be fun and inclusive in seeking to establish good habits or change unhealthy or unsafe habits. The education and encouragement strategies listed below are common to many walkable communities. If your community uses other strategies to educate the public and encourage walking, please describe them as well.

Question 1

Please describe any Safe Routes to School (SRTS) programming being implemented in your community in the space provided below.

Check any of the following activities that are part of your SRTS programs and include information about the nature, scope, and results of these activities (as well as any others not listed below) in your description.

☑ Walk to School Day/Week
Definition: Walk to School Day is an international event that takes place annually in October. Schools from all over the country plan special activities to encourage students to walk to school. This special event can be a great way to start a Safe Routes to School program.

Description:

Coconino County's Safe Routes to School program and Safe Kids Coconino County has sponsored 4 schools for International Walk to School Day for the past 7 years. Buses and parental drop-off sites provided as well as student incentives provided for participants.

About 1,800 children participated in this year's event.

☑ Walking Wednesdays or other walking events

Definition: Some schools and communities promote walking to school by having regular Walking Wednesday events in which parents, teachers, and students may meet up near the school campus and walk to school together.

Description:

Thomas School Park 'n Walk program through Bushmaster Park to begin Spring 2011.

☑ Walkability audits or SRTS maps

Definition: By auditing and assessing walking routes and creating maps indicating the safest routes to school, communities can help educate students and families about the best routes to take.

Description:

Since 2006, walkability audits have been conducted at 5 schools in conjunction with SRTS workshops. A walkability audit was also conducted at Mountain School in October 2010.

☑ Walking School Bus

Definition: From saferoutesinfo.org : A group of children that walk or bicycle to school together accompanied by one or more adults.

Description:

Killip Elementary School daily walking school bus program in planning stages. Estimated start is Spring of 2011.

☐ Student safety patrol

Definition: From saferoutesinfo.org: Student safety patrols enhance enforcement of drop-off and pick-up procedures at school by increasing safety for students and traffic flow efficiency for parents. Such efforts allow students to participate in promoting traffic safety where they learn skills they can use in their everyday lives.

☑ Tracking system to count the number of children walking to school

Description:

Safe Routes to School student tally sheets are submitted quarterly. SRTS has developed an online parent survey which will be utilized in the future.

☑ Other (please describe)

Description:

Walking incentive program in effect at 4 Flagstaff Elementary schools with prizes and "play" money given to students who walk on monthly basis. This money is used to purchase fun prizes at the SRTS store. Acknowledgments are also given to classes with most monthly walkers. SRTS holds an end-of-year drawing for a new mountain bike.

Please estimate what percent of schools in your communities participate in the following:

Ongoing SRTS program:	33	%
Special walk to school events only:	50	%
No walk to school or SRTS activities:	50	%

Question 2

Please describe any education and training programs related to pedestrian education, safety, or design for staff in your municipality. Staff may include transportation officials, law enforcement officers, school staff and teachers, and advocates and public health professionals. Please include in this description the nature, frequency, scope, and results of these programs.

The SRTS National Course has been conducted in Flagstaff 5 times at 5 different schools since 2006.

The SRTS national instructor training course was held in Flagstaff in September 2007.

The "Skills for Local SRTS Program Development" workshop was held in Flagstaff in October 2008. About 40 individuals from across the state attended.

Flagstaff hosted the FHWA's "Designing Streets for Pedestrian Safety" workshop in February of 2007. Approximately 30 planners and engineers, representing local and regional agencies, attended.

Several current planning staff have attended Form-Based Code Institute training.

The City of Flagstaff and the FMPO host webinars on a variety of pedestrian and bicycle topics several times per year for local planners and engineers. Attendance averages about 10-12.

Question 3

Please check and briefly describe any education or encouragement campaigns that are implemented in your community regarding the following topics. Include information about the target audience, techniques used (e.g., posters, workshops, etc.), frequency , scope, and results of the programs. Please mention what measures your community has taken to make sure that education and encouragement campaigns are inclusive of all populations. Also mention your community partnerships (such as Public Health & Planning partnerships) that collaborate on these efforts. Provide any relevant links and attachments to help illustrate these descriptions, if available.

☑ Walking safety training (e.g., targeted walking education or encouragement programs for children, older adults, college students, transit riders, etc.)

Link to relevant material:
http://www.flagstaff.az.gov/DocumentVie

Description:

SRTS in-class pedestrian education
http://www.flagstaff.az.gov/DocumentView.aspx?DID=12858

Collaboration between local fire departments and health department offering basic safety skills including pedestrian safety - conducted 90 times last year at all elementary schools in district

Walking incentive program at 4 local elementary schools

Walk this Way Photovoice, a Safekids program that provides kids with disposable cameras and encourages them to comment on their walking environment through pictures and essays

Annual "Flagstaff Walks!" - a week-long education and encouragement program organized by the City's Pedestrian Advisory Committee

☐ Driving safety with respect to pedestrians (e.g., pedestrian safety included in drivers education curriculum, test, manual or bus driver training)

☐ Public service announcements

☑ Public health campaigns related to walking

Link to relevant material:
http://www.coconino.az.gov/heartbeat.a

Description:

Safe Routes to School

Coconino County Wellness program

Aerobic Winter Challenge

☐ Environmental campaigns related to walking

☑ Walk to work events

Link to relevant material:
http://www.flagstaff.az.gov/index.aspx?N

Description:

Flagstaff Walks!

☐ Prescription walking or prescribed trails
Definition: Prescription walking or prescribed trails are when doctors prescribe walking time/distance and location

---

☐ Other (please describe):

Question 4

Please check and briefly describe any walking tours, guides, or maps that are available (on-line or printed) in your community. If available, please provide a link, attachment, or pictures of wayfinding devices and/or plans, maps, or brochures for these walking tours.

☑ Walking maps (e.g., neighborhood maps, school route maps, city-wide maps, etc.)

Link to relevant material:

Description:

Walking and Biking in Downtown Flagstaff Map
http://www.flagstaff.az.gov/DocumentView.aspx?DID=12855

Safe Routes to School Walking School Bus Map for Thomas School
http://www.flagstaff.az.gov/DocumentView.aspx?DID=12854

☐ Wayfinding and route signs for pedestrians

☑ History, historic district, architectural, or other themed walks

☑ Guided by a person

Link to relevant material:

Description:

As part of the 50 Miles of FUTS celebration, the City hosted a series of 16 themed walks along the FUTS trails. The walks were organized by a variety of local community partners, including the Museum of Northern Arizona, Lowell Observatory, Northern Arizona University, The Open Space Commission, Friends of Flagstaff's Future, and Friends of the Rio de Flag. Themes includes geology, birding, astronomy, watchable wildlife, history, Route 66, open space, and native flora. If the community partners are willing the themed walks may become annual events.
http://www.flagstaff.az.gov/index.aspx?NID=1972

A series of Route 66 history walks are held each year during Flagstaff's Route 66 Days event.

The Flagstaff Visitor Center and the Museum of Northern Arizona conduct regularly-scheduled downtown history walks.

Several themed walks part of the Flagstaff Walks! series of events, including Walk the FUTS Ride the Bus; a Breakfast Walk, and a Sustainability Walk.
http://www.flagstaff.az.gov/index.aspx?NID=1894

Local walking advocate Jack Welch and the Scalawags host several "Walk the Walk" events each week throughout the year. The walks are intended to explore various trails and different parts of Flagstaff.

Jack Welch also hosts "25 Walks in 50 Days" during the summer to explore the City's FUTS trail system.
http://www.flagstaff.az.gov/index.aspx?NID=1973

☑ Unguided using books and brochures, audio tours, or signs and wayfinding

Link to relevant material:
http://flagstaffarizona.org/visitor_downlo

Description:

Flagstaff's Haunted Places self-guided tour
http://www.flagstaffarizona.org/documents/haunted_places.pdf

Flagstaff's Route 66 self guided walking tour
http://www.flagstaffarizona.org/downloads/visitors/route66_walking.pdf

Flagstaff Walks! Downtown Scavenger Hunt
http://www.flagstaff.az.gov/DocumentView.aspx?DID=12271

Flagstaff Historic Downtown Dining Map
http://www.flagstaffarizona.org/downloads/visitors/downtown_dining_map.pdf

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☑ Greenways and trail maps

Link to relevant material:
http://flagstaff.az.gov/index.aspx?NID=1

Description:

Flagstaff Urban Trails and Bikeways Map

Question 5

Please briefly describe any events and activities in your community that promote walking. Include information about the target audience, nature, frequency, scope, and results of these events. Provide any relevant links and attachments, if available. Please mention any street closures, (e.g., festivals, farmers markets, or Sunday Parkways), Walk to Work events, Main Street programs, or art or culture walks.

First Friday Artwalk, occurs the first Friday of each month in downtown Flagstaff
http://www.flagstaffartwalk.com/

Flagstaff Community Markets are held twice per week at two locations (downtown, east side) from May through October
http://www.flagstaffmarket.com/

Carfree Flagstaff is observed in September in conjunction with World Carfree Day
http://www.carfreeflag.com/

International Walk to School Day every October

Question 6

Please briefly describe any other education or encouragement programs affecting walking in your community.

Flagstaff Walks! is an annual week-long series of events intended to celebrate Flagstaff's walkability raise awareness of pedestrian issues. Flagstaff Walks! is organized by the City's Pedestrian Awareness Committee, and has been held each fall for six years. Events from this fall's Flagstaff Walks! included:

- Safe Routes to School workshop
- Neighborhood Walkability Audit
- Pedestrian Advisory Committee booth on Heritage Square during the First Artwalk
- Community Sidewalk Clean-up
- Walk the FUTS/Ride the Bus
- Try Transit Day (free transit rides all day)

Events from previous years include

- VIP/Breakfast Walk
- Accessibility Audit
- Fall Color Hikes

http://www.flagstaff.az.gov/index.aspx?NID=1894

Last updated 12/15/2010

Engineering

Designing, engineering, operating, and maintaining quality roadways and pedestrian facilities is a critical element in producing a Walk Friendly Community. Designers and engineers have a diverse array of design elements and ever-developing technologies at their disposal that provide a safer, inviting, and more accessible street for pedestrians. These benefits aren't limited to pedestrians. By accommodating pedestrians in all roadway designs, roads become safer for all users. Therefore, it should be essential that pedestrian engineering and design tools are used throughout your community, including sidewalk accommodations and standards, crossings and intersections, traffic calming, trail design, and newer, innovative treatments.

Question 1

Which of the following standards, if any, are included in your municipality's sidewalk design specifications? Please provide a link or attachment of the municipality's sidewalk design standard specifications.

- ☑ Sidewalks at least 5' wide in residential areas, 10' – 30' in commercial zones
- ☑ Required buffer zone between sidewalk and street
- ☑ Level and continuous sidewalks at driveways so that driveways do not look like roadways

Sidewalk design link:
http://www.flagstaff.az.gov/index.aspx?N

Sidewalk design file upload:
Browse...
Only RTF, PDF, and word documents are permitted

Question 2

Estimate the percent of arterial and non-arterial streets that have sidewalks on both sides of the road, one side of the road, or have paved shoulders (minimum of 4 ft) in your community.

Sidewalks on both sides — Arterials: 41 %

Sidewalks on both sides — Non-Arterials: 46 %

Sidewalks on one side - Arterials: 27 %

Sidewalks on one side - Non-Arterials: 27 %

Paved shoulders ≥ 4' — Arterials: 22 %

Paved shoulders ≥ 4' — Non-Arterials: 6 %

Please enter the following information about your road network:

What is the mileage of your total road network?
350 *miles*

How many miles of sidewalks are in your pedestrian master plan?
unknown *miles*

How many miles of new sidewalk did you construct last year?
1.0 *miles*

How many miles of new sidewalk did you construct in the last three years?
2.4 *miles*

How many miles of new sidewalk do you plan to construct in the next three years?
0.5 *miles*

Question 3

Does your community have a sidewalk condition and curb ramp inventory process?

☐ Yes

Does your community use government funds to repair broken sidewalks?

☑ Yes

What is the annual line item for sidewalk maintenance in your community's budget?
$15,000

Estimate the percent of intersections that have ADA accessible ramps on all four corners.
90 %

Estimate the percent of sidewalks that need to be repaired or replaced.

15 %

Does your community have a program to install curb ramps?

☐ Yes

Does your community have a program to repair and replace broken sidewalks?

☑ Yes

How many locations (or linear feet) were fixed last year? 650 lf

How many repairs are planned for next year? 650 lf

Is there a method for residents to report missing or broken sidewalks and curb ramps?

☑ Yes

Please explain the report process (e.g., on-line complaint form):

Residents can report sidewalk problems to the Public Works Division, Traffic Section, Multimodal Transportation Planner, or Safe Sidewalks program.

Question 4

Please indicate the number of bridges or overpasses in your community and how many of those provide for pedestrians through shoulders, sidewalks, or multiuse paths.

Number of Bridges (excluding freeways): 6

Number of Bridges with pedestrian provisions on at least one side: 4

Number of Pedestrian overpasses (or bridges): 1

Number of Pedestrian underpasses: 8

Identify the last three bridges built (or major reconstruction) in your community, and do the

bridges provide pedestrian provisions on at least one side?

Bridge Number 1

Country Club Bridge (@BNSF railroad tracks) includes a multi-use path on one side

Bridge Number 2

Fourth Street Bridge (@BNSF railroad tracks) includes a multi-use path on one side and a sidewalk on the other

Bridge Number 3

All other bridges are 15+ years old

Identify bridges currently under design. Do the bridges provide pedestrian provisions on at least one side?

The Arizona Department of Transportation is currently preparing a Design Concept Report (DCR)for widening Interstate 40 through Flagstaff. The DCR will evaluate all overpasses and underpasses for inclusion of sidewalks, bike lanes, and/or multi-use paths.

The City has prepared concept (30 percent) plans for a new Lone Tree Road overpass at the BNSF railroad tracks, which would include a multiuse path on one side and a sidewalk on the other.

Question 5

Does your community maintain a pedestrian signalling system?

☑ Yes

Please briefly describe initiatives your community has taken to ensure or improve pedestrian access, safety and convenience at signalized intersections. Provide a link or attachment of the relevant policy or ordinance, if available.

Description:

Pedestrian countdown signals exist at most signalized intersections; the City is in the process of adding countdown signals to all remaining intersections.

Pedestrian push-buttons are in place at all signalized intersections (except downtown signals have pedestrian recall).

ADA ramps are in place at all corners of all signalized intersections.

The City has initiated a Highway Safety Improvement Program project to replace standard

crosswalk markings with piano key style markings at all signalized and a number of other intersections. The new markings will be made of more-durable thermoplastic material and are expected to last longer.

Link to policy or ordinance:

Upload policy or ordinance:

Browse...

Only RTF, PDF, and word documents are permitted

Do you provide pedestrian recall (pedestrians receiving a walk signal during every phase without using a push button) in high pedestrian corridors?

(•) Yes ( ) No

At locations where pedestrian push buttons are used, are the push buttons reachable from a level landing and located in line with the crosswalk line furthest from the intersection?

