NOTICE AND AGENDA

PLANNING & ZONING COMMISSION
WEDNESDAY
JULY 23, 2025

COUNCIL CHAMBERS
211 WEST ASPEN AVENUE
4:00 P.M.

To participate in the meeting virtually use the following link:

Join the Meeting Online

The public can submit comments that will be read at the dais by a staff member to CDPandZCommission@flagstaffaz.gov

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 Commission and to the general public that, at this meeting, the Commission may vote to go into executive session, which will not be open to the public, for legal advice and discussion with the Commission'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 Commission Members may be in attendance telephonically or by other technological means.

CAROLE MANDINO, CHAIR
JOSHUA MAHER
CHRISTINE SHEEHY
CJ LUCKE
MARY NORTON, VICE CHAIR
IAN SHARP
MEGAN WELLER

3. PUBLIC COMMENT

At this time, any member of the public may address the Commission on any subject within their jurisdiction that is not scheduled before the Commission on that day. Due to Open Meeting Laws, the Commission cannot discuss or act on items presented during this portion of the agenda. To address the Commission on an item that is on the agenda, please wait for the Chair to call for Public Comment at the time the item is heard.

4. APPROVAL OF MINUTES

Approval of the minutes from the regular meeting on Wednesday June 25, 2025.

5. PUBLIC HEARING

A. Public Hearing:

PZ-22-00109-04: A Direct to Ordinance Zoning Map Amendment request from ViewPoint Engineering on behalf of Red Oak Development Group to rezone approximately 13.82 acres located at 2951 S Masonic Lane from the Rural Residential (RR) zone within the Resource Protection Overlay Zone (RPO) and Suburban Commercial (SC) zone within the RPO to the Medium Density Residential (MR) zone within the RPO.

STAFF RECOMMENDED ACTION:

Staff recommends the Planning & Zoning Commission forward the request to the City Council with a recommendation approving **PZ-22-00109-04**, subject to the following conditions which will be included into the zoning map amendment ordinance:

1. The subject property must be developed in accordance with the approved site plan and the conditions of approval dated May 9, 2024. Modifications (other than minor modifications) to the approved site plan will require an amendment to this Direct to Ordinance Zoning Map Amendment request.
2. All other requirements of the Zoning Code and other City codes, ordinances, and regulations, shall be met by the proposed development.
3. All terms, conditions, and restrictions detailed within the "Pinehaven Development Agreement" must be fully satisfied.
4. In the event the property is rezoned and the Developer 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 Rural Residential (RR) and Suburban Commercial (SC) in accordance with A.R.S. § 9-462.01.

B. Public Hearing: CUP Extension Request (PZ-24-00046) - Mountain View Baptist Church

At the June 26, 2024 meeting, the Commission approved a Conditional Use Permit request from Mountain View Baptist Church to establish a new 6,674 sq. ft. building, which includes a place of worship with more than 250 seats, office rooms, and meeting rooms. Places of worship with more than 250 seats require a Conditional Use Permit (CUP) in the Rural Residential (RR) zone. The applicant is requesting an extension of 180 days maximum.

STAFF RECOMMENDED ACTION:

Staff recommends that the request for the CUP extension be granted by the Planning and Zoning Commission with the original requirements included in Conditional Use Permit No. PZ-24-00046 and as follows:

1. The development of the site shall substantially conform to the plans as presented with the Conditional Use Permit application and with the Site Plan as approved by the Inter-Division Staff on January 9, 2024. Modifications to the approved site plan shall require additional review by the IDS team.

6. GENERAL BUSINESS

A. A request for Preliminary Block Plat approval for Canyon del Rio Phase 2 located at 3200 E Butler Avenue within the Single-family Residential (R1) zone and the Medium Density Residential (MR) zone.

STAFF RECOMMENDED ACTION:

Staff recommends the Planning and Zoning Commission, in accordance with the findings presented in this report, forward the Preliminary Block Plat for Canyon del Rio Phase 2 to the City Council with a recommendation of approval with the following conditions:

1. The final plats for each phase shall be in substantial conformance with the preliminary plat including the phasing plan and map (sheets PH01 and PH02) of the preliminary Block Plat of Canyon del Rio Phase 2. Each phase and parcel of the Canyon del Rio plat must meet all requirements independently.
2. The Final Plat for Canyon del Rio Phase 2 must meet the conditions of approval in the IDS approval comment letter dated June 5, 2025, as well as the conditions of approval of both the Traffic Impact Analysis dated April 2, 2025, and the Whetstone Memo dated July 10, 2025.

7. MISCELLANEOUS ITEMS TO/FROM COMMISSION MEMBERS

8. 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. This notice has been posted on the City's website and can be downloaded at www.flagstaff.az.gov.

Dated this _____ day of _____, 2025.

_____
Alaxandra Pucciarelli, Commission Liaison

Planning & Zoning Commission 4.
Meeting Date: 07/23/2025
From: Nancy Corbin-Fuller, Administrative Specialist

Information

TITLE:
APPROVAL OF MINUTES

Approval of the minutes from the regular meeting on Wednesday June 25, 2025.

STAFF RECOMMENDED ACTION:

Executive Summary:

Attachments

P&Z minutes

MINUTES

PLANNING & ZONING COMMISSION
WEDNESDAY
JUNE 25, 2025

COUNCIL CHAMBERS
211 WEST ASPEN AVENUE
4:00 P.M.

1. CALL TO ORDER

- Chair Mandino called the meeting to order at 4:01 p.m.

NOTICE OF OPTION TO RECESS INTO EXECUTIVE SESSION

Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the Commission and to the general public that, at this meeting, the Commission may vote to go into executive session, which will not be open to the public, for legal advice and discussion with the Commission'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 Commission Members may be in attendance telephonically or by other technological means.

PRESENT:	ABSENT:
CAROLE MANDINO, CHAIR	IAN SHARP
MARY NORTON, VICE CHAIR	MEGAN WELLER
JOSHUA MAHER	
CHRISTINE SHEEHY	
CJ LUCKE	

3. PUBLIC COMMENT

- None

At this time, any member of the public may address the Commission on any subject within their jurisdiction that is not scheduled before the Commission on that day. Due to Open Meeting Laws, the Commission cannot discuss or act on items presented during this portion of the agenda. To address the Commission on an item that is on the agenda, please wait for the Chair to call for Public Comment at the time the item is heard.

4. APPROVAL OF MINUTES

Approval of the minutes from the regular meeting on Wednesday May 28, 2025.

Moved by Christine Sheehy, **seconded by** CJ Lucke to approve of the minutes from the regular meeting on Wednesday May 28, 2025.

Vote: 5 - 0 - Unanimously

5. GENERAL BUSINESS

A. Discussion:

PZ-25-00041: Single Use Residential in Commercial Zones and Adaptive Reuse Incentives -- This amendment proposes to allow single use residential projects without a Conditional Use Permit in commercial zones with the provision of at least 20% affordable housing units. Additionally, the amendment provides further incentives for adaptive reuse projects.

STAFF RECOMMENDED ACTION:
No staff recommendation. Discussion item only.

- Tiffany Antol, Zoning Code Manager, presented and answered the Commissioners' questions.
- Jennifer Mikelson, Housing Planning Manager, presented and answered the Commissioners' questions.
- Public comment given by Charity Lee with Capstone Homes.

B. Consideration and Approval of Preliminary Plat:

Request from EPS Group, Inc, on behalf of CDR Devcorp LTD, for Preliminary Plat approval of "Canyon del Rio- The Highlands" located at 3805 E Whetstone Dr, a 141-lot single-family subdivision on 27.07 acres in the Medium-Density Residential (MR) Zone.

STAFF RECOMMENDED ACTION:
Staff recommends the Planning and Zoning Commission, in accordance with the findings presented in this report, forward the Preliminary Plat to the City Council with a recommendation of approval.

- Ben Mejia, Senior Planner, gave a PowerPoint presentation and answered the Commissioners' questions.
- Applicant, Charity Lee, answered the Commissioners' questions.

Moved by Mary Norton, **seconded by** Joshua Maher to approve the Planning and Zoning Commission, in accordance with the findings presented in this report, forward the Preliminary Plat PZ-00015-01 to the City Council with a recommendation of approval.

Vote: 5 - 0 - Unanimously

6. MISCELLANEOUS ITEMS TO/FROM COMMISSION MEMBERS

- None

7. ADJOURNMENT

- Meeting was adjourned at 4:59 p.m.

SIGNATURE LINE

_____
CHAIRPERSON

Planning & Zoning Commission 5. A.
Meeting Date: 07/23/2025
From: Ben Mejia, Planner

Information

TITLE:
Public Hearing:
PZ-22-00109-04: A Direct to Ordinance Zoning Map Amendment request from ViewPoint Engineering on behalf of Red Oak Development Group to rezone approximately 13.82 acres located at 2951 S Masonic Lane from the Rural Residential (RR) zone within the Resource Protection Overlay Zone (RPO) and Suburban Commercial (SC) zone within the RPO to the Medium Density Residential (MR) zone within the RPO.

STAFF RECOMMENDED ACTION:
Staff recommends the Planning & Zoning Commission forward the request to the City Council with a recommendation approving **PZ-22-00109-04**, subject to the following conditions which will be included into the zoning map amendment ordinance:

1. The subject property must be developed in accordance with the approved site plan and the conditions of approval dated May 9, 2024. Modifications (other than minor modifications) to the approved site plan will require an amendment to this Direct to Ordinance Zoning Map Amendment request.
2. All other requirements of the Zoning Code and other City codes, ordinances, and regulations, shall be met by the proposed development.
3. All terms, conditions, and restrictions detailed within the "Pinehaven Development Agreement" must be fully satisfied.
4. In the event the property is rezoned and the Developer 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 Rural Residential (RR) and Suburban Commercial (SC) in accordance with A.R.S. Â§ 9-462.01.

Attachments

Staff Report
Application
Area Context Map
Legal Notice
Project Narrative and Regional Plan Analysis
WSIA
Preliminary Drainage Report
Traffic Impact Statement
Citizen Participation Plan, Record of Proceedings, Emails from Public
Approved Site Plan & NRPP
Landscape Plan

PLANNING AND DEVELOPMENT SERVICES REPORT
DIRECT TO ORDINANCE ZONING MAP AMENDMENT

PUBLIC HEARING
PZ-22-00109-04

DATE: **July 3, 2025**
MEETING DATE: **July 23, 2025**
REPORT BY: **Ben Mejia**

REQUEST:
Direct to Ordinance Zoning Map Amendment requested by ViewPoint Engineering on behalf of Red Oak Development Group to rezone approximately 13.82 acres located at 2951 S Masonic Lane from the Rural Residential (RR) zone within the Resource Protection Overlay Zone (RPO) and Suburban Commercial (SC) zone within the RPO to the Medium Density Residential (MR) zone within the RPO.

STAFF RECOMMENDATION:
Staff believes that the proposed Zoning Map amendment is in substantial conformance with the required findings and recommends the Planning & Zoning Commission forward the 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 May 9, 2024. Modifications (other than minor modifications) to the approved site plan will require an amendment to this Direct to Ordinance Zoning Map Amendment request.
2. All other requirements of the Zoning Code and other City codes, ordinances, and regulations, shall be met by the proposed development.
3. All terms, conditions, and restrictions detailed within the "Pinehaven Development Agreement" must be fully satisfied.
4. In the event the property is rezoned and the Developer 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 Rural Residential (RR) and Suburban Commercial (SC) in accordance with A.R.S. § 9-462.01.

PRESENT LAND USE:
The subject property ("Property") is approximately a 13.82-acre vacant parcel. S Masonic Lane bisects the site in the form of an access easement providing connection from the Pinnacle Pines subdivision to E Zuni Drive.

PROPOSED LAND USE:
The applicant proposes to develop the site with an 83-unit multiple-family development with associated parking, landscaping, and amenities.

NEIGHBORHOOD DEVELOPMENT:
See the attached area context map.

North: Vacant parcel, zoned Public Facility (PF) and Suburban Commercial (SC)
East: College/University, zoned PF
South: Single-family home subdivision, zoned MR; Vacant parcel, zoned High-Density Residential (HR)
West: Vacant parcel, zoned PF

I. Project Introduction

A. Background/Introduction

The request was filed by ViewPoint Engineering on behalf of Red Oak Development Group for a Direct to Ordinance Zoning Map Amendment. The proposal would rezone approximately 13.82 acres located at 2951 S Masonic Lane from the RR zone within the RPO and SC zone within the RPO to the MR zone within the RPO.

The subject property is vacant land located along E Zuni Drive and S Lone Tree Road and is bisected by S Masonic Lane, which serves as access to the Pinnacle Pines subdivisions. The applicant proposes an 83 unit multiple-family development consisting of townhome-style buildings which cluster units in 20 groups of 4 and 5. The development proposes a financial contribution to the City's Affordable Housing Fund totaling $1,802,413.83. This contribution is in lieu of constructing 10 Category 1 affordable units at 12% of the total unit count in order to utilize the affordable housing incentives for a reduction to resource protection. The project plans to be developed in two construction phases; Phase 1 consists of all development to the west of S Masonic Lane and Phase 2 consists of all development east of Masonic Lane. Phase 1 will construct 40 units and public improvements along E Zuni Drive. The entirety of the trail proposed for civic space will be constructed at part of Phase 1. Phase 2 will construct the remaining 43 units to the east of Masonic Lane and public improvements along S Lone Tree Road.

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, the applicant can proceed directly to construction plans and building permit review.

B. Proposed Rezoning and Development Plan

The applicant requests rezoning approval to permit the construction of a multiple-family development consisting of 83 units. Upon rezoning approval, the applicant intends to subdivide the units as condominiums. The site layout includes 20 townhome-style structures in clusters of 4 and 5 units and a resident clubhouse. The following unit composition is proposed:

Unit Type	Unit Count	Composition
Two Bedroom	9	11%
Three Bedroom	72	87%
Four Bedroom	2	2%

The MR Zone allows a density range of 6-9 units/acre in the RPO outside of an activity center. The Regional Plan has designated the site as Suburban Neighborhood area type, which has an allowable density range of 2-13 units/acre. The gross density of this project is 6 units/acre and is within the allowable density for the MR Zone and the Suburban Neighborhood area type.

II. Staff Site Plan Review

On May 9, 2024, Inter-Division Staff (IDS) approved an application for Site Plan Review of the proposed development subject to a successful Direct to Ordinance Zoning Map Amendment request. 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 13.82 acres will be rezoned to the MR zone within the RPO. Development of the site will be conditioned to the approved site plan, the final development agreement, and the additional conditions stated above. 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, common 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 includes townhome-style units in groups of Four and five side-by-side units located along a central drive aisle running east-west through the site. The proposal utilizes a common space amenity area surrounding the site which serves as a buffer to E Zuni Drive, S Lone Tree Road, and the neighboring subdivision to the south. The common area includes a walking trail for public use, which meets the civic space requirement at the time of site plan review.

ii. Resource Protection

The subject site is within the RPO. The Zoning Code requires 50% of the tree resources to be saved. This project utilizes an Affordable Housing incentive for resource protection which allows a 35% reduction to the required forest resource preservation for projects with 12% Category 1 affordable housing units. Use of this incentive reduces the required forest resource protection rate to 32.5%, the developer proposes to save 33.6% of the existing forest resources. The majority of the preserved forest resources are located along the northern and southern property lines within the common space area. This proposal meets all slope preservation requirements. This site is not within a protected floodplain.

iii. Common Space & Civic Space

The MR zone requires 15% of the gross lot area to be Common Space (Table 10-40-30.030.G). A minimum of 87,802 square feet of common space is required for the proposed residential project. The approved site plan identifies 87,981 square feet of common space. Common space is proposed to serve as a buffer around the site. Access to common space is provided by the trail network with trailheads distributed throughout the site.

At the time of review for the site plan, Section 10-30.60.090.B.1 of the Zoning Code required developments with 50 or more dwelling units to provide a minimum of 5% of the site as Civic Space. A total of 29,268 square feet of civic space is required. The site plan identifies a total of 39,450 square feet, or 6.7% of the site, toward civic space within the residential development. The civic space is proposed as a walking trail that runs through the forested common space area encompassing the development. A pinecone-inspired amenity structure provides a seating and viewing area along the trail.

iv. Pedestrian and Bicycle Circulation Systems

The approved site plan includes 5-foot-wide sidewalks along the central drive aisle. Sidewalks internal to the site are provided to the north of Drive “B” and connect to off-site sidewalks along all driveway access points from E Zuni Dr, S Masonic Ln, and S Lone Tree Road. Residents to the south of Drive B and along Drive B2 will rely on the internal drives to provide pedestrian connection to the nearest sidewalk.

Five-foot wide sidewalks and a bicycle lane will be constructed along the project's entire E Zuni frontage as part of this development's improvements to E Zuni Dr.

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 prioritizes resource protection along the rights-of-way and provides a buffer between the site and the adjacent neighborhood to the south. This resource protection buffer around the site maintains visual continuity of the forested areas surrounding the site and serves as an extension of the common space areas in Pinnacle Pines.

Scale refers to similar or harmonious proportions, overall height and width, the visual intensity of the development, and the building massing. The surrounding existing developments are primarily townhomes and a manufactured home park. The townhome-style structures are grouped in clusters of 4 and 5 units, breaking up the massing so that facades are generally 75 feet or less. The maximum height of 35 feet is comparable to the maximum height permissible in surrounding zones. The density of approximately 6 units/acre and the townhome-style buildings are compatible with the town-home development to the south of the site in Pinnacle Pines.

Continuity encompasses patterns of development and scale, but also site development, building forms, texture, materials, details, and colors. The proposal is consistent with Architectural Design Standards requirements for exterior materials and light reflectance values by using stone veneer and batten board siding with darker, low reflectance paint.

vi. Landscaping

A preliminary landscaping plan, showing all landscape areas, plant locations, plant species, and sizing was reviewed and approved with the approved site plan application. The preliminary landscaping plan meets the requirements of parking lot, street buffer, 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 II and is allowed a total of 30,000 lumens per acre. Outdoor lighting plans are not required in conjunction with a Direct to Ordinance Zoning Map Amendment and 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, 188 spaces are required. This project provides 189 parking spaces including three ADA accessible parking spaces throughout the site. Two ADA parking spaces are provided in the driveway for both accessible units. Parking spaces for each unit are provided within one-car garages and driveways. Garages are not included for the accessible units; two driveway parking spaces are provided for the accessible units. There are 25 surface parking spaces dispersed throughout the site for guest use. While the project is eligible for parking reductions for proximity to proposed bus stops and affordable housing, this project meets the base parking requirements without any reductions.

ix. Historic/Cultural Resources

The Historic Preservation Officer reviewed this project and made no comments or conditions.

B. Public Systems 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 is generally determined by the estimated peak hour trips generated by a development, per the Engineering Standards. The study of this site was based on the original proposal of 87 residential units and estimated peak hour trips of 48 vehicles/hour in the a.m. and 56 vehicles/hour in the p.m. According to the Standards, a Traffic Impact Statement (TIS) was sufficient. ViewPoint Engineering, the engineering consultant for the developer, completed the TIS in December of 2022.

Transportation Improvements

The project includes improvements to E Zuni Drive to meet City standards, the street section along the project frontage. Improvements along E Zuni Drive will include the following:

- A bicycle lane along the full frontage of E Zuni;
- Construction of curb and gutter along the full frontage of E Zuni;
- Construction of parkway along the full frontage of E Zuni, with the exception of approximately 150-ft to the east of Driveway A and between S Masonic Lane and S Lone Tree Road to protect existing slope resources;
- Construction of a five (5) foot wide concrete sidewalk along the full frontage of E Zuni;

Improvements along S Lone Tree Road will include the following:

- A right-turn lane into the project site;
- Construction of a five (5) foot wide parkway;
- Construction of a six (6) foot wide concrete sidewalk;

The project site is serviced by transit and proposes two bus stops along E Zuni Drive. The exact location of the bus stops will be coordinated with Mountain Line and finalized as part of the civil plans. Pedestrian access to the subject property is served by existing and proposed sidewalk along both rights-of-way.

ii. Water and Wastewater Impact

A Water and Sewer Impact Analysis (WSIA) was completed by the City on March 10, 2023 based on the original proposed count of 87 units. The proposed development is located within the City of Flagstaff urban growth boundary and is served by City water and sewer utilities. All public utilities are proposed within a 26-foot Public Utility Easement in the driveway on both sides of Masonic Lane.

Water

Currently, public water infrastructure exists across the property and in the adjacent roadways. There is a 12" water main in S Lone Tree Road, a 12" PVC water main in Zuni Drive and an 8" PVC water main in Masonic Lane. This main falls within the City of Flagstaff Pressure Zone 'B' and meets the minimum pressure requirements stated in the City of Flagstaff Engineering Standards.

New 8" water mains will be extended and looped on both sides of Masonic Lane in the PUE to provide water service to each unit. The water mains will have two fire hydrants and individual meters for each of the units.

Wastewater
The site is bordered by two existing sewer lines and a sewer line crossing the site in Masonic Lane. To the north of the project in Zuni Drive is a 21" VC sewer interceptor. An 8" sewer in Masonic Dr and a 10" PVC sewer in Lone Tree flow to this main. New 8" sewer mains will extend on both sides of Masonic Lane inside the PUE to provide sewer collection to each unit.

iii. Stormwater Analysis

The on-site stormwater system consists of a detention basin located central to the site along E Zuni Drive. As part of the rezoning request, a Drainage Impact Analysis was performed. The impact analysis studied the existing and proposed conditions. Results of the impact analysis show the proposed stormwater system has the capacity to mitigate and improve upon pre-development conditions based on analysis of 2-year, 10-year, and 100-year storm events.

III. Zoning Map Amendment Findings

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.

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 is 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 provide the framework for the density, intensities, and mix of uses within the area types.

The subject property is designated as Existing Suburban Neighborhood area-type. Suburban Neighborhood Characteristics include a density of 2-13 units per acre, low-rise apartments (generally accepted as three-story maximum), and open spaces used for passive recreation. The proposed development is consistent with density range supported by the Regional Plan area/place type and uses 3-story structures with typical heights of approximately 35 feet to achieve a low-rise development style.

ii. Applicable General Plan Goals and Policies

As part of its review, staff identified relevant Regional Plan Goals and Policies that could be applied to support or not support the proposed Zoning Map Amendment. The relevant goals and policies can be found below and within the developer's comprehensive plan analysis. The following is a discussion of how the project generally meets or conflicts with goals and policies in each relevant chapter.

a. Environmental Planning & Conservation (Air Quality, Climate Change and Adaptation, Dark Skies, Ecosystem Health, Environmentally Sensitive Lands, Natural Quiet, Soils, and Wildlife)

The Regional Plan encourages development to work with the existing landforms. Developments should step down sloped sites and preserve as much natural topography as possible. Policy E&C.9.2 states that construction projects employ strategies to minimize disturbed areas, soil compaction, soil erosion and destruction of vegetation. Policy CC.1.1 identifies the goal of preserving 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.

The site has considerable forest and slope resources which makes adherence to the resource protection standards challenging. This project utilizes an affordable housing incentive for a 35% reduction in the preservation rate of forest resources, bringing the required forest preservation from 50% to 32.5%. This development meets the reduced preservation requirement at a preservation rate of 33.6%. By focusing development along a central east-west axis through the site, the project minimizes disturbance to slope resources and concentrates forest resource protection along the periphery of the site to provide continuity to surrounding forest areas.

By incorporating walking trails through its forest preservation areas, this project meets Policy E&C.10.5. "Support the development of watchable wildlife recreation opportunities." This trail network will be available for public use for the enjoyment of the natural environment and resident wildlife.

b. Open Space

The project uses resource protection areas along the borders of the property to serve as buffer areas to neighboring uses, maintain continuity of the forest, and provide publicly available civic space to enjoy the natural environment. The design of this common space supports the following policies: Policy OS.1.3. "Use open spaces as natural environment buffer zones to protect scenic views and cultural resources, separate disparate uses, and separate private development from public lands, scenic byways, and wildlife habitats." Policy OS.1.4. "Use open space as opportunities for non-motorized connectivity, to interact with nature, and to enjoy the views and quiet."

c. Water Resources (Water Sources, Water Demand, Stormwater and Watershed Management, and Water Quality)

As shown on 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 and served by existing infrastructure.

The Drainage Impact Analysis studied the pre- and post-development conditions of stormwater flows and proposes an improvement to the impacts downstream of this site, meeting 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." The proposed development complies with the findings of the Drainage Impact Analysis discussed in the Public Systems Impact Analysis section of this report.

d. Efficient Use of Energy Goals and Policies

This project is fully electric and therefore meets Regional Plan Policy E.2.1. “Promote renewable energy sources that reduce demand upon fossil fuels and other forms of generation that produce waste.” Additionally, this project provides electric hookup locations in garages for each unit and two public-access charging stations on-site to promote the use of electric vehicles per Policy E.1.13. “Promote and encourage the use of fuel-efficient vehicles that use renewable fuels.”

The Regional Plan Policy E.1.5 promotes the expansion of energy-efficient modes of transportation. The improvements to E Zuni Drive as part of this project include the construction of a new sidewalk and a bike lane along the project frontage where there currently is none. This will encourage the use of non-motorized transportation along E Zuni Drive creating safe separation between these modes of transportation and vehicles on the road.

The project includes a bike share program for residents to rent bicycles at no cost. The number of bikes and whether they will be e-bikes or not will be determined by the applicant and coordinated with the City’s Sustainability office for compliance.

The project includes two new bus stops which provide new opportunities for the use of public transportation. The developer encourages the use of public transportation by offering bus pass reimbursement for homeowners to purchase two adult bus passes for the first year of ownership and promoting Mountain Line's EcoPass for Educators program.

e. Community Character (Scenic Resources and Natural Setting, Heritage Preservation, Community Design, and Arts, Sciences and Education)

This project proposes buildings designed at a scale comparable to the existing neighborhood of Pinnacle Pines to the south of the project site, with maximum heights of 35 feet and wall plane lengths generally not exceeding 75 feet. The project is designed to blend with the existing neighborhood in conformance with Policy CC.3.2. “Maintain and enhance existing buildings and blend well-designed new buildings into existing neighborhoods.”

The project incorporates an accessory structure with a sculptural design inspired by the shape of a pinecone to serve as a rest and amenity area along the publicly accessible walking trail. By blending a functional space with artistic design, the project promotes Policy CC.5.3. “Encourage the integration of art into public and private development projects.”

To the north of this site is a parcel of land owned by the Arizona Board of Regents which is currently under review for the Kinsey Elementary School relocation. To the east of this site is the Coconino Community College. This project proposes the development of new sidewalk along the full frontage of E Zuni Drive and improvements to the existing sidewalk along S Lone Tree Road. Policy CC.5.4. requires that “Complete sidewalks and Flagstaff Urban Trails System connections for all schools, community colleges, and university campuses.” The construction of these sidewalk improvements will provide safer pedestrian connections to the adjacent schools in general conformance with this policy.

f. Growth Areas & Land Use (Reinvestment, Greenfield, Urban Area, Suburban Area, Rural Area, Employment Area, Special Planning Area, and Activity Centers)

The proposed development is on a vacant parcel within the urban growth boundary and adjacent to existing neighborhoods. The development of the infill parcel includes the required civic space, common

space, and pedestrian amenities, including public improvement along the street frontage. The requested rezoning promotes a more seamless transition between surrounding development, in conformance with Policy LU.3.4 "Promote transitions between urban, suburban, and rural areas with an appropriate change in development intensity, connectivity, and open space."

This request supports infill development within the urban growth boundary in support of Policy LU.5.1. "Encourage development patterns within the designated growth boundaries to sustain efficient infrastructure projects and maintenance." The proposal also supports 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".

E Zuni Drive does not currently have sidewalks or a bike lane along its entire length. This project includes the development of a new sidewalk and bike lane along E Zuni Drive and improved sidewalk along S Lone Tree Road, in conformance with Policy LU.13.1. "Prioritize connectivity for walking, biking, and driving within and between surrounding neighborhoods." The Bow and Arrow Trail runs along the northern edge of E Zuni Drive, providing some pedestrian connectivity in place of a sidewalk, however this trail is unpaved and cannot serve as an accessible substitute for sidewalk. The project's public improvements will shorten the gap between the neighboring properties to the west and the closest pedestrian/bicycle infrastructure on S Lone Tree Road.

g. Transportation (Mobility and Access, Safe and Efficient Multimodal Transportation, Environmental Considerations, Quality Design, Pedestrian Infrastructure, Bicycle Infrastructure, Transit, Automobile, Passenger Rail and Rail Freight, Air Travel, and Public Support for Transportation)

Policy T.1.6. promotes strategies that support alternate modes of travel. Policy T.2.1. promotes the design of infrastructure to provide safe and efficient transportation for vehicles, bicycles, and pedestrians. The proposed improvements to E Zuni Drive provide separation between competing modes of transportation and increase safety and potential use.

h. Neighborhoods, Housing, and Urban Conservation

This project includes a $1,802,413.83 contribution to the Affordable Housing Fund for the City to support affordable housing projects and incentives. This financial contribution provides the City with resources to give assistance throughout the City and supports the following policies:
Policy NH.3.5. "Encourage and incentivize affordable housing"
Policy NH.5.1. "Provide adequate resources for families with children experiencing homelessness"
Policy NH.5.2. "Provide adequate resources for individuals experiencing homelessness"

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 believes that the proposed amendment will add to the public good.

The developer has identified the following Community Benefits and Public Good:

i. The developer will provide improvements along E Zuni Drive and S Lone Tree Road, including new or improved sidewalk, parkway, and a bike lane.
ii. The developer will provide two bus stops serving both directions along E Zuni Drive.
iii. The developer will contribute to the City of Flagstaff Affordable Housing fund commensurate with 10 Category 1 affordable units or 12% total number of units at a total contribution of $1,802,413.83.

C. Finding #3

To meet the finding the affected site must be determined to be physically suitable in terms of design, location, shape, size, operating characteristics; and the provision of public and emergency vehicle access, public services, and utilities to ensure that the requested zone designation and the proposed or anticipated uses and/or development will not endanger, jeopardize, or otherwise constitute a hazard to the property or improvements in the vicinity in which the property is located.

Staff believes that the proposed application meets this finding. The Inter-Division Staff reviewed the application and concluded that the site was suitable for the proposed development. The IDS team based its conclusion on the review of all applicable codes and requirements as well as impact analysis for the site. Any potential impacts were mitigated by the developer and off-site improvements will be required to serve this development.

II. DEVELOPMENT AGREEMENT

A draft development agreement has been prepared. The primary purpose of this agreement is to set out roles and responsibilities in regard to the following (not limited to):

- Developer obligations for public improvements to rights-of-way
- Development Phasing
- Commitments to sustainability initiatives
- Restrictions on short-term rentals, no leases under 30 days
- Administration of the Affordable Housing Fund contribution payments

III. 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 developer held two neighborhood meetings in regard to this case on October 17, 2024 and November 21, 2024. Both meetings were held with in-person and virtual options for attendance. Per the meeting sign-in, approximately 17 individuals attended the first meeting, and 10 individuals attended the second meeting. Citizen Participation summaries, attached, were prepared in response to the questions, comments and concerns presented. The meetings included a presentation from the developer and a question-and-answer session where questions could be asked or typed into the chat. Comments on the project included the following topics: increase in density of the area, impacts to traffic, impacts to dark skies and natural environment, increased noise, the project's proposal to use a fractional ownership model, and timing for the project.

Ten emails from the public have been received as of the writing of this report and have been included with this agenda item. All correspondence either voiced opposition or concerns with the project such as traffic, concerns about parking, impacts to the natural environment, and concerns about fractional ownership or short-term rentals.

In response to neighbor participation, the applicants removed fractional ownership from their proposal. The applicant has included in their development agreement a restriction that prohibits leases under 30 days. Nothing in the development agreement precludes fractional ownership in the future.

RECOMMENDATION:

Staff recommends the Planning & Zoning Commission forward the request to the City Council with a recommendation approving PZ-22-00109-04, subject to the following conditions which will be included into the zoning map amendment ordinance:

1. The subject property must be developed in accordance with the approved site plan and the conditions of approval dated May 9, 2024. Modifications (other than minor modifications) to the approved site plan will require an amendment to this Direct to Ordinance Zoning Map Amendment request.
2. All other requirements of the Zoning Code and other City codes, ordinances and regulations, shall be met by the proposed development.
3. All terms, conditions, and restrictions detailed within the "Pinehaven Development Agreement" must be fully satisfied.
4. In the event the property is rezoned and the Developer 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 Rural Residential (RR) and Suburban Commercial (SC) in accordance with A.R.S. § 9-462.01.

Attachments:

- Application
- Area Context Map
- Legal Notice
- Project Narrative and Regional Plan Analysis
- WSIA
- Drainage Impact Analysis
- Traffic Impact Statement
- Citizen Participation Plan, Record of Proceedings, Emails from the Public
- Approved Site Plan Drawings and Natural Resource Protection Plan
- Landscape Plan
- Building Floor Plans and Elevations

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 Pinehaven			
Site Address 2951 Masonic Ln, Flagstaff, AZ 86005	**Parcel Number(s)** 103-26-002-D	**Subdivision & Lot Number**	**Site Acreage** 13.82
Existing Zoning District Rural Residential	**Proposed Zoning District** Medium Density Residential	**Existing Regional Plan Area and Place Type** Suburban Residenital	
Existing Use undeveloped land	**Proposed Use** Residential Multifamily		
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) Medium			

Property Owner(s) Thomas Staub - RedOak Development Group	**Phone** 737-717-3097
Mailing Address 2121 E 6th Street, Suite 203, Austin, TX, 78702 **City, State, Zip**	**E-mail** tom@redoakvc.com
Applicant(s) Eric Beals, ViewPoint Engineering, Director of Horizontal Design	**Phone** 737-717-3097
Mailing Address 2121 E 6th Street, Suite 203, Austin, TX, 78702 **City, State, Zip**	**E-mail** ebeals@viewpointengineering.com
Project Representative(s) Kentzie Mosley, ViewPoint Engineering, Project Engineer	**Phone** 940-655-4881
Mailing Address 2121 E 6th Street, Suite 203, Austin, TX, 78702 **City, State, Zip**	**E-mail** kmosley@viewpointengineering.com

Property Owner Signature (required)	Date	Applicant Signature	Date
Eric Beals	2/8/2024	Kentzie K Mosley P.E.	2/8/2024

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

PF
SC
E ZUNI DR
MR
HR
RR
E J W POWELL BLVD

NOTICE OF PUBLIC HEARINGS & DEVELOPMENT AGREEMENT

NOTICE IS HEREBY GIVEN that the Flagstaff Planning and Zoning Commission will hold a Public Hearing on Wednesday, July 23, 2025, at 4:00 p.m. and the Flagstaff City Council will hold a Public Hearing on Tuesday, August 26, 2025, at 3:00 p.m. in City Hall Council Chambers (211 W Aspen Ave). A virtual option will be provided for these meetings. Please see the corresponding agenda for additional information on how to participate virtually. Agendas can be found on the City of Flagstaff website. The public hearing is to consider the following:

A proposed amendment to the official City of Flagstaff zoning map to rezone 13.8 acres from Rural Residential (RR) and Suburban Commercial (SC) zoning with the Resource Protection Overlay (RPO) to Medium Density Residential (MR) zoning with the Resource Protection Overlay (RPO) for the purpose of allowing a multi-family residential development with 83 units.

NOTICE IS HEREBY GIVEN that the Flagstaff City Council will consider a Development Agreement on Tuesday, September 2, 2025 at 3:00 p.m. in City Hall Council Chambers (211 W Aspen Ave). A virtual option will be provided for this meeting.

General Description of the Affected Area:
Approximately 13.8 acres located at 2951 S Masonic Lane City of Flagstaff, Coconino County Assessor's Parcel Number 103-26-002D.

The Council hearing for these items may be continued if the Planning and Zoning Commission has not given a recommendation.

Interested parties may file comments in writing regarding the proposed amendment or may appear and be heard at the hearing dates set forth above. Maps and information regarding the proposed amendment are available at the City of Flagstaff, Planning and Development Services Section, 211 West Aspen Avenue.

PROPOSED ZONING MAP AMENDMENT
From Rural Residential (RR) and Suburban Commercial (SC) to Medium Density Residential (MR) for the purpose of allowing a multi-family development with 83 proposed units

PROPOSED DEVELOPMENT AGREEMENT
Pinehaven Development Agreement intended to facilitate the development of the property

ADDRESS:	**2951 S Masonic Lane**
APN:	103-26-002D
ACRES:	Approximately 13.8 Acres
	City of Flagstaff
	Coconino County

FOR FURTHER INFORMATION, CONTACT

Ben Mejia, Senior Planner
Planning & Development Services
211 West Aspen Avenue
Flagstaff, Arizona 86001
(928) 213-2616
Ben.Mejia@flagstaffaz.gov

Publish: July 5, 2025

ViewPoint Engineering

MAILING ADDRESS
2121 East Sixth Street, Suite 203
Austin, TX 78702
ph: 512.779.9464
www.viewpointengineering.com

July 3, 2024
via First Class Mail

Subject: **Notice of Public Hearings regarding**
Direct to Ordinance Zoning Map Amendment
2951 S Masonic Lane
VPE#: 22004

Dear Neighbor,

This letter is to notify you of the upcoming public hearings for a **Direct to Ordinance Zoning Map Amendment** request by the property owner, **RODG DT Pine Haven Horizontal LLC.** The site is located at **2951 S Masonic Lane**, a 13.8 acre property at the southeast corner of E Zuni Drive and S Lone Tree Road. The parcel is bisected by S Masonic Lane. The request is to rezone the parcel from the Rural Residential (RR) and Suburban Commercial (SC) Zone in the Resource Protection Overlay (RPO) to the Medium Density Residential (MR) Zone in the RPO to construct a multi-family development with 83 dwelling units as well as a clubhouse and public walking/hiking trails. Refer to the attached documents for additional site-specific information.

Any interested parties and/or authorized agents may attend the public hearings so that they be heard and offer comments. The meeting information is as follows:

Planning & Zoning Commission Meeting
- **Date:** .....July 23, 2025
- **Time:**.....4:00 pm
- **Location:**.....City Council Chambers, City Hall, 211 W Aspen Ave.
- Please direct written comments can be emailed to the city at CDPandZCommission@flagstaffaz.gov

City Council Public Hearing #1 – First Reading
- **Date:** .....August 26, 2025
- **Time:**.....3:00 pm
- **Location:**.....City Council Chambers, City Hall, 211 W Aspen Ave.
- Please direct written comments may be submitted to publiccomment@flagstaffaz.gov.

City Council Public Hearing #2 – Second Reading and Consideration of the Development Agreement
- **Date:** .....September 2, 2025
- **Time:**.....3:00 pm
- **Location:**.....City Council Chambers, City Hall, 211 W Aspen Ave.
- Please direct written comments may be submitted to publiccomment@flagstaffaz.gov.

Options for virtual attendance are available on the agenda of each public hearing. Agendas can be found on the City of Flagstaff website.

A complete application will be available for viewing during regular work hours at the Community Development Front Counter in City Hall. For more information about the public hearing, the application, or how to submit public comments, please contact Ben Mejia, Senior Planner with the City of Flagstaff.

Applicant Contact Information:

Contact: ..... **Marc Toth**
Title/Position: ..... **Design Manager**
Organization/Company: ..... **Viewpoint Engineering**
Phone Number: **737.717.3097**
Email Address: ..... **Pinehaven-Zone@viewpointengineering.com**

City Contact Information:

Contact: ..... **Ben Mejia**
Title/Position: ..... **Senior Planner**
Organization/Company: ..... **Current Planning Section; City of Flagstaff**
Phone Number: **928.213.2616**
Email:.....**Ben.Mejia@flagstaffaz.gov**

Thank you for your time, and we hope to see you at the meeting.

Sincerely,
ViewPoint Engineering

By: _____
Luke Caraway, PE, President

Attached: Project Description
Site Information
Location Map
FEMA Map
Zoning Map

cc: Client
File

https://viewpointengineering.sharepoint.com/sites/viewpoint/shared documents/vpls/horiz/22004 flagstaff 14/permitting/city/draft notice to property owners.docx

PROJECT DESCRIPTION

RODG DT Pine Haven Horizontal LLC (RODG) is proposing the development of the property located at 2651 S Masonic LN, a total of 13.82 acres. The project, Pinehaven, formerly Juniper Estates, (SITE) is an 83-unit condominium development with clubhouse. The site is currently zoned as a mix of rural residential (RR) and commercial suburban (SC).

The property in question is further identified parcel number 103-26-002-D. A project location map can be found in the appendix.

PLAN OVERVIEW

The project, Pinehaven, formerly Juniper Estates, (SITE) is an 83-unit condominium residential community. The project site is ±13.82 gross acres with ±5.12 acres developed and a proposed improvement density of 6.18 units per acre. (83 units/13.82 acres = ±6). Additionally, the project will construct a clubhouse, stormwater management basin and other associated infrastructure.

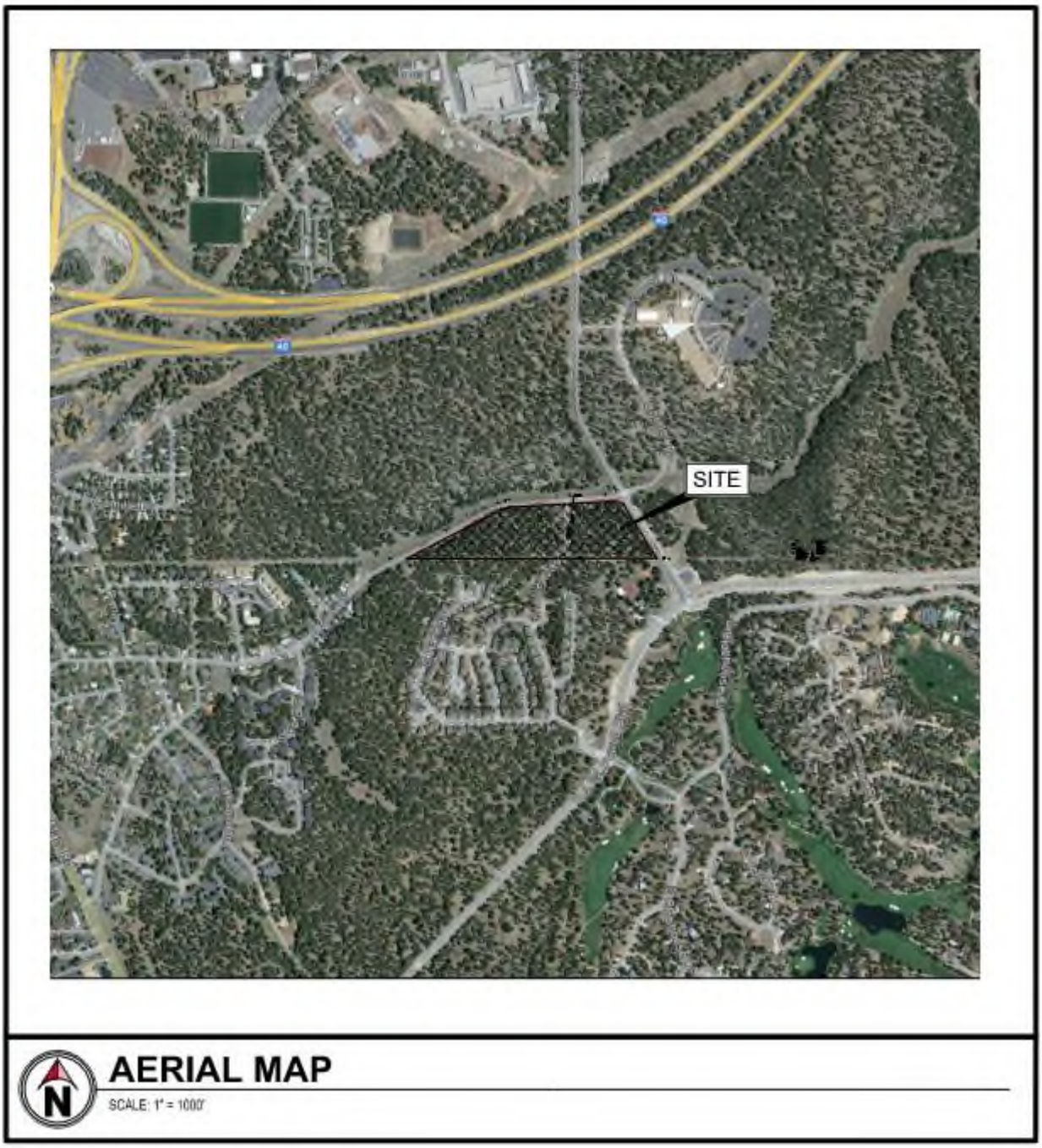
The project site is located on the southwest corner of E Zuni Drive and Lone Tree Road. The Site is bisected by Masonic Lane. To the south of the site is the Pinnacle Pines development consisting of condominium style townhomes. To the west of the site is the National Forest. To the north and the east of the site is vacant undeveloped land that has been purchased by the board of regents for Northern Arizona University.

The SITE will have four (4) access points. Two of the access points will be off Masonic Ln. There will be additional access from Zuni Dr and Lone Tree Rd. These access points will provide access for pedestrians, bicyclists, and motorists.

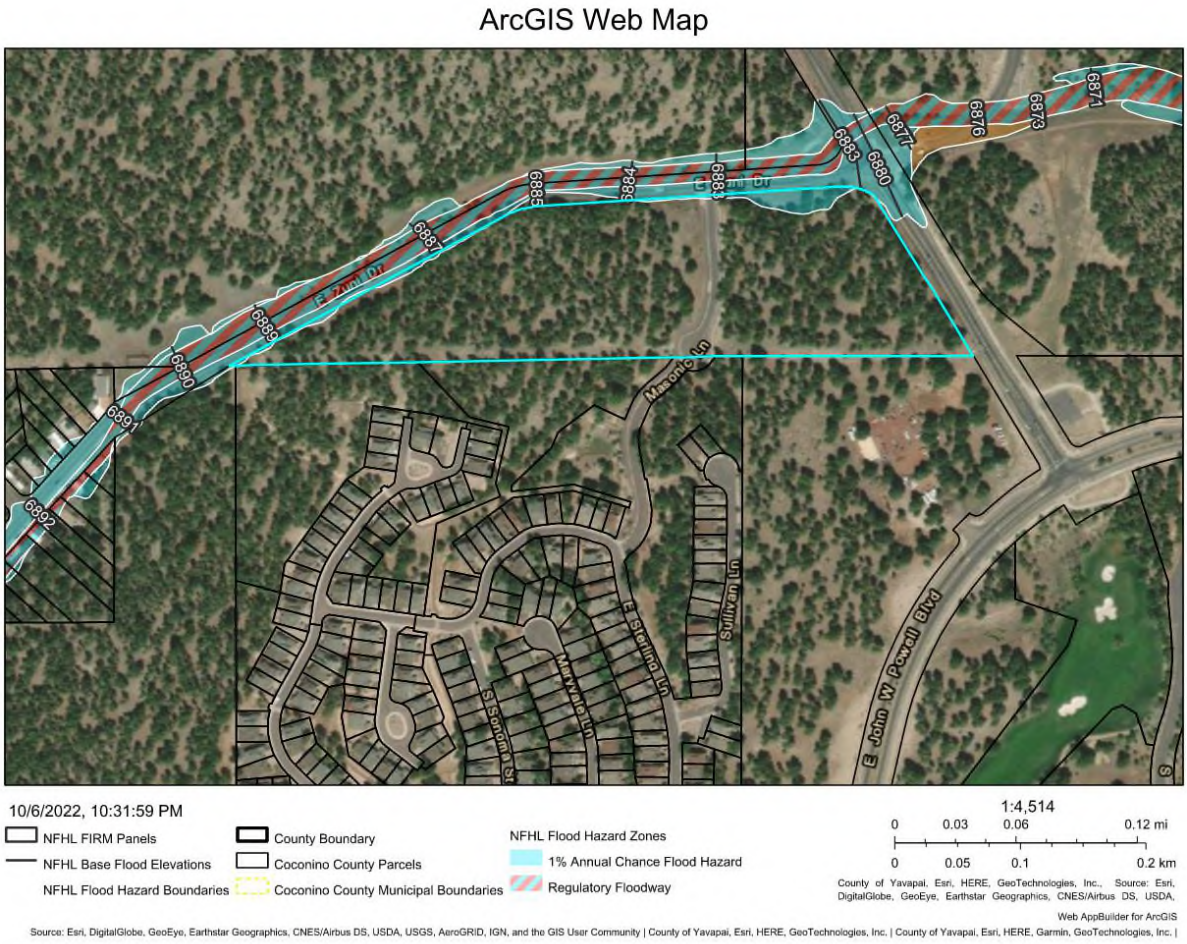
SITE DATA

PLAN REFERENCE		
PLAN TITLE		**ALTA/NSPS LAND TITLE SURVEY**
		DATED: SEPT. 14, 2022
SURVEYOR		ARIZONA SURVEYING INC. 1843 W HEAVENLY CT FLAGSTAFF, AZ 86001 JOB NO: 22-42
OWNER APPLICANT		
NAME		**RODG DT PINE HAVEN HORIZONTAL LLC**
ADDRESS		2121 EAST 6TH STREET, SUITE 203 AUSTIN, TX 78702
PARCEL DATA		
ADDRESS		E. ZUNI DRIVE & S. MASONIC LANE FLAGSTAFF, AZ 86001
TAX MAP NO/ PARCEL ID		APN: 103-26-002D
ZONING DATA		
ZONING DISTRICT	*EXISTING*	*RURAL RESIDENTIAL, SUBURBAN COMMERCIAL* *[RPOZ: RESOURCE PROTECTION OVERLY ZONE]*
	PROPOSED	MEDIUM DENSITY RESIDENTIAL (MR)
USE	*EXISTING*	*UNDEVELOPED*
	PROPOSED	RESIDENTIAL (PERMITTED)
STATEMENT OF INTENT		
THE APPLICANT IS PROPOSING TO DEVELOP THE SUBJECT PARCEL WITH TWO NEW ROADS, TOWNHOUSES AND ASSOCIATED SITE IMPROVEMENTS		