(•) Yes ( ) No

Approximately what percentage of intersections have accessible pedestrians signals with audible walk indications?

0 %

Approximately what percentage of intersections have pushbutton-integrated accessible pedestrians signals with audible and vibrotactile indications?

0 %

What is the average walk speed used to determine signal timing?

less than 4 *ft/s*

Do you operate your signals that have dedicated left turn arrows with a protected only phase or with protective permissive phases? Please explain:

Left turn signals use both protected and permissive phases. Protected phases are used where intersection geometry and crash history warrant

Do you use right-turn-on-red restrictions? If yes, when and where?

No

What percentage of intersections have countdown signals?

100 %

Question 6

Please briefly describe initiatives your community has taken to ensure or improve

pedestrian access, safety and convenience at crosswalks. In your description please address the following questions. Provide a link or attachment of the relevant policy or ordinance, if available.

Description:

Curb ramps are in place at most major intersections.

The City has initiated a Highway Safety Improvement Program project to replace standard crosswalk markings with piano key style markings at all signalized and a number of other intersections. The new markings will be made of more-durable thermoplastic material and are expected to last longer.

The City has started evaluting and making or planning improvements for uncontrolled intersection or mid-block crossings that are used heavily.

Link to policy or ordinance:

Upload policy or ordinance:

Browse...

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How are marked crosswalk locations selected?

Signalized and stop-controlled intersection crosswalks are typically marked. Uncontrolled locations are determined case by case, by street speed and volume, number of lanes and crossing distances, and visibility.

What is your standard crosswalk marking type (e.g., parallel lines, ladder style, high visibility, etc.)?

Parallel lines; many intersections will be

Are crosswalk markings regularly maintained?

- (•) Yes
- ( ) No

Are in-road stop/yield signs used?

Are advance stop/yield lines placed at multilane uncontrolled marked crosswalks in order to reduce multiple threat crashes?

- (•) Yes
- ( ) No

Are there other pedestrian safety practices being used at crosswalks?

Because Flagstaff is a dark-skies city, appropriate lighting for uncontrolled/mid-block crossings is taken into account.

Question 7

Does your community design and build its own roadways?

☑ Yes

Please indicate which geometric features, if any, are being used to ensure or improve pedestrian access, safety, and convenience. In your description, please address the questions following the feature in question.

☑ Median Crossing/Refuge Islands

Is there a standard or typical roadway that these are used on? How many have been installed in the last three years? Are any more planned?

Description:

Two pedestrian median refuges have been installed in the past three years; one at an elementary school and another at a high-volume crossing location on the north end of the Northern Arizona University campus. Both use the "Z" offset design.

A third is planned on a busy FUTS trail crossing and will also use the Z design.

Link to island policy:

Upload island policy:

Browse...

Only RTF, PDF, and word documents are permitted

☑ Curb Extensions

How many have been installed in the last three years? Are any more planned?

Description:

Curb extensions were installed this summer at 6 intersections on the two main streets in Flagstaff's historic Southside neighborhood, just south of downtown.

Flagstaff's downtown has had curb extensions at all intersections for about 15 years.

Link to curb extension policy:

Upload policy:

Browse...

Only RTF, PDF, and word documents are permitted

Standard Curb Radii

What is the standard radius (10', 15', 20', 25', 30', 35') for local, collector, and arterial streets?

Description:

Local: 15 feet
Collector: 20-25 feet
Arterial: 30 feet

Link to curb radius policy:

http://www.flagstaff.az.gov/DocumentVie

Upload curb radius policy:

Browse...

Only RTF, PDF, and word documents are permitted

Other

Please provide a description of the other features being implemented.

Initiatives to increase safety for people crossing the street at bus stops that are not located at signalized intersections or crosswalks

Please describe these initiatives.

Question 8

Please briefly describe any innovative pedestrian treatments installed in your community. Treatments may include special pedestrian phasing such as a leading pedestrian interval or scramble timing, crossing aids such as a HAWK beacon or rapid flash beacon, or passive pedestrian detection. Include any relevant links or attachments, if available.

Description of treatments:

A push-button actuated flashing beacon is used on a busy crossing at the north end of the campus of Northern Arizona University

Link to special treatment document:

Upload special treatment:

Browse...

Only RTF, PDF, and word documents are permitted

Question 9

Please briefly describe your community's traffic calming practices and/or policies and cite

any relevant examples. Traffic calming practices may include road diets, lane diets (reduction in lane width) or streets with a pedestrian focus. Provide any relevant links or attachments, if available.

Description of practices:

Traffic calming projects have been implemented in 4 neighborhoods in the past few years. Three were initiated by the neighborhood, and the fourth (in the Southside neighborhood) was initiated by the City with substantial involvement by the neighborhood.

Link to calming practices document:

Current uploaded calming practices:
COF TrafficCalmingDraft 2-2010 JVJ.pdf

Upload calming practices document:
Browse...
Only RTF, PDF, and word documents are permitted

Question 10

Please briefly describe any other engineering projects or policies affecting walking in your community.

The City of Flagstaff adopted an updated sidewalk maintenance ordinance in 2008 to make the law more understandable and easier to enforce. The City of Flagstaff's Sustainability and Environmental Management section is responsible for the education and enforcement of the SafeSidewalk ordinance.

Significant public outreach, through PSA's, print and radio advertisements, poster, flyers a mobile sign trailer and specialty advertising, is intended to increase public awareness of this ordinance.

Enforcement policy for the ordinance calls for increased enforcement effort over a three year period in coordination with the outreach programs. The complaint driven model has seen a large increase in public demands for enforcement over this period with approximately 380 complaints regarding properties whose adjacent sidewalks are occluded by overgrowth, snow, ice, gravel, parked vehicles or any other obstruction.

During the same 12 month period, over 160 Notices of Violation had been issued to both commercial and residential property owners and tenants. Many have been abated at the cost of the property owners.

http://www.flagstaff.az.gov/index.aspx?nid=1237

Last updated 12/15/2010

Enforcement

In many communities, enforcement is often neglected as a technique for making communities safer for walking. Communities that have created comfortable walking environments through engineering improvements or urban design features may still have safety concerns if traffic laws are not properly understood or adequately enforced. Enforcement activities work best when implemented in conjunction with education and awareness activities. Therefore, well-implemented enforcement campaigns will include public education campaigns, law enforcement officer training, and strategic law enforcement and ticketing strategies. A successful enforcement program will usually require the involvement of community members, law enforcement officials, city council members, and the media.

Question 1

How many officers does your community have?

109

How many of these are involved in enforcement and what is the average amount of work time per officer devoted to enforcement?

Number in enforcement:

50

Average hours (officers/month) of enforcement:

3200

Does your community have a traffic safety officer?

- ○ Yes
- ◉ No

If so, please estimate the amount of work time that is devoted to responsibilities concerning pedestrian laws and safety.

Question 2

Does your community use targeted enforcement programs to promote pedestrian safety in crosswalks?

☑ Yes

Indicate which of these elements, if any, are part of the enforcement program.

☐ Pedestrian decoys (aka crosswalk stings)
Definition: From walkinginfo.org: These are well-prepared and coordinated operations designed to warn motorists that the yield-to-pedestrian laws will be enforced at target locations. Officers prepare a site by establishing the safe stopping distance to a crosswalk, with a 10 mi/h over the speed limit leeway. Cones are set out in that location. An officer in plain clothes steps into the crosswalk just before a vehicle passes the cone. If the motorist doesn't yield, either a warning or a citation is given, based on the severity of the incident.

☑ Media campaigns regarding enforcement

☑ Speed feedback signs

☑ Progressive ticketing
Definition: From walkinginfo.org: Progressive ticketing is a method for introducing ticketing through a three-staged process: educating, warning, and ticketing.

☑ Other (please describe):

Description:

The City of Flagstaff has a traffic enforcement unit comprised of four motor officers who are also cross trained in accident reconstruction. They respond to most collisions and work traffic in problem areas when not on collisions.

Question 3

How many citations does your local police department give annually for traffic infractions that relate to road safety?

6550

Is this up or down from previous years?

◉ Up ○ Down

Please list the number of citations given for the following infractions:

Speeding: 1909

Failure to yield: 1799

Parking on sidewalks or too close to intersections or crosswalk:

31

☐ Does your community use photo enforcement technology that targets speeding and/or red light running?

Explain:

Question 4

Which, if any, of the following approaches does your community take to ensure the safety and security of pedestrians and runners on city streets, trails, and walkways?

☑ Emergency call boxes:

Describe:

Flagstaff has one call box near a FPD storefront. There are several emergency call boxes placed strategically on the campus of Northern Arizona University.

☑ Police patrols on foot or bike

Describe (include the number of officers that are bike patrol certified):

None of Flagstaff's police officers are bike patrol certified. We do utilize officers on bicycles for special events. We have four patrol bicycles that are used regularly by the officers when weather conditions allow.

☑ Neighborhood watch programs

Describe:

Flagstaff has approximately 50 community block watch programs. We augment this with community support meetings which are usually held in larger venues to address more specific topics such as identity theft, immigration laws, and/or traffic safety.

☑ Drunk driving and drunk walking enforcement

Describe:

Flagstaff submits and usually receives The Governors Office of Highway Safety (GOHS) underage drinking prevention program and the GOHS DUI holiday task force grant as well. These grants allow the financial means to put more resources in place during problem weekends or events.

☑ Street lighting

Estimate the percentage of streets with lighting on one or both sides:

Arterial: 100%

Non-Arterial: 90%

☐ Other:

Question 5

Please briefly describe your community's policies and practices regarding the use of adult crossing guards at elementary and middle schools. Include any information about the criteria for placement of adult crossing guards, training programs, crossing procedures, crossing guard signs and equipment, and law enforcement strategies at crossing guard locations.

The Flagstaff Police Department holds a crossing guard safety training once per year. The Flagstaff Unified School District does not currently have a crossing guard training program. The local SRTS coordinator has obtained a crossing guard video from the Maricopa Association of Governments and is planning to hold training sessions for the crossing guards.

Provide a link or attachment of any relevant policies, if available.

Link:

File upload:

Browse...

Only RTF, PDF, and word documents are permitted

Question 6

Does your community's police department have a systematic strategy for selecting locations and countermeasures for traffic and pedestrian safety?

☑ Yes

Describe:

By working with neighborhood groups and the Transportation Commission, Flagstaff has been able to place traffic calming structures in several problem areas around the city (N. San Francisco, E. Dodge, Lucky Lane)

Question 7

Do police work regularly with traffic engineers and planners to review sites in need of safety improvement for motorists and pedestrians?

☑ Yes

Describe:

Representatives from Flagstaff Police Department meets monthly with the Transportation Commission. In this forum, we are advised of problem areas and are also allowed to bring suggestions for improvement forward.

Does your community use crash and/or fatality data to identify problem areas and potential solutions?

◉ Yes ○ No

Please describe any other ways that your community's police department addresses the pedestrian concerns in your community.

Flagstaff Police Department (FPD) uses a computer statistics model to show our supervisors and officers the problem collision and crime areas within the city. Each squad is then tasked with coming up with tactics to effectively impact the problem areas. FPD also has an officer that attends all the Bicycle and Pedestrian Advisory Committee meetings to discuss any further issues. Additionally, personnel are present at all Flagstaff City Council meetings in the event concerns or issues are brought up.

Last updated 12/15/2010

Evaluation

By incorporating planning, education, encouragement, engineering, and enforcement countermeasures, a community can have a direct impact on pedestrian safety and walkability. Evaluation of the pedestrian environment and behavior plays a crucial role in problem identification and countermeasure selection. In order to truly understand local pedestrian needs and safety issues, a community should utilize effective evaluation strategies.

Question 1

Does your community have an ongoing pedestrian counting and/or survey program that allows for long-term trend analysis of walking trips?

- [x] Yes

Please describe:

The Flagstaff Metropolitan Planning Organization conducted a trip diary survey in 2007, which collected detailed information on walking and bicycling trips. The survey will be repeated in 2011, and every 5 years after that.

The FMPO also collects turning movement counts at various busy intersections, including pedestrian and bicycle counts. The counts do not follow a set schedule, but are done on average every 3 years.

Question 2

Has your community used any of the following tools to evaluate major pedestrian areas (town centers, major activity areas, routes to school, etc.) in order to identify problem areas and potential solutions?

- [x] Walkability Checklists:
- [ ] Pedestrian Intersection Safety Index:
- [x] Pedestrian Level of Service (LOS):
- [ ] Pedestrian Road Safety Audit Guidelines and Prompt Lists:
- [ ] Health Impact Assessment:
- [ ] Other Evaluation Tools:

Question 3

Does your community routinely conduct pre/post evaluations of road projects and traffic calming with respect to pedestrian crashes, volumes and motor vehicle speeds?

- (•) Yes
- ( ) No

Question 4

Using **Walk Score**, what is the average (mean) walk score of the following locations in your community?

Average Walk Score of Geographic Center:
78

Average Walk Score of Northernmost point:
(City boundary directly north of geog. center)
58

Average Walk Score of Easternmost point:
(City boundary directly east of geog. center)
3

Average Walk Score of Southernmost point:
(City boundary directly south of geog. center)
14

Average Walk Score of Westernmost point:
(City boundary directly west of geog. center)
6

Average Walk Score of Midpoint of geographic center and northernmost point:
8

Average Walk Score of Midpoint of geographic center and easternmost point:
55

Average Walk Score of Midpoint of geographic center and southernmost point:
55

Average Walk Score of Midpoint of geographic center and westernmost point:
62

Average Walk Score of Urban school location:
71

Average Walk Score of Suburban school location:
20

Please describe any other ways that your community evaluates pedestrian accommodation, walking rates, and pedestrian safety.

The City of Flagstaff's Pedestrian Advisory Committee holds monthly public meeting and accepts public comment. The PAC's duties include evaluating and prioritizing pedestrian projects, and making suggestions regarding pedestrian safety to the Transportation Commission.

Last updated 12/15/2010

Additional Questions

Question 1

What are the three primary reasons your city deserves to be designated as a Walk Friendly Community?

Flagstaff Urban Trails System: FUTS is a city-wide network of more than 50 miles of non-motorized, shared-use pathways that are used extensively for both recreation and transportation. The system connects neighborhoods, employment, shopping, schools, parks and open space; and provides an incredibly diverse range of experiences. According to the City of Flagstaff Citizen Survey of 2009, 78 percent of Flagstaff residents have used the FUTS trail system in the last year.

Nationally-recognized Safe Routes to School program: The Coconino County Health Department started its Safe Routes to School program in 2007. The program has a part-time coordinator and has received more than $200,000 in non-infrastructure grant funding since its inception. Safe Routes to School has education, enforcement, and evaluation programs in four schools in Flagstaff, and works indirectly with all schools in the district.

A clear commitment to keeping Flagstaff pedestrian-friendly: With the support of the community, the City of Flagstaff has taken a number of positive steps in the past few years to promote walkability, including establishing a Pedestrian Advisory Committee, emphasizing pedestrian accommodation in plans, ordinances, and standards, establishing dedicated funding sources for construction of FUTS trails, creating a multimodal transportation planned position, and organizing the Flagstaff Walks! series of events to celebrate our walkability.