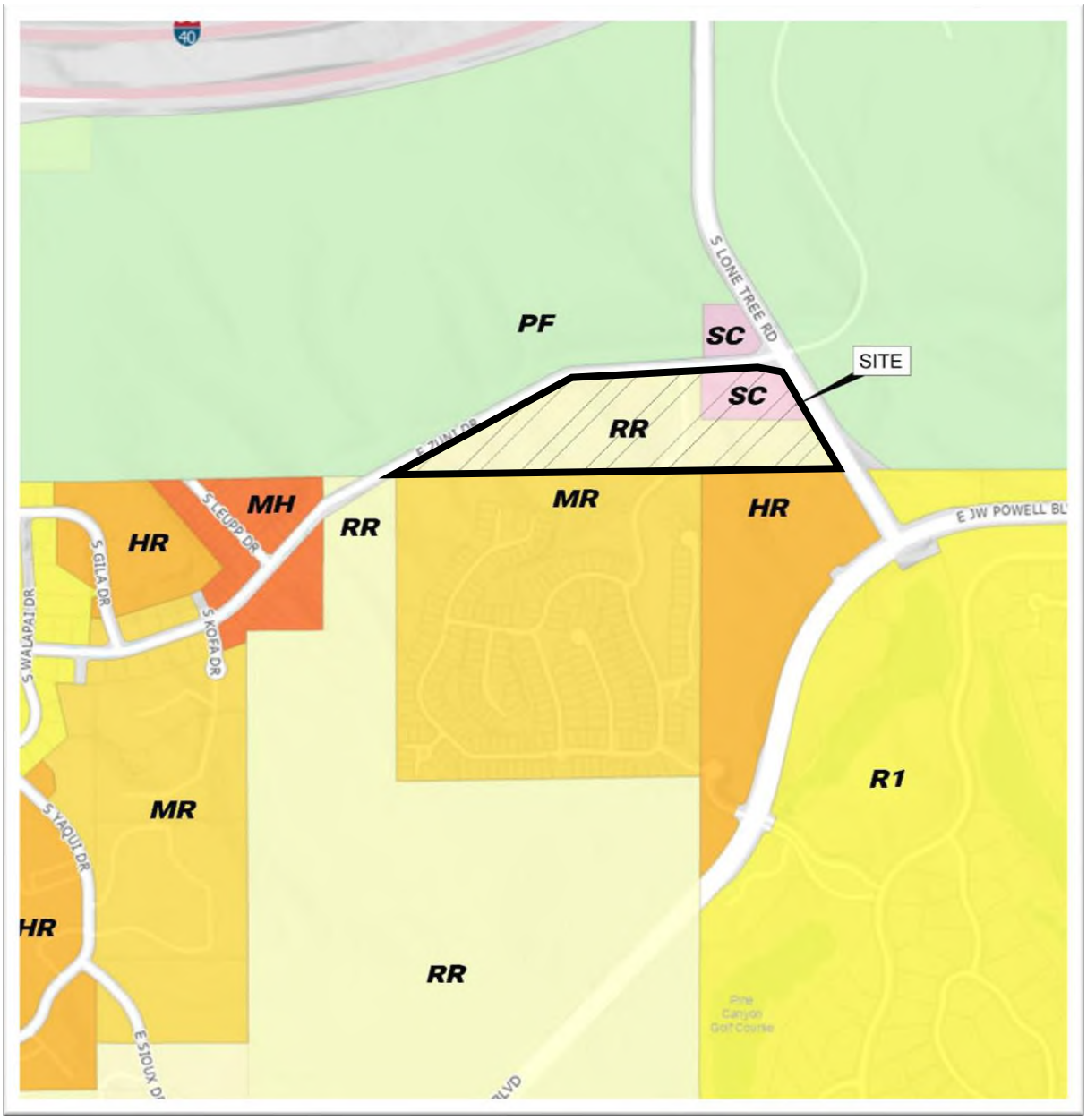
A.1 PROJECT LOCATION MAP

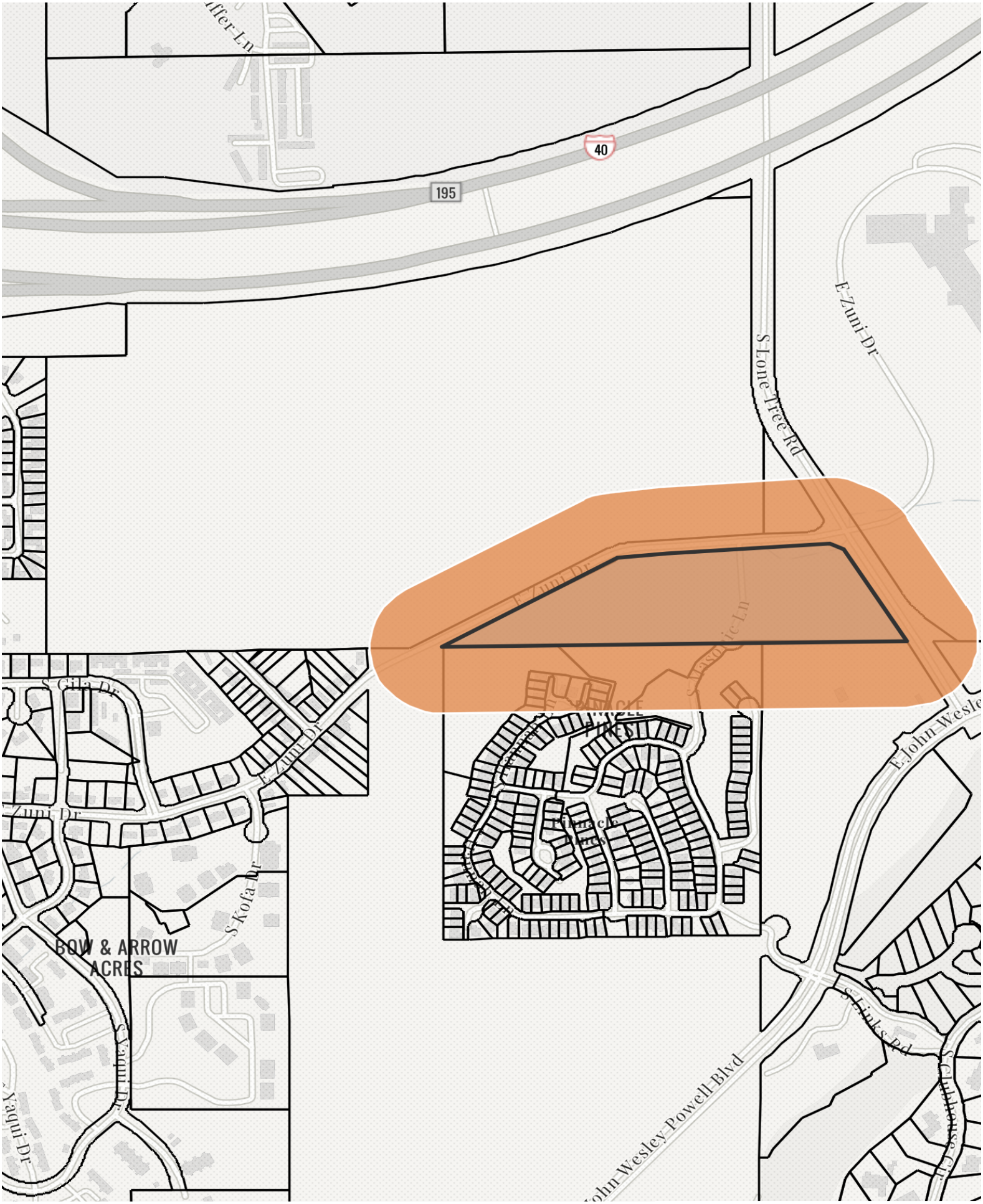


A.2 FLOOD MAP


ArcGIS Web Map
6871
6873
6876
6877
6880
6883
6884
6885
6887
6889
6890
6891
6892
E Zuni Dr
Masonic Dr
E Sterling Ln
Sullivan Ln
Mayan Ln
S Sonoma St
E John W Powell Blvd
10/6/2022, 10:31:59 PM
NFHL FIRM Panels
NFHL Base Flood Elevations
NFHL Flood Hazard Boundaries
County Boundary
Coconino County Parcels
Coconino County Municipal Boundaries
NFHL Flood Hazard Zones
1% Annual Chance Flood Hazard
Regulatory Floodway
1:4,514
0 0.03 0.06 0.12 mi
0 0.05 0.1 0.2 km
County of Yavapai, Esri, HERE, GeoTechnologies, Inc., Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA,
Web AppBuilder for ArcGIS
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community | County of Yavapai, Esri, HERE, GeoTechnologies, Inc. | County of Yavapai, Esri, HERE, Garmin, GeoTechnologies, Inc. |

A.3 ZONING MAP




40
195
E Zumi Dr
S Lone Tree Rd
S Gila Dr
E Zumi Dr
Zumi Dr
S Kofa Dr
BOW & ARROW ACRES
S Yaqui Dr
Yaqui Dr
Pinnacle Pines
E John Wesley Powell Blvd
S Links Rd
S Clubhouse Cir

Contact Type	NAME	ATTN	STREET	CITY	STATE	ZIP
300	Anthony & Kathleen Brau		19550 N Greyhawk Drive No 1120	Scottsdale	AZ	85255
300	Michael & Lisa Vukonich		2030 E Mead Drive	Gilbert	AZ	85298
300	City of Flagstaff		211 W Aspen Avenue	Flagstaff	AZ	86001
300	Nsh Llc		26611 N 150th Street	Scottsdale	AZ	85262
300	Van Der Werf Family Trust		3086 S Hannah Lane	Flagstaff	AZ	86005
300	3109 South Salvestrin Ln Llc		3245 E Donald Drive	Phoenix	AZ	85050
300	Joanne & Richard Glazar		48392 Stillwater Drive	La Quinta	CA	92253
300	Monje John S & Linda K Revocable Trust Agreement		6121 S Four Peaks Place	Chandler	AZ	85249
300	Styskal Jeff J & Emily J Revocable Trust		6819 E Winchcomb Drive	Scottsdale	AZ	85254
300	Lucaire Claudia Revocable Trust		7408 E Onyx Court	Scottsdale	AZ	85258
300	Esmurdoc Revocable Family Trust		8205 Ruby Mountain Way	Las Vegas	NV	89128
300	Towns On Lone Tree Owner LLC		8601 N Scottsdale Road No 335	Scottsdale	AZ	85253
300	Patricia & Brent Thornquist		8923 E Arizona Park Place	Scottsdale	AZ	85260
300	Pinnacle Pines Community Association		PO Box 10000	Prescott	AZ	86304
300	Glenn Gippner		PO Box 1042	Flagstaff	AZ	86002
300	Arizona Board Of Regents For Northern Arizona University		PO Box 4092	Flagstaff	AZ	86011
email	Chris & Claudia Lucaire		3191 S. Marryvale	Flagstaff	AZ	86005
mtg	Michael Morano		3109 S Salvestrin Ln	Flagstaff	AZ	86005
mtg	Irma Sandercock		1005 E Sterling Ln	Flagstaff	AZ	86005
mtg	Steve Worth		1164 E Streling Ln	Flagstaff	AZ	86005
mtg	Patrick Hurley		2800 S Lone Tree Road Coconino College	Flagstaff	AZ	86005
mtg	Claire Wilkinson		3117 S Salvestrin Ln	Flagstaff	AZ	86005
mtg	Sheryl Dawson		3127 S Hannah Ln	Flagstaff	AZ	86005
mtg	Carol Newton		3202 S Sonoma St	Flagstaff	AZ	86005
mtg	L Stone & P Watters		3209 S. Hannah Ln	Flagstaff	AZ	86005
mtg	Bob & Sue James		3225 S Sonoma St	Flagstaff	AZ	86005
mtg	Bruce Ertmann		3279 S Hannah Ln	Flagstaff	AZ	86005
mtg	Xiaoqing Ma		800 E Sterling Ln	Flagstaff	AZ	86005
mtg	Michael Plumer		918 E Sterlin Ln	Flagstaff	AZ	86005
mtg	Kennedy Tania & Vincent Lopez		925 E Sterling Ln	Flagstaff	AZ	86005
mtg	Mary Norton		969 E Sterling Ln	Flagstaff	AZ	86005
mtg2	Dana & Bill Coughlin		1037 E Sterling Ln	Flagstaff	AZ	86005
mtg2	Jason Hale		216 N Humphreys St			
city	Friends of Flagstaff's Future	ATTN: Michelle James	P.O.Box 23462	Flagstaff	AZ	86002
city	Betsy McKellar		330 S Ash Lane	Flagstaff	AZ	86004
city	Flagstaff Lodging, Restaurant & Tourism Association	ATTN: Steve Finch	P.O.Box 30622	Flagstaff	AZ	86003
city	Marilyn Weissman		1055 East Apple Way	Flagstaff	AZ	86001
city	David Carpenter		1109 W Beal Road	Flagstaff	AZ	86001
city	Norther Az Assoc. of Realtors	ATTN: Robb Shedd	1515 East Cedar Avenue, Suite C4	Flagstaff	AZ	86004
city	Maury Herman		3 North Leroux St	Flagstaff	AZ	86001
city	Coconino Co. Community Development	ATTN: Jay Christeman	2500 N Fort Valley Rd, Bldg 1	Flagstaff	AZ	86001
city	Nat White		1120 North Rockridge Road	Flagstaff	AZ	86001
	Charlie Silver		720 West Aspen Ave.	Flagstaff	AZ	86001
	Barry Levitan		19 S San Francisco St	Flagstaff	AZ	86001
	Celia Barotz		3354 N Crest St.	Flagstaff	AZ	86001
	US Navy, Intergovernmental Branch	ATTN: Mary Beth Dreusike	850 Pacific Highway, Bldg1, 5th Fl, Suite 513	San Diego	CA	92101
	Tyler Denham		538 S. Fountaine, Suite 2	Flagstaff	AZ	86001
	AZ Army National Guard, ASAA-FMO	ATTN: Dorenda Coleman	5636 E. McDowell Rd.	Phoenix	AZ	85008
	Coconino Co. Community Development	ATTN: Jess McNeely	2500 N Fort Valley Rd, Bldg 1	Flagstaff	AZ	86001
	Charity Lee, Entitlements Manager		3605 S. Flagstaff Ranch Rd	Flagstaff	AZ	86005
	Adrian Skabelund		819 W. Grand Canyon Ave.	Flagstaff	AZ	86001
	Rachel Bass		3083 W Easterday Lane	Flagstaff	AZ	86001

ARIZONA BOARD OF REGENTS FOR NORTHERN ARIZONA UNIVERSITY
PO BOX 4092
FLAGSTAFF
AZ
86011

VUKONICH MICHAEL W & LISA R
2030 E MEAD DR
GILBERT
AZ
85298

RODG DT PINE HAVEN HORIZONTAL LLC
8512 BESTRIDE
AUSTIN
TX
78744

3109 SOUTH SALVESTRIN LN LLC
3245 E DONALD DR
PHOENIX
AZ
85050

FLAGSTAFF CITY OF
211 W ASPEN AVE
FLAGSTAFF
AZ
86001

PINNACLE PINES COMMUNITY ASSOCIATION
PO BOX 10000
PRESCOTT
AZ
86304

ARIA FRESCA PROPERTIES LLC
10212 N 109TH PL
SCOTTSDALE
AZ
85259

VAN DER WERF FAMILY TRUST DTD 09-18-97
3086 S HANNAH LN
FLAGSTAFF
AZ
86005

GIPPNER GLENN M
PO BOX 1042
FLAGSTAFF
AZ
86002

STYSKAL JEFF J & EMILY J REVOCABLE TRUST DTD 02-15-14
6819 E WINCHCOMB DR
SCOTTSDALE
AZ
85254

LUCAIRE CLAUDIA REVOCABLE TRUST DTD 02-14-07
8513 E WELSH TRAIN
SCOTTSDALE
AZ
85258

GLAZAR JOANNE M & RICHARD C
48392 STILLWATER DR
LA QUINTA
CA
92253

ESMURDOC REVOCABLE FAMILY TRUST DTD 07-11-14
8205 RUBY MOUNTAIN WAY
LAS VEGAS
NV
89128

BRAU ANTHONY & KATHLEEN
19550 N GREYHAWK DR NO 1120
SCOTTSDALE
AZ
85255

SIRAGUSA FAMILY REVOCABLE TRUST DTD 09-09-98
4761 E MARSTON DR
PARADISE VALLEY
AZ
85253

THORNQUIST PATRICIA & BRENT
19700 N 76TH ST NO 1065
SCOTTSDALE
AZ
85255

MONJE JOHN S & LINDA K REVOCABLE TRUST AGREEMENT
6121 S FOUR PEAKS PL
CHANDLER
AZ
85249

TOWNS ON LONE TREE OWNER LLC
8601 N SCOTTSDALE RD NO 335
SCOTTSDALE
AZ
85253

Neighborhood Meeting Certification

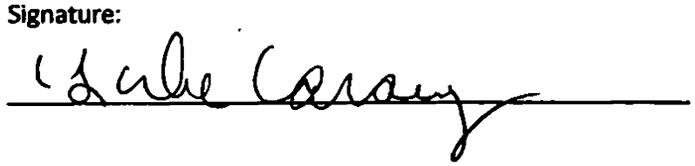
I, LUKE CARAWAY, the authorized representative of REDOAK DEVELOPMENT GROUP, do hereby attest that the neighborhood meeting for Project No. PZ-22-00109-04 was noticed and conducted in compliance with Section 10-20.30.060 of the City of Flagstaff Zoning Code and included the following:

- ☐ 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 12/23/25 and accepted by the City of Flagstaff on 2/7/25.
- ☐ 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 10/4/24 & 11/1/24 to all property owners within 300 feet of the subject property boundaries, to all tenants residing on the subject property, to all Homeowners Associations (HOAs) within 1,000 feet of the subject property, and all persons or groups whose names are listed on the Registry of Persons and Groups.
- ☐ A total of 2 neighborhood meeting notification sign(s) were installed on 10/2/24 & 11/5/24 at the following location(s):
  - Corner of Lone Tree Road and East Zuni Drive
  - _____
  - _____
- ☐ A written summary of the meetings, known as a Citizen Participation Report, was submitted to the City of Flagstaff on 12/23/25.
- ☐ Copies of the Citizen Participation Report were sent via first class mail on 7/11/25 to all persons who recorded their names on the neighborhood meeting sign-in sheet.

Authorized Representative of the Applicant:

LUKE CARAWAY

Signature:



Affidavit of Notifications to Affected Property Owners

Case Number: PZ-22-00109-04

Project Name: PINEHAVEN (formerly Juniper Estates)

Applicant Name: Red Oak Development Group

Location: 2951 S Masonic Lane

In order to assist in providing adequate notice to interested parties and to meet Arizona State Statute requirements, the applicant for public hearings in the City of Flagstaff shall notify affected property owners as prescribed by Section 10-20.30.080 of the City of Flagstaff Zoning Code. **It shall be the responsibility of the applicant to establish a list of the names and addresses of persons who require notification of a public hearing as established in Sections 10-20.30.060.A, 10-20.30.060.B, and 10-20.30.060.C of the Zoning Code, and mail a notice of required public hearing via first class mail to each of the persons on the list referenced above no later than 15 days prior to the public hearing date. It shall also be the responsibility of the applicant to submit a notarized copy of the mailing list to the Planning Director prior to the fifteenth day before the public hearing date.**

I confirm that the public hearing notifications were mailed as detailed in Section 10-20.30.080 of the City of Flagstaff Zoning Code at least fifteen (15) days prior to the public hearing.

Applicant's/Representative's Signature: Luke Conroy

SUBSCRIBED AND SWORN before me this 11th day of July, 2025 by:

Notary Public

KATHERINE TIERNAN RHOTEN
Notary Public, State of Texas
Comm. Expires 04-21-2027
Notary ID 134319370

My Commission Expires:

4/21/27

Affidavit of Sign Posting

Case Number: PZ-22-00109-04

Project Name: PINEHAVEN (formerly Juniper Estates)

Applicant Name: Red Oak Development Group

Location: 2951 S Masonic Lane

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: Gabe Conaway

SUBSCRIBED AND SWORN before me this 10th day of July, 2025 by:

Notary Public

4/21/27
My Commission Expires:

KATHERINE TIERNAN RHOTEN
Notary Public, State of Texas
Comm. Expires 04-21-2027
Notary ID 134319370

Owner Certification Acknowledging Receipt

of Notice of Right to Appeal Exactions and Dedications

I hereby certify that I am the owner of property located at:

2951 S Masonic Lane

(address of development approval or City required improvements and dedications)

and hereby certify that I have received a notice that explains my right to appeal all exactions and/or dedications required by the City of Flagstaff as part of my property development on the parcel listed in the above address.

Signature of Property Owner

7/10/25

Date

Jul 8, 2025 at 8:45:57 AM
794–798 E Zuni Dr
Flagstaff AZ 86001
United States
ViewPoint Engineering
MAILING ADDRESS
2121 East Sixth Street, Suite 203
Austin, TX 78702
ph: 512.779.9464
www.viewpointengineering.com
City of Flagstaff
PUBLIC HEARING
PLANNING & ZONING COMMISSION: Wednesday, July 23, 2025 at 4pm
CITY COUNCIL (1st Read): Tuesday, August 26, 2025 at 3pm
CITY COUNCIL (2nd Read/Development Agreement): Tuesday, September 2, 2025 at 3pm
LOCATION OF HEARINGS: City Council Chambers, City Hall
211 W Aspen Ave., Flagstaff AZ 86001
REQUEST: Direct to Ordinance Zoning Map Amendment to rezone from Rural Residential (RR) and Suburban Commercial (SC) to Medium Density Residential (MR)
PROPOSAL: Multi-Family Development for 83 dwelling units
SITE LOCATION: 2951 S Masonic Lane
SIZE: 13.82 ac
CASE #: PZ-22-00109-04
Applicant Contact: Marc Toth, Viewpoint Engineering
Phone Number: 737.717.3097
Email Address: Pinehaven-Zone@viewpointengineering.com
Flagstaff Planning & Development Services Division Contact: Ben Mejia, Senior Planner
Phone: 928.213.2616
Email: bmejia@flagstaffaz.gov

PROJECT NARRATIVE

November 2023

Revised: July 2025

Pinehaven – Condominium Development
(formerly Juniper Estates)

2951 S Masonic Lane
Flagstaff, AZ 86005

Prepared for
RODG DT Pine Haven Horizontal LLC
2121 East 6th Street, Suite 203
Austin, Texas 78702

Prepared By:
ViewPoint Engineering
2121 East 6TH Street, Suite 203
Austin, TX 78702
VPE Project No: **22004**

Will Buzzelli, P.E.

ViewPoint Engineering

Table of Contents

1.0 Project Description 2
2.0 Development Details 2
2.1 Plan Overview 2
2.2 Zoning Map Amendment 2
2.3 Housing 3
3.0 Regional Plan Analysis 5
3.1 Natural Environment 6
3.2 Built Environment 14
3.3 Human Environment 18
3.4 Pedestrian Connectivity 20
3.5 Materials Management Plan 21

APPENDIX A: Supporting Documents
A.1 Project Location Map
A.2 Flood Map
A.3 Zoning Map

1.0 PROJECT DESCRIPTION

Red Oak Development Group, LLC (RODG) is proposing the development of the property located at 2651 S Masonic Lane. a total of 13.44 acres (per ALTA survey). The project, Pinehaven, formerly Juniper Estates, (SITE) is an 83-unit condominium development with clubhouse. The site is currently zoned as a mix of rural residential (RR) and suburban commercial (SC).

The property in question, further identified parcel number 103-26-002-D. A project location map can be found in the appendix.

2.0 DEVELOPMENT DETAILS

2.1 PLAN OVERVIEW

The project, Pinehaven, formerly Juniper Estates, (SITE) is an 83-unit condominium residential community. The project site is 13.44 gross acres with ~5.1 acres developed and a proposed improvement density of 6.2 units per acre. Additionally, the project will construct a clubhouse, stormwater management basin and other associated infrastructure.

The project site is located on the southwest corner of E Zuni Drive and Lone Tree Road. Masonic Lane bisects the Site. To the south of the site is the Pinnacle Pines development consisting of condominium style townhomes. To the west of the site is the National Forest. To the north and the east of the site is vacant undeveloped land that has been purchased by the board of regents for Northern Arizona University.

The SITE will have four (4) access points. Two of the access points will be off Masonic Lane. There will be additional access from Zuni Dr and Lone Tree Rd. These access points will provide access for pedestrians, bicyclists, and motorists.

2.2 ZONING MAP AMENDMENT

Developing the property as proposed requires an amendment to the zoning map. The site is currently zoned as a mix of rural residential (RR) and suburban commercial (SC). The applicant is proposing to rezone this area to medium density residential (MR). The project meets the characteristics of the Suburban Neighborhood area-place type and conforms to the goals and policies of the Flagstaff Regional Plan 2030 and additionally meets the requirements for findings for zoning map amendments (§10-20.50.040.F.a) according to the following:

1) Consistent with the Goals of the General Plan: The proposed zoning is consistent with the zoning of the adjacent parcels and the general zoning of the surrounding area (see zoning map in appendix) and therefore meets the goals of the General Plan.

2) Not Detrimental to the Public Interest: The site proposes to meet or exceed the City regulations for stormwater management which will reduce runoff and any flooding present near the site or downstream. Additionally, the site proposes improvements to roadways and the implementation of public transit structures. Finally, the project proposes the construction of a trail system throughout the site for public recreation.

3) Site Suitability: The project site fronts along two major rights-of-way and is therefore able to take advantage of existing infrastructure and City services. Additionally, the project has been designed to address City requirements for all appropriate regulations including but not limited to storm drainage, solid waste collection as well as wastewater disposal.

2.3 HOUSING

The project follows the guidelines set forth in The City of Flagstaff's 10-year Housing Plan. The project is proposing a housing contribution to the city for the equivalent of 10 affordable units (~12.0%). The site will consist of three types of housing. The table below summaries the unit count and the square footage per unit.

Table 1: Building Type Summary

BUILDING SUMMARY						
BUILDING MODEL	**UNIT TYPE**	**Qty**	**FLOORS**	**TOTAL FLOOR AREA (SF)**	**BEDROOMS**	**BUILDING NUMBER**
PONDEROSA	INTERIOR UNIT	32	3	2,226	3	10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 24, 26, 28, 29
	END UNIT	30	3	2,250	3	
ASPEN	INTERIOR UNIT	9	3	2,180	2	12, 23, 25, 27
	END UNIT	8	3	2,231	3	
JUNIPER	INTERIOR UNIT	2	2	1,565	3	22
	END UNIT [ACCESSIBLE]	2	2	1,585	4	
	TOTAL	**83**				
CLUBHOUSE			2	5,100	N/A	N/A

PARKING / BICYCLE PARKING: In conjunction with the housing incentive the project is entitled to utilize a parking reduction incentive for the site based upon a Category 1 designation. This incentive would have allowed for a reduction of 23 spaces from the total requirement. However, to address concerns from the community, the incentive will not be taken. See the table below for a breakdown of the required parking, incentives taken, and parking provided on the proposed site.

Table 2: Parking / Bicycle Parking Requirements

PARKING REQUIREMENTS			
REQUIRED PARKING CALCULATION			
USE	**REQUIREMENT [1]**	**PARKING REQUIRED**	
		UNITS	**PARKING**
SINGLE FAMILY (ATTACHED)			
STANDARD UNITS (2 - 3 BEDROOMS)	2.00 SPACES PER UNIT	81	162.00
STANDARD UNITS (4 BEDROOMS)	2.50 SPACES PER UNIT	2	5.00
GUEST PARKING	0.25 SPACES PER UNIT	83	20.75
TOTAL PARKING REQUIRED		TOTAL	187.75
		USE	188
PARKING PROVIDED			
GARAGE SPACE (1 PER UNIT, EXCL ADA UNITS)		81	
DRIVEWAY SPACE		83	
ADDITIONAL SPACES		22	
ADA SITE SPACES		3	
TOTAL PARKING PROVIDED		**189**	
REQUIRED BICYCLE PARKING			
5% OF TOTAL REQUIRED PARKING SPACES		188	9.4
TOTAL BICYCLE PARKING REQUIRED		USE	10
BICYCLE PARKING PROVIDED			**12**
1) PER TABLE 10-50.80.040.A			
2) THE PROJECT WILL PROVIDE AN AFFORDABLE HOUSING CONTRIBUTION TO THE CITY FOR THE EQUIVALENT OF 10 SITE UNITS.			

PARKING REDUCTION CALCULATION (NOT TAKEN)			
DESCRIPTION	**REQUIREMENT [1]**	**QTY**	**REDUICTION**
AFFORDABLE TYPE UNITS **[2]**	-0.5 SPACES PER UNIT (2 - 1.5 REQ FOR AFFORDABLE HOUSING)	10	5.0
BUS STOP	10% REDUCTION	188	18.8
TOTAL ALLOWED PARKING REDUCTION		TOTAL	23.80
		USE	23
1) PER TABLE 10-50.80.040.A			
2) THE PROJECT WILL PROVIDE AN AFFORDABLE HOUSING CONTRIBUTION TO THE CITY FOR THE EQUIVALENT OF 10 SITE UNITS.			

3.0 REGIONAL PLAN ANALYSIS

The City of Flagstaff has provided a vision and list of goals for the future development of the region. The following analysis shall demonstrate the project's compliance with the goals of the City's Regional Plan 2030. The analysis has been developed based upon the overall issues identified; Natural Environment, Built Environment; and Human Environment. While the accomplishment of every goal defined would be ideal, it is not always possible. The goals and policies of the regional plan have been analyzed for this project. Not all of the plan initiatives are pertinent to this project. Additionally, the implementation of pertinent goals/policies may not be viable as some of these goals overlap with others which create an either/or situation. Therefore, the analysis below provides only those goals/policies for which the project is compliant. All others have been omitted for clarity.

The proposed project best fits with the Suburban Neighborhood area type. In accordance with the plan the project characteristics are as follows:

- Block Size: The project proposes private driveways; however, these drives function similarly to roadways and provide connectivity between Zuni and Masonic and Masonic and Lone Tree. The proposed layout provides for a well-organized structure integrating with the surrounding roadway network in lieu of creating dead-end cul-de-sacs and allows for direct pedestrian and bicycle connections to established networks.
- Density: The project has been designed with a residential density of 6.18 units / acre which meets the area-type target range of 2-13 units / acre and is further at the target of 6 units /acre for the pedestrian shed.
- Residential: The project consists of a townhome-style development on the outskirts of Flagstaff proper. The development has been designed in such a way to cluster improvements and maximize the preservation of the wooded areas. These wooded areas have been provided with walking trails which are connected to the nearby FUTS trail system (Bow & Arrow Trail). Further the project proposes the installation of a bus stop on Zuni Drive for Route 04 & 14 buses. In addition to providing public transit for the proposed community, it will improve access for the Pinnacle Pines and LoneTree communities.
- Parks/Open Space /Public Space: The project open space provides a network of trails for passive recreation. While not directly connected, the project area is in close proximity to the FUTS trail network.
- Conservation: (Refer to Section 3.1 below) The project has developed a site plan to minimize the disturbance of site natural resources; more specifically protections to forest/woodlands and steep slopes

The analysis that follows shall use the characteristics of this area-type in determining compliance with the Regional Plan. The following are the characteristics of this area-type

3.1 NATURAL ENVIRONMENT

Environmental Planning & Conservations (Chapter IV): Flagstaff is rich with natural resources and goals are established to protect or improve them. Upon review of the project area, the following natural resources were identified on site. The site is predominantly forested, so overlaps the other resources.

- **Wild Life Linkages:** As shown on the image below, the project preserves open space along the southern boundary line. This area will preserve a link/path to wildlife areas to the north.
- **Limestone Soils:** Development has been clustered around the existing roadways and avoids the soils present on the property.
- **Trees >20":** As shown, the identifies tree areas have been avoided.
    - **Forested areas:** While not indicated on the image below, the property contains additional forested areas (refer to plans in the appendix) and as such the smaller contiguous disturbance area preserves these areas as well

Figure 1: Excerpt from Map 7 Significant Natural Resources

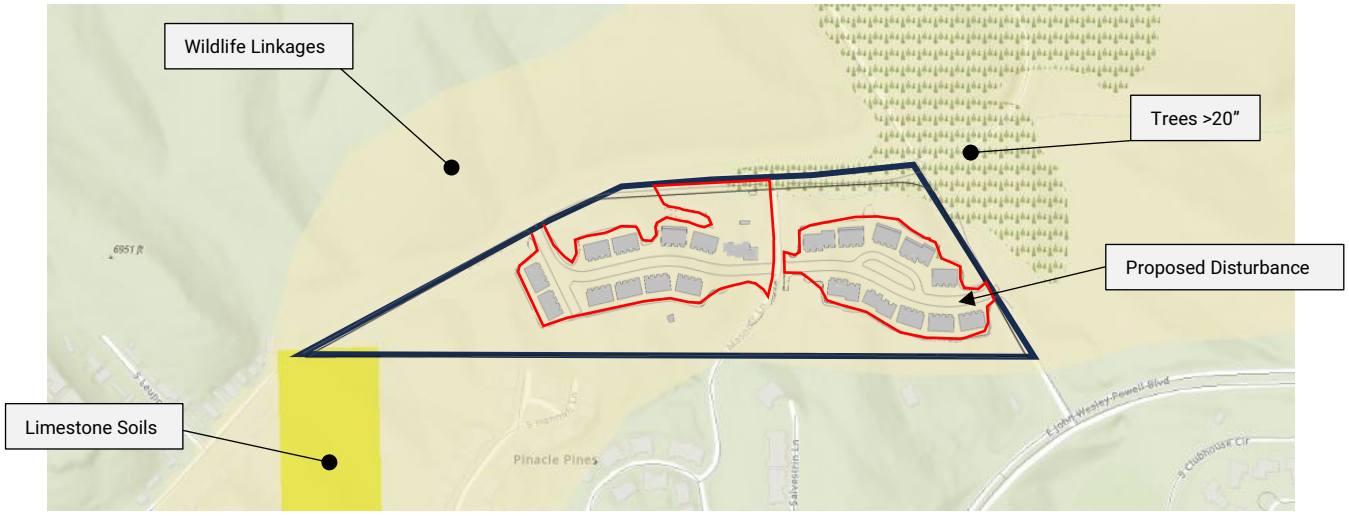
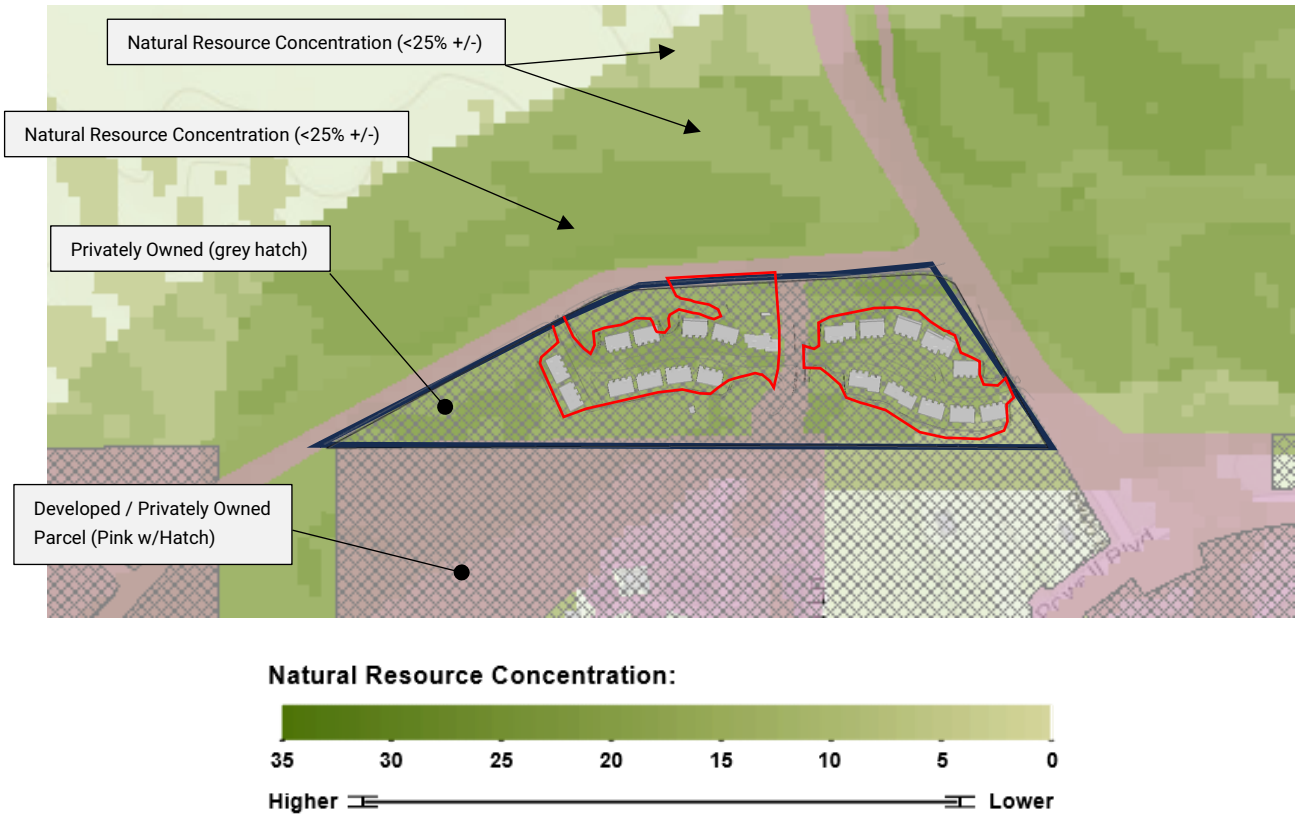


Figure 2: Excerpt from Map 8 Concentration of Natural Resources



- **Concentration of Natural Resources:** As indicated with the green areas on the image above, the project site contains varying concentrations of natural resources. The site contains steep slopes up to and greater than 35% as well as forested areas as indicated above in addition to floodplain areas. The project has been developed to minimize these disturbances by clustering the development into a tight footprint. The natural resources are mor specifically described below. An analysis of the site topography has been performed and is contained on sheets C201 and C202 of the plan set. The table below provides a breakdown of the respective areas.

    - **Steep Slopes:** The site contains steep slopes up to and greater than 35%. An analysis of the site topography has been performed and is contained on sheets C201 and C202 of the plan set. The table provides a breakdown of the respective areas.

    - **Floodplain:** The Site resides in two different flood zones. Most of the project site is contained in flood zone X, the area of minimal flood zone hazard. The northeast corner of the site is in the AE flood zone. Within the AE flood zone there will be no dwelling development (See appendix).

With a Category 1 project designation, in accordance with Table 10-30.20.040B, a resource reduction of 35% has been applied to the forest protection requirements indicated. The resulting reduction adjusted the required resource protection from 50% to 32.5% [50% x (1-35%)]. The proposed resource protection plan can be seen on the table below.

Table 3: Resource Protection Summary

RESOURCE PROTECTION LAND									
RESOURCE	TOTAL RESOURCE PROTECTION LAND (SF)	AREA IN A MORE RESTRICTIVE RESOURCE (SF)	NET RESOURCE PROTECTION AREA (SF)	REQ. RESOURCE PROTECTION (%)	ADJUSTED REQ. RESOURCE PROTECTION [2] (%)	ALLOWED DISTURBANCE AREA (SF)	PROPOPSED DISTURBANCE (SF / %)		PROPOSED PROTECTION (%)
FLOODPLAIN	147,602	0	147,602	100%	100%	0	0	0.0%	100.0%
STEEP SLOPES									
>35%	13,072	1,012	12,060	100%	100%	0	0	0.0%	100.0%
25% - 34.99%	56,355	0	56,355	80%	80%	11,271	9,948	17.7%	82.3%
17% - 24.99%	134,233	0	134,233	70%	70%	40,270	34,468	25.7%	74.3%
FOREST	423,852	154,857	268,995	50%	32.5% [2]	181,572	178,535	66.4%	33.6%
1) VALUES PROVIDED IN THE TABLE ARE MEASURED WITHIN THE TITLE BOUNDARY ONLY. IMPROVEMENTS REQUIRED WITHIN ROAD RIGHTS-OF-WAY HAVE BEEN EXCLUDED.									
2) AFFORDABLE HOUSING REDUCTION: THE PROJECT IS PROPOSING A HOUSING CONTRIBUTION FOR THE EQUIVALENT OF 10 AFFORDABLE UNITS OUT OF 83 TOTAL UNITS (10 / 83 = 12.04 %). THE PROJECT IS A CATEGORY 1 PROJECT, THEREFORE IN ACCORDANCE WITH TABLE 10-30.20.040.B, A RESOURCE REDUCTION OF 35% HAS BEEN APPLIED TO THE PROTECTION REQUIREMENTS INDICATED. [50% x (1 - 35%)]									

These goals were also critical in the development of site design. The project implements these goals as follows:

- **Air Quality.** To promote improved air quality in the city, the project will implement various methods during the construction process.

Policy E&C.1.3. Encourage strategies and partnerships to mitigate dust.

During construction, where possible, construction vehicles will be prevented from idling to reduce exhaust. Further the project has minimized construction disturbance areas and forest/tree removal. The preservation of forested areas will improve air quality for the new homes.

- **Climate Change:** As climate change is caused by many factors the cumulative impacts of proposed improvements will aid in mitigating the projects' effect.

Policy E&C.2.2. Promote investments that create a connected and efficient community, decrease emissions from transportation and building energy, and strengthen climate resiliency.

The project will be providing each unit with EV hookup ability within the garage or on the exterior of the dwelling for units without garages. Additionally, an external EV charging space adjacent to the clubhouse as well as within the central parking area of Phase 2. Additionally, the project is proposing the construction of a bus stop on Zuni Drive encouraging use of public transportation. Finally, the

project will be providing a dedicated bicycle lane along Zuni Drive improving connectivity of alternative vehicular pathways.

Policy E&C.3.3. Invest in forest health and watershed protection measures.

The project proposes preserving forested areas as well as the implementation of shade trees with help to reduce the localized temperatures. The project also proposes forest maintenance measures to be implemented as part of this initial construction and periodically as part of site maintenance.

Additionally, the project will implement a slow-release stormwater management basin in the project. The basin will retain stormwater runoff onsite and encourage evaporation in lieu of direct runoff into the waterways providing improvements to the overall watershed.

- **Dark Skies:** In accordance with city requirements, the project (located in Zone 2) will implement appropriate Dark Skies requirements.

Policy E&C.5.2. Encourage and incentivize voluntary reduction of "exempt" lighting that degrades night sky visibility, and work to prevent light trespass whenever possible in both public and private areas.

As a community dedicated to preserving Flagstaff's renowned dark skies, Pinehaven will proactively implement lighting restrictions to minimize light pollution (i.e. the project will provide doors and windows with low-E ratings and film applications to reduce light trespass). HOA regulations will limit excessive outdoor lighting, including security lights and seasonal decorations, ensuring that residents enjoy the breathtaking night sky while maintaining neighborhood aesthetics. Compliance with these guidelines will not only protect the environment but also enhance property values and the overall ambiance of the community.

- **Ecosystem Health:** The project site is located in proximity to an intermittent stream and stormwater runoff from the site will have a direct impact on the health of the ecosystem.

Policy E&C.6.1. Encourage public awareness that the region's ponderosa pine forest is a fire-dependent ecosystem and strive to restore more natural and sustainable forest composition, structure, and processes.

The HOA will provide information packets to homeowners at initial purchase and as well as any change in ownership. Further, informational packets will be provided in the clubhouse, as available, of the city's/community's of local resources and programs.

Policy E&C.6.7. Use best practices to control the spread of exotic and invasive plants, weeds, and animals, and eradicate where possible.

As part of the construction project and periodically thereafter, the HOA will perform forest maintenance as needed. This maintenance will include, but not be limited to, the removal of invasive species and cleanup of the forest floor.

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

The project landscape plans have been developed utilizing native species plants throughout the site.

- **Environmentally Sensitive Lands:** The project site contains the natural resources/sensitive lands below. The site-specific resources can be found in Table 3 above.

Policy E&C.7.1. Design development proposals and other land management activities to minimize the alteration of natural landforms and maximize conservation of distinctive natural features.

Policy LU.3.3. Protect sensitive cultural and environmental resources with appropriate land uses and buffers.

The design of the project avoided these areas as much as feasible. One strategy employed was to use the sites underlying rock structure. In lieu of providing gentler slopes to taper out construction, the project will utilize the rock to create more natural rock walls. The implementation of these walls allows for a much smaller disturbance footprint.

As the site is mostly forested, disturbance was inevitable. However, in conjunction with the method above to protect the slopes, the minimal disturbance footprint preserved as much of the forested areas as possible.

- **Soils:** The project site contains hilly areas and therefore due to the planned construction the site will require excavation into the rock layers below.

Policy E&C.9.2. Construction projects employ strategies to minimize disturbed areas, soil compaction, soil erosion, and destruction of vegetation

In conjunction with the minimized disturbance, the rock cut areas will be stabilized with reinforcement material to allow for increased vertical slopes in lieu of shallower tapering slopes. These methods will preserve the surrounding areas. The designs of the reinforcements will be developed to visually integrate with the natural topologic features.

- **Wildlife:** The Flagstaff region boasts an abundance of wildlife that is highly valued by residents and visitors alike.

Policy E&C. I 0.5. Support the development of watchable wildlife recreation opportunities.

Policy WR.5.2. Incorporate pedestrian access, trails, and watchable wildlife opportunities into natural watercourses when practical.

Policy LU.2.3. New development should protect cultural and natural resources and established wildlife corridors, where appropriate.

The preservation of contiguous open spaces on-site will aid in the development of opportunities to be exposed to the local wildlife. Additionally, the project has proposed a walking trail in and around the site to facilitate observations. This trail network will provide seating areas not only for areas to rest but also to experience local fauna.

OPEN SPACE (Chapter V) Providing open space areas for public use and enjoyment being another goal of the regional plan, the project implements the following strategy to achieve compliance.

Policy OS.1.4. Use open space as opportunities for non-motorized connectivity, to interact with nature, and to enjoy the views and quiet.

Policy OS.1.5. Integrate open space qualities into the built environment.

With the minimized disturbance footprint of the development, the project is preserving the forested areas onsite which will be used as open space for the community. Additionally, the project is proposing walking/hiking trails through the site which will be open to the public. Thes trails provide various degrees of difficulty as well as provide rest areas. The design of these trails will be naturalized into the terrain. Additionally, the trails will provide multiple access points to public rights-of-way to encourage public use.

WATER RESOURCES (Chapter VI) Water resources within the Flagstaff area are related to not only the delivery of potable water to the population but protection of surface waters which feed those aquifers. This project addresses the goals of the plan through the implementation of stormwater management strategies.

Goal WR.1. Maintain a sustainable water budget incorporating regional hydrology, ecosystem needs, and social and economic well-being.

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 natural watershed characteristics as well as offering recreational components.

- **Stormwater Management:** The existing offsite drainage from the south will continue to be routed through the project using the existing storm drain network. The portion of runoff from Masonic Lane will be captured and retained in the retention pond. The proposed site runoff on the east side of the site will be routed through storm drains into an on-site retention pond. Runoff on the West side of the site will be routed through storm drains where they will be discharged from the site at the existing culvert at the intersection of Zuni and Lone Tree. Pre- vs post-development analysis has been performed on the site and there will be no increase in peak flows due to the proposed development.

  The implementation of this strategy meets the goals of the regional plan by slowly releasing accumulated stormwater runoff into the waterways. This slow-release process mimics the natural hydrologic process of water infiltrating into the ground and migrating through the soil to the nearest waterway and trickling into the base flow.

  Additionally, the basin was designed in conjunction with the open space trail system. To integrate into the surroundings and provide connections for pedestrians and wildlife.

Policy WR.6.2. Recognizing the concern about water quality, seek methods to divert contaminants from the waste stream.

- **Water Quality:** In addition to runoff being slowly released into the watershed, the proposed basin will filter pollutants through soil media which were picked up from roadways. By holding and filtering runoff through soil, the temperature of the water discharging from the basin will be reduced thereby reducing the overall water temperature the downstream waterways and encourages a more beneficial ecosystem. Further, and in conjunction with other goals of the regional plan, the project implements minimal disturbances of natural resources and clustering of improvements, each of which fosters improved quality.

ENERGY (Chapter VII) Energy usage within the city plays an important role in community development both economically and personally. The project plans to implement the following to address energy goals.

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 NH.4.4. Encourage green practices in housing construction and rehabilitation that support durable, healthy, and energy-efficient homes.

Pine Haven has been designed to be very energy efficient. Energy Star certified appliances will be provided in units. Additionally, units will be equipped with Energy efficient heat pump HVAC and

Electric, tankless water heaters, which means that their insulation levels, windows, and mechanical heating and cooling systems greatly surpass current energy codes by a very wide margin.

Policy E.1.5. Promote and encourage the expansion and use of energy-efficient modes of transportation: 1) Public transportation; 2) Bicycles; and 3) Pedestrians

Pinehaven will be a community designed for connectivity and mobility, reducing reliance on personal vehicles and embracing alternative transportation methods. As part of this vision, we are offering several initiatives that will set a new standard for accessibility and convenience:

- **Bus Pass Program ($408+ per Homeowner Value)**: In support of a more transit-friendly lifestyle, Pinehaven will offer homeowners reimbursement for the purchase of two adult bus passes for the first year of ownership. Adult passes cost $34 per month per individual, bringing the total value of this incentive to $408 for a full year per person. Homeowners will submit proof of purchase to the HOA for reimbursement, ensuring easy access to local transit options and reducing personal vehicle dependency.

- **EcoPASS for Educators ($300 - $500 Value per Educator per year)**: As an extension of our teacher incentives, Pinehaven will participate in the EcoPASS program for non-student staff at Northern Arizona University. This program provides discounted or free transit passes, significantly reducing commuting costs for educators. Pinehaven will work with NAU to facilitate direct enrollment or reimburse educators who apply independently, supporting sustainable commuting solutions for Flagstaff's educational workforce.

- **Bike Share Program ($300 - $500 per Resident Value)**: Residents of Pinehaven's condominiums will have access to a free bike share program managed through the community office. This initiative will provide scheduled bike rentals at no cost, allowing residents to explore nearby trails, parks, and commercial areas conveniently. The HOA will maintain and oversee the scheduling system, ensuring availability and fair usage for all participants.

Policy E.1.13. Promote and encourage the use of fuel-efficient vehicles that use renewable fuels..

- **EV Charging:** The project will be providing EV Charging connection hookup locations within each of the residential garages. For the units without garages, a weather resistant hookup will be provided on the exterior. Further, two additional public access external EV charging units will be installed in partnership onsite.

3.2 BUILT ENVIRONMENT

COMMUNITY CHARACTER (Chapter VIII) being the combination of qualities and assets that establish the unique sense of place and promotes as high quality of life, this project strives to meet this goal in the following ways.

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.

This project has proposed minimal disturbance to the site area. The existing site contains a wooded area of Pine Trees. This element was a crucial factor in the development of the project so as to provide a sense of nature for the future residence. By clustering the disturbance areas, the remaining open space encloses the structures giving a sense of being within the environment.

GROWTH AREAS & LAND USE (Chapter IX) Planning for smart development in the future is an important goal. Ensuring development progresses to meet the needs of the community in a smart logical direction ensures future expansions do not get ahead of the community and address the needs of the 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.

The project site was designed to provide structures to integrate into the topography as much as possible and maintain visual sightlines around the area. Proposed Homes are sighted to maximize views for the respective owners, as well as prevent obstruction of views from parcels located to the south of the site. See the view cross-sections provided during the neighborhood meetings to illustrate typical views. As shown, the proposed development is nestled into the topography thereby providing scenic views to the residents and neighbors.

Figure 3: Sample View Section

Policy LU.2.4. Utilize Low Impact Development (LID) strategies and stormwater best practices as part of the overall design for new development

Policy LU.5.3. Promote compact development appropriate to and within the context of each area type: urban, suburban, and rural.

Policy LU.5.4. Encourage development to be clustered in appropriate locations as a means of preserving natural resources and open space, and to minimize service and utility costs, with such tools as Transfer of Development Rights (TDR)

Policy LU.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.

The project implements the LID strategy of cluster development to minimize the disturbed area and preserve the surrounding area. Further, the basin has been designed to incorporate a soil media filter to minimize impacts to downstream waterways. Additionally, the basin design will provide filtering of stormwater runoff to improve water quality.

TRANSPORTATION (Chapter X) To counter the car-culture which has developed, the regional plan aims to encourage development which provides for all forms of transportation in a manner which serves all within the community. The project meets this goal as described below.

Policy T.1.6. Provide and promote strategies that increase alternate modes of travel and demand for vehicular travel to reduce peak period traffic.

Policy T.1.7. Coordinate transportation and other public infrastructure investments efficiently to achieve land use and economic goals.

Policy T.2.1. Design infrastructure to provide safe and efficient movement of vehicles, bicycles, and pedestrians.

Policy T.3.1. Design and assess transportation improvement plans, projects, and strategies to minimize negative impacts on air quality and maintain the region's current air quality

Policy T.5.1. Provide accessible pedestrian infrastructure with all public and private street construction and reconstruction projects.

Policy T.5.4. Design streets with continuous pedestrian infrastructure of sufficient width to provide safe, accessible use and opportunities for shelter.

The project provides multiple avenues for transportation around the region. Specifically, the construction of a Bus Stop on Zuni Drive. Additionally, the project is proposing bicycle and car-share programs. Refer to the section **Energy** Above for more information.

- Bicycle: The project will widen Zuni Drive to provide the addition of a bicycle lane. Additionally, Bicycle racks are being provided onsite in accordance with regulations. The project site is not directly connected to the FUTS trail system; however the site is in close proximity.

- Pedestrian: The project will install/improve public sidewalks along the frontages of Zuni Drive and Lone Tree Road. The proposed sidewalks will improve pedestrian access to the area.

- Transit: The regional transit authority has identified this location as being deficient for public access. Therefore, the project proposes the construction of two bus stop shelters along Zuni Drive. This location can potentially serve both Route 4 & 14 lines.

Policy T.6.2. Establish and maintain a comprehensive, consistent, and highly connected system of bikeways and FUTS trails

The project proposes a public use trail within the open space. This trail system is adjacent to the Bow & Arrow trail and provides for a short loop to the existing FUTS system.

Policy T.8.3. Design neighborhood streets using appropriate traffic calming techniques and street widths to sustain quality of life while maintaining traffic safety.

Roads & Corridors: The applicant has worked with the city staff in review of the public improvements to the adjacent roadways. As part of the consultations, the project has provided improvements based upon the ultimate buildout of the respective roads. Further, the city indicated the need for an adjustment of the centerline of Zuni Drive near the intersection of Lone Tree. The centerline adjustment is needed so future improvements do not impact adjacent natural resources. The applicant is providing the additional R.O.W. to allow for the adjustment and the proposed improvements will be construction relative to this adjusted location. These improvements will complement the long-term planned improvements for JW Powell for mobility in the region.

PUBLIC BUILDINGS, SERVICES, FACILITIES AND SAFETY (Chapter XII) Planning for and protecting critical infrastructure while promoting community resilience are important considerations in the timing, location, and pattern of development. Well-planned infrastructure, public facilities and services, and safety and emergency response are keys to community civic pride and accessibility.

Policy CD.1.5. Require that new development pay for a fair and rough proportional share of public facilities, services, and infrastructure.

- Locating Facilities: The project proposes adding publicly accessible open space areas adjacent to public R.O.W.s in addition to being in close proximity to public transit.
- The project will provide improvements to Zuni Drive and will install sidewalk and curb along the frontage.
- The project will install a deceleration lane along Lone Tree for entrance into the site and will replace the existing sidewalk with 5ft wide sidewalk along areas of improvement.