Question 2

What are the three aspects of your community most in need of improvement in order to accommodate pedestrians?

Completion of the primary system of FUTS trails and missing in-fill segments of partially-complete trails

Increased education and enforcement for motorists regarding pedestrian awareness, safety, traffic laws

More consistent and universal removal of snow, gravel, weeds, trash, and other obstructions from sidewalks

Question 3

How can your community leverage its designation as a Walk Friendly Community to increase the number of people walking and make walking safer?

Designation as a Walk Friendly Community will help bring national/international recognition to Flagstaff as a walkable, livable, and sustainable community, which in turn helps increase visitation and bolsters our tourism-based economy.

Designation and recognition will allow us to be more successful in securing grants, bond revenues, and budget allocations for pedestrian and trail projects and programs.

For the community, designation will promote awareness of our walkable character and foster appreciation for pedestrian issues. This works to encourage people to walk more, and makes it more likely that they will be supportive of pedestrian issues.

Walk Friendly Communities is sponsored by the U.S. Department of Transportation Federal Highway Administration. The program is maintained by the UNC Highway Safety Research Center's Pedestrian and Bicycle Information Center, with support from a variety of national partners.

Pedestrian and Bicycle Information Center Contact Information

www.walkinginfo.org

www.bicyclinginfo.org

www.pedbikeinfo.org

Walk Friendly Communities

COMMUNITY REPORT CARD AND FEEDBACK:

Flagstaff, Arizona
April 21, 2011

Introduction

Thank you for submitting an application to the Walk Friendly Community program on behalf of Flagstaff, Arizona! A Walk Friendly Community is a city or town that has shown a commitment to improving walkability and pedestrian safety through comprehensive programs, plans and policies.

Each application was evaluated by at least three reviewers to provide a fair assessment of your community and provide technical feedback on how to improve the walkability of your community.

After thorough consideration of your application, we are pleased to designate Flagstaff as a Bronze Walk Friendly Community. In reviewing your application, there were several areas that we were particularly impressed with, including:

- The Flagstaff Urban Trail System, which is an outstanding, far-reaching, and diverse trail system that serves both functional and recreational purposes and is supported through dedicated promotion and publicity.
- The Flagstaff Walks! campaign, which contains educational, promotional, and maintenance activities rolled into a well-marketed and coordinated event for the city.
- Dedication to exceptional educational opportunities, both through a premier Safe Routes to School program, safety training, and ongoing education for city staff and volunteers.

Flagstaff has exhibited a desire to become a community that supports active transportation. Flagstaff is stepping outside the status quo and making an effort to improve walkability and health in the community. You have made some excellent progress, allocating staff to pedestrian issues, coordinating strategic plans for enforcing pedestrian safety, and making great efforts to market and promote walking as a viable mode.

Despite those positive elements, we have noted several areas in which your community can improve its policies, programs, and standards. Please continue to build upon this foundation to work to improve your Walk Friendly Community designation, as Flagstaff is very close to

advancing to the next level. This report card provides detailed feedback on how your community can take it to the next level; take the time to review the feedback and contact us with any questions.

Primary Recommendations

This section identifies and provides suggestions for the most vital areas of improving Flagstaff's overall walkability. Additional details are provided in the following sections. **We recommend that you read these areas thoroughly and develop clear goals, benchmarks, funding sources, and an implementation schedule for reaching these goals.**

- The crash rate in Flagstaff is certainly higher than desirable and has a greater fatal to non-fatal crash ratio than expected. Hiring a **traffic safety officer** to lead a strategic enforcement program could help to mitigate this.
- Continuing to expand the **sidewalk network** to give pedestrians the necessary facilities to travel safely through the community along uninterrupted paths.
- Shape planning policies to help focus on **infill development**. The Walk Scores show the peripheral areas of Flagstaff to be very low density. By reorienting the focus to the pedestrian and transit networks, the city can continue to improve the walkability.

Feedback by Section

This remainder of this report card will provide detailed feedback and suggestions for each section in the community assessment tool. Feedback will include research to support the importance of this question as well as tools, guides, and case studies of successful implementations in other communities.

Each section received an overall score as defined below:

- **Walk Friendly:** The responses in this section indicate that your community is particularly strong in this area with great efforts being made towards improving walkability. Even so, there are always areas within this section where improvements and growth could be made.
- **On the Right Track:** This score indicates that your community does not exhibit the characteristics to be truly walk friendly in this section, but that there are still good existing programs or new programs that could be expanded. Please review our suggestions on how you could improve the walkability in this area.
- **Needs Attention:** This score indicates that your community does not yet demonstrate strong programs, policies, and results, characteristic of a Walk Friendly Community based on the responses in this section. Please review our suggestions carefully on how you can create positive change in your community with both short- and long-term objectives.

Community Profile

Walk Friendly

- It is great to see staff time and a varied network of cooperative partners devoted to pedestrian issues.

Status of Walking

On the Right Track

- The crash rates are a concern for Flagstaff, as they are higher than desirable. Part of this is necessarily attributed to the higher exposure, as evidenced in the mode share data. However, it is still an area that can be greatly improved.

Planning

On the Right Track

- Creating a stand-alone ADA transition plan with a time line for implementing improvements will improve accessibility. In addition, requiring ADA compliance with all new development and creating an evaluation schedule will help to prioritize maintenance and new construction. The Checklist for Accessible Sidewalks and Street Crossings can provide more information.
- It is clear that Flagstaff does include Complete Street planning, but could improve implementation and could also create a standalone policy. In addition, it is interesting the community development is in charge of complete streets instead of the DOT. By providing specific design details and tightening up the possibility for exemption from the policy (i.e. requiring complete streets amenities on all roads regardless of present or future need, or the absence thereof, or during routine cleaning), the Complete Streets policy would be enhanced. The National Complete Streets Coalition can provide more detail.
- Flagstaff has clearly invested time, money, and effort to create a pedestrian network, both through funding and policy. The provision of a sidewalk retrofit policy could be very helpful in ensuring that sidewalks are connected and the pedestrian network is complete. The Greensboro, North Carolina, sidewalk ordinance could be a helpful example.
- While it is clear that Flagstaff takes the design of parking facilities very seriously as well as the number of parking places and their location, you could employ some other measures to reduce the need for parking, especially in downtown. By providing cashout incentives and park and ride lots, Flagstaff could reduce the amount of parking as well as the demand. This link can provide more information about best practices.

Education & Encouragement

Walk Friendly

- While Flagstaff has invested substantial resources to provide training to schools, planners, and engineers, certain audiences, such as law enforcement and public health professionals, could also receive training. The PBIC provides a large number of these trainings.
- Flagstaff does a good job of providing events and campaigns directed to walking, but could consider using public service announcements and educate drivers about pedestrian safety during Driver's Education courses. More information can be found here about a successful program.
- Flagstaff, by providing events that encourage walking to a large degree, have created a culture of walking. This is associated with positive activities such as farmer's markets

and Artwalks. If the capacity exists, Flagstaff should consider hosting Ciclovias to promote walking. These programs have been successfully implemented all over the world, including in Chicago, Illinois, and Clearwater, Florida.

Engineering

On the Right Track

- Good sidewalk standards, but the sidewalk coverage leaves a lot to be desired. These are fairly low numbers for a city like Flagstaff and the city should be making substantial efforts to improve. There is not much sidewalk construction planned, which is cause for concern given the below 50% coverage of arterials (with both sides). The city should also inventory the sidewalks to determine the mileage of current and planned facilities.
- The city is not repairing sidewalks at a fast pace and the line item in the budget is substantially smaller than comparable cities. Flagstaff needs to complete an inventory process periodically to assess the needs of the pedestrian infrastructure. The City of Seattle has an excellent website that covers its system of prioritizing sidewalk improvements.
- The use of a Rectangular Rapid Flash Beacon is great. There are a number of other treatments that could provide similar safety improvements for pedestrians. The MUTCD provides more guidance, while this resource can provide another perspective.
- A system for inventorying sidewalks and prioritizing sidewalk maintenance would be an excellent step for Flagstaff. This resource provides guidance on how to inventory sidewalks using GIS. This resource can be helpful for finding funding. See Chapter 6.

Enforcement

On the Right Track

- Given the crash rates in Flagstaff and the number of officers in enforcement, it is highly recommended that the city create a traffic safety officer position to lead a strategic, targeted enforcement effort.
- The number of "Failure to Yield" citations in Flagstaff is substantially higher than many other cities, which demonstrates the commitment in Flagstaff to creating a pedestrian-friendly city infrastructure. That is a great accomplishment. This resource can provide more information about photo enforcement technology.
- In addition to providing speed feedback signs and using a progressive ticketing strategy, problem areas can be dealt with through crosswalk stings. More information can be found here, or you can check out a similar program in New Jersey.
- Using police officers on foot or on a bicycle, particularly in downtown areas or on campus, can provide targeted enforcement and also increase the visibility of enforcement. Flagstaff should have some of the occasional bike patrol officers certified.
- Crossing guards are a fundamental piece of creating a safe walking environment for children to get to and from school. Using police or police-trained volunteers can have a profound effect on the number of children walking (of bicycling) to school. The Adult School Crossing Guard Guidelines might be a helpful resource.

Evaluation

On the Right Track

- The National Bicycle and Pedestrian Documentation Project could provide a supplement to the counting and survey initiatives in Flagstaff. More information can be found here.
- While the use of walkability checklists and the PLOS is commendable, other tools can also provide helpful guidance. In particular, the Health Impact Assessment is really helpful as well as the Intersection Safety Index (though Flagstaff does a really good job with intersections, judging by responses). More information can be found here.
- It seems that much of downtown Flagstaff is very pedestrian-friendly, while many areas on the outskirts are not at all. By increasing infill development and creating nodes around transit stations, Flagstaff can increase density and create more walkable communities.

More Information

If you have questions or comments regarding this feedback, your community's initiatives and programs, or the application process in general, we'd like to hear from you. Please contact:

Carl Sundstrom, 919-843-4963, sundstrom@hsrc.unc.edu

Dan Gelinne, 919-962-8703, gelinne@hsrc.unc.edu

You can also send general inquiries to info@walkfriendly.org

Walk Friendly Communities

Last updated 12/15/2015

Print This Page

Community Profile

This section is intended to provide applicants with a chance to describe their communities. Having an understanding of the geographic, demographic, and economic make up of the community can help explain the challenges and opportunities that the community faces when planning for walking.

Contact Information

Name of Community:	Flagstaff
Mayor or Top Official:	Mayor Jerry Nabours
Mayor's Phone:	928 213 2015
Community Contact Name:	Martin Ince
Position/Employer:	City of Flagstaff
Contact Address:	211 West Aspen Avenue
Address (line 2):	
City:	Flagstaff
State:	Arizona
Zip code:	86001
Phone/Fax:	928 213 2685
Email:	mince@flagstaffaz.gov
Web site:	www.flagstaff.az.gov

Pedestrian Coordinator & Government Staff

List your official pedestrian coordinator or pedestrian issues contact person on government staff, and identify his/her

department.

Contact Person: Martin Ince

Contact Person Dept: Community Development

How many hours are spent per year in this capacity?

1040

Is this person also the bicycle coordinator?

(•) Yes ( ) No

List all other government staff or contractors whose primary duties are devoted to walkability and pedestrian safety issues:

Do you have a Pedestrian Advisory Committee, Ped/Bike Council or other venue for citizen input?

(•) Yes ( ) No

If yes, please provide the name of the Chair and their contact information:

Pedestrian Advisory Committee

Heather Taylor, Co-Chair
Coconino County Health Department
2625 North King Street
Flagstaff, AZ 86004
928-679-7262

Kim Austin, Co-Chair
Coconino County Health Department
2625 North King Street
Flagstaff, AZ 86004
928-679-7213

Do you have an independent pedestrian advocacy organization?

( ) Yes ( ) No

If yes, please provide the name and contact information:

Has your mayor signed the International Charter for Walking or a similar pledge to improve the conditions for walking in your community?

( ) Yes (•) No

If yes, please provide details:

Community Profile

Population:	68,785
Area of municipality:	64.4
Population Density:	1068
Park Land:	2.2

Age Distribution: [?]

under 20:	29.5
age 20–64:	63.9
age 65–84:	5.8
0ver 85:	0.7

Last updated 12/15/2015

Status of Walking

This assessment tool seeks to learn how *much* people are walking and how *safe* they are when they are doing so. Therefore, the outcomes that are most significant for the purposes of this tool are the numbers of walkers and the number of pedestrian crashes. Walk Friendly Communities is looking for communities that have created environments in which many people walk *and* pedestrian crash rates are low, or those communities that are making significant progress towards those ends. These two questions focus on these specific outcomes, while other questions in this survey address what measures are used by communities to facilitate walking and improve safety.

Question 1

According to the 2000 Census, what percentage of residents used the following modes for their commute to work?

Walking:	10.9
Bicycling:	4.8
Public transit:	2.9
Single-occupant vehicles:	65.3
Carpool:	10.8

Please also provide the latest walking percentage of commuting to work from the 3-year estimates of the American Community Survey:

Walking 2006-2008:	10.3
Walking 2008-2010:	10.9
Public transit 2006-2008:	2.4
Public transit 2008-2010:	2.9

If your community conducts its own travel counts, please include a link, attachment or description of those count results:

Web Link:

Current travel count file:
Flagstaff Trip Diary Report 2013-05-14 with app.pdf

File Upload:
Choose File No file chosen

Count Results Description:

Single occupant vehicle: 48.7%
Multiple occupant vehicle: 24.3%
Transit: 4.3%
Bicycle: 7.6%
Walk: 15.1%

Question 2

How many pedestrian/motor vehicle crashes were reported in each of the last five years; and how many of these crashes resulted in injuries and fatalities?

Number of Pedestrian Motor Vehicle Crashes — 2013:	28

Number of Pedestrian Motor Vehicle Crashes — 2012:	30
Number of Pedestrian Motor Vehicle Crashes — 2011:	32
Number of Pedestrian Motor Vehicle Crashes — 2010:	36
Number of Pedestrian Motor Vehicle Crashes — 2009:	23
Number of Pedestrian Injuries — 2013:	24
Number of Pedestrian Injuries — 2012:	23
Number of Pedestrian Injuries — 2011:	25
Number of Pedestrian Injuries — 2010:	33
Number of Pedestrian Injuries — 2009:	18
Number of Pedestrian Fatalities — 2013:	3
Number of Pedestrian Fatalities — 2012:	4
Number of Pedestrian Fatalities — 2011:	3
Number of Pedestrian Fatalities — 2010:	2
Number of Pedestrian Fatalities — 2009:	2

Question 3

What long-term trends in walking volumes and pedestrian/motor vehicle crashes has your community observed?

Available data indicates that pedestrian mode share is generally increasing in Flagstaff:

The Trip Diary Survey shows an increase in the percentage of trips made by walking from from 14.2% to 15.1% between 2006 and 2012. However, the trends differ by geographic area. In the central core area of Flagstaff, which includes downtown and the NAU campus, walking mode share increased from 19.4% to 32.5% between 2006 and 2012, but in rest of Flagstaff walking mode share decreased from 11.8% to 5.9% during the same time period.