3.3 HUMAN ENVIRONMENT

NEIGHBORHOODS, HOUSING, AND URBAN CONSERVATION (Chapter XIII) These are the places where people live, play, go to school, work, and interact. Central to Flagstaff 's urban neighborhoods are a pedestrian experience interconnecting business, homes, schools, places of worship, transit, and parks in a compact, walkable land use pattern. The following methods have been developed to meet the goals of the plan.

Policy NH.1.2. Respect traditions, identifiable styles, proportions, streetscapes, relationships between buildings, yards, and roadways; and use historically appropriate and compatible building and structural materials when making changes to existing neighborhoods, especially in historic neighborhoods

Project Inspiration: I suppose that people who live in a beautiful area like this must get kind of used to seeing the natural beauty every day, but I can tell you that we "flatlanders" continue to be in awe of the natural beauty of this region every time we visit. So it shouldn't come as a surprise that the pine trees and topography of the site have always been the main inspiration for our project, and that we designed the buildings to be fairly simple in order to let the forest itself shine through.

Site Planning: We designed the residential units to be grouped into blocks of four or five units in order to preserve as much open space as possible. This minimizes the construction footprint so that you can enjoy more of the surrounding natural forest. The majority of the site has been protected in its natural state to allow for an extensive network of publicly accessible trails.

Building Design: We specifically kept the massing of the units simple, designed them to have low-sloped, shed roofs not only to conform to the city's height restrictions but also to facilitate snow removal in the wintertime and direct any runoff away from the front walkways and entries.

Following the city's guidelines on low reflectance values and darker colors, we plan to paint the vertical exterior siding a kind of dark umber color that will really make the surrounding forest pop! We also have stone facing at the lower floor near the garages and main entries, with some rust-colored steel accent paneling that frames the front balconies above. Each residence has a number of decks, balconies, and/or patio at both ends that are designed to connect residents to the outdoors and provide views to the surrounding landscape.

Echoing the materials and aesthetics of the adjacent residences, our community clubhouse provides each resident with an opportunity to get to know their neighbors and interact in a variety of ways— such as hanging out in the media room watching the big game with friends, working out in

the gym, occasionally sweating it out in one of the two saunas, or maybe just “chilling out” in one of our cold immersion tanks.

Policy NH.1.3. Interconnect existing and new neighborhoods through patterns of development, with complete streets, sidewalks, and trails.

Policy NH.1.4. Foster points of activities, services, increased densities, and transit connections in urban and suburban neighborhoods.

The project provides for expansion of the public rights-of-way, providing sidewalks along the frontages and providing a bicycle lane on Zuni Drive. Further the project will provide a bus stop on Zuni Drive. This bus stop will allow for a connection needed for the adjacent subdivisions to provide an access point into the city or other points. Proposed walking and hiking trail within the open space. While not directly connected, the project is in close proximity to the City’s FUTS trail system to encourage interconnectivity. Further, the project is providing bus stops along Zuni, facilitating multi-modal transportation.

Policy NH.1.6. New development, especially on the periphery, will contribute to completing neighborhoods, including inter-connecting with other neighborhoods; providing parks, civic spaces, and a variety of housing types; and protecting sensitive natural and cultural features.

Policy NH.6.1. Promote quality redevelopment and infill projects that are contextual with surrounding neighborhoods. When planning for redevelopment, the needs of existing residents should be addressed as early as possible in the development process.

The development is proposed within the space between the city and existing subdivisions (infill development). By providing this development and the interconnectivity of the roads, and walks, the development provides for a smart expansion of the city in lieu of moving further out and fighting against urban sprawl.

Policy NH.3.3. Increase the availability of affordable housing for very low-income persons, through innovative and effective funding mechanisms

The dynamics of the proposed project are not conducive to providing affordable housing as part of the project. Due to the challenges of the site topography, the proposed house product demands a higher price point. The final sale price will likely be higher than the neighboring Pinnacle Pines development. Providing affordable housing with this project was not viable. Therefore, in consulting with City staff, the developer will be providing a housing contribution to the city for an equivalent of 10 units. This contribution can then be used to assist in other efforts by the city or in conjunction with

other programs or developments. Terms of the contribution have been prepared in consultation with city staff and included in the project's development agreement.

Policy NH.4.3. Address accessibility issues and other housing barriers to persons with disabilities or special needs.

The developer is committed to providing for people with disabilities or special needs. As such this project has committed to providing two units dedicated to ADA accessibility. These units go beyond exterior accessibility and have integrated ADA guidelines into the full internal layout design.

Policy NH.4.6. Consider and integrate public transportation when possible in planning housing developments, to help reduce a household's transportation costs and minimize impact on the community's roads and transportation system.

The project's inclusion of the bus stop on Zuni, as well as the proposed reimbursements incentives will encourage the use of public transportation around the city.

RECREATION (Chapter XV) The Flagstaff region prides itself as being one of the best "quality of life" communities in the nation, in part due to abundant indoor and outdoor recreational opportunities, all of which contribute greatly to the community's public health. To further the goals set forth in the regional plan the project proposes the following:

Policy Rec.1.1. Integrate active and passive recreational sites within walking distance throughout the region to promote a healthy community for all City and County residents and visitors.

Development of Recreation Areas: In conjunction with the preservation of natural resources, the applicant has preserved a large area of green space/forested area. Within this area, the project is providing a walking/hiking trail for public use. This trail system interweaves throughout the site and provides challenging hiking areas and scenic views of the area. The project is proposing a walking and hiking trail within the open space. Further, the project will improve Zuni Drive by providing sidewalks along the frontage. While not directly connected, the project is in close proximity to the City's FUTS trail system.

3.4 PEDESTRIAN CONNECTIVITY

The SITE will have 5-foot sidewalks throughout the development and connect to the existing sidewalks on Masonic Lane and Lone Tree Rd. This will encourage the use of pedestrian elements and expand upon the pedestrian corridor connectivity of the City of Flagstaff. The project proposes installing walking trails through the undisturbed portions of the site. Trail locations will be coordinated with the city during the plan approval process.

3.5 MATERIALS MANAGEMENT PLAN

Each unit will consist of trash and recycling receptacles within the kitchen cabinets.

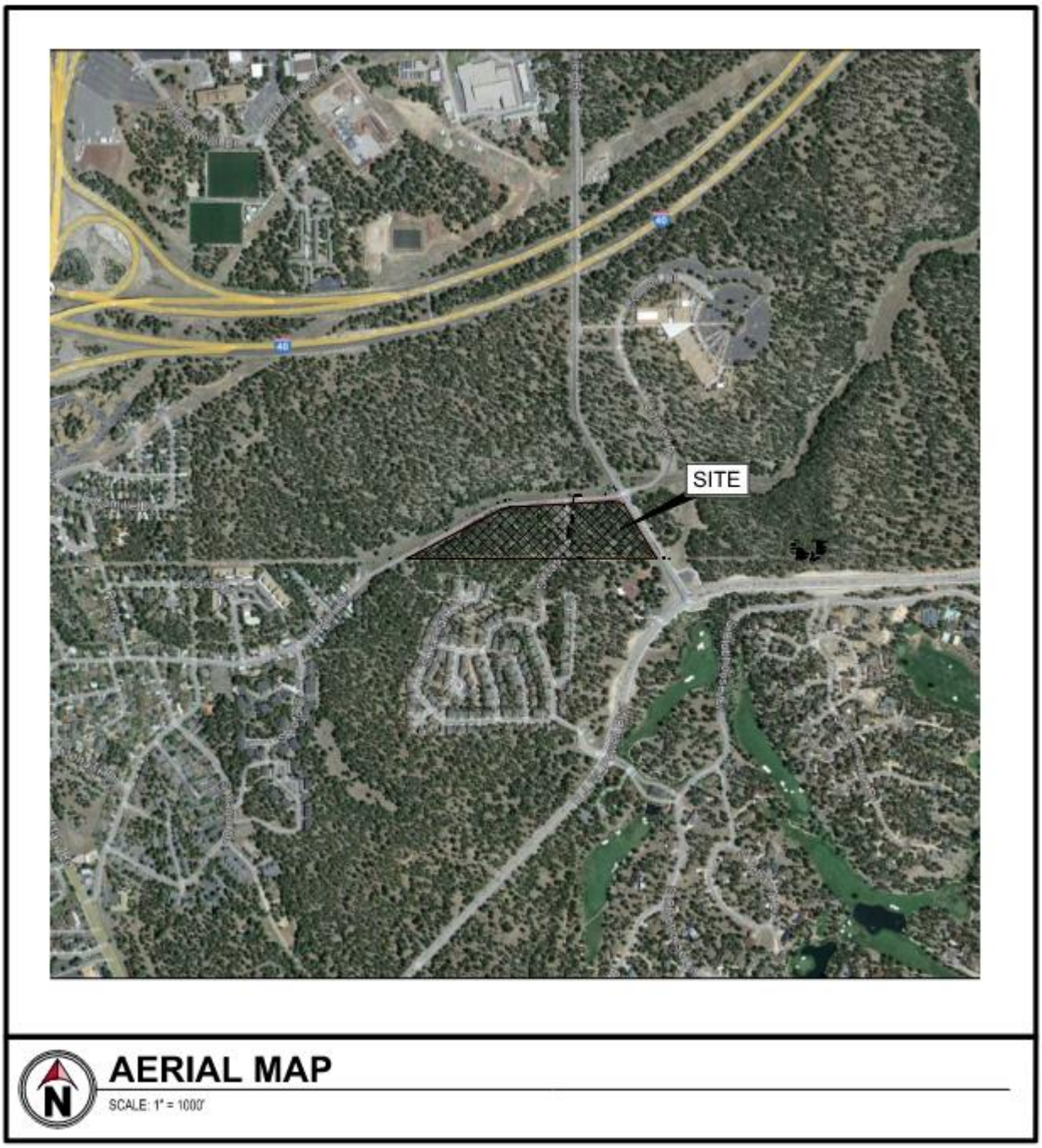
No centralized storage rooms for trash or recycling materials are planned in the individual units. No trash chutes will be utilized on site. Trash and recycling receptacles will be located throughout the club house. The site will consist of 4 collection locations throughout the site. Each location will consist of 8-yard dumpsters which typically can store up to 1,600 lbs. of material. Estimating that each home will consist of 2.5 occupants that generate 4.40 lbs. of waste per day based on the national average. The total amount of waste the site will need to accommodate per week is 6,391. This amount divided by 1,600 is 3.99. Given that there are four (4) 8-yard dumpsters on site there should be sufficient storage. Pick up of trash and recycling from these locations is proposed to be picked up by the city following the cities current collection schedule.

Educational materials will be provided to the residents regarding being resourceful within the home and reducing their individual carbon footprint. The methods included within this material will be focused on bringing your own, encouraging donation of unused items, buying smart, fix and maintain items they currently have, and borrowing and share items.

ViewPoint Engineering

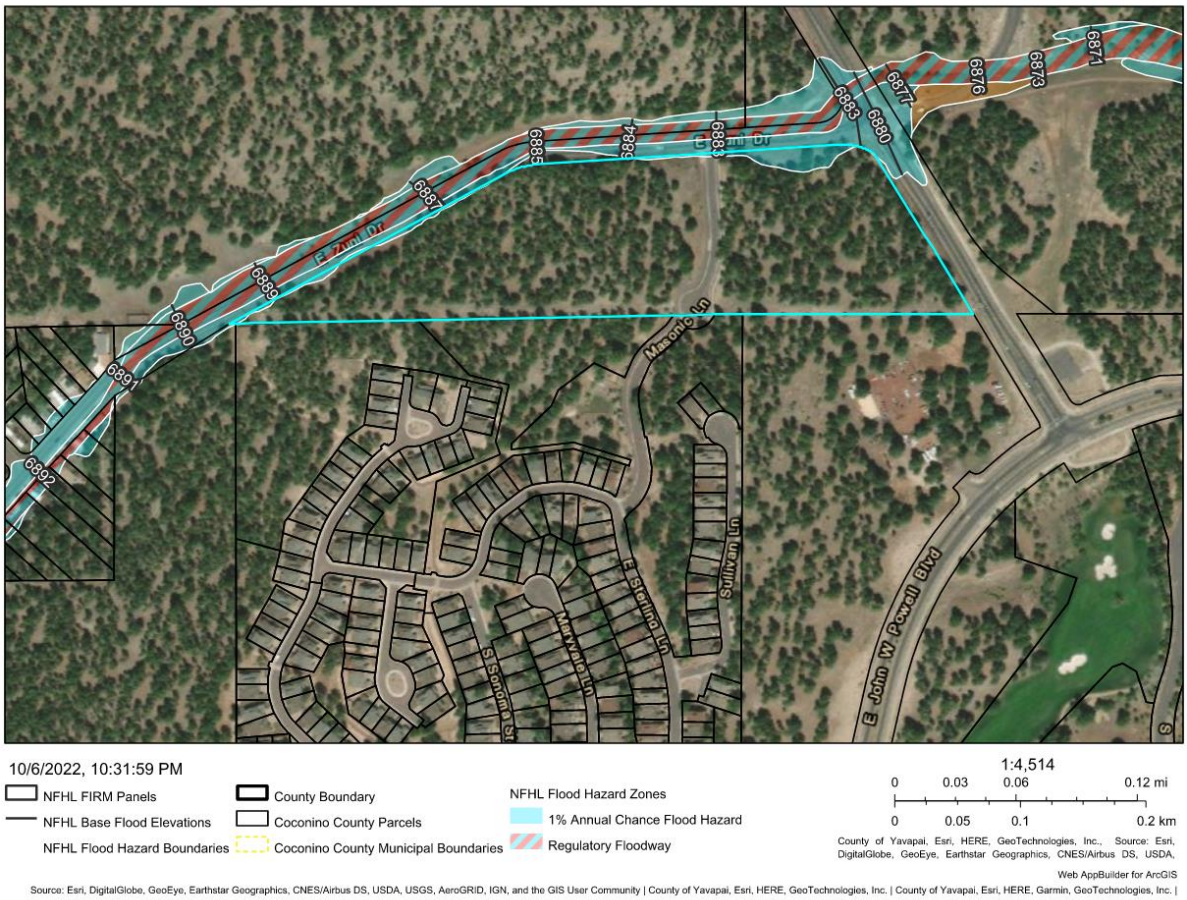
APPENDIX A: SUPPORTING DOCUMENTS

A.1 PROJECT LOCATION MAP

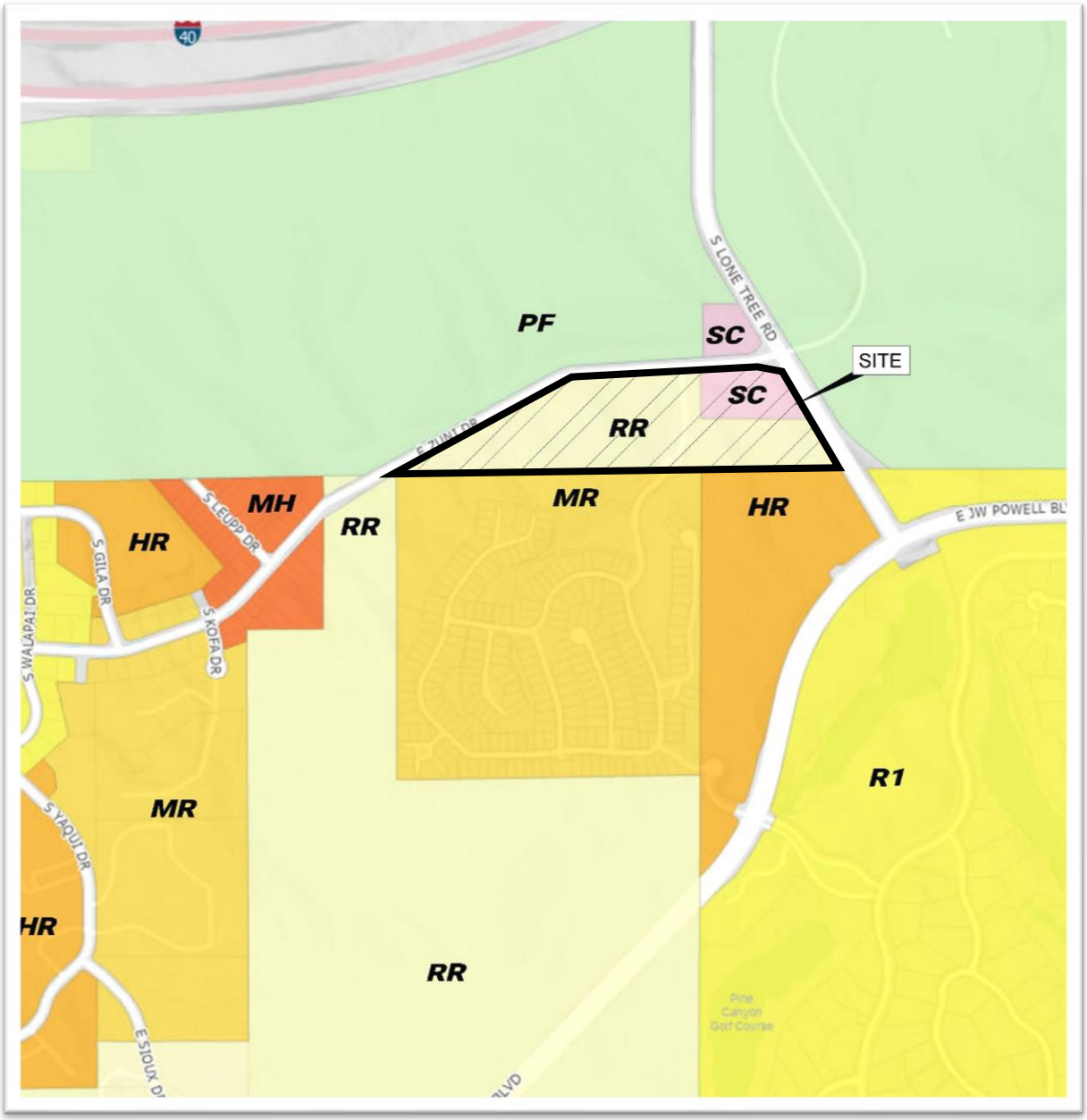


A.2 FLOOD MAP

ArcGIS Web Map



A.3 ZONING MAP



Juniper Estates

13.8+/- Acre Condo Development Project

Analysis Completed March 10, 2023

Public Water & Sewer Impact Analysis

Prepared by Ardurra, for The City of Flagstaff Water Services

Mayor

Becky Daggett

Council

Austin Aslan
Khara House
Lori Matthews
Jim McCarthy
Miranda Sweet
Deborah Harris

City Manager

Greg Clifton

Water Services Director

Shannon Jones

City Engineer

Paul A. Mood, P.E.

Public Works Director

Scott Overton

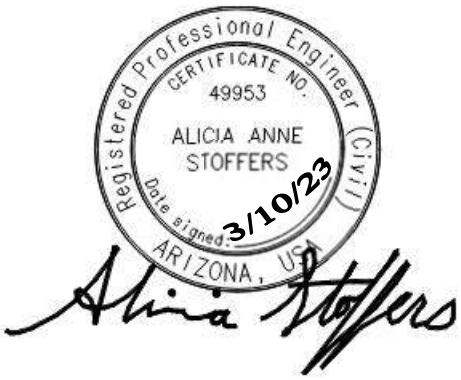
Registered Professional Engineer (Civil)
CERTIFICATE NO. 49953
ALICIA ANNE STOFFERS
Date signed: 3/10/23
ARIZONA, USA

Table of Contents
Public Water and Sewer Impact Analysis
Juniper Estates

Contents

I. INTRODUCTION 3
II. ANALYSIS SUMMARY 4
III. WATER SYSTEM ANALYSIS 4
A. EXISTING WATER SYSTEM 4
B. PROPOSED WATERLINE EXTENSIONS 4
C. WATER SYSTEM DEMANDS 5
D. WATER SYSTEM ANALYSIS RESULTS 5
IV. SEWER SYSTEM ANALYSIS 6
A. EXISTING SEWER SYSTEM 6
B. PROPOSED SEWER SYSTEM EXTENSIONS 6
C. SEWER SYSTEM FLOWRATES 7
D. SEWER SYSTEM ANALYSIS RESULTS 7
V. CONCLUSIONS & REQUIREMENTS 9

Site Plan	Exhibit 1
Sewer GIS Map	Exhibit 2
Water GIS Map	Exhibit 3
WaterGEMS Junctions Map	Exhibit 4
WaterGEMS Hydrants Map	Exhibit 5
SewerGEMS Sewer Manholes	Exhibit 6
WaterGEMS Peak Domestic Flows and Pressures	Appendix A
WaterGEMS Fire Flow Analysis Report	Appendix B
SewerCAD Gravity Pipe Report	Appendix C



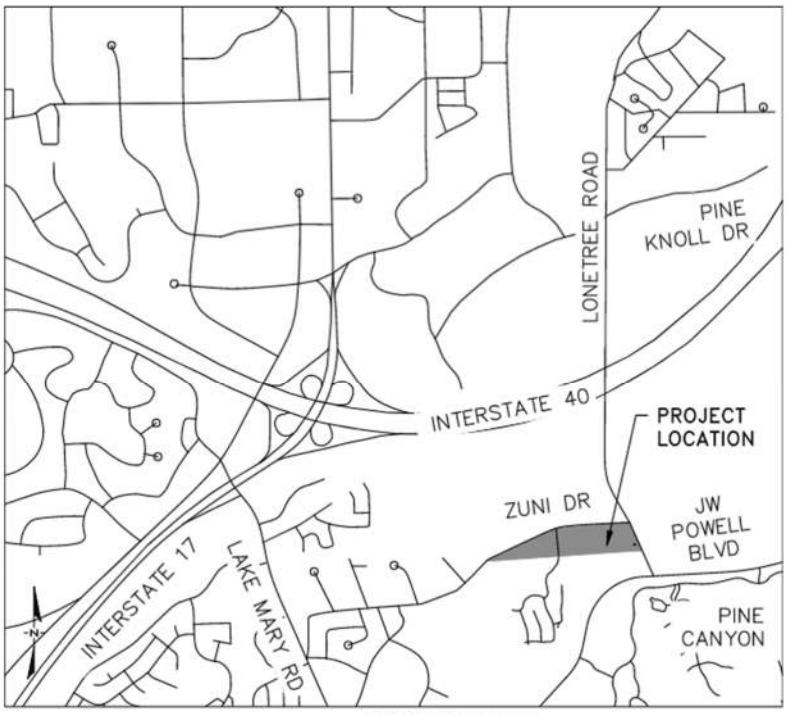
I. INTRODUCTION

The Juniper Estates project is located on Masonic Lane, southwest of the intersection of Zuni Dr and Lonetree Road. The project is located on Coconino County parcel 103-26-002D in Section 28, Township 21N, Range 7E, Gila and Salt River Base & Meridian (see Figure 1).

The proposed development lies within the City of Flagstaff urban growth boundary and has the ability to be served by City water and sewer utilities.

The Juniper Estates Overall Utility Plan Dated 10/07/22 and Utility Plan Sheets 1 and 2 (Exhibit 1) was provided to the City by ViewPoint Engineering. and has been used as the basis for this preliminary analysis. The developer is proposing two 26' PUEs for a total width of 52' centered on the proposed roadway. All public utilities are within the 52' PUE.

The criteria used herein to estimate the project's utility impacts is from the City of Flagstaff Engineering Design Standards (COF EDS), Chapter 13-09, effective October 2017. This Water and Sewer Impact Analysis (WSIA) is considered valid for two years from its completion date, which is 3/10/2023.



VICINITY MAP
NOT TO SCALE

II. ANALYSIS SUMMARY

On-site modifications:

The project site is bisected by Masonic Lane. In that road there are existing public sewer and water mains. Connections are proposed to the existing utilities and to existing utilities in Zuni Drive and Lone Tree Road. The remainder of the parcel is vacant, and it is assumed that there is currently no infrastructure in the ground to support this development, so all systems for the project will have to be designed and built.

Off-site modifications:

Sewer:. Currently there are sewer mains crossing the parcel that can be utilized for sewer service and also existing mains in the adjacent roadways. Tapping and extending the sewer line should be done according to City of Flagstaff Standards.

Water: Currently there is a water main crossing the parcel that can be utilized for water service and also existing mains in the adjacent roadways. Tapping and extending the waterline should be done according to City of Flagstaff Standards.

III. WATER SYSTEM ANALYSIS

A. EXISTING WATER SYSTEM

Currently, public water infrastructure exists across the property and in the adjacent roadways. There is a 12" DI water main in Lonetree Rd, a 12" PVC water main Zuni Dr. and an 8" PVC water main in Masonic Lane. This main falls within the City of Flagstaff Pressure Zone 'B'. See Exhibit 3 for the City of Flagstaff GIS map of the existing water facilities.

B. PROPOSED WATERLINE EXTENSIONS

The Concept Plan shows new 8" water mains extended on both sides of Masonic Lane in a 52' PUE to provide water service to each condo (Exhibit 1). The water mains will have two fire hydrants and individual meters for each of the 87 condos. The site plan provided by View Point Engineering shows the project tapping the public water system in 4 locations to loop the new mains through the site and provide a second source to both sections of the project.

There are structures proposed on the Concept Plan provided. A building on this

development could have multiple stories with water and sewer fixture heights up to 35 feet above ground level (according to zoning category MR Zoning and Table 10-40.30.040.C). This analysis provides the water pressure at the existing ground level. After grading is complete and finished floor elevations are established, analysis should be performed by the Architect/Engineer (A/E) to verify adequate pressure throughout the project.

C. WATER SYSTEM DEMANDS

The following quantifies the anticipated water demands for the project. The following Demand Criteria is from the City of Flagstaff Code 13-09-003-0004.2.

Water System Demand

Population Density MFR	2.5 person/unit
Average Daily Flow MFR	75 gpcd
Peak Daily Flow SFR	300 gpcd
Single Family Residential	87 Dwelling Units

Average Daily Demand = 87 DU X 2.5 person/unit X 75 gpcd = 16,313 gpd

Peak Daily Demand = 87 DU X 2.5 person/unit X 300 gpcd = 65,250 gpd

Fire Flow Demand = 1,500 gpm

D. WATER SYSTEM ANALYSIS RESULTS

Bentley WaterGEMS software was used for simulations of peak daily and fire flow.