The American Commmunity Survey (3-year average) shows an increase in walking from 6.5% in 2007 to 8.1% in 2010 to 10.9% in 2013.

The American Community Survey (1-year average)shows a decline in walking from 10.8% in 2012 to 8.3% in 2013. We are waiting for 2014 numbers for Flagstaff to be released.

Over the last 10 years the number of annual pedestrian crashes has not followed clear trend lines, and ranges from a high of 51 in 2007 to a low of 23 in 2009. The 10-year average is 35 pedestrian crashes annually. Since 2009, the number of annual pedestrian crashes have been relatively consistent and in the low 30's. There was slight spike in 2014, which saw 44 pedestrian crashes.

Last updated 12/15/2015

Planning

Pedestrian issues are addressed at many different levels of planning, ranging from neighborhood plans to city, county, state, and federal policies and plans. A comprehensive pedestrian plan should address all five Es (education, encouragement, enforcement, engineering and evaluation) along with public involvement. With thorough planning, a community can become proactive rather than reactive in addressing issues of pedestrian accessibility, safety, and aesthetics. Planning involves soliciting public input, collecting information about current and future conditions, and considering what policies, plans, programs and resources a municipality will require to meet your community's needs.

Question 1

Has your community adopted a pedestrian plan or pedestrian safety action plan?

☐ **Yes**

How are pedestrian issues captured in other plans (e.g. the comprehensive plan, Transportation Improvement Program, etc.)?

The Flagstaff Regional Plan 2030, which was adopted in January of 2014, includes a goal in the Transportation Element to "increase the availability and use of pedestrian infrastructure, including FUTS, as a critical element of a safe and livable community." The goal is supported by 4 specific policies related to walking. In addition, 15 goals and 56 policies in the other 11 elements directly or indirectly promote walking and walkability.

The Regional Transportation Plan, which was prepared by the Flagstaff Metropolitan Planning Organization and adopted in 2009 by the City of Flagstaff and Coconino County, includes a number of tables that establish Level of Service policies for pedestrian, bicycle, and transit service.

The plan divides the region into one of 3 area types - urban, suburban, and rural - and assigned a target future level of service for pedestrian, bicycle, and transit accommodation. the tables describe appropriate facilities and standards for each combination of area type and LOS, for example moderate pedestrian LOS in an urban area.

Question 2

Has your community adopted an ADA Transition Plan for the public right of way?

☐ **Yes**

There are state roads in most communities. Has your state DOT adopted an ADA Transition Plan?

☑ **Yes**

Is the state DOT transition plan being implemented?

(•) Yes ( ) No

Explain:

ADOT is working to implement the plan, but is behind the schedule established in the plan

https://www.azdot.gov/docs/default-source/ada-library/ada_transition_plan-prow_final_1212.pdf?sfvrsn=2%27

Question 3

Has your community adopted a Complete Streets policy or ordinance?

[x] **Yes**

If yes, please provide a link or attachment of the document.

Link to document:

http://www.flagstaff.az.gov/DocumentCenter/Vie

Document upload:

Choose File No file chosen

Who is responsible for the implementation of the Complete Streets Ordinance?

Community Development Division - City of Flags

How is Complete Streets work funded? (i.e., is it routinely funded as part of the project, funded with other set-aside funds, etc.?)

Typically funded as part of the project. In some cases complete streets projects are funded through the city's 2000 Transportation Tax

What challenges and barriers does your community face in implementing the Complete Streets policy?

Some funding is available through the 2000 Transportation Tax, although it is limited. The most significant barrier is often finding room for sidewalks within existing right-of-way, and existing development often precludes or limits options to obtain easements or acquire additional ROW to accommodate sidewalks.

Identify three recent examples of how your Complete Streets policy was implemented (particularly at roadway widening projects):

Project 1:

Last year the City completed a project to add curb-and-gutter, sidewalks, and bike lanes to a three-quarter mile section of West Street, between Sixth Street and Arrowhead Boulevard. Another half mile of West Street to the north had been similarly improved two years before. West Street is a primary collector in the low-income Sunnyside neighborhood. Currently the City is widening Arrowhead Boulevard to include curb-and-gutter, sidewalks, and bike lanes to carry the improvements to Route 66 at the edge of the neighborhood.

Project 2:

Federal Highway Safety Improvement Program (HSIP) funds were used to add bike lanes to a quarter-mile section of Beulah Boulevard in 2013. Although the new bike lanes are not very long, they completed a missing gap in bike lanes along a very busy road that is heavily used by NAU students and other bike commuters.

Project 3:

Over the past few years, several City projects have completed missing segments of sidewalks along both sides of Woodlands Village Boulevard, an arterial roadway about 1.1 miles in length through a significant commercial and high-density residential district. The street now has continuous sidewalks along both sides for its entire length.

Question 4

Please briefly describe how public input is used in the municipality's planning process. Mention the role that citizen participation, advisory board review, and/or the municipality's pedestrian/bicycle advisory council play in the process. How do you assure that individuals with disabilities are included in the public input process?

Both the Pedestrian and Bicycle Advisory Committees host monthly meetings that are open to the public.

The City's pedestrian, bicycle, and urban trails programs each maintain their own pages on the city's website.

The public can sign up through the City's website to receive monthly agendas for the Pedestrian and Bicycle Advisory Committees, as well as other information and notices of interest. At present about 200 individuals are sent PAC agendas and 400 are sent BAC agendas.

Items of interest regarding walking, biking, and trails are also regularly posted on a FUTS Facebook page, which has about 1900 followers.

Provide any relevant links or attachments that indicate the formal and informal public participation and advocacy efforts in your community (i.e., a link to the pedestrian and bicycle advisory board website, if it exists, or documented guidelines for public participation in the planning process).

Website link:

http://www.flagstaff.az.gov/index.aspx?NID=182

Please briefly describe the role that citizen participation, advisory board review, and/or the municipality's pedestrian/bicycle advisory council play in the process of reviewing ongoing projects and development.

Flagstaff has had an appointed Pedestrian Advisory Committee since 2007. The PAC meets monthly and advises and reports to the City's Transportation Commission on pedestrian and walking issues.

The PAC does not typically review individual development proposals. However, they are involved in reviewing and preparing plans, policies, standards and guidelines related to pedestrian infrastructure. They also help set priorities for projects in the City's capital plan, notably FUTS trail projects.

The City also has a separate Bicycle Advisory Committee.

Please briefly describe how you assure that specific populations (like individuals with disabilities or low incomes) are included

in the public input process.

The City has a Disability Awareness Commission to assure that individuals with disabilities are included in the public input process.

The FMPO and NAIPTA host quarterly meetings of a regional Coordinated Mobility Council, which works to enhance mobility for the elderly, disabled, and other populations with mobility challenges.

The FMPO approved its Title VI plan in 2010 to help ensure that all individuals have an opportunity to participate in the transportation planning process regardless of race, color, national origin, disability, age, gender, or income status.

Please briefly describe how your community works with coalitions, advocates, and other departments and agencies to ensure that pedestrians are considered in all projects and documents.

All City projects - private and public - are reviewed through the inter-division staff (IDS) review process. Various staff members typically watch out for pedestrian issues, including planning, engineering, traffic, and multi-modal staff.

City and FMPO staff are typically invited to review ADOT (state) transportation projects.

Staff from the City, FMPO, NAIPTA and Northern Arizona University meet every two months to discuss on-going and up-coming multi-modal transportation plans and projects.

Staff from the City, Coconino County, Coconino National Forest, the National Park Service, and Flagstaff Biking Organization meet quarterly to coordinate regional trails planning and projects.

Participation file upload:

Choose File No file chosen

Question 5

Does the city have a policy requiring sidewalks on both sides of arterial streets?

(•) Yes ( ) No

On both sides of collector streets?

(•) Yes ( ) No

Sidewalk policy link:

http://www.flagstaff.az.gov/DocumentCenter/Vie

Sidewalk funding and installation: (if applicable, please provide a link or attachment of the relevant ordinance or policy)

Sidewalk funds link:

Sidewalk funds file upload:

Choose File No file chosen

Does the city require sidewalks to be constructed or upgraded with all (or the vast majority of) new private development?

◉ Yes ○ No

Explain:

Sidewalks are required on both sides of all new streets built in conjunction with new development. In a few cases, though not typically, the City requires existing sidewalks to be repaired when needed.

Question 6

Has your community established a connectivity policy, pedestrian-friendly block length standards and connectivity standards for new developments, or convenient pedestrian access requirements?

☐ **Yes**

Question 7

Do you have a trails plan?

◉ Yes ○ No

How many miles of trails (paved/hard surface/natural) currently exist in your community?

56

How many miles of trails are included in your current planning documents?

130

Please describe destinations (schools, shopping, offices, etc.) that are accessible by trail in your community:

The Flagstaff Urban Trails System (FUTS) is a community-wide network of 56 miles of non-motorized trails. The trails connect many major destinations, either directly or by proximity, including downtown, the NAU campus, several larger commercial areas, residential neighborhoods, parks, and schools. The trails also provide access to open space areas, and connect in a number of locations to single-track trails in the National Forest that virtually surrounds Flagstaff.

Please provide a link or attachment of relevant plan, if available.

Link to document:

http://www.flagstaff.az.gov/DocumentCenter/Vie

Trail plan document upload:

Choose File No file chosen

Is it routine policy to build trails and paths with all new and major re-developments?

◉ Yes ○ No

Is it required through zoning regulations?

◉ Yes ○ No

Are incentives provided to encourage trail construction?

○ Yes ◉ No

If so please provide a link or attachment of the policy or ordinance.

Link to trail incentive:

Incentive file upload:

Choose File No file chosen

Question 8

Is your community served by public transportation?

☑ **Yes**

If yes, please list the agencies and whether they are city, regional, or both.

Northern Arizona Intergovernmental Public Transportation Authority
3773 North Kaspar Drive
Flagstaff, Arizona 86004
928-779-6624

Please provide the following performance indicators and details to indicate how well your community is served by public transportation.

Percent of population living within a quarter mile of a bus stop or 1/2 mile of a rail station:

59

Hours of operation for transit service:

Weekday:	5:38 am to 10:04
Saturday:	6:48 am to 7:34 p
Sunday:	6:48 am to 7:34 p
Average off-peak headway on bus routes:	60
Average peak period bus headway	25
Average off-peak headway on train routes:	NA
Average peak period headway on train routes:	NA

Percent of bus stops that are wheelchair accessible:

55

What route planning and trip information is provided for transit passengers (e.g. real-time arrival information, online trip planning, etc.)?

On-line route planning is available through NAIPTA's website and Google Transit

Passengers with smart phones and other devices can get real-time arrival information through the TransLoc app. For those with text-message enabled phones, real-time arrival information can also be sent via text message. A few transit stops on the NAU campus display real-time arrival information at the stop.

Passengers can also call NAIPTA offices for assistance with trip planning and arrival times.

Please describe your transit stop improvement process including information on bus stop location guidance and the use of safety and accessibility audits, crash data, and boarding/alighting data.

NAIPTA was recently been awarded a federal grant in the amount of $516,000 to upgrade ADA accessibility at inaccessible bus stops. Construction on stops is to be done in the summer of 2016 to install ADA landing pads, replace sidewalk, and add curb ramps.

This will bring the system from 55% accessible to 85% accessible. Boarding and alighting data is used to determine where service should be increased or enhanced. Routes with higher boarding and alighting numbers have higher frequency and longer hours.

Question 9

Which of the following approaches does your community use when planning for parking? Please provide a link or attachment of relevant ordinance or policy and describe when and where these strategies are used. (check all that apply)

- [x] Maximum parking standards or absence of minimum parking standard

Link to standard:

http://www.flagstaff.az.gov/DocumentCenter/Vie

File upload:

Choose File No file chosen

Description of standards (including when and where these are used):

Developments over 10,000 square feet in floor area or containing 25 or more residential units are not allowed to exceed the minimum number of parking spaces by more than five percent. (Section 10-50.80.040 C.1. of the Zoning Code)

- [x] Parking location requirements (i.e., parking below, beside, or behind a building; allowing on-street parking to meet minimum parking requirements)

Link to location requirements:

http://www.flagstaff.az.gov/DocumentCenter/Vie

File upload:

Choose File No file chosen

Description of requirements (including when and where these are used):

To the maximum extent feasible, parking lots shall be completely or mostly located to the side or behind a building rather than in front to reduce the visual impact of the parking lot. (Section 10-30.60.050 A.3. of the Zoning Code)

☑ Surface lot size and design requirements, including pedestrian and vehicle separation, locating lots to the side or behind businesses, alternative use of parking lot, landscaping, etc.

Link to size/design requirements:

http://www.flagstaff.az.gov/DocumentCenter/Vie

File upload:

Choose File No file chosen

Description of requirements (including when and where these are used):

The City's Zoning Code requires landscaping for all parking lots with 8 or more single-loaded spaces or 16 or more double-loaded spaces. The area and amount required for landscaping is based on the number of parking spaces.

Within parking lots, required landscaping is accommodated in landscape and peninsula islands; and terminal islands are required at the ends of rows.

On the perimeter, parking lots must be screened from streets with a low wall or fence, a landscape screen, or both.

Parking areas over one acre must also be divided into smaller lots with planted buffers between them to minimize the perceived scale of the parking lot.

Proposed revisions to the Zoning Code (currently under consideration by the City Council) will require a "building entry zone" to connect the building to the street and the parking lot via a pedestrian walkway and landscape features.

☑ Shared parking allowances

Definition: Shared parking lots can reduce the total number of parking spaces needed in a particular area by coordinating peak parking demand times between different buildings and different uses. For instance, an office building might be able to share a parking lot with a restaurant that operates only in the evenings, as the former would use the lot during the day and the latter would use it at night.

Link to allowances:

http://www.flagstaff.az.gov/DocumentCenter/Vie

File upload:

Choose File No file chosen

Description of allowances (including when and where these are used):

The Zoning Code allows a parking reduction when two or more uses on the same site or adjacent parcels have distinct and differing peak parking usage periods (e.g., a theater and a bank). The reduction is based on a required parking demand study, and the sharing arrangement must be memorialized in a recorded covenant that runs with the land.

The required number of parking spaces can also be reduced when warranted by a parking demand study, when the development implements a traffic management plan, if forest resources are preserved in the parking lot, when bicycle parking is provided, and if the development is within one-quarter mile of a transit stop.

- [x] Priced public parking

Link to prices:

File upload:

Choose File No file chosen

Description of priced parking (including when and where these are used):

Very recently the City Council moved forward with a plan to install parking kiosks in downtown Flagstaff. The plan will implement paid parking on public streets in downtown Flagstaff, in the Southside neighborhood, and in City-owned parking lots. Parking kiosks, which can be accessed by computer or mobile device, will be installed rather than traditional meters. Time limits will vary by location and time of day/month of year, and the price will average about $1 per hour. The Council's final approval of the plan is anticipated in January of 2016.