The analysis area was estimated to be the area impacted by the proposed Juniper Estates development additional demands and locations that supply fire flows. This area is bounded by Lake Mary Road and Pine Knoll Dr. See the GIS Water Map Exhibit 3 with the analysis area. Proposed Demands were added to the model at J-14177 on Zuni Dr for the 45 western lots and J-7497 on Lonetree Rd for the 42 eastern lots. The Water Gems Junction Map is Exhibit 4.

Results of the computer analysis (Appendix A) for peak daily flow indicate a range in pressures off-site in the project vicinity from 109.58 psi (J-11543, Pine Knoll Drive) to 54.01 psi (J-2405, Pine Canyon). The nodes are consistent given the elevations of the

junction nodes within the analyzed boundary. The existing waterline in Masonic Lane has an approximate elevation of 6892 at the connection point to the new waterlines. The peak daily flow condition yields a pressure on the project site of 100.64 psi. This project meets the minimum pressure requirements stated in the City of Flagstaff Engineering Standards.

A pressure-reducing valve is required by the City of Flagstaff Engineering Standards if the pressure is above the 80 psi pressure. High pressures on-site will require the developer to install pressure-reducing valves after the meter.

Based on the computer simulation of fire flow, residual pressures in the project vicinity are projected to remain above 20 psi (COF EDS 13-09) or higher during fire flow scenarios of 1500 gpm or less. All of the hydrants in the analysis area can provide the required fire flow. Results are included in Appendix B and the Water Gems Hydrant Map is Exhibit 5. The lowest fire flow available within the analysis area occurs within the existing Bow and Arrow Neighborhood, west of the project site, due to higher elevations and smaller supply mains. This area still meets the minimum required Fire Flow and is not impacted by the proposed development.

It is the developer's responsibility to design, acquire adequate right-of-way for, and construct all on-site and connecting water infrastructure per all applicable City, State, and Federal rules and regulations.

IV. SEWER SYSTEM ANALYSIS

A. EXISTING SEWER SYSTEM

The project site is bordered by two existing sewer lines and a sewer line crossing the site in Masonic Lane. To the north of the project in Zuni Dr. is a 21" VC sewer interceptor. An 8" DI sewer in Masonic Dr and a 10" PVC sewer in Lonetree Rd flow to this main. The analysis area looks at the sewer downstream of the project to the Rio De Flag WRP junction MH R-034. See Exhibit 2 for the City of Flagstaff GIS map of the existing sewer system. The Wildcat Hill Treatment Plant treats all sewage collected from this proposed project.

B. PROPOSED SEWER SYSTEM EXTENSIONS

The Concept Plan shows new 8" sewer mains extended on both sides of Masonic Lane in a 52' PUE to provide sewer collection to each condo (Exhibit 1). Constructing and tapping the sewer line in the right-of-way should be done according to City of

Flagstaff Standards.

The proposed on-site sewer system was not analyzed as a part of this report and shall be addressed by the A/E as part of their design for their project. The A/E's engineering analysis and design shall be consistent with the requirements called out in the City of Flagstaff Engineering Standards.

C. SEWER SYSTEM FLOWRATES

The following criteria were utilized in determining the anticipated wastewater generation for this project. The following Demand Criteria is from the City of Flagstaff Code 13-09-002-0002.

The peaking factor is determined based on existing upstream population and calculated per Figure 13-09-002-01 in the Flagstaff Design Standards. The Population Equivalent for the existing flow rate in the upstream sewer system is 19,000 (100 gpcpd). A peaking factor of 1.75 is used in this analysis.

Sewer System Design Flows Condo

Population Density	2.5 person/unit
Average Daily Flow	75 gpcd
Peak Factor	1.75
Condos	87

Average Daily Flow = 87 lots X 2.5 person/unit X 75 gpcd = 16,313 gpd

Peak Daily Flow= 16,313 gpd X 1.75 = 28,548 gpd

D. SEWER SYSTEM ANALYSIS RESULTS

The submitted Utility Plan, Exhibit 1, shows connections to all three of the existing sewer mains. Without design elevations to determine flow direction, this analysis assumes the proposed site will contribute a portion of the generated flow to the sewers in both Zuni Dr and Lonetree Rd based on existing topography.

In the SewerGEMS model prepared for this evaluation, the sewer design flows for 45 condos were applied to manhole 6-213 in Zuni Dr. and 42 units at manhole 11-002 in Lonetree Rd (See Exhibit 6). These total design flows from Juniper Estates project

will yield a peak day flow increase of 28,548 gallons per day (0.028 MGD).

The capacity of the existing collection system downstream of this project is adequate to convey the existing and proposed flow rates and maintain the City's required d/D pipe capacity ratio (expressed as a percentage) at less than 70%. The highest D/d in the analysis area is 33.9% in the 24" sewer south of the Rio De Flag Wastewater Reclamation Plant. See Appendix C and Exhibit 6 for results.

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 by the Juniper Estates 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.

V. CONCLUSIONS & REQUIREMENTS

Sewer and water service to all adjacent homes and businesses must be maintained during construction and tapping for this project.

The findings of this analysis indicate that the completion of the project will comply with public water and sewer infrastructure requirements as outlined in the current City of Flagstaff Engineering Standards as long as all on-site infrastructure is designed and constructed per the Engineering Standards and as stipulated herein. All new service connections to the City water and sewer infrastructure are required to pay capacity fees for the new connection to the public water and sewer system. Deviations from the intent shown on the developer's provided preliminary drawings, and/or further development beyond what was shown on the preliminary drawings will require additional review and must gain full IDS (Inter-Division Staff) Approval. It should be noted that the City of Flagstaff Engineering Standards (Chapter 13 of the City of Flagstaff Code) is the only document used for this analysis. This WSIA does not guarantee conformance to any other codes, standards, or specifications similar to, but not limited to, IBC, IFC, IRC etc.

The location(s) of any required fire hydrants related to this project is (are) left to the discretion of the City of Flagstaff Fire Department per City of Flagstaff Engineering Standards and current Fire Codes. Approval by the City Engineer shall also be obtained.

Water and Sewer computer analyses were done with Bentley Systems WaterGEMS and SewerGEMS software. The existing City of Flagstaff master water and sewer models were modified to incorporate the estimated infrastructure and flows that will be required by this development.

All existing utility information is based on the City of Flagstaff GIS data and other information contained within the WaterGEMS & SewerCAD master models or provided by the City of Flagstaff engineering staff. The developer's A/E should confirm the City water system supply and wastewater collection system pipe sizes, materials, and locations as part of their design for connection to the COF water and sewer systems.

Changes to the development plan can impact the results of this Water and Sewer Impact Analysis. Those changes include modification of the development size, area of commercial space, number or type of residential units, population, etc. If such changes are made, then the developer must apply for an updated analysis and

provide the proposed changes to the City of Flagstaff for review and consideration.

This WSIA is considered valid for two years from its completion date, 3/10/2023, which is the date of the engineer's seal on the cover sheet and table of contents of this WSIA. All water and sewer utility lines and treatment plant capacity reservations as a result of this study will expire at that time. This WSIA will function as place holder for the developer. The capacity assurances discussed within this report 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.

Exhibit Maps

LAND USE				ESTIMATED WATER DEMAND		
TYPE		PEAK	# OF UNITS	DESIGN POPULATION	MAXIMUM TOTAL DAILY CONSUMPTION	PEAK DAY FLOW RATE
RESIDENTIAL CONDO	3.5 PERSONS PER DWELLING UNIT	250 (GPCD)	87	304.5	76125 (GPD)	52.86 (GPM)

*Values found in Table 13-09-003-02 Water Demand Criteria of the Flagstaff Municipal Code.

LAND USE				ESTIMATED WASTE WATER DEMAND	
TYPE		AVERAGE DRY WEATHER FLOW	# OF UNITS	DESIGN POPULATION	ESTIMATED DAILY FLOW
RESIDENTIAL CONDO	3.5 PERSONS PER DWELLING UNIT	75 (GPCD)	87	304.5	22837.5 (GPD)

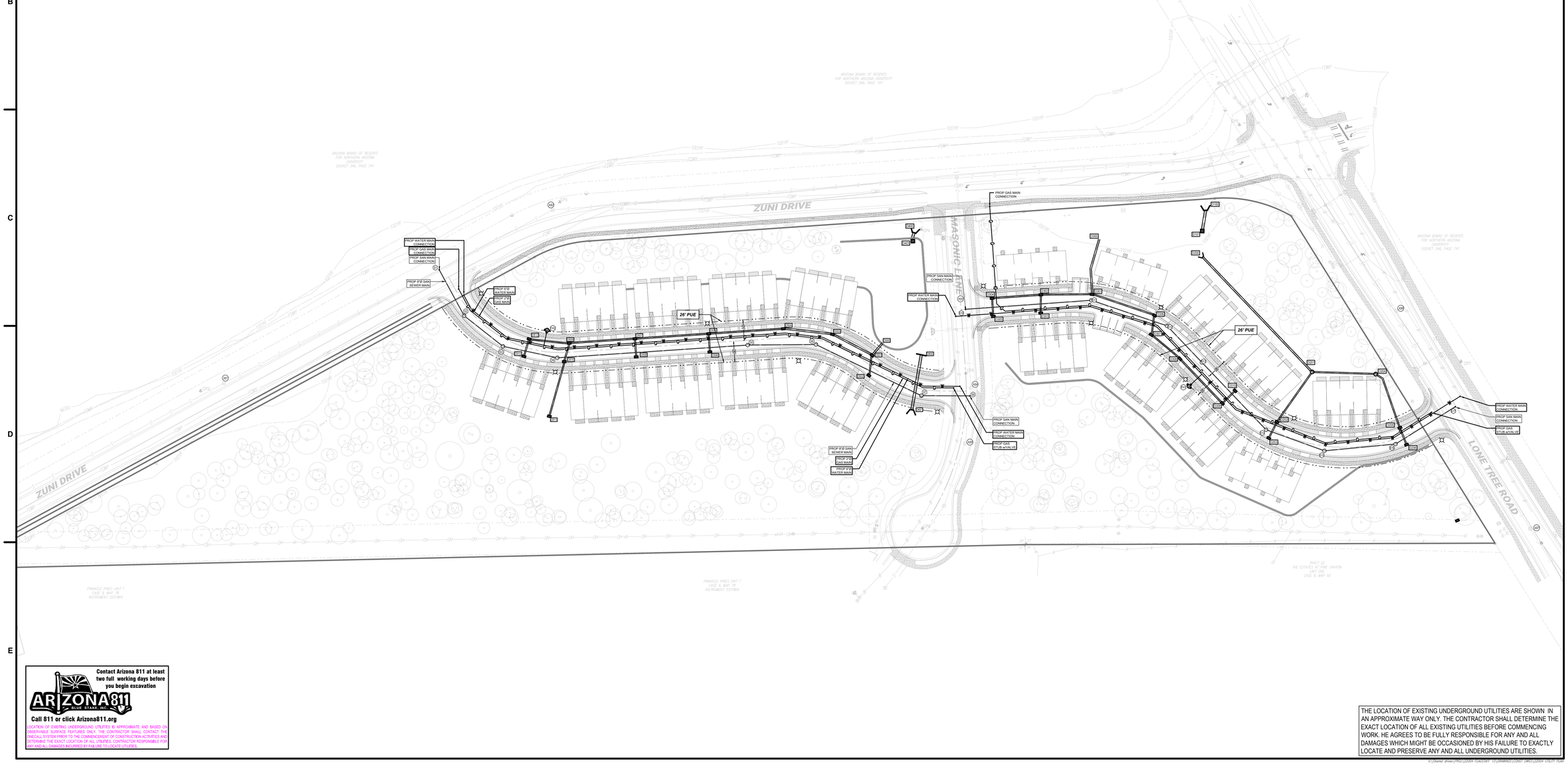
* Values found in 13-09-002-01 Average Daily Flows by Land Use of the Flagstaff Municipal Code.

LEGEND

- PROPERTY BOUNDARY
- LEGAL RIGHT-OF-WAY
- ULTIMATE RIGHT-OF-WAY
- ROAD/RIGHT-OF-WAY CENTER LINE
- EASEMENT LINE
- APPROX. FEMA ZONE AE BOUNDARY
- APPROX. FEMA FLOODWAY BOUNDARY
- FENCE LINE
- EDGE OF ASPHALT
- EDGE OF DIRT/GRAVEL
- EX. SANITARY SEWER MAIN
- EX STORM PIPE
- EX. UNDERGROUND ELECTRIC SERVICE LINE
- EX. OVERHEAD WIRE
- EX. GAS SERVICE MAIN
- EX TELEPHONE/COMMUNICATIONS LINE
- EX WATER MAIN
- EX CONTOUR ELEVATION LINE
- PROP CONTOUR ELEVATION LINE
- PROP STORM SEWER
- PROP SAN SEWER MAIN
- PROP GAS SERVICE MAIN
- PROP WATER SERVICE MAIN
- PUE

SYMBOL LEGEND

- EX. STORM CATCH BASIN / MANHOLE
- EX. WATER VALVE
- EX. FIRE HYDRANT
- EX TELECOMM BOX
- EX. SANITARY MANHOLE
- EX UTILITY POLE w/GUY ANCHOR
- EX. ELECTRIC BOX
- EX. LIGHT POLE
- EX. BOLLARD
- EX. GAS VALVE / LINE MARKER
- EX. SIGN
- EX. CONCRETE PAVEMENT
- SURVEY CONTROL POINT
- PROPERTY CORNER
- PROPERTY MONUMENT FOUND
- EX. TREES (PINE, OAK, DECID.)
- PROP STORM STRUCTURE w/ID
- PROP SAN STRUCTURE w/ID
- PROP FIRE HYDRANT w/ID
- PROP LIGHT POLE
- LANDSCAPE STRIP



Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE, AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REV	DATE	DESCRIPTION	INIT
REVISIONS			

PRELIMINARY NOT FOR CONSTRUCTION

THIS PLAN HAS BEEN PREPARED FOR GENERAL DISCUSSION ONLY AND IS BASED UPON LIMITED DUE DILIGENCE.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE 1" = 50' (0, 25, 50)
DWN BY: M TOTH
CHK BY: E BEALS

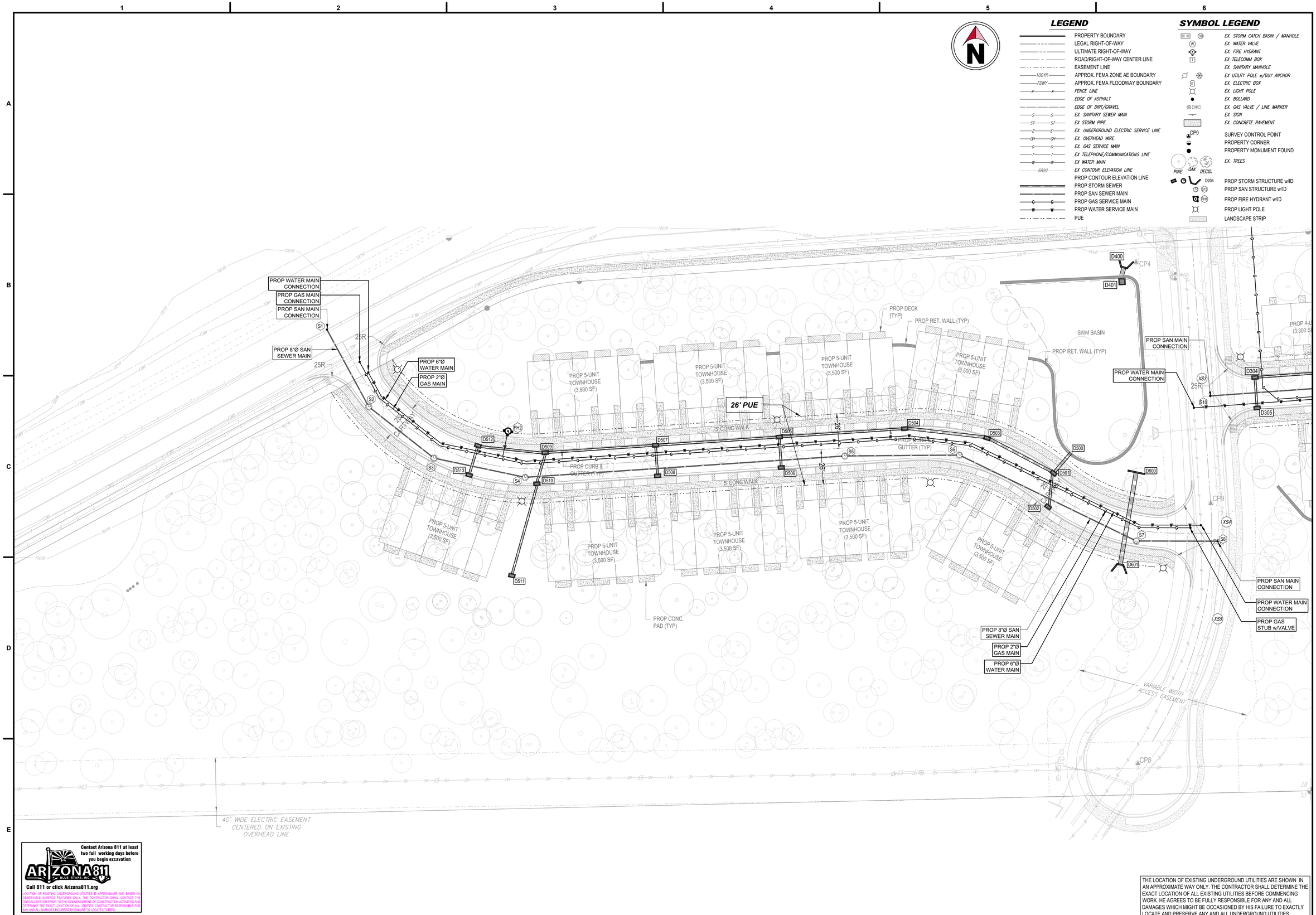
PROJECT: **JUNIPER ESTATES**
RESIDENTIAL LAND DEVELOPMENT
2955 N MAIN ST, FLAGSTAFF, AZ
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
8512 BESTRIDE BEND, AUSTIN, TEXAS 78744

TITLE: **OVERALL UTILITY PLAN**

PROJECT NO. 22004
DATE OCTOBER 7, 2022
SHEET ID
REV 0

P:\Shared drives\VPE\22004 FLAGSTAFF TI\Drawings\Cover Sheet\22004 UTILITY PLAN



Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT

PRELIMINARY NOT FOR CONSTRUCTION

THIS PLAN HAS BEEN PREPARED FOR GENERAL DISCUSSION ONLY AND IS BASED UPON LIMITED DUE DILIGENCE.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE 1" = 30'
0 15 30

DWN BY: M TOTH
CHK BY: E BEALS

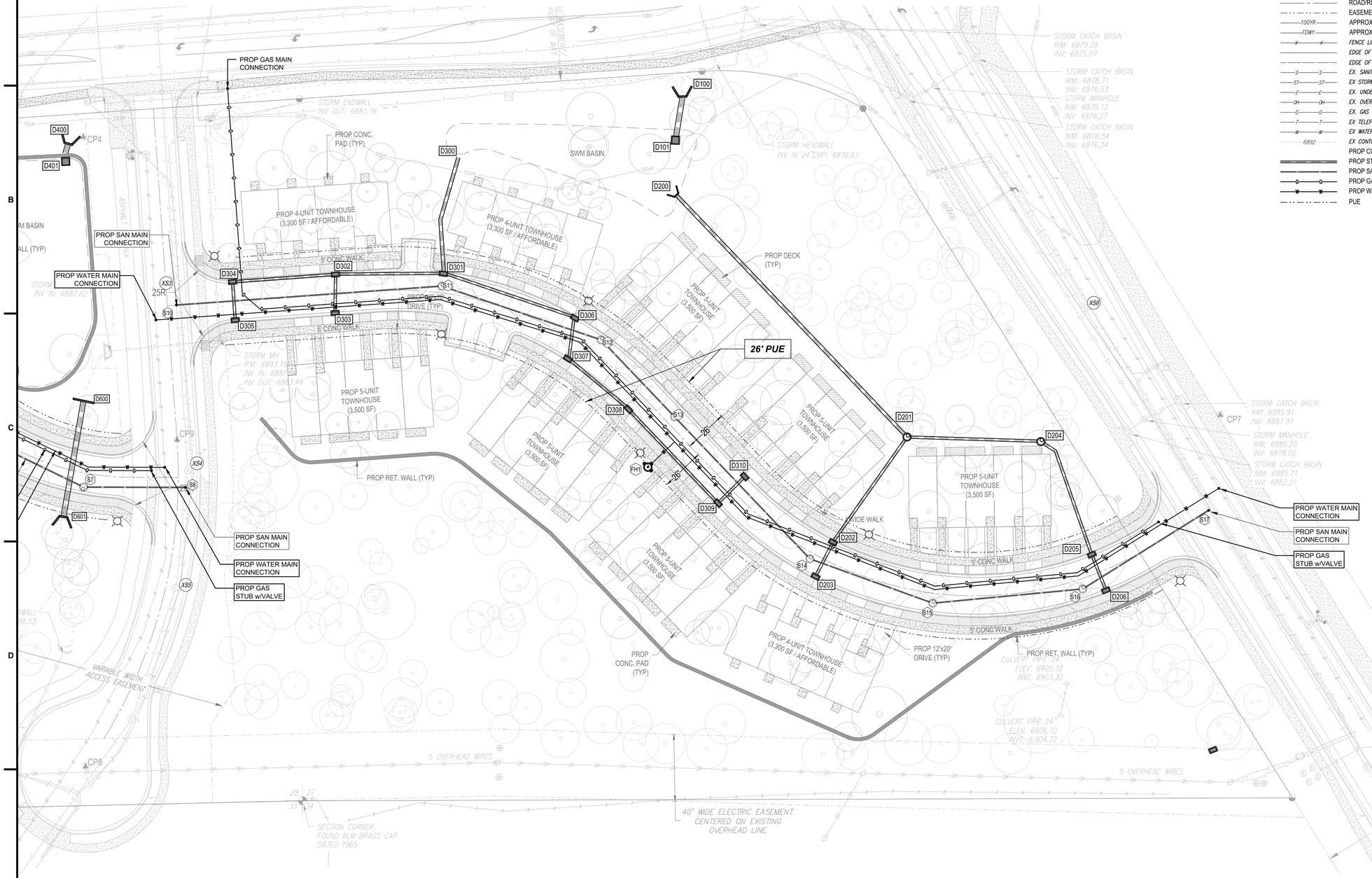
PROJECT: JUNIPER ESTATES
RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
8512 BESTRIDE BEND, AUSTIN, TEXAS 78744

TITLE: UTILITY PLAN (1 OF 2)

PROJECT NO. 22004
DATE OCTOBER 7, 2022
SHEET ID
REV 0

SHEET 11 of 13



LEGEND

- PROPERTY BOUNDARY
- LEGAL RIGHT-OF-WAY
- ULTIMATE RIGHT-OF-WAY
- ROAD/RIGHT-OF-WAY CENTER LINE
- EASEMENT LINE
- 100YR — APPROX. FEMA ZONE AE BOUNDARY
- FDWY — APPROX. FEMA FLOODWAY BOUNDARY
- FENCE LINE
- EDGE OF ASPHALT
- EDGE OF DIRT/GRAVEL
- EX. SANITARY SEWER MAIN
- EX STORM PIPE
- EX. UNDERGROUND ELECTRIC SERVICE LINE
- EX. OVERHEAD WIRE
- EX. GAS SERVICE MAIN
- EX TELEPHONE/COMMUNICATIONS LINE
- EX WATER MAIN
- 6892 — EX CONTOUR ELEVATION LINE
- PROP CONTOUR ELEVATION LINE
- PROP STORM SEWER
- PROP SAN SEWER MAIN
- PROP GAS SERVICE MAIN
- PROP WATER SERVICE MAIN
- PUE

SYMBOL LEGEND

- EX. STORM CATCH BASIN / MANHOLE
- EX. WATER VALVE
- EX. FIRE HYDRANT
- EX TELECOMM BOX
- EX. SANITARY MANHOLE
- EX UTILITY POLE w/GUY ANCHOR
- EX. ELECTRIC BOX
- EX. LIGHT POLE
- EX. BOLLARD
- EX. GAS VALVE / LINE MARKER
- EX. SIGN
- EX. CONCRETE PAVEMENT
- CP9 — SURVEY CONTROL POINT
- PROPERTY CORNER
- PROPERTY MONUMENT FOUND
- EX. TREES (PINE, OAK, DECID.)
- D204 — PROP STORM STRUCTURE w/ID
- S16 — PROP SAN STRUCTURE w/ID
- FH1 — PROP FIRE HYDRANT w/ID
- PROP LIGHT POLE
- LANDSCAPE STRIP

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REV	DATE	DESCRIPTION	INIT
		REVISIONS	

PRELIMINARY NOT FOR CONSTRUCTION

THIS PLAN HAS BEEN PREPARED FOR GENERAL DISCUSSION ONLY AND IS BASED UPON LIMITED DUE DILIGENCE.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