- [ ] Parking cashout incentives
  Definition: Parking cashout is a financial incentive in which employees who do not drive and park at work receive a subsidy that approximates the cost employers bear to provide free parking to employees.

- [ ] Remote parking and/or park and ride

- [x] Other (please describe)

Link to other approach:

http://www.flagstaff.az.gov/DocumentCenter/Vie

File upload:

Choose File No file chosen

Description of other approach (including when and where these are used):

Development within a parking management district can pay a fee in lieu of parking with approval by the City Council.

Question 10

Approximately what percentage of development in the last five years has been infill?

50-60

How many LEED-ND projects have been developed (or are pre-qualified) in your community (just LEED for Neighborhood

Development not all LEED designations)?

None

What measures does your community use to encourage dense, mixed-use development? (check all that apply)

☑ Secondary or accessory dwelling units are permitted
Definition: These units are self-contained apartments on an owner occupied single-family lots.

Link to measure: http://www.flagstaff.az.gov/DocumentCenter/Vie

File upload: Choose File No file chosen

Description of measure (including where it is permitted):

An accessory dwelling unit (ADU) is permitted on any lot with a single-family dwelling provided the primary residence is occupied by the property owner. Section 10-40.60.030 of the Zoning Code lists a number of specific regulations for ADU's.

☑ Retail/commercial uses are required on the ground floor of residential buildings in mixed use corridors or districts

Link to measure:

http://www.flagstaff.az.gov/DocumentCenter/Vie

File upload:

Choose File No file chosen

Description of measure (including where it is permitted):

Mixed use development is not required to include residential development, however when residential units are included they cannot be on the ground floor adjacent to the street. Residential must be located above or behind commercial development (Section 10-40.60.250)

Proposed revisions currently under consideration by the City Council will make the language regarding mixed use development more clear.

☑ Density bonuses to developers are provided for providing amenities that enhance walkability and livability
Definition: Density bonuses are used by local governments to allow a developer to build at a higher density than zoning permits in exchange for providing affordable residences or walk-friendly amenities.

Link to measure:

http://www.flagstaff.az.gov/DocumentCenter/Vie

File upload:

Choose File No file chosen

Description of measure (including where it is permitted):

Density bonuses for residential development are available via the Zoning Code for providing energy efficiency buildings and/or affordable housing. (Section 10-30.70.030)

- [x] Form-based or design-based codes are used
  Definition: These codes are an alternative to conventional zoning that can be used to ensure a walk friendly environment by regulating the form, scale and massing of buildings rather than the use. They are typically presented with both diagrams and words.

Link to measure:

http://www.flagstaff.az.gov/DocumentCenter/Vie

File upload:

Choose File No file chosen

Description of measure (including where it is permitted):

The City's Zoning Code include options for developers to use form-based coding and transect zones in place of traditional zoning. In the central area, developers have the option by right of using traditional zoning districts or form-based transect zones. In the remainder of the City, developers can request to rezone their property to use form-based transect zones. (Section 10-40.40)

- [ ] Neighborhood school siting policies

What other incentives are provided for infill developments? (please describe):

City staff is currently working on a community reinvestment plan, which is intended to support reinvestment and infill development to further the goals of the Regional Plan. The plan will examine physical constraints, regulatory requirements, and financial mechanisms that encourage or discourage reinvestment, and develop strategies to limit obstacles and capitalize on opportunities.

Staff has prepared a draft outline for the plan and presented it to the City Council. However, work on completing the plan will not occur until next spring at the earliest.

Please describe the planning efforts in your community to preserve and strengthen your urban structure. Examples could include revitalization efforts of your downtown and other historic ares or infill and intensification efforts in centers, nodes, districts, and along corridors.

Flagstaff's Regional Plan is based on the principle of compact development at three scales:

Infill and reinvestment are promoted at a city-wide scale.

At the neighborhood scale, activity centers - mixed-use nodes that vary in scale, context, and activity mix - are intended to promote compact urban form, efficient infrastructure, walking and transit, and protection of natural resources.

At the development or site scale, clustered development is encouraged.

The Regional Plan also promotes transformation of existing streets into Great Streets, where the need to move traffic is balanced with other modes of travel as well as civic activity, public space, commerce, and homes.

The option to use a form-based code and transect zones in downtown Flagstaff and in the Southside neighborhood encourages infill development that supports walking and is more urban in character.

The City recently completed and approved a neighborhood plan for La Plaza Vieja, a historic, low-income neighborhood near downtown. The plan promotes walkability in the neighborhood and development/redevelopment that supports the neighborhood's strong pedestrian environment.

Question 11

In the following fields, please select and briefly describe any urban design features or pedestrian amenities that your community uses or requires to create a comfortable and attractive walking environment.

- [x] Lighting:

Flagstaff is a Dark Sky city and has a number of regulations in place to limit light pollution. All outdoor light fixtures must be fully shielded (full cutoff), certain types of lamps are not allowed, and lighting levels are strictly limited.

Pedestrian-scaled lighting was installed in Flagstaff's downtown areas in the mid-90s. Pedestrian-scaled lighting is typically not used in other areas, although it is allowed/encouraged in more urban transect zones.

- [x] Trees and plantings:

A landscape buffer of 10 feet (or 5 feet for two-lane streets) is required along the street frontage of non-residential development. This is typically located behind the sidewalk on private property, although a portion of the landscape buffer can be located within the public right-of-way.

Parkway buffers are required by the Engineering Standards between the back-of-curb and the sidewalk. However, parkways are frequently omitted when right-of-way space is limited.

Street trees are required when new streets are built.

- [x] Street furniture:

Benches and bike racks have been installed along streets in downtown Flagstaff and along the 2 major commercial streets in the Southside neighborhood.

The City has proposed Zoning Code amendments to remove frontage landscape standards and instead allow street trees and furniture when buildings front and are within a few feet of the public sidewalk.

- [x] Community identifiers (e.g. gateways, banners, public art):

Flagstaff has an active public art program and has funded and installed a variety of public sculptures and murals in the last 10-15 years. A number of private murals have also been created.

☑ Other features and amenities (e.g. facade design requirements, public restrooms, pavemaent design):

New development and alterations to existing buildings in three historic districts - Railroad (downtown), Southside, and Townsite - are subject to additional review and design standards to ensure compatibility with the historic character and historic aspects of those neighborhoods.

Please provide a link or attachment of the ordinance or policy that addresses these features.

Link:

File Upload:

Choose File No file chosen

Question 12

Please briefly describe any other planning policies related to promoting or enhancing walking in your community.

Section 10-30.60.040 of the Zoning Code describes specific standards for pedestrian and bicycle circulation systems in new development, to encourage walking and biking in a safe and convenient environment.

On-site functions, including building entrances, outdoor plazas and courtyards, and open space, must be linked with a convenient, well-connected network of pedestrian and bicycle ways.

Off-site pedestrian and bicycle connections are required to adjoining public sidewalks, FUTS trails within 100 feet of the site, internal walkways on adjoining properties, nearby transit stops, and abutting National Forest lands.

In parking lots of greater than 8000 square feet, pedestrian ways must provide a clear, continuous route to the building entrance with distinguishing landscaping, fencing, and pedestrian-scaled lighting.

Pedestrian and bicycle ways must meet several design standards:

Materials must provide traction and facilitate maintenance and snow removal.

Distinctive landscape elements are used to clearly define gateways in larger developments (more than 20,000 square feet).

Decorative paving, such as colored concrete, stamped concrete, signs and landscaping helps to identify vehicular crossing points.

Section 10-30.60.060 sets standards for open spaces, civic spaces, and outdoor public space in new development. For non-residential development with more than 20,000 square feet of floor area, at least five percent of the site is required for an outdoor pedestrian amenity area that serves as a transition between the parking areas and the building entrance.

Section 10-50.20.030 B.4. in the Architectural Design Standard requires buildings with street level visual interest to pedestrians. This is accomplished through display windows, display cases, or decorative wall surfaces along public ways or pedestrian routes. Large expanses of blank wall along public ways and

pedestrian routes are not allowed.

Last updated 12/15/2015

Education & Encouragement

Education and encouragement are primary components in creating a successful walk friendly community. This section seeks information about the programs, policies and strategies your community uses to inform, inspire, motivate or reward walkers and other users of the public right of way. It also asks the question "Do your efforts result in a safe walking environment?" Effective pedestrian safety education begins at an early age, is age-specific, and continues through the years across all modes (i.e., motorists educated about pedestrian safety contribute to a safer, more pleasant walking environment for pedestrians; this environment enables and encourages more people to walk).

Encouragement programs can be fun and inclusive in seeking to establish good habits or change unhealthy or unsafe habits. The education and encouragement strategies listed below are common to many walkable communities. If your community uses other strategies to educate the public and encourage walking, please describe them as well.

Question 1

Please describe any Safe Routes to School (SRTS) programming being implemented in your community in the space provided below.
Check any of the following activities that are part of your SRTS programs and include information about the nature, scope, and results of these activities (as well as any others not listed below) in your description.

- [x] Walk to School Day/Week
  Definition: Walk to School Day is an international event that takes place annually in October. Schools from all over the country plan special activities to encourage students to walk to school. This special event can be a great way to start a Safe Routes to School program.

Description:

The City of Flagstaff partners with Coconino County Injury Prevention program each year for International Walk to School Day. Five schools within the city limits participate in this yearly fun event. Incentives are given to each participating walker, and all children are escorted to school by adult volunteers. Other partners in this event include: Flagstaff Unified School District, Safe Kids Coconino County, Northern Arizona University ROTC, Coconino County Tobacco and Chronic Disease program, Pedestrian Advisory Committee, and Flagstaff Medical Center. Over 1000 children participate in this event annually.

- [ ] Walking Wednesdays or other walking events
  Definition: Some schools and communities promote walking to school by having regular Walking Wednesday events in which parents, teachers, and students may meet up near the school campus and walk to school together.

- [x] Walkability audits or SRTS maps
  Definition: By auditing and assessing walking routes and creating maps indicating the safest routes to school, communities can help educate students and families about the best routes to take.

Description:

Safe walking maps have been created and distributed to each elementary school within the Flagstaff Unified School District.

- [x] Walking School Bus
  Definition: From saferoutesinfo.org : A group of children that walk or bicycle to school together accompanied by one or more adults.

Description:

A walking school bus was used at Killip School between 2011 and 2013. For the first school year there were 4 "routes" every morning. In the second year there was only one route, but it was conducted in the morning and afternoon (to and from school). The walking school bus at the school has not been used since. The walking school bus was implemented following a one-day training for conducted by PedNet Consulting and sponsored by the Coconino County Safe Routes program.

- [x] Student safety patrol
  Definition: From saferoutesinfo.org: Student safety patrols enhance enforcement of drop-off and pick-up procedures at school by increasing safety for students and traffic flow efficiency for parents. Such efforts allow students to participate in promoting traffic safety where they learn skills they can use in their everyday lives.

Description:

BASIS school is a charter school within the Flagstaff city limits. After conducting an observation of the school dismissal, recommendations were given to the school to increase child safety. The school has since taken steps to increase safety measures in and around the school: increased parental and staff supervision, education to the school parents, and encouragement of bus transportation usage with decreased student bus pass costs and a deviation of the regular bus routes to coincide with school start and end times.

- [ ] Tracking system to count the number of children walking to school

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- [x] Other (please describe)

Description:

Pedestrian and bicycle safety is taught through Coconino County Injury Prevention Program and Safe Kids Coconino County within the City of Flagstaff.

May is Bike safety month with local community and school bicycle rodeos, discount helmet sales and organized fitting clinics.

October is pedestrian safety month, which kicks off with International Walk to School Day (over 1,000 children participating), walking audits in and around the schools, and "Be Safe. Be Seen" displays on reflectivity and visibility.

Please estimate the number of schools in your communities that participate in the following:

Ongoing SRTS program:	0
Special walk to school events only:	7
No walk to school or SRTS activities:	5

Total number of elementary and middle schools in your community: 17

Please provide the following information for the Safe Routes to School contact person in your community:

Contact Person and Title:

Kim Austin, Health Educator
Coconino County Public Health Services District Injury Prevention

Contact Person Department:

Coconino County Public Health Services District.
*We have a SRTS program that is not federally funded

How many hours are spent per year in this capacity?
1000

Please describe your most recent Safe Routes to School grants:

The Coconino County Injury Prevention program and SafeKids program has received federal Safe Routes to School grants since 2008. Coinciding with the passage of MAP-21, the State of Arizona elected to not make Safe Routes to School (or Transportation Alternatives) grant funding available to small urban and rural areas in Arizona. As a result Coconino County's federal Safe Routes to School grant ended as of September 2014.

Coconino County Injury Prevention and SafeKids have continued a pedestrian and bicycle safety program for children patterned on the Safe Routes to School program. Most of the same education is provided but without specific school participation or in-class lessons for grades K-5 (this is the reason 0 schools are listed above for on-going SRTS program)

Question 2

Please describe any education and training programs related to pedestrian education, safety, or design for staff in your municipality. Please include in this description the nature, frequency, scope, number of attendees, and results of these programs.

Engineering:

A one-day Walking School Bus training was held in May of 2011. The training was conducted by PedNet Consulting and sponsored by the Coconino County Safe Routes program. Approximately 30 people attended. A walkability assessment of the Sunnyside neighborhood was conducted in conjunction with the training.

ADOT sponsored a Safe Routes to School workshop on September 30, 2010 at Kinsey School and training for its Active School Neighborhood Checklist at Mountain School on October 1, 2010. Approximately 15 people attended. The workshop included a walkability assessment of the Ponderosa Trails neighborhood in the vicinity of the school.

The City of Flagstaff, NAIPTA, and ADOT conducted a walkability and transit access assessment in April of 2012 in the Southside and Woodlands Village neighborhoods as part of the Arizona Transit Association conference. About 30 people participated in the mobile workshop.

A full-day Health Impact Assessment training fpr practitioners and professionals was held on October 18, 2013. The

training was conducted by the Arizona Department of Health Services and the Project for Livable Communities. About 35 individuals were in attendance.

Another half-day Health Impact Assessment workshop was conducted on May 27, 2015. This workshop was sponsored by the Arizona Department of Health Services, the Coconino County Public Health Services District, and the Arizona Alliance for Livable Communities. About 25 people attended

Planning:

Same as above - the workshops and training were targeted to engineers, planners, law enforcement, school officials and teachers, public officials, and public health staff.

Law enforcement:

Same as above

School staff:

Same as above

Public officials:

Same as above

Other:

Question 3

Please check and briefly describe any education or encouragement campaigns that are implemented in your community regarding the following topics. Include information about the target audience, techniques used (e.g., posters, workshops, etc.), frequency , scope, and results of the programs. Please mention what measures your community has taken to make sure that education and encouragement campaigns are inclusive of all populations. Also mention your community partnerships (such as Public Health & Planning partnerships) that collaborate on these efforts. Provide any relevant links and attachments to help illustrate these descriptions, if available.

- [ ] Public service announcements

- [x] Public health campaigns related to walking

Link to relevant material:

http://www.coconino.az.gov/awc

Description:

The Coconino County Public Health Services District organizes the Aerobic Winter Challenge each year. This is a five-month team incentive program that encourages regular physical activity and healthy eating during the cold winter months. Employees of organizations in the Northern Arizona Public Employee Benefit Trust (NAPEBT), which includes the City of Flagstaff, Coconino County, Coconino Community College, NAIPTA, and Flagstaff Unified School District are eligible to participate. The challenge has been held for more 30 years.

NAPEBT also organizes a year-round wellness incentive program, which encourages physical activity and other wellness activities.

- [ ] Walk to work events

- [ ] Other (please describe):

Question 4

Please check and briefly describe any walking tours, guides, or maps that are available (on-line or printed) in your community. If available, please provide a link, attachment, or pictures of wayfinding devices and/or plans, maps, or brochures for these walking tours.

- [x] Walking maps (e.g., neighborhood maps, school route maps, city-wide maps, trails and greenways, etc.)

Link to relevant material:

http://www.flagstaff.az.gov/index.aspx?NID=152

Description:

The Flagstaff Urban Trails and Bikeways Map is a comprehensive map of FUTS trails and on-street bikeways. The map also features the routes of the Arizona Trail and Loop Trail through Flagstaff, connections to nearby single-track trails in the adjoining national forest, bus stops, steep hills, and watchable wildlife sites in town.

About 15,000 copies of the map have been given away every year since 2006. The cost of printing has been underwritten by Blue Cross Blue Shield of Arizona since 2006.

The map is also available in a digital version, geo-referenced for use with Avenza's PDF Maps app for smartphones and tablets. More than 1000 digital copies have been downloaded since it was made available in 2014.

The City also publishes a public art map, which has locations and descriptions of more than 40 works around town. The map shows FUTS trails to encourage walking and biking to public art locations.

Safe walking maps have been created by the Coconino County Safe Routes to School program and are distributed to each elementary school within the Flagstaff Unified School District.

- [ ] Wayfinding and route signs for pedestrians

Question 5

Please briefly describe any ciclovia/Sunday Parkways/open streets or similar events in your community. Include information about the target audience, nature, frequency, scope, and results of these events. Provide any relevant links and attachments, if available.

The Flagstaff Arts Council sponsors First Friday ArtWalk - each first Friday of the month, art galleries and businesses in downtown Flagstaff open their doors from 6-9 pm with special art exhibitions, performances, live music, food and other activities. The event has become immensely popular with both locals and visitors, and is described by the organizers as Flagstaff'monthly street party.

http://flagartscouncil.org/artwalk/

Flagstaff Community Markets are held once a week at two locations (downtown on Sundays, east side on Wednesday evenings) from May through October

http://www.flagstaffmarket.com/

Question 6

Please briefly describe any other education or encouragement programs affecting walking in your community.

Flagstaff Walks! is an annual series of events organized every fall since 2005 by the City's Pedestrian Advisory Committee to celebrate Flagstaff's walkability and to raise awareness of pedestrian issues.

2015 events included:

Arizona Trail Day

Second annual celebration of the Arizona Trail, and Flagstaff as a gateway community. Features food, music, and a variety of exhibits and information. A group walk along the trail was led by local walking advocate Jack Welch.

Park(ing) Day

Six parking spaces along Mike's Pike were converted to temporary parks to promote social interaction, civic engagement, and people-oriented streetscapes. Organized by the City's Sustainability program and the Geography and Public Planning school at NAU.

Science in the Park – Visibility and Reflectivity for Pedestrians

Pedestrian Advisory Committee staffed an exhibit at Science in the Park and explore how visibility and reflectivity can help make pedestrians safer. Part of the Flagstaff Festival of Science series of events.

Flagstaff Community Market - Pedestrian Advisory Committee booth

PAC has a table for three weekends at the Flagstaff Community Market, and discuss a variety of pedestrian issues with the public.

Geology Walk

A walking tour of central Flagstaff to show how earth and human history meet in the walls of Flagstaff's lovely stone buildings. Guided by Marie Jackson, author of the book "Stone Landmarks".

Picture Canyon Walk

Guided, 3-mile hike explores ruins, petroglyphs, the restored channel of the Rio de Flag, and Flagstaff's only waterfall at the Picture Canyon Preserve.

Public Art Walk

Walking tour of public art in Downtown and the Southside, led by Mark DiLucido with the City's community design program.

Progressive Breakfast with the PAC

A fun walk combines a tour of downtown Flagstaff with a progressive breakfast from local eateries. Walkers are invited to visit with the Pedestrian Advisory Committee about concerns on walking issues.

Mural Walk

Three-mile walking tour will feature 20 murals around downtown and the southside, and will be led by local walking advocate Jack Welch.

Geocaching/Letterboxing/Benchmark Hunting

A guided activity to learn about the world of treasure hunting with GPS, and the basics of the three sports as an activity for all ages.

International Walk to School Day

Organized by Coconino County Injury Prevention and SafeKids. More than 1000 kids participate.

Crossing Guard Appreciation Day

Held in conjunction with Walk to School Day; teachers, parents, and kids are invited to show appreciation to local crossing guards. Included a proclamation from the Mayor of Flagstaff.

15-Minute Makeover - Sidewalk Clean Up

The PAC invited the public to help clean a section of FUTS trail near downtown. Part of the 15-minute makeover at 1O:15 on 10-15.

Last updated 12/15/2015

Engineering

Designing, engineering, operating, and maintaining quality roadways and pedestrian facilities is a critical element in producing a Walk Friendly Community. Designers and engineers have a diverse array of design elements and ever-developing technologies at their disposal that provide a safer, inviting, and more accessible street for pedestrians. These benefits aren't limited to pedestrians. By accommodating pedestrians in all roadway designs, roads become safer for all users. Therefore, it should be essential that pedestrian engineering and design tools are used throughout your community, including sidewalk accommodations and standards, crossings and intersections, traffic calming, trail design, and newer, innovative treatments.

Question 1

Which of the following standards, if any, are included in your municipality's sidewalk design specifications? Please provide a link or attachment of the municipality's sidewalk design standard specifications.

- [x] Sidewalks at least 5' wide in residential areas, 10' – 30' in commercial zones
- [x] Required buffer zone between sidewalk and street
- [x] Level and continuous sidewalks at driveways so that driveways do not look like roadways

Sidewalk design link:

http://www.flagstaff.az.gov/DocumentCenter/Vie

Sidewalk design file upload:

Choose File No file chosen

Question 2

Estimate the percent of arterial and non-arterial streets that have sidewalks on both sides of the road, one side of the road, or have paved shoulders (minimum of 4 ft) in your community.

Sidewalks on both sides — Arterials:	41.3
Sidewalks on both sides — Non-Arterials:	53.9
Sidewalks on one side - Arterials:	24.9
Sidewalks on one side - Non-Arterials:	17.7
Paved shoulders ≥ 4' — Arterials:	17.4
Paved shoulders ≥ 4' — Non-Arterials:	3.0

Please enter the following information about your road network:

What is the mileage of your total road network?

312

How many miles of sidewalks are in your pedestrian master plan?

345

How many miles of new sidewalk did you construct last year?

0.37

How many miles of new sidewalk did you construct in the last three years?

1.5

How many miles of new sidewalk do you plan to construct in the next three years?

same

Question 3

Describe the following inventories and update processes for your community.

Sidewalk inventory:

The City recently completed a comprehensive GIS inventory of sidewalks in Flagstaff. The inventory covers all public streets, private streets, parks, and the NAU campus.

Curb ramp inventory:

Curb ramps have not been inventoried

Please describe your community's sidewalk retrofit policy to fill gaps, repair sidewalks, and provide new sidewalks as needed.

Since 2004, the City has replaced sidewalk panels and curb ramps as part of its regular street maintenance program when work is done on the adjoining street. Sidewalks and curb ramps are repaired or replaced when they do not meet ADA guidelines, typically when cracks or heaves create a vertical deflection of more than one-quarter inch.

Adjoining sidewalks and curb ramps are repaired or replaced when the street project is a reconstruction or mill and overlay. Adjoining sidewalks and curb ramps are not repaired when the street is chip-sealed or seal-coated. Since 2004, the City has installed 513 curb ramps and replaced a little over 3 miles of sidewalk via this process.

In 2014, Flagstaff voters approved a dedicated sales tax to fund the Road Repair and Street Safety program, which provides $100 million over the next 20 years for preventative and deferred maintenance on all City-maintained streets. Adjoining sidewalks and curb ramps will be repaired or replaced using the same methodology and criteria described above. During the 2015 construction season, 92 curb ramps were installed or replaced and just under a mile (5148 linear feet) of sidewalk was replaced.

The City also provides a small amount ($15,000 annually) to assist residential property owners with sidewalk repair and replacement of the public sidewalk abutting their property. Like many places, Flagstaff City Code assigns responsibility for maintenance and upkeep of the public sidewalk to the adjoining property owner. To reduce the burden, the City will pay for half of the cost when sidewalk repair or replacement is necessary. Last year about 600 linear feet of sidewalk were replaced through this program.

What is the annual line item for sidewalk maintenance in your community's budget?

$15,000

Estimate the percent of intersections that have ADA accessible ramps on all four corners.

90

Estimate the percent of sidewalks that need to be repaired or replaced.

25

Does your community have a program to install curb ramps?

- [x] Yes

How many ramps are installed per year? 92

How many ramp installations are planned for next year? same

Does your community have a program to repair and replace broken sidewalks?

- [x] Yes

How many locations (or linear feet) were fixed last year? 5148

How many repairs are planned for next year? same

Is there a method for residents to report missing or broken sidewalks and curb ramps?

☑ Yes

Please explain the report process (e.g., on-line complaint form):

Citizens can report broken sidewalks via the City's on-line Citizen Report Tracker system (http://www.flagstaff.az.gov/index.aspx?nid=2708). This system also works with smartphones and tablets. Sidewalk Repair is one of the available standard forms.

Question 4

Please indicate the number of bridges or overpasses in your community and how many of those provide for pedestrians through shoulders, sidewalks, or multiuse paths.

Number of Bridges (excluding freeways):	6
Number of Bridges with pedestrian provisions on at least one side:	5
Number of Pedestrian overpasses (or bridges):	1
Number of Pedestrian underpasses:	9

Identify the last three bridges built (or major reconstruction) in your community, and do the bridges provide pedestrian provisions on at least one side?

Bridge Number 1

Enhancements were made last summer to the Country Club bridge over I-40 to install a concrete 10-foot FUTS trail along the east side of the roadway leading to and away from the bridge. There is an existing 6-foot sidewalk across the bridge which could not be widened to 10-feet due to space limitations; however the existing fencing along the outside of the sidewalk, which curved in over the sidewalk, was replaced with a more vertical fence to provide a more open feel for trail users.

Bridge Number 2

J.W. Powell bridge over I-17 was refurbished two years ago. The bridge was not made wider, but the the edge stripe was moved to narrow travel lanes and create a 4-foot shoulder. There are no other ped or bike facilities on the bridge.

Bridge Number 3

The Fourth Street bridge over the BNSF tracks was built ca 2005 with bike lanes on both sides, a sidewalk on one side, and a FUTS trail on the other.

Identify bridges currently under design. Do the bridges provide pedestrian provisions on at least one side?

The City has submitted an application for a TIGER grant to rebuild two bridges along Fourth Street over I-40. If funded, the design will include bike lanes on both sides, a sidewalk on one side, and a FUTS trail on the other.

Question 5

Does your community maintain a pedestrian signalling system?

☑ Yes

Please briefly describe initiatives your community has taken to ensure or improve pedestrian access, safety and convenience at signalized intersections. Provide a link or attachment of the relevant policy or ordinance, if available.

Description:

All signalized intersections in the City include ped-head signals with countdown and ped push buttons, and curb ramps.

Link to policy or ordinance:

Upload policy or ordinance:

Choose File No file chosen

Do you provide pedestrian recall (pedestrians receiving a walk signal during every phase without using a push button) in high pedestrian corridors?

(•) Yes ( ) No

If yes, when and where?

All City signals in downtown Flagstaff have pedestrian recall.

Please describe any passive pedestrian detection (e.g. video, microwave) in your community.

Passive detection for the RRFB is used in the middle of ped refuge islands installed on Fourth Street and Lone Tree Road.

Approximately what percentage of intersections have accessible pedestrians signals with audible walk indications?

0

Approximately what percentage of intersections have pushbutton-integrated accessible pedestrians signals with audible and vibrotactile indications?

0

What is the average walk speed used to determine signal timing?

3.5

Do you use right-turn-on-red restrictions? If yes, when and where?

No

Do you use Leading Pedestrian Intervals? If yes, when and where?

Yes, at one intersection (Beaver and Butler)

What is your maximum cycle length in your downtown?

90 sec

What is your maximum cycle length in your community?

110 sec

What speed is traffic progress for in downtown?

17 mph

What is the longest pedestrian crossing that you have?

130 feet (north leg of Lake Mary Road and Beulah Blvd)
115 feet (north leg of Fourth Street and Route 66)

What is the policy on displaying Walk signals (e.g. > 12 seconds or 25% of cycle length)?

Walk signals are typically displayed for 4-7 seconds, although the actual time varies by location. A pedestrian countdown phase follows, with enough time to cross the distance at 3.5 feet/second (not including yellow and red phases).

What percentage of intersections have countdown signals?

100 at City signal

Question 6

Please briefly describe initiatives your community has taken to ensure or improve pedestrian access, safety and convenience at crosswalks. In your description please address the following questions. Provide a link or attachment of the relevant policy or ordinance, if available.

Description:

Over the past several years, the city has used Highway Safety Improvement Program funds to upgrade transverse pavement markings (crosswalk markings and stop-bars) at more than 300 intersections city-wide. Crosswalk marking have been changed from the traditional parallel lines to ladder-style. The project also upgraded materials to longer-lasting, more-durable thermoplastic and MMA markings.

Link to policy or ordinance:

Upload policy or ordinance:

Choose File No file chosen

How are marked crosswalk locations selected?

The City uses NCHRP 562 for guidance regarding where crosswalks should be marked

What is your standard crosswalk marking type (e.g., parallel lines, ladder style, high visibility, etc.)?

Ladder

Please describe your crosswalk inventory and update process:

Existing marked crosswalk locations were inventoried as part of the HSIP transverse pavement markings project

Are crosswalk markings regularly maintained?

◉ Yes ○ No

Describe:

Annually, on average

☐ Are in-road stop/yield signs used?

Are advance stop/yield lines placed at multilane uncontrolled marked crosswalks in order to reduce multiple threat crashes?
◉ Yes ○ No

Describe:

Advanced yield markings (sharks teeth) and MUTCD Yield Here to Pedestrians (R1-5 or R1-5a) are used in advance of RRFB beacons

Are there other pedestrian safety practices being used at crosswalks?

Passive detection has been used in the median island at a few RRFB locations. This automatically sends a call to the RRFB device to begin flashing and does not require the pedestrian to press a second button for the second stage of the crossing.