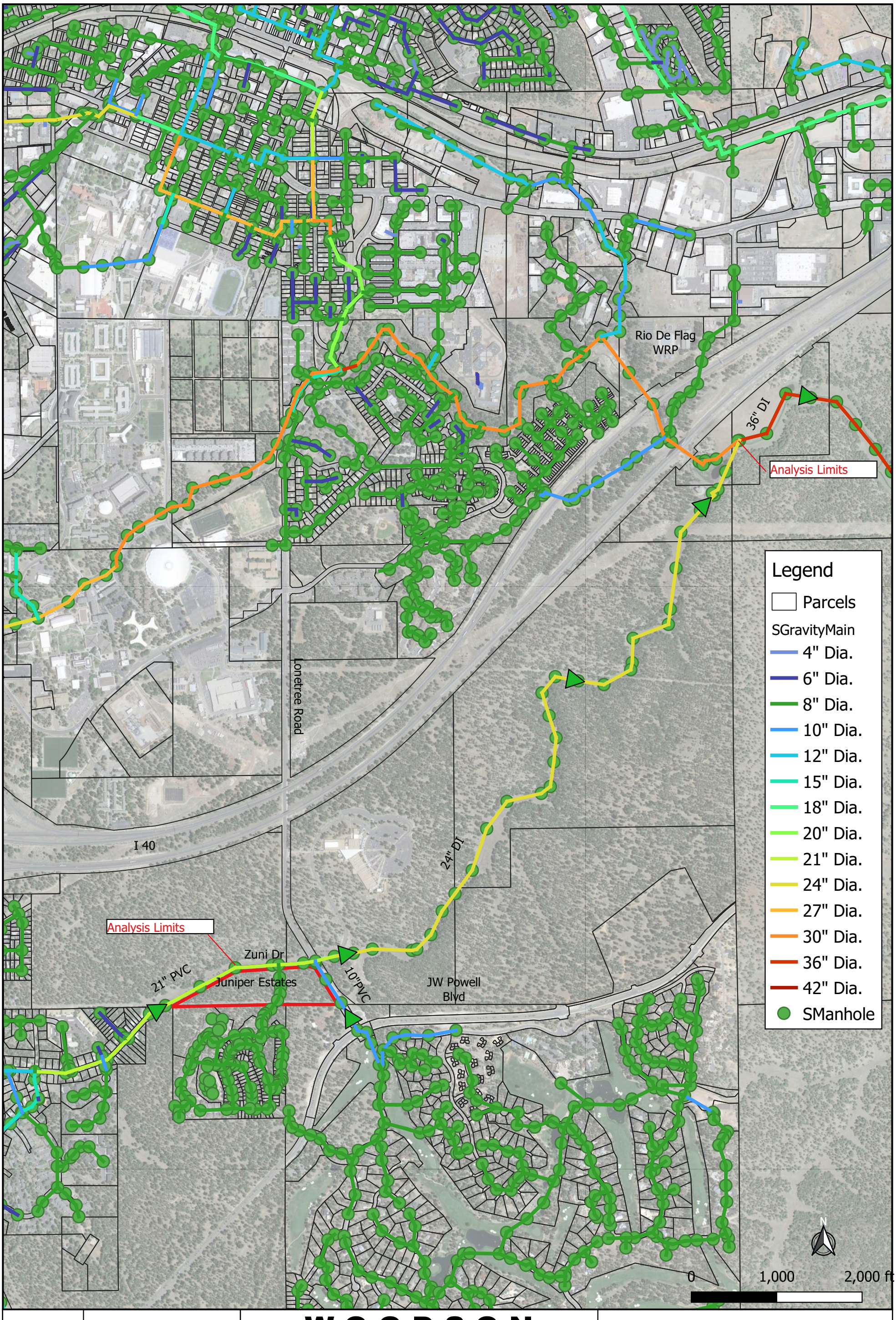
SCALE 1" = 30' (0 15 30)
DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: JUNIPER ESTATES
RESIDENTIAL LAND DEVELOPMENT
2955 S. MILITARY TRAIL
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
8512 BESTRIDE BEND, AUSTIN, TEXAS 78744

TITLE: UTILITY PLAN (2 OF 2)

PROJECT NO. 22004
DATE OCTOBER 7, 2022
SHEET ID
REV 0



PROJ # 122802

ARDURRA

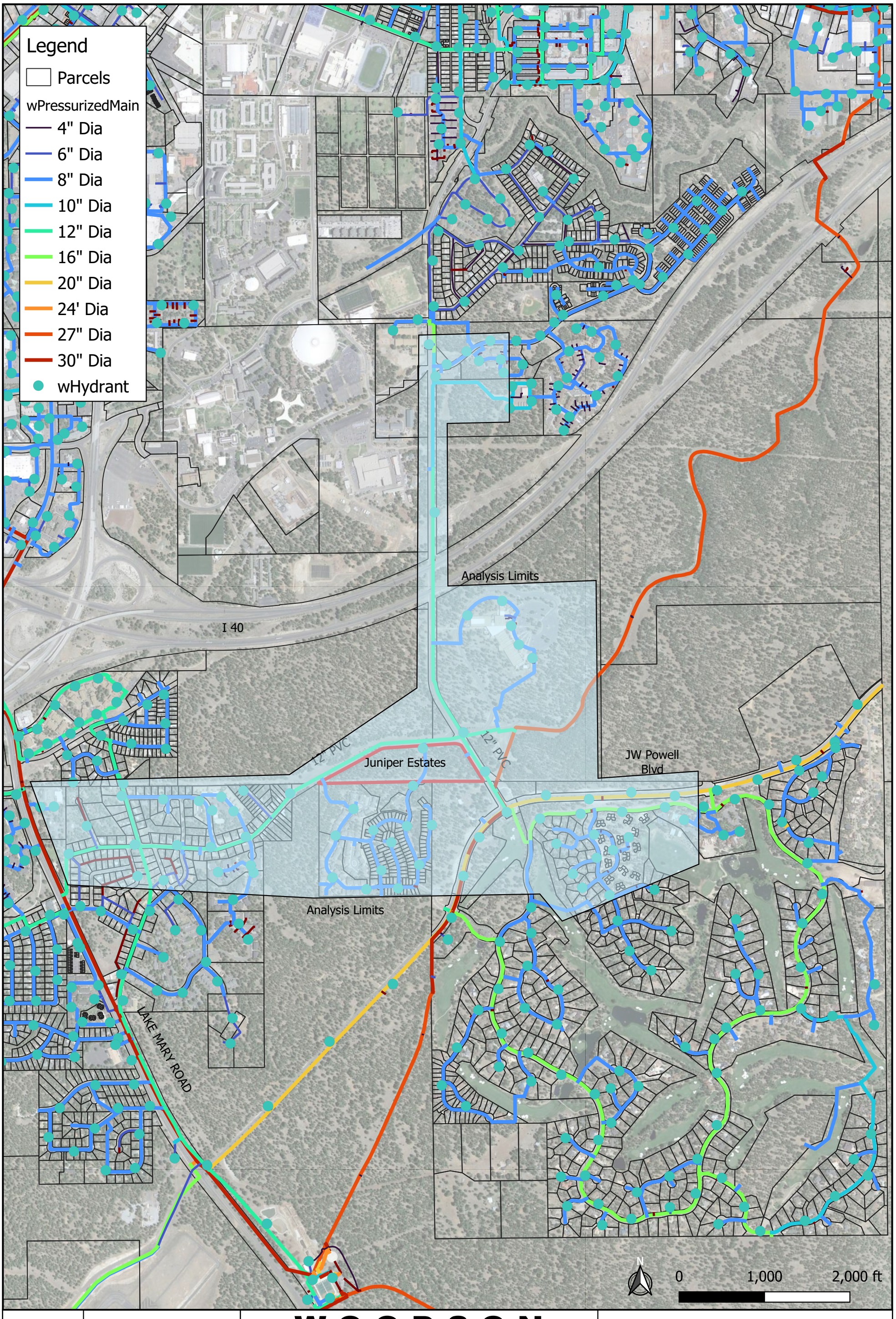
W O O D S O N

ENGINEERING AND SURVEYING

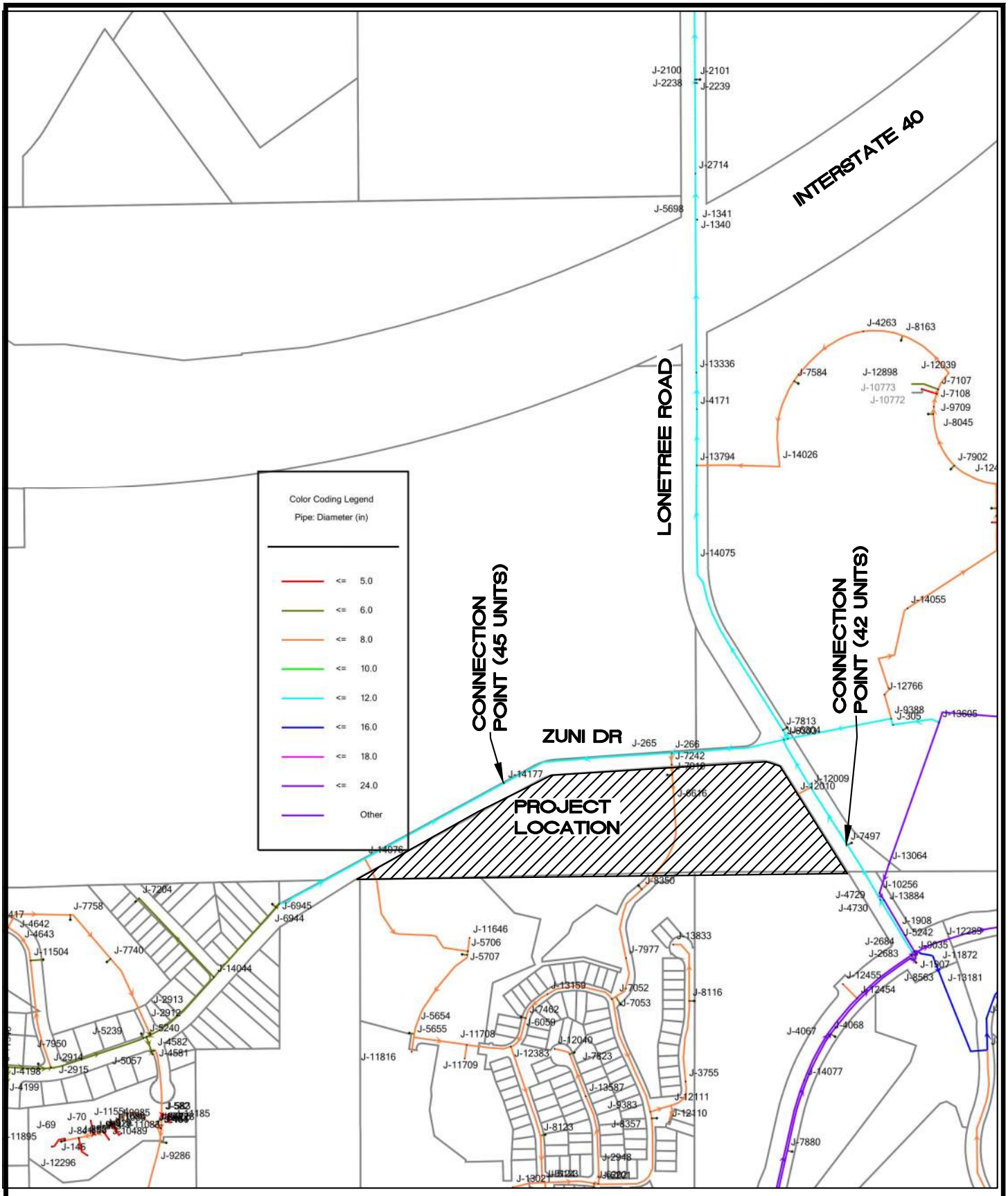
124 N ELDEN ST.
FLAGSTAFF, AZ 86001
PHONE: (928) 774-4636 WWW.ARDURRA.COM

EXHIBIT 2

Juniper Estates
FLAGSTAFF SEWER GIS MAP

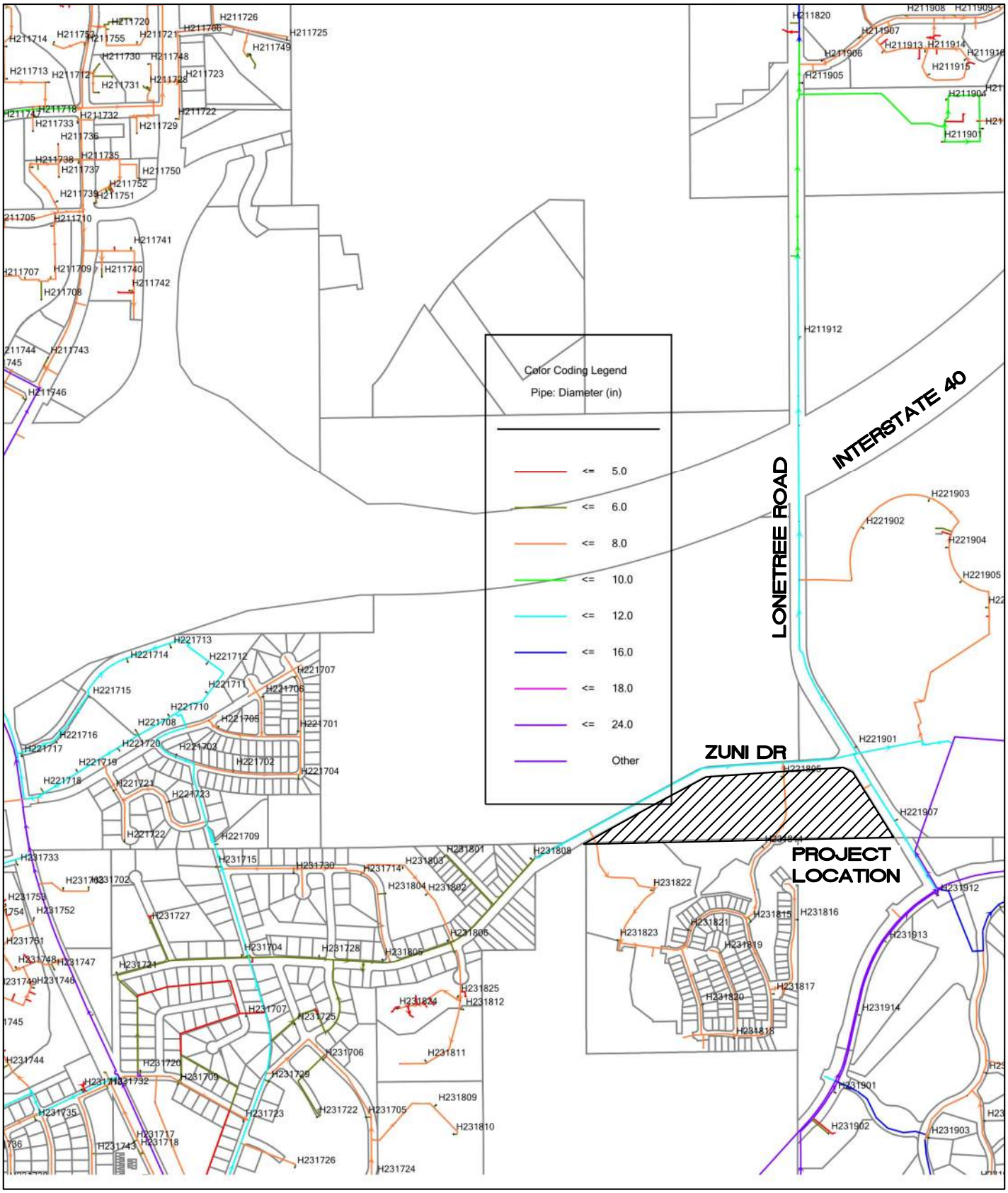


PROJ # 122802	ARDURRA	**WOODSON** ENGINEERING AND SURVEYING 124 N ELDEN ST. FLAGSTAFF, AZ 86001 PHONE: (928) 774-4636 www.ardurra.com	**EXHIBIT 3** **JUNIPER ESTATES** **FLAGSTAFF WATER GIS**



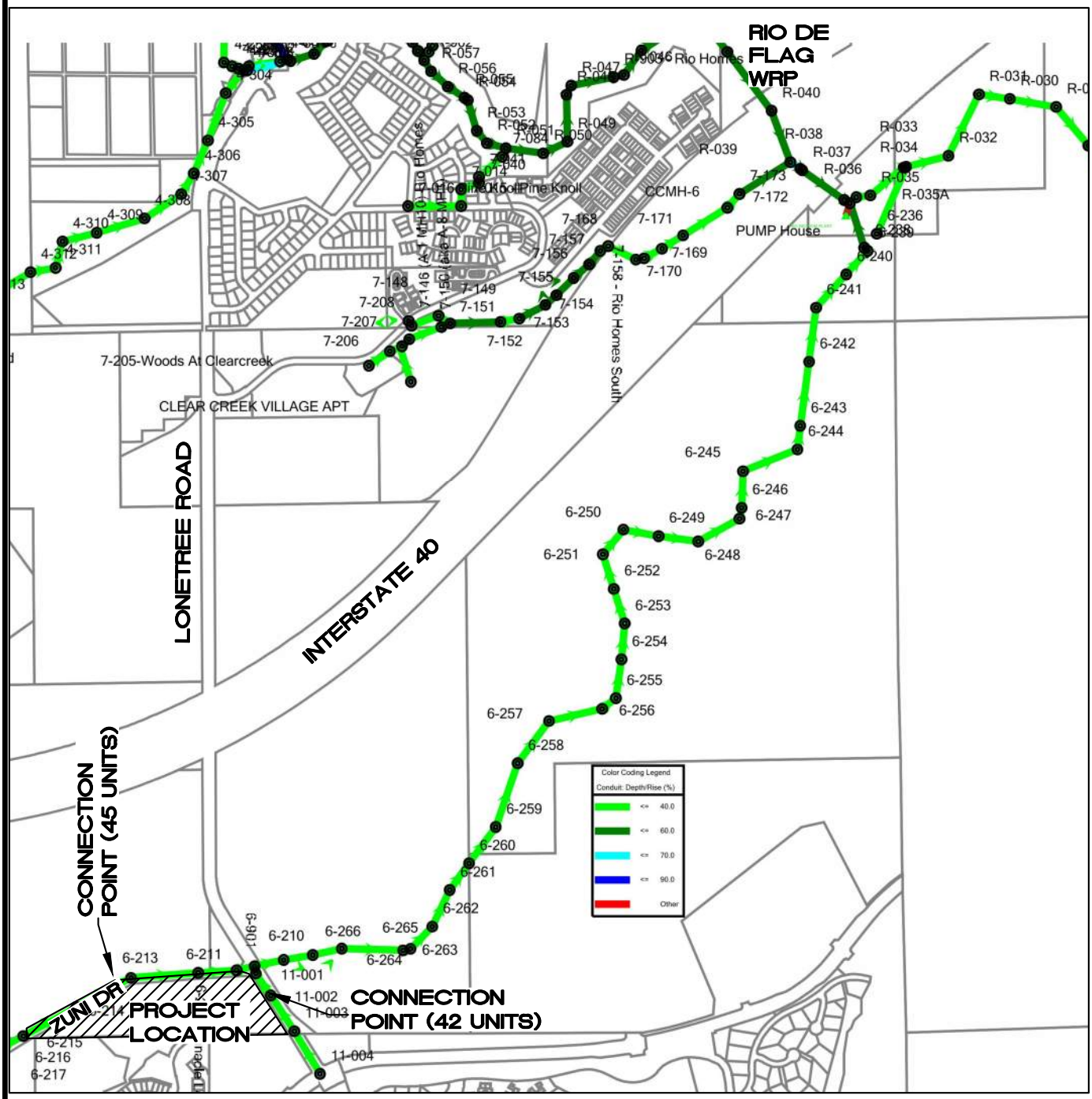
NOT TO SCALE

DRAFTED BY: AAS DATE: 1/24/2023 PROJ. NO.: 122802 FN: GEMS MAPS	**WOODSON** ENGINEERING & SURVEYING (928)774-4636 | WWW.ARDURRA.COM	EXHIBIT 4 WISA JUNIPER ESTATES WATER GEMS JUNCTIONS



NOT TO SCALE

DRAFTED BY: AAS DATE: 1/24/2023 PROJ. NO.: 122802 FN: GEMS MAPS	**WOODSON** ENGINEERING & SURVEYING (928)774-4636 | WWW.ARDURRA.COM	EXHIBIT 5 WISA JUNIPER ESTATES WATER GEMS HYDRANTS



NOT TO SCALE

DRAFTED BY: AAS DATE: 1/24/2023 PROJ. NO.: 122802 FN: GEMS MAPS	**WOODSON** ENGINEERING & SURVEYING (928)774-4636 | WWW.ARDURRA.COM	EXHIBIT 6 WISA JUNIPER ESTATES SEWER GEMS MANHOLES

Appendix A

FlexTable: Junction Table

Label	Elevation (ft)	Demand (gal/min)	Pressure (psi)	Hydraulic Grade (ft)
J-2405	7,000.00	0.00	54.01	7,124.83
J-2406	7,000.00	0.00	54.01	7,124.83
J-9128	6,999.84	0.23	54.08	7,124.83
J-10863	6,999.21	0.00	54.35	7,124.83
J-5739	6,999.14	0.00	54.38	7,124.83
J-9986	6,998.88	0.00	54.49	7,124.83
J-7903	6,998.57	0.00	54.63	7,124.83
J-5380	6,996.06	0.00	55.71	7,124.83
J-10983	6,995.55	0.08	55.94	7,124.83
J-1299	6,995.53	0.00	55.94	7,124.83
J-1300	6,995.43	0.00	55.99	7,124.83
J-7383	6,995.00	0.09	56.17	7,124.83
J-408	6,994.83	0.08	56.24	7,124.83
J-409	6,994.82	0.00	56.25	7,124.83
J-8225	6,994.64	1.21	56.33	7,124.83
J-10100	6,994.52	0.13	56.38	7,124.83
J-856	6,994.08	0.00	56.57	7,124.83
J-857	6,993.76	0.00	56.71	7,124.83
J-5219	6,993.57	0.00	56.79	7,124.83
J-2501	6,992.86	0.00	57.10	7,124.83
J-2500	6,992.80	0.00	57.13	7,124.83
J-13295	6,992.32	0.39	57.33	7,124.83
J-5473	6,991.38	0.00	57.74	7,124.83
J-12602	6,988.00	0.00	59.21	7,124.86
J-1251	6,987.46	0.00	59.43	7,124.83
J-1252	6,987.35	0.00	59.48	7,124.83
J-5448	6,987.05	0.00	59.61	7,124.83
J-6201	6,983.79	0.37	61.04	7,124.86
J-13296	6,983.73	0.15	61.05	7,124.83
J-2948	6,983.66	0.26	61.09	7,124.86
J-6202	6,983.56	0.00	61.14	7,124.86
J-2317	6,983.19	0.00	61.28	7,124.83
J-2318	6,982.95	0.00	61.38	7,124.83
J-5207	6,982.58	0.00	61.55	7,124.83
J-1682	6,982.00	0.00	61.80	7,124.83
J-1683	6,982.00	0.00	61.80	7,124.83
J-5458	6,982.00	0.00	61.80	7,124.83
J-8152	6,981.94	0.00	61.82	7,124.83
J-9485	6,981.59	0.00	61.97	7,124.83
J-8323	6,980.67	0.00	62.37	7,124.83
J-293	6,980.59	0.00	62.41	7,124.83
J-292	6,980.00	0.00	62.66	7,124.83
J-7189	6,979.68	0.00	62.80	7,124.83
J-7580	6,978.93	0.30	63.13	7,124.83
J-5123	6,978.95	0.00	63.13	7,124.86
J-5124	6,978.89	0.00	63.15	7,124.86
J-5736	6,977.53	0.02	63.73	7,124.83
J-691	6,977.15	0.00	63.90	7,124.83
J-690	6,976.83	0.04	64.03	7,124.83
J-13021	6,976.56	0.00	64.17	7,124.86
J-8092	6,975.25	0.04	64.72	7,124.83
J-13992	6,975.19	0.42	64.74	7,124.83
J-11160	6,973.60	0.00	65.43	7,124.82
J-3755	6,973.23	0.44	65.61	7,124.86
J-13587	6,973.13	0.28	65.65	7,124.86

FlexTable: Junction Table

Label	Elevation (ft)	Demand (gal/min)	Pressure (psi)	Hydraulic Grade (ft)
J-5708	6,971.51	0.00	66.34	7,124.83
J-4263	6,971.15	0.00	66.50	7,124.86
J-818	6,970.21	0.00	66.90	7,124.83
J-817	6,969.82	0.00	67.07	7,124.83
J-8357	6,969.44	0.37	67.25	7,124.86
J-12110	6,969.40	0.42	67.26	7,124.86
J-12111	6,968.34	0.00	67.72	7,124.86
J-7823	6,968.12	0.11	67.81	7,124.86
J-7584	6,967.65	0.00	68.01	7,124.86
J-12488	6,967.47	0.00	68.09	7,124.86
J-5175	6,967.03	0.00	68.27	7,124.83
J-9383	6,967.05	0.55	68.28	7,124.86
J-8116	6,967.03	0.29	68.29	7,124.86
J-716	6,966.53	0.00	68.49	7,124.83
J-12898	6,966.25	0.00	68.62	7,124.86
J-12040	6,966.07	0.00	68.70	7,124.86
J-717	6,966.02	0.00	68.71	7,124.83
J-5699	6,966.00	0.00	68.72	7,124.83
J-8045	6,966.00	0.00	68.73	7,124.86
J-8019	6,966.00	0.00	68.73	7,124.86
J-9709	6,965.95	0.00	68.75	7,124.86
J-11816	6,965.84	0.00	68.80	7,124.86
J-7902	6,965.76	0.00	68.83	7,124.86
J-7108	6,965.47	0.00	68.96	7,124.86
J-8163	6,965.45	0.00	68.97	7,124.86
J-7107	6,965.33	0.00	69.02	7,124.86
J-12039	6,965.30	0.00	69.04	7,124.86
J-8018	6,964.90	0.00	69.21	7,124.86
J-8123	6,964.83	0.00	69.24	7,124.86
J-8255	6,964.45	0.00	69.40	7,124.86
J-7880	6,961.18	0.00	70.82	7,124.87
J-13833	6,960.78	0.14	70.99	7,124.86
J-5655	6,959.85	0.00	71.39	7,124.86
J-5654	6,959.79	0.00	71.42	7,124.86
J-7404	6,958.95	0.00	71.77	7,124.84
J-6652	6,956.96	0.00	72.62	7,124.81
J-7758	6,955.99	0.00	73.07	7,124.88
J-11138	6,955.56	0.00	73.24	7,124.84
J-4076	6,954.33	0.00	73.76	7,124.82
J-4077	6,954.16	0.00	73.84	7,124.82
J-12417	6,953.20	0.41	74.28	7,124.88
J-6059	6,953.09	0.00	74.32	7,124.86
J-4642	6,952.33	0.00	74.66	7,124.88
J-5707	6,952.00	0.00	74.79	7,124.86
J-4643	6,951.82	0.00	74.88	7,124.88
J-5706	6,951.57	0.00	74.97	7,124.86
J-7462	6,951.50	0.00	75.01	7,124.86
J-10221	6,951.33	0.07	75.09	7,124.89
J-6454	6,950.40	0.47	75.49	7,124.89
J-11646	6,949.87	0.00	75.71	7,124.86
J-7740	6,949.64	0.02	75.82	7,124.88
J-7058	6,949.56	0.92	75.86	7,124.89
J-11975	6,948.96	0.18	76.10	7,124.84
J-11709	6,948.61	0.00	76.26	7,124.86
J-14077	6,948.13	0.00	76.47	7,124.86