Are pedestrian hybrid beacons and rectangular rapid flash beacons used? Please describe when and where (e.g. in close proximity to schools, bus stops, trail crossings, etc.):

RRFB locations:

Fourth Street at W.L. Gore (mid-block crossing where a major employer's campus straddles a busy street)

Butler Avenue at Humphreys Street (uncontrolled intersection on the edge of the NAU campus along a busy student walking route)

Cedar Avenue at Ellen Street (uncontrolled intersection near middle and elementary schools)

Fourth Street at Third Avenue (uncontrolled intersection near bus stop)

Fourth Street at Dortha Avenue (uncontrolled intersection near bus stop, community health center)

Lone Tree Road at Brannen Street (uncontrolled intersection at FUTS crossing)

Lone Tree Road at Coconino Comm College (mid-block crossing at bus stop, community college campus)

Pedestrian hybrid beacons (HAWK) locations:

West Street at Dortha Avenue (uncontrolled intersection near Coconino High School)

Question 7

Does your community design and build its own roadways?

☑ Yes

What geometric features are being used to ensure or improve pedistrian access, safety and convenience? In your description please address the following questions. Provide a link or attachment of the relevant policy or ordinance, if available.

Are median crossing/refuge islands used? Is there a standard or typical roadway that these are used on? How many have been installed in the last three years (on new roadways or retrofits)? Are any more planned?

Link to island policy:

Description:

Median crossings/refuge islands are used, although there is not a formal standard in place for when they are required or should be used.

Crossing/refuge islands have been installed in 4 locations in the last three years, in conjunction with the installation of RRFBs:

Fourth Street at Dortha
Fourth Street at Third
Lone Tree Road at Brannen
Cedar Avenue at Ellen

Do you routinely install curb extensions? How many have been instaled in the last three years? Are any more planned?

Link to curb extension policy:

Description:

None have been installed in the last 3 years. Curb extensions were installed on most corners in downtown Flagstaff in the mid 90s, and on commercial streets in the Southside neighborhood about 5 years ago.

Curb extensions have been added or lengthened at a few central locations to accommodate bus stops.

Additional curb extensions are planned at a few locations in the Southside neighborhood to narrow crossings and realign skewed intersections in response to a proposed major student housing project.

What is the standard curb radius (10',15',20',25',30',35') for local, collector, and arterial streets?

Link to curb radius policy:

http://www.flagstaff.az.gov/DocumentCenter/Vie

Description:

Arterial: 30 feet
Collector: 20 feet
Local: 15 feet

What other geometric design features are implementeed for pedestrian safety?

Link to other design features:

http://www.flagstaff.az.gov/DocumentCenter/Vie

Description:

Median landscape islands are used occasionally on multi-lane roads

Parkway strips between the sidewalk and curb are required via the Engineering Standards

Wider sidewalks are required when high pedestrian volumes are anticipated

Curb and gutter are required for all streets

Minimum driveway spacing standards are listed in the Engineering Standards

---

Has your community taken initiatives to increase safety for people crossing the street at bus stops that are not located at signalized intersections?

Link to bus stop policy:

Description:

Bus stops locations are reviewed case-by-case for site-specific measures to enhance pedestrian access. Median islands and RRFBs have been installed on Fourth Street and Lone Tree Road to serve bus stops not at signalized intersections.

Please describe your community's use of multi-modal level of service in the 2010 Highway Capacity Manual. Please include information on standards, goals, and the hierarchy of pedestrian/transit/bicycle/vehicular LOS used to evaluate and design streets and intersections in your community.

City has tried to use it in few cases, but found that it does not work well. Typically the installation of a 5 or 6-foot sidewalk per standards is sufficient to meet LOS A or B for peds. Ped level of service falls below A or B only in a few select location, like busier areas downtown. In these locations, high ped volumes are not indicative of a problem.

Question 8

Please briefly describe your community's traffic calming practices and/or policies and cite any relevant examples. Traffic calming practices may include road diets, lane diets (reduction in lane width) or streets with a pedestrian focus. Provide any relevant links or attachments, if available.

Description of practices:

The City's Guidebook for Residential Traffic Management describes a detailed process for citizens to initiate traffic calming measures in their neighborhood or on their street. See question below for additional information.

Link to calming practices document:

http://www.flagstaff.az.gov/DocumentCenter/Vie

Please describe any recent road diets:

Lanes were narrowed on several streets in order to accommodate bike lanes

Beulah Boulevard between Woodlands Village Boulevard and McConnell Drive

Columbus Drive between Humphreys Street and San Francisco Street

Please describe your traffic calming methods including typical treatments and site selection and prioritization:

The process for selecting streets and neighborhoods for traffic calming is citizen-driven and initiated by submitting a citizen action request form.

Staff evaluates the request, collects relevant data, and meets with representatives of the neighborhood. Staff then drafts a list of proposed traffic calming measures, which is based on the least intrusive/least expensive methods that will address the issues. Non-engineering solutions are considered first, including:

Warning/caution signs
Speed limit signs
Pavements markings and striping
Neighborhood block watch
Police presence
Radar trailers

Potential engineering solutions include:

Warning signs/striping
Speed humps, speed tables, raised intersections
Curb extensions
Traffic circles
Median barriers with lane narrowing
Discontinuous one-way streets
Diverters and channelized turn-barriers
Chokers and chicanes
Street closures

Once a strategy is selected, the plan is circulated in the neighborhood and must obtain 60% approval from property owners and/or residents in the affected area. The proposal is then reviewed by the City's Transportation Commission during a public hearing.

As part of the review process, the street or neighborhood is scored on a variety of primary and contributing factors, and must meet minimum threshold criteria to qualify as a potential traffic calming project. Primary factors include speed, excessive speeds, traffic volume, and cut-through traffic volume. Contributing factors include the presence of schools, pedestrian generators, high-density housing, major streets, bike lanes and FUTS trails, and sidewalks.

What is the maximum speed limit at traffic signals in your community?

40 mph (or same as entering roadway speed limit)

Do you have school zones and reduced speed limits? Please describe:

School zones have a maximum speed limit of 15 mph while school is in session, in accordance with state statutes. School zones are statutorily defined on all streets adjacent to schools, and are posted with mobile, in-traffic speed limit signs during school hours.

What is the posted speed of the majority of the arterial roads in your comunity?

30, 35 or 40 mph, depending on design and context

Question 9

Please briefly describe any other engineering projects or policies affecting walking in your community.

The City's "Safe Sidewalk" ordinance requires property owners adjacent to public sidewalks to keep the sidewalk clear and free of snow and other obstructions. The ordinance was amended in 2008, and again in 2013 to clarify requirements and make enforcement easier.

The ordinance requires adjoining property owners to remove snow from public sidewalks within 24 hours of a storm event. Per the 2013 amendments, code enforcement officials can notify property owners of a violation by posting the property (leaving a small notice of violation sign on a stake in a snowbank). If the property owner does not clear the snow withing 24 hours of the notice, the City can hire outside crews to remove the snow and charge the property owner.

The same enforcement process is used for sidewalks blocked by trash cans, overgrown vegetation, parked cars, and debris.

Between July of 2014 and July of 2015, City enforcement staff investigated and issued a total of 262 violations of the ordinance. Property owners voluntarily complied in approximately 90 percent of the cases. For the remaining cases the City hired outside crews to remove the snow or other obstruction.

Last updated 12/15/2015

Enforcement

In many communities, enforcement is often neglected as a technique for making communities safer for walking. Communities that have created comfortable walking environments through engineering improvements or urban design features may still have safety concerns if traffic laws are not properly understood or adequately enforced. Enforcement activities work best when implemented in conjunction with education and awareness activities. Therefore, well-implemented enforcement campaigns will include public education campaigns, law enforcement officer training, and strategic law enforcement and ticketing strategies. A successful enforcement program will usually require the involvement of community members, law enforcement officials, city council members, and the media.

Question 1

Does your community have a traffic safety division/unit within the Police Department?

(•) Yes ( ) No

Does your community have police patrols on foot or bike? If so, please describe (include the number of officers that are bike patrol certified).

Flagstaff Police Department has 5 patrols on foot or bike. Six officers are currently certified through The International Police Mountain Bike Association (IPMBA). FPD has just been awarded a grant to purchase 3-4 new bicycles for officers to patrol.

Please estimate the number of patrol officers and amount of time that is devoted to responsibilities concerning pedestrian

laws and safety:

The numbers vary by month, and can range from 2 to 8 officers. Time devoted to pedestrian safety also varies.

Question 2

Does your community use targeted enforcement programs to ensure the safety and security of pedestrians in crosswalks and on city streets, trails, and walkways? Indicate which of these elements, if any, are part of the enforcement program.

- [x] Yes

Indicate which of these elements, if any, are part of the enforcement program.

- [x] Targeted pedestrian crossing operations (e.g., use of plain-clothed "decoy pedestrian" officers to enforce motorist yielding laws):
  Definition: From walkinginfo.org: These are well-prepared and coordinated operations designed to warn motorists that the yield-to-pedestrian laws will be enforced at target locations. Officers prepare a site by establishing the safe stopping distance to a crosswalk, with a 10 mi/h over the speed limit leeway. Cones are set out in that location. An officer in plain clothes steps into the crosswalk just before a vehicle passes the cone. If the motorist doesn't yield, either a warning or a citation is given, based on the severity of the incident.

  Please describe the extent and frequency of the operation (include how sites are selected):

  Every month the traffic safety division focuses on a different objective depending on empirical evidence of collisions and other issues. Each morning officers use a map in the meeting room to pin “high activity” areas where enforcement will be increased. High pedestrian activity areas and high pedestrian crash areas are sometimes targeted.

- [ ] Media campaigns regarding enforcement

- [ ] Speed feedback signs

- [x] DUI Checkpoint operations

  Please describe the extent and frequency of operations (include how sites are selected):

- [x] Targeted speed enforcement

  Please describe the extent and frequency of operations (include how sites are selected):

  Based on empirical data and observations, FPD identifies problem areas and targets speeding. New radar guns were purchased earlier this year. FPD now has 10-12 radar guns, enough for every patrol.

- [ ] Progressive ticketing
  Definition: From walkinginfo.org: Progressive ticketing is a method for introducing ticketing through a three-staged process: educating, warning, and ticketing.

- [ ] Emergency call boxes

- [x] Other

  Please describe:

FPD initiated a pedestrian safety campaign on December 1 that will last for 3 months. The campaign is in response to a higher-than-normal number of pedestrian deaths - 5 so far in 2015. The campaign will target failure to yield on the part of motorists, risky crossing behaviors for pedestrians, and intoxicated pedestrians.

Question 3

Please list the number of citations given for the following infractions:
Failure to yield to pedestrians:

30 since 2011

Parking on sidewalks or too close to intersections or crosswalk:

1

☐ Does your community use photo enforcement technology that targets speeding and/or red light running?

Explain:

Question 4

Please briefly describe your community's policies and practices regarding the use of adult crossing guards at elementary and middle schools. Include any information about the criteria for placement of adult crossing guards, training programs, crossing procedures, crossing guard signs and equipment, and law enforcement strategies at crossing guard locations.

Crossing guards at FUSD schools are typically facilities employees or volunteers. Training is not provided; however Coconino County Injury Prevention has been working with FUSD to implement a short, annual training session that uses a Maricopa Association of Governments (MAG) training video for crossing guards.

Provide a link or attachment of any relevant policies, if available.
Link:

File upload:

Choose File No file chosen

Question 5

Do police work regularly with traffic engineers and planners to review sites in need of safety improvement for motorists and pedestrians?

☑ Yes

Describe:

The City's Traffic Engineer works with FPD to evaluate high crash locations and potential countermeasures. FPD attends the City's Transportation Commission meetings, where problem locations and solutions are often discussed.

Does your community use crash and/or fatality data to identify problem areas and potential solutions?

◉ Yes ○ No

Describe:

The City recently complete a draft of a comprehensive report on pedestrian and bicycle crashes - http://www.flagstaff.az.gov/documentcenter/view/47871

Does your community use a Data-Driven Approach to Crime and Traffic Safety (DDACTS) to understand the overlap between hi-crime and traffic safety concerns?

○ Yes ◉ No

If so, describe ay DDACTS training you have undertaken and/or the process you use to prioritize traffic safety in relation to other police interests:

Question 6

Please describe any other ways that your community's police department addresses the pedestrian concerns in your community.

Since Flagstaff is a “Dark Sky City” many pedestrian crashes occur because the limited light output causes pedestrians to be more difficult to see at night. If pedestrians are found at fault in crashes, we offer a diversion course, free of charge, to educate about safe practices concerning brighter clothing, predictable actions and particularly tenuous locations. Attendance has been 80+.

Last updated 12/15/2015

Evaluation

By incorporating planning, education, encouragement, engineering, and enforcement countermeasures, a community can have a direct impact on pedestrian safety and walkability. Evaluation of the pedestrian environment and behavior plays a crucial role in problem identification and countermeasure selection. In order to truly understand local pedestrian needs and safety issues, a community should utilize effective evaluation strategies.

Question 1

Does your community have an ongoing pedestrian counting and/or survey program that allows for long-term trend analysis of walking trips?

☑ Yes

Please describe (including first year of program, frequency, number of sites, etc.):

The Flagstaff Metropolitan Planning Organization conducted a trip diary survey in 2006 and 2012, which collected detailed information on walking and bicycling trips. The survey will be conducted again in 2017 and every 5 years after that.

http://www.flagstaff.az.gov/index.aspx?nid=2713

Question 2

Has your community used any of the following tools to evaluate major pedestrian areas (town centers, major activity areas, routes to school, etc.) in order to identify problem areas and potential solutions?

☑ Walkability Checklists (please describe when and where):

Formal walkability assessments have been conducted in two neighborhoods (La Plaza Vieja and the Fourth Street corridor) in 2008 and 2009.

Informal walkability and safe routes to school assessments have been conducted at a variety of locations in past several years, including the Sunnyside neighborhood, Ponderosa Trails neighborhood around Mountain School, at Basis School, and in the neighborhood around Kinsey School.

☑ Pedestrian Intersection Safety Index (please describe when and where):

The FMPO has developed a Pedestrian Environment score to measure the quality of the walking environment along street segments and at intersections. For intersections, the score includes the following factors:

Number of pedestrian crashes
Volume of traffic
Traffic control
Presence/quality of crosswalk markings
Number of traffic lanes
Speed limit
Islands or bulb-outs
Presence of curb ramps
Crossing limitations/prohibitions
Corner radii

Pedestrian environment scores have been calculated for all intersections of major roads (collector and arterials), a total of 267 intersections in the City. The results are being used in the the City's pedestrian and bicycle master planning process, and the FMPO's Regional Transportation Plan update, to help identify and prioritize pedestrian improvements.

☑ Pedestrian Level of Service (LOS) (please describe when and where):

The Pedestrian Environment score described above is also used to measure the quality of the walking environment along street segments. For street segments, the score includes the following factors:

Presence of pedestrian buffers (parkways, on-street parking, bike lanes)
Presence of sidewalks
Traffic speed
Traffic volume
Number of lanes/width of road
Presence/quality of median
Functional class of road

Pedestrian environment scores have been calculated for all major road segments (collector and arterials) in the City. The results are being used in the the City's pedestrian and bicycle master planning process, and the FMPO's Regional Transportation Plan update, to help identify and prioritize pedestrian improvements.

☐ Pedestrian Road Safety Audit Guidelines and Prompt Lists (please describe when and where):

☐ Health Impact Assessment (please describe when and where):

☐ Smart Growth Scorecards (please describe when and where):

☐ Web-based or smartphone applications for resident feedback and input(please describe):

☑ Other Evaluation Tools:

Please describe:

The City recently completed an analysis of mode share trends and comparison to mode share in peer communities.

http://www.flagstaff.az.gov/documentcenter/view/46972

The trends analysis uses two available sources of data - the FMPO Trip Diary Survey and the American Community Survey (one-year and three-year averages) for measuring mode share in Flagstaff. The trends analysis allows us to assess the status of alternative transportation and determine if things are improving or not.

The peer community comparison identifies 15 communities that are comparable to Flagstaff, based on population, location in the western US, and presence of a large public university, and compares means of transportation to work data from the American Community Survey for walking, biking, and transit. The analysis also compares Flagstaff to state and national mode share averages. This allows us to benchmark against other communities and set realistic goals and targets for mode share.

Question 3

Does your community routinely conduct pre/post evaluations of road projects and traffic calming with respect to pedestrian crashes, volumes and motor vehicle speeds?

◉ Yes ○ No

If yes, please explain when this is typically done and provide a recent example:

Pre and post evaluations are not done routinely for all projects, but have been done in a few specific cases to assess the effectiveness of the project:

In two neighborhoods - Bow and Arrow and La Plaza Vieja - data was collected on vehicle speeds and crashes before

and after a neighborhood traffic calming program. The data that was collected did not specifically include pedestrian data.

Speed and crash data was also collected before and after a new FUTS trail crossing was installed at at Beal Road.

Along Fourth Street, pedestrian counts were collected before and after two temporary median refuges were installed. The counts were used to validate the most effective locations for the refuges, which are now under construction in a permanent location and configuration.

Question 4

Using Walk Score, please type in the address for your City Hall and provide the following information:

City Hall Walk Score:
87

City Hall Transit Score:
not available

Top 10% Walk Score for your communiity:
(located at the bottom of the Walk Score web page)
not available

Average Walk Score for your community:
(located at the bottom of the Walk Score web page)
33

Please provide the Overall Sprawl Score for your community's metropolitan region:
not available

Question 5

Please describe any other ways that your community evaluates pedestrian accommodation, walking rates, and pedestrian safety.

Last updated 12/15/2015

Additional Questions

Question 1

What are the three primary reasons your city deserves to be designated as a Walk Friendly Community?

Newly adopted Regional Plan and Zoning Code: since Flagstaff first applied for and received Walk Friendly Community status in 2010, the community has adopted a new Regional Plan and Zoning Code, both of which support and promote walkability. As a follow-up to the Regional Plan, the City and FMPO are working on an updated Regional Transportation Plan as well as a Pedestrian and Bicycle Master Plan. These sub-documents will bring an additional level of refinement to the goals and policies of the Regional Plan and identify specific strategies, programs, and projects to help make Flagstaff more walkable.

Flagstaff Urban Trails System: FUTS is a city-wide network of more than 50 miles of nonmotorized, shared-use pathways that are used extensively for both recreation and transportation. The system connects neighborhoods, employment, shopping, schools,parks and open space; and provides an incredibly diverse range of experiences. According to the City of Flagstaff Citizen Survey of 2009, 78 percent of Flagstaff residents have used the FUTS trail system in the last year.

The Road Repair and Street Safety program: in 2014 Flagstaff voters approved a dedicated sales tax that will provide $100 million over the next 20 years for maintenance of streets. As part of the program, sidewalks and curb ramps will be replaced when the adjoining street is reconstructed or milled/overlaid. This program will significantly benefit sidewalk maintenance. Last year alone, 92 curb ramps and almost a mile of sidewalks were repaired or replaced.

Question 2

What are the three aspects of your community most in need of improvement in order to accommodate pedestrians?

Completion of the primary system of FUTS trails and missing in-fill segments of partially complete trails

A comprehensive plan that identifies deficiencies and needed pedestrian enhancements, including missing sidewalk segments, enhanced street crossings, and grade separations. Flagstaff's transportation tax expires in 2020, and over the next several years there will be considerable discussion about how to renew it and for what it will be used. It will be imperative to have a solid pedestrian plan in place so that pedestrian considerations have a significant role in those discussions.

Flagstaff needs a formal design process for streets that incorporates tenets of context sensitive design and complete streets, so that pedestrian travel and activity are prioritized or provided at a higher level of service where appropriate.

Question 3

How can your community leverage its designation as a Walk Friendly Community to increase the number of people walking and make walking safer?

Designation as a Walk Friendly Community will help bring national/international recognition to Flagstaff as a walkable, livable, and sustainable community, which in turn helps increase visitation and bolsters our tourism-based economy.

Designation and recognition will allow us to be more successful in securing grants, bond revenues, and budget allocations for pedestrian and trail projects and programs.

For the community, designation will promote awareness of our walkable character and foster appreciation for pedestrian issues. This works to encourage people to walk more,and makes it more likely that they will be supportive of pedestrian issues.

Walk Friendly Communities | **Renewal Application 2022**

City of Flagstaff
28 February 2021

Please state your community's name and state (e.g., Walktown, California)

Flagstaff, Arizona

Please describe how your community is responding to the WFC program's primary recommendations for improving your overall walkability. If you have been unable or chosen not to implement these changes, please describe why.

Some of the City's current efforts are intended to address feedback from our 2010 WFC application. The City does not have a formal report card from our 2015 renewal application.

Missing sidewalks/sidewalk coverage. The City has conducted an comprehensive inventory of missing sidewalks on public streets, identified missing sidewalks along major streets, and prioritized projects to complete the most-needed. At grade and enhanced crossings were similarly inventoried and prioritized. As a result of these efforts, funding has been secured through the transportation sales tax and first mile/last mile grant.

Sidewalk maintenance/replacement. The City is in the process of reviewing policies and practices for sidewalk maintenance and replacement, including identifying new funding opportunities. This effort is on-going.

Crash rates. The City regularly collects and reviews pedestrian and bicycle crash data. A formal report was made available in 2015, and updated in 2019. The City is working on strategies to use this information to advance pedestrian safety.

Education and encouragement. Local programs were curtailed somewhat by the pandemic; but there is renewed interest in expanded education and encouragement programs as a result of the City's carbon Neutrality Plan and Active Transportation Master Plan.

What are the areas most in need of improvement to increase the walkability of your community?

Construction closures and detours. The City needs a more thorough process and supportive standards and guidelines for reviewing requests to close sidewalks, bikeways, and FUTS trails for construction.

Snow removal. Keeping sidewalks and curb ramps clear of snow during winter storms is an on-going challenge.

Sidewalk maintenance and replacement program. City funding for the sidewalk replacement program has been increased over the last few years, but is still less than is needed to have an impact.

Education and encouragement. The City has historically had a strong interest in infrastructure, but less of an emphasis on other programmatic elements to support walking.

What are your community's greatest accomplishments in the last 5 years?

Transportation sales tax (Prop 419). In 2018, Flagstaff voters approved an extension of a transportation sales tax for another 20 years (2020-2040). A total of $29 million in anticipated revenues from the tax are dedicated to pedestrian and bicycle projects.

First Mile Last Mile grant funding. In 2020, Mountain Line transit was awarded an FTA Section 5307 grant for $5.5 million to improve pedestrian and bicycle facilities in support of transit. Mountain Line and the City are working cooperatively to plan and deliver projects with the funds.

Carbon Neutrality Plan (CNP). Adopted by the City Council in 2021, following declaration of a climate emergency in 2020. The CNP establishes a goal to reduce Flagstaff's emissions by 44% by 2030; and targets the transportation sector, which accounts for an estimated 30% of GHG emissions in Flagstaff. The CNP calls for a fundamental shift in transportation that decreases dependence in cars, reduces vehicle miles travelled, and significantly shifts trips to walking, biking, and transit.

Active Transportation Master Plan (ATMP). A draft plan was released for public review in September of 2021; adoption is anticipated in the first half of 2022. The ATMP will serve as a detailed guide for enhancing walking and biking in Flagstaff. A long list of prioritized pedestrian and bicycle projects – sidewalks, bikeways, FUTS trails, crossings, bridges and tunnels – is also included.

Please describe what your community has done, if anything, to support and encourage walking as part of your COVID-19 pandemic response.

During the summers of 2020 and 2021, several downtown streets and alleys were closed completely or partially to create space for outdoor gathering and dining space.

Please provide the latest walking and public transportation percentages of commuting to work from the most recent 5-year estimates from the American Community Survey. This information can be found by visiting http://factfinder.census.gov/

Year	2019
Walking %	11.2
Public Transit%	1.8

Please describe any other pedestrian volume or count data that you are collecting. Include a description of your count locations, how this is being collected, and how this data is being used.

Trail counts. The City's Parks and Recreation Dept conducts regular trail counts along several FUTS segments.

StreetLight data. The city has collected processed cellphone data at a variety of locations with a limited access subscription to StreetLight data. This data has yet to be processed and analyzed.

ADOT ped/bike counts. In the fall of 2017, ADOT conducted pedestrian and bicycle counts at four locations on state roads in Flagstaff.

MetroPlan Trip Diary Survey. MetroPlan (formerly the Flagstaff Metropolitan Planning Organization) has conducted a trip diary survey every six yeas (2006, 2012, 2018) that includes walking and biking mode share information.

MetroPlan traffic model. MetroPlan is the process of updating its regional traffic model to incorporate predicted pedestrian and bicycle trips.

Number of pedestrian-involved motor vehicle crashes

2016	25
2017	27
2018	18
2019	31
2020	25

Number of pedestrian injuries in pedestrian-motor vehicle crashes

2016	16
2017	15
2018	9
2019	21
2020	17

Number of pedestrian fatalities in pedestrian-motor vehicle crashes

2016	3
2017	0
2018	4

2019 4
2020 4

What long-term trends in walking volumes and pedestrian-motor vehicle crashes has your community observed?

Walking volumes. American Community Survey data indicates that the walking percentage for commute trips has increased moderately but consistently over the past 10 years. Walking mode share numbers from the Trip Diary Survey have been steady since 2006. However, the Trip Diary Survey shows dramatic increases (almost 9 percentage points) in walking trips in the central core of Flagstaff since 2006, while walking trips in the rest of Flagstaff have decreased by 3.5 percentage points.

Pedestrian crash numbers. Pedestrian-involved crashes have steadily declined since 2001, including a more marked decrease since 2015. These trends are also seen in bicycle crashes and motor vehicle crashes since 2001.

Please describe the progress in implementing your pedestrian (or other relevant) plan. Does your plan include performance measures and benchmarks and have you made progress towards them?

A public draft of the City's Active Transportation Master Plan was released for public review in September of 2021. Approval by the City Council is anticipated in the first half of 2022.

The document includes six targets for mode share, pedestrian and bicycle crashes, and walk friendly/bike friendly designations over a five-year and 20-year timeframe.

Please describe any guiding policy statements and goals your community has and provide an update on the progress of implementation (e.g., Vision Zero, Complete Streets, etc.).

The Active Transportation Master Plan includes a number of goals and policies that provide additional detail and guidance for the more general goals and policies already in the City's Regional Plan. A more thorough review of progress will be possible following adoption of the ATMP.

Countermeasure Installation. Please provide the number of installations of the following treatments in the last five years. You may add any relevant comments about your use (or non-use) of a countermeasure.

Rectangular Rapid- Flashing Beacons
None since 2015

Pedestrian Hybrid Beacons
Route 66/Blackbird/Metz
Leading Pedestrian Intervals
None
Road Diets (Lane Reductions)
Fremont Blvd in Cheshire neighborhood (in planning)
Medians or Pedestrian Crossing Islands
None since 2015
Speed Reduction Strategies (e.g., traffic calming, speed limit reductions, etc.)
Traffic calming projects:
Several streets in La Plaza Vieja neighborhood (complete)
University Ave in Boulder Point neighborhood (interim)
Woodland Dr in Brannen neighborhood (interim)
Mt. Pleasant Dr in Country Club neighborhood (in planning)
Country Club Dr in Country Club neighborhood (in planning)
Curb Extensions
Along Clay Ave in La Plaza neighborhood

Have you conducted safety evaluations for any countermeasures listed above?

Generally crash data is collected prior to implementation, and will be collected again a few years after completion.

What education and encouragement programs have you implemented over the past 5 years? This may include Safe Routes to School, increased staff training, Open Streets events, creating a new inter-departmental task force, etc.

The City hosted an FHWA Designing for Pedestrian Safety workshop in October of 2019. The two-day workshop was attended by planners and engineers from the City of Flagstaff, Coconino County, ADOT, and other transportation agencies in the region.

The Coconino County Injury Prevention program continues to operate a limited Safe Routes to School program, even though state funding for the program has not been available for several years. The County organizes annual events in conjunction with International Walk-to-School Day, and conducts several educational activities.

City staff in the Transportation section attend regular webinars (approximately monthly) on issues related to pedestrian accommodation and safety.

The JWalkers group recently restarted its series of walks, following a pandemic-related hiatus, as successor to the popular Walk the Walk program. JWalkers are group of volunteers who organize several walks each month around Flagstaff for both fun and education.

The Flagstaff Walks! series of pedestrian-related events has been suspended for the last several years due to the pandemic. However, the City's Pedestrian Advisory Committee recently began planning to resume events in fall of 2022.

Representatives from the Flagstaff Police Department now regularly attend the Pedestrian Advisory Committee and Bicycle Advisory Committee meetings. PD's traffic enforcement section continues targeted enforcement efforts, including speeding, red light running, and failure to yield. The department also deploys offices on a foot in the Downtown area , and on e-bikes to patrol the City's FUTS system.

The City has convened an internal Expanded Use of Right-of-Way (EUROW) committee to review opportunities for alternative use of street space.

Have you been able to use your WFC designation and/or the Report Card feedback to leverage funding or other support for programs to improve your community's walkability? Please explain.

The WFC program and report card was used to leverage support for additional funding to complete missing sidewalks on major streets. In 2018, Flagstaff voters approved an extension of the transportation sales tax, which includes $29 million over 20 years for pedestrian and bicycle projects. In advance of the proposition, a detailed inventory of existing sidewalks and a prioritized list of missing sidewalks was developed, partially in response to the report card from our original application.

The program has also raised awareness of the need to address pedestrian crashes and sidewalk maintenance. The City continues to work on these issues.

How can the WFC program better help you and your community?

The report card and feedback from the original application has been useful, in part because it provides a third-party review and perspective of walkability in Flagstaff. Additional detailed feedback from our application is welcome.

It may also be helpful to reach out to individuals in Flagstaff (outside of government) for their perspective and thoughts on walkability in Flagstaff in general and our (future) application in particular, as a way of hearing from additional voices, getting an on-the-ground view, and drawing more people locally into the process.