FlexTable: Junction Table

Label	Elevation (ft)	Demand (gal/min)	Pressure (psi)	Hydraulic Grade (ft)
J-14026	6,946.93	0.00	76.98	7,124.85
J-12383	6,946.79	0.00	77.05	7,124.86
J-13566	6,945.55	0.19	77.59	7,124.89
J-11708	6,944.97	0.00	77.83	7,124.86
J-11976	6,944.66	0.00	77.96	7,124.84
J-1224	6,943.93	0.00	78.30	7,124.91
J-4171	6,943.68	0.00	78.38	7,124.85
J-1225	6,943.74	0.00	78.38	7,124.91
J-13159	6,942.59	0.18	78.86	7,124.86
J-13336	6,941.19	0.00	79.46	7,124.85
J-7053	6,937.20	1.22	81.19	7,124.86
J-7052	6,936.61	0.12	81.45	7,124.86
J-4067	6,936.24	0.00	81.61	7,124.87
J-4068	6,935.72	0.00	81.84	7,124.87
J-13794	6,935.40	0.00	81.97	7,124.85
J-11504	6,934.97	8.04	82.17	7,124.88
J-13137	6,934.92	0.00	82.17	7,124.85
J-12289	6,931.85	0.00	83.50	7,124.85
J-11872	6,929.36	0.00	84.58	7,124.85
J-12454	6,929.36	0.00	84.58	7,124.86
J-9035	6,929.32	0.00	84.60	7,124.85
J-1908	6,929.16	0.00	84.68	7,124.87
J-1907	6,929.11	0.00	84.70	7,124.87
J-5242	6,928.99	0.00	84.75	7,124.87
J-2684	6,928.90	0.00	84.78	7,124.85
J-2683	6,928.79	0.00	84.83	7,124.85
J-8563	6,928.54	0.00	84.94	7,124.87
J-12455	6,928.40	0.00	85.00	7,124.86
J-7977	6,927.77	0.00	85.27	7,124.86
J-14055	6,926.86	0.00	85.67	7,124.87
J-12296	6,926.87	0.06	85.67	7,124.87
J-3601	6,921.64	0.00	87.91	7,124.82
J-11083	6,921.55	0.38	87.97	7,124.87
J-3135	6,919.73	0.00	88.74	7,124.82
J-3136	6,919.69	0.00	88.75	7,124.82
J-3147	6,919.68	0.00	88.76	7,124.82
J-896	6,919.16	0.00	89.00	7,124.87
J-9085	6,919.14	0.28	89.01	7,124.87
J-516	6,918.92	0.00	89.08	7,124.82
J-515	6,918.77	0.00	89.15	7,124.82
J-895	6,918.44	0.00	89.32	7,124.87
J-4730	6,917.59	0.00	89.68	7,124.87
J-4729	6,917.54	0.00	89.70	7,124.87
J-13884	6,916.84	0.00	90.00	7,124.87
J-8844	6,916.39	0.67	90.21	7,124.90
J-841	6,915.77	0.00	90.47	7,124.87
J-70	6,915.71	0.00	90.50	7,124.87
J-1089	6,915.64	0.11	90.53	7,124.87
J-69	6,915.46	0.00	90.61	7,124.87
J-1088	6,915.22	0.00	90.71	7,124.87
J-145	6,915.14	0.00	90.74	7,124.87
J-10256	6,915.03	0.00	90.79	7,124.87
J-12653	6,914.83	0.00	90.85	7,124.82
J-8845	6,914.62	0.00	90.98	7,124.90
J-6522	6,913.28	0.00	91.56	7,124.90

FlexTable: Junction Table

Label	Elevation (ft)	Demand (gal/min)	Pressure (psi)	Hydraulic Grade (ft)	
J-6521	6,912.94	0.16	91.70	7,124.90	
J-7389	6,912.92	0.27	91.71	7,124.90	
J-9286	6,912.89	1.74	91.72	7,124.87	
J-10489	6,912.35	0.00	91.95	7,124.87	
J-7204	6,911.59	0.94	92.28	7,124.87	
J-13181	6,911.16	0.00	92.46	7,124.85	
J-8350	6,910.79	0.00	92.62	7,124.86	
J-2238	6,909.84	0.00	93.01	7,124.83	
J-2100	6,909.70	0.00	93.07	7,124.83	
J-920	6,909.47	0.00	93.20	7,124.87	
J-868	6,909.39	0.00	93.23	7,124.87	
J-983	6,909.25	0.00	93.29	7,124.87	
J-10636	6,909.09	0.78	93.37	7,124.89	
J-919	6,909.06	0.00	93.37	7,124.87	
J-984	6,908.77	0.71	93.50	7,124.87	
J-6236	6,908.58	0.06	93.59	7,124.90	
J-867	6,908.51	0.00	93.61	7,124.87	
J-11895	6,908.51	0.00	93.61	7,124.87	
J-8160	6,908.44	0.00	93.65	7,124.89	
J-6235	6,908.23	1.11	93.74	7,124.90	
J-2101	6,907.96	0.00	93.83	7,124.83	
J-464	6,907.94	0.00	93.86	7,124.87	
J-2239	6,907.85	0.00	93.87	7,124.83	
J-465	6,907.85	0.00	93.90	7,124.87	
J-5068	6,907.47	0.00	94.06	7,124.87	
J-10797	6,906.94	0.06	94.30	7,124.89	
J-4728	6,906.86	0.00	94.32	7,124.87	
J-361	6,906.69	0.32	94.41	7,124.89	
J-11185	6,905.97	0.00	94.71	7,124.87	
J-14075	6,905.87	0.00	94.75	7,124.86	
J-85	6,905.53	0.51	94.91	7,124.89	
J-86	6,905.48	0.00	94.93	7,124.89	
J-11554	6,904.92	0.00	95.16	7,124.87	
J-583	6,903.70	1.18	95.69	7,124.87	
J-582	6,903.63	0.00	95.72	7,124.87	
J-14131	6,903.15	0.00	95.89	7,124.78	
J-13767	6,903.05	0.95	95.98	7,124.89	
J-13978	6,902.42	0.00	96.22	7,124.81	
J-4089	6,900.21	0.12	97.21	7,124.89	
J-4090	6,899.91	0.00	97.34	7,124.89	
J-7829	6,899.80	0.65	97.39	7,124.90	
J-11144	6,899.31	0.00	97.60	7,124.89	
J-9813	6,899.18	0.08	97.66	7,124.90	
J-8379	6,899.17	0.38	97.66	7,124.89	
J-13977	6,899.00	0.00	97.69	7,124.79	
J-8378	6,898.98	0.64	97.74	7,124.89	
J-13298	6,898.63	0.00	97.89	7,124.89	
J-12884	6,898.19	0.93	98.03	7,124.78	
J-3446	6,898.00	0.69	98.16	7,124.89	
J-5507	6,898.00	0.09	98.16	7,124.89	
J-5508	6,898.00	0.23	98.16	7,124.89	
J-1038	6,898.00	0.06	98.17	7,124.89	
J-1039	6,898.00	0.00	98.17	7,124.89	
J-4509	6,898.00	0.42	98.17	7,124.89	
J-7497	6,897.13	21.88	98.53	7,124.87	New Demand Location

FlexTable: Junction Table

Label	Elevation (ft)	Demand (gal/min)	Pressure (psi)	Hydraulic Grade (ft)	
J-8044	6,896.79	0.29	98.69	7,124.89	
J-3914	6,896.28	0.00	98.91	7,124.89	
J-3913	6,896.13	0.24	98.97	7,124.89	
J-4198	6,896.00	0.00	99.03	7,124.88	
J-4199	6,896.00	0.29	99.03	7,124.88	
J-11540	6,896.00	0.35	99.03	7,124.88	
J-11748	6,895.63	0.00	99.14	7,124.78	
J-7950	6,895.64	0.23	99.18	7,124.88	
J-2914	6,895.14	0.60	99.40	7,124.88	
J-2915	6,895.12	0.00	99.41	7,124.88	
J-4581	6,894.00	0.00	99.89	7,124.88	
J-4582	6,894.00	0.33	99.89	7,124.88	
J-5057	6,894.00	0.34	99.89	7,124.88	
J-2912	6,894.00	0.03	99.89	7,124.88	
J-2913	6,894.00	0.00	99.89	7,124.88	
J-5239	6,894.00	0.36	99.89	7,124.88	
J-5240	6,894.00	0.00	99.89	7,124.88	
J-12291	6,893.18	0.00	100.20	7,124.78	
J-3436	6,893.05	0.00	100.26	7,124.78	
J-3437	6,892.92	0.00	100.31	7,124.78	
J-13064	6,892.52	0.00	100.53	7,124.87	
J-7736	6,892.38	0.00	100.55	7,124.78	
J-6616	6,892.25	0.00	100.64	7,124.86	Connection Point in Masonic Lane
J-11642	6,892.00	0.00	100.71	7,124.78	
J-14044	6,892.00	1.04	100.75	7,124.87	
J-6944	6,891.85	0.19	100.81	7,124.86	
J-6945	6,891.41	0.00	101.01	7,124.86	
J-12550	6,890.99	0.00	101.15	7,124.78	
J-14076	6,889.43	0.00	101.86	7,124.86	
J-12010	6,889.23	0.00	101.95	7,124.87	
J-11681	6,887.63	0.00	102.60	7,124.78	
J-11682	6,886.66	0.00	103.02	7,124.78	
J-14177	6,886.07	23.44	103.31	7,124.86	New Demand Location
J-7910	6,885.37	0.00	103.62	7,124.86	
J-7242	6,884.03	0.00	104.20	7,124.86	
J-34	6,883.27	0.53	104.49	7,124.78	
J-35	6,883.20	0.00	104.52	7,124.78	
J-184	6,882.57	0.00	104.79	7,124.78	
J-265	6,882.32	0.00	104.94	7,124.86	
J-266	6,882.31	3.59	104.94	7,124.86	
J-185	6,882.16	0.00	104.97	7,124.78	
J-12766	6,881.43	0.00	105.33	7,124.87	
J-12009	6,881.20	0.00	105.42	7,124.87	
J-7813	6,880.00	0.00	105.94	7,124.86	
J-6303	6,880.00	0.00	105.94	7,124.87	
J-6304	6,879.96	0.00	105.96	7,124.87	
J-6040	6,879.45	0.00	106.14	7,124.77	
J-6039	6,879.30	0.00	106.20	7,124.77	
J-305	6,876.18	0.00	107.59	7,124.87	
J-500	6,876.00	0.00	107.63	7,124.77	
J-501	6,876.00	0.00	107.63	7,124.77	
J-3554	6,876.00	0.00	107.63	7,124.77	
J-3555	6,876.00	0.00	107.63	7,124.77	
J-12669	6,875.32	0.00	107.93	7,124.77	
J-7767	6,875.28	0.00	107.94	7,124.77	

FlexTable: Junction Table

Label	Elevation (ft)	Demand (gal/min)	Pressure (psi)	Hydraulic Grade (ft)
J-9388	6,875.34	0.00	107.96	7,124.87
J-3581	6,875.11	0.00	108.02	7,124.77
J-2196	6,874.83	0.00	108.14	7,124.77
J-2195	6,874.63	0.00	108.23	7,124.77
J-11982	6,874.00	0.00	108.50	7,124.77
J-13605	6,873.98	0.00	108.55	7,124.87
J-2666	6,873.25	0.00	108.82	7,124.77
J-2667	6,873.06	0.00	108.90	7,124.77
J-11983	6,871.96	4.58	109.38	7,124.77
J-11543	6,871.49	0.00	109.58	7,124.77

Appendix B

FlexTable: Hydrant Table

Label	Zone	Elevation (ft)	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gal/min)	Fire Flow (Available) (gal/min)	Pressure (Calculated Residual) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
231721	B	6,904.96	True	1,500.00	2,924.17	20.01	181701
221901	B	6,879.34	True	1,500.00	3,500.00	94.23	181701
221902	B	6,970.00	True	1,500.00	3,412.09	20.00	181701
231913	B	6,935.86	True	1,500.00	3,500.00	71.89	181701
211909	B	6,869.71	True	1,500.00	3,500.00	46.66	181701
202101	B	6,863.13	True	1,500.00	3,500.00	51.73	181701
192102	B	6,860.04	True	1,500.00	3,500.00	66.14	181701
192001	B	6,879.89	True	1,500.00	3,500.00	77.52	181701
192129	B	6,859.15	True	1,500.00	3,500.00	71.07	181701
192007	B	6,878.00	True	1,500.00	3,500.00	87.93	181701
231914	B	6,962.09	True	1,500.00	3,500.00	60.96	181701
232009	B	6,956.68	True	1,500.00	3,500.00	63.00	181701
211908	B	6,873.94	True	1,500.00	3,500.00	45.38	181701
192218	B	6,839.90	True	1,500.00	3,500.00	77.84	181701
192022	B	6,878.12	True	1,500.00	3,500.00	83.96	181701
192127	B	6,868.68	True	1,500.00	3,500.00	48.28	181701
192032	B	6,878.00	True	1,500.00	3,500.00	76.91	181701
231729	B	6,901.79	True	1,500.00	3,500.00	75.96	181701
192029	B	6,874.26	True	1,500.00	3,500.00	57.65	181701
201923	B	6,903.05	True	1,500.00	3,500.00	28.55	181701
181929	B	6,891.51	True	1,500.00	3,500.00	44.26	181701
231925	B	6,955.55	True	1,500.00	3,500.00	51.62	181701
231808	B	6,892.00	True	1,500.00	3,500.00	68.05	181701
192116	B	6,864.12	True	1,500.00	3,500.00	51.11	181701
231707	B	6,908.98	True	1,500.00	1,603.21	20.00	181701
241804	B	6,963.54	True	1,500.00	3,500.00	46.52	181701
222003	B	6,991.30	True	1,500.00	3,500.00	42.07	181701
221906	B	6,966.00	True	1,500.00	3,245.56	20.02	181701
231726	B	6,935.67	True	1,500.00	3,500.00	26.05	181701
231708	B	6,927.36	True	1,500.00	3,500.00	44.92	181701
231912	B	6,928.38	True	1,500.00	3,500.00	68.64	181701
192124	B	6,877.46	True	1,500.00	3,500.00	70.42	181701
231719	B	6,906.00	True	1,500.00	3,500.00	62.92	181701
192115	B	6,863.20	True	1,500.00	3,500.00	65.55	181701
192123	B	6,862.39	True	1,500.00	3,500.00	50.02	181701
231722	B	6,910.17	True	1,500.00	1,809.75	20.00	181701
222004	B	6,986.59	True	1,500.00	3,500.00	34.87	181701
231902	B	6,986.60	True	1,500.00	2,839.93	20.01	181701
211910	B	6,863.46	True	1,500.00	3,500.00	51.38	181701
231704	B	6,900.21	True	1,500.00	3,500.00	33.13	181701
192120	B	6,858.00	True	1,500.00	3,500.00	85.18	181701
192031	B	6,877.94	True	1,500.00	3,500.00	84.17	181701
231813	B	7,014.29	True	1,500.00	3,500.00	35.63	181701
192208	B	6,852.86	True	1,500.00	3,500.00	66.31	181701
192216	B	6,852.46	True	1,500.00	3,500.00	72.85	181701
231701	B	6,943.00	True	1,500.00	3,500.00	29.99	181701
211821	B	6,908.58	True	1,500.00	2,969.75	20.00	181701
231706	B	6,901.13	True	1,500.00	3,500.00	50.36	181701
231805	B	6,895.62	True	1,500.00	3,500.00	46.96	181701
231824	B	6,913.60	True	1,500.00	2,272.95	20.00	0
192019	B	6,874.20	True	1,500.00	3,500.00	77.43	181701
222002	B	6,988.47	True	1,500.00	3,500.00	30.44	181701
231926	B	6,979.92	True	1,500.00	3,500.00	52.70	181701

FlexTable: Hydrant Table

Label	Zone	Elevation (ft)	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gal/min)	Fire Flow (Available) (gal/min)	Pressure (Calculated Residual) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)	
231727	B	6,912.90	True	1,500.00	1,924.75	20.00	181701	
211907	B	6,876.00	True	1,500.00	3,500.00	49.60	181701	
221805	B	6,885.80	True	1,500.00	3,500.00	79.31	181701	Masonic Lane and Zuni
192130	B	6,860.00	True	1,500.00	3,500.00	26.80	181701	
202002	B	6,860.69	True	1,500.00	3,500.00	49.88	181701	
192006	B	6,880.16	True	1,500.00	3,500.00	64.90	181701	
231705	B	6,913.01	True	1,500.00	3,500.00	33.57	181701	
221905	B	6,965.42	True	1,500.00	3,167.90	20.01	181701	
232018	B	6,963.96	True	1,500.00	3,500.00	58.84	181701	
241805	B	6,985.00	True	1,500.00	3,500.00	38.97	181701	
192023	B	6,879.13	True	1,500.00	3,500.00	84.59	181701	
192045	B	6,882.00	True	1,500.00	3,228.61	20.00	181701	
231806	B	6,894.00	True	1,500.00	3,500.00	44.52	181701	
221903	B	6,965.41	True	1,500.00	3,186.75	20.02	181701	
231720	B	6,914.00	True	1,500.00	3,500.00	76.45	181701	
181955	B	6,899.67	True	1,500.00	3,500.00	67.97	181701	
192030	B	6,868.24	True	1,500.00	3,500.00	66.24	181701	
201943	B	6,867.76	True	1,500.00	3,500.00	40.65	181701	
231809	B	6,960.13	True	1,500.00	2,393.14	20.01	181701	
192126	B	6,868.83	True	1,500.00	3,500.00	58.03	181701	
222001	B	6,968.00	True	1,500.00	3,500.00	57.70	181701	
231812	B	6,912.11	True	1,500.00	2,427.10	28.64	181701	
192005	B	6,866.81	True	1,500.00	3,500.00	63.71	181701	
192125	B	6,868.89	True	1,500.00	3,500.00	67.14	181701	
192033	B	6,879.22	True	1,500.00	3,500.00	53.59	181701	
221907	B	6,897.86	True	1,500.00	3,500.00	87.17	181701	Near Connection Point at Lonetree Rd
192214	B	6,858.27	True	1,500.00	3,500.00	47.58	181701	
211912	B	6,902.72	True	1,500.00	3,500.00	65.11	181701	
231901	B	6,969.96	True	1,500.00	3,500.00	56.20	181701	
211820	B	6,896.64	True	1,500.00	3,500.00	33.60	181701	
231731	B	6,911.36	True	1,500.00	3,500.00	66.81	181701	
192021	B	6,877.61	True	1,500.00	3,500.00	72.34	181701	
192217	B	6,846.43	True	1,500.00	3,500.00	75.30	181701	
192114	B	6,863.96	True	1,500.00	3,500.00	63.80	181701	
202003	B	6,864.44	True	1,500.00	3,500.00	55.64	181701	
231810	B	6,963.18	True	1,500.00	2,110.05	20.00	181701	
231801	B	6,913.74	True	1,500.00	1,780.71	20.01	181701	
202001	B	6,862.07	True	1,500.00	3,500.00	60.01	181701	
192128	B	6,868.00	True	1,500.00	3,500.00	51.06	181701	
192122	B	6,865.86	True	1,500.00	3,500.00	41.30	181701	
231927	B	6,973.61	True	1,500.00	3,500.00	43.27	181701	
211906	B	6,884.61	True	1,500.00	3,500.00	48.11	181701	
201802	B	6,911.16	True	1,500.00	3,500.00	26.11	181701	
231811	B	6,942.40	True	1,500.00	2,004.23	20.01	181701	
192046	B	6,879.86	True	1,500.00	3,500.00	36.73	181701	
192020	B	6,878.00	True	1,500.00	3,500.00	80.96	181701	
231802	B	6,949.26	True	1,500.00	3,500.00	22.98	181701	
231709	B	6,913.18	True	1,500.00	3,500.00	76.07	181701	
231728	B	6,896.86	True	1,500.00	3,500.00	37.68	181701	
202004	B	6,865.35	True	1,500.00	3,500.00	28.91	181701	
231825	B	6,906.18	True	1,500.00	2,686.22	20.02	0	
192118	B	6,873.14	True	1,500.00	3,500.00	65.96	181701	
211911	B	6,865.98	True	1,500.00	3,500.00	48.08	181701	

FlexTable: Hydrant Table

Label	Zone	Elevation (ft)	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gal/min)	Fire Flow (Available) (gal/min)	Pressure (Calculated Residual) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
192219	B	6,839.33	True	1,500.00	3,500.00	77.78	181701
231903	B	6,962.62	True	1,500.00	3,500.00	58.28	181701
231723	B	6,903.99	True	1,500.00	3,500.00	80.34	181701
231725	B	6,899.79	True	1,500.00	3,500.00	39.45	181701
221904	B	6,966.00	True	1,500.00	3,130.48	20.02	181701
231724	B	6,916.50	True	1,500.00	3,500.00	37.19	181701
211905	B	6,890.74	True	1,500.00	3,500.00	56.72	181701
192209	B	6,852.12	True	1,500.00	3,500.00	57.43	181701

Appendix C

Title: FlexTable: Conduit Table

Label	Diameter (in)	Material	Manning's n	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Slope (Calculated) (ft/ft)	Flow (gpd)	Depth/Rise (%)	Capacity (Full Flow) (gpd)	
1832	10.0	Ductile Iron	0.013	11-003	6,891.77	11-004	6,902.00	0.027	334,031.00	31.7	2,329,462.69	
1831	10.0	Ductile Iron	0.013	11-002	6,872.17	11-003	6,891.77	0.060	334,031.00	38.2	3,477,364.34	Juniper Estates Loading Location
1830	10.0	PVC	0.010	11-001	6,871.01	11-002	6,872.17	0.006	347,812.00	36.3	1,391,515.89	
1829	10.0	PVC	0.010	11-001	6,871.01	6-901	6,868.78	0.039	347,812.00	58.0	3,641,012.73	
5810	21.0	PVC	0.010	6-215	6,877.05	6-214	6,875.56	0.003	1,408,958.50	29.8	7,568,351.92	
5811	21.0	PVC	0.010	6-214	6,875.56	6-213	6,873.32	0.005	1,408,958.50	30.5	9,210,002.09	
5812	21.0	PVC	0.010	6-213	6,873.32	6-212 Pinnacle Load	6,871.25	0.004	1,423,724.55	31.2	8,464,646.75	Juniper Estates Loading Location
5813	21.0	PVC	0.010	6-212 Pinnacle Load	6,871.25	6-211	6,869.49	0.006	1,526,849.46	28.9	10,335,311.12	
5814	21.0	PVC	0.010	6-211	6,869.49	6-901	6,868.78	0.005	1,526,849.46	34.3	9,480,337.60	
5815	21.0	PVC	0.010	6-901	6,868.78	6-210	6,867.65	0.005	2,041,263.45	34.2	9,434,233.24	
5816	24.0	PVC	0.010	6-210	6,867.65	6-266	6,864.50	0.014	2,045,013.48	25.7	22,539,024.00	
5817	24.0	PVC	0.010	6-266	6,864.50	6-265	6,861.45	0.014	2,045,013.48	25.8	22,129,036.18	
5818	24.0	PVC	0.010	6-265	6,861.45	6-264	6,856.55	0.011	2,045,013.48	26.5	19,489,869.00	
5819	24.0	PVC	0.010	6-264	6,856.55	6-263	6,856.05	0.009	2,045,013.48	27.2	17,801,287.43	
5820	24.0	PVC	0.010	6-263	6,856.05	6-262	6,853.05	0.013	2,045,013.48	26.0	21,429,323.65	
5821	24.0	PVC	0.010	6-262	6,853.05	6-261	6,851.25	0.006	2,045,013.48	28.2	14,529,970.50	
5822	24.0	PVC	0.010	6-261	6,851.25	6-260	6,850.02	0.005	2,045,013.48	28.8	13,331,726.32	
5823	24.0	PVC	0.010	6-260	6,850.02	6-259	6,848.35	0.005	2,045,013.48	28.8	13,262,182.92	
5824	24.0	PVC	0.010	6-259	6,848.35	6-258	6,844.05	0.008	2,045,013.48	27.1	17,418,192.49	
5825	24.0	PVC	0.010	6-258	6,844.05	6-257	6,838.65	0.014	2,045,013.48	25.8	22,139,060.25	
5826	24.0	PVC	0.010	6-257	6,838.65	6-256	6,833.05	0.013	2,045,013.48	25.8	22,078,715.51	
5827	24.0	PVC	0.010	6-256	6,833.05	6-255	6,831.05	0.015	2,045,013.48	25.5	23,307,356.32	
5828	24.0	PVC	0.010	6-255	6,831.05	6-254	6,824.75	0.021	2,045,013.48	24.7	27,681,899.55	
5830	24.0	PVC	0.010	6-254	6,824.75	6-253	6,823.15	0.006	2,045,013.48	28.2	14,524,077.18	
5831	24.0	PVC	0.010	6-253	6,823.15	6-252	6,821.32	0.007	2,045,013.48	27.8	15,504,688.17	
5832	24.0	PVC	0.010	6-252	6,821.32	6-251	6,819.47	0.007	2,045,013.48	27.8	15,560,916.11	
5833	24.0	PVC	0.010	6-251	6,819.47	6-250	6,817.75	0.007	2,045,013.48	27.6	15,957,804.81	
5834	24.0	PVC	0.010	6-250	6,817.75	6-249	6,816.35	0.005	2,045,013.48	28.6	13,635,887.33	
5835	24.0	PVC	0.010	6-249	6,816.35	6-248	6,814.75	0.005	2,045,013.48	28.5	13,811,553.03	

Title: FlexTable: Conduit Table

Label	Diameter (in)	Material	Manning's n	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Slope (Calculated) (ft/ft)	Flow (gpd)	Depth/Rise (%)	Capacity (Full Flow) (gpd)
5840	24.0	PVC	0.010	6-248	6,814.75	6-247	6,811.05	0.010	2,045,013.48	26.5	19,322,494.26
5841	24.0	PVC	0.010	6-247	6,811.05	6-246	6,810.55	0.006	2,045,013.48	28.1	14,663,890.11
5842	24.0	PVC	0.010	6-246	6,810.55	6-245	6,808.25	0.008	2,045,013.48	27.2	17,134,622.41
5843	24.0	PVC	0.010	6-245	6,808.25	6-244	6,804.95	0.007	2,045,013.48	27.5	16,367,441.70
5844	24.0	PVC	0.010	6-244	6,804.95	6-243	6,802.85	0.012	2,045,013.48	26.2	20,472,656.43
5845	24.0	PVC	0.010	6-243	6,802.85	6-242	6,797.65	0.011	2,045,013.48	32.7	19,579,764.78
5846	24.0	Ductile Iron	0.012	6-242	6,797.65	6-241	6,796.55	0.003	2,077,826.56	35.1	8,164,296.42
5847	24.0	Ductile Iron	0.012	6-241	6,796.55	6-240	6,795.74	0.002	2,122,451.55	35.7	7,730,821.45
5848	24.0	Ductile Iron	0.012	6-240	6,795.74	6-239	6,795.15	0.002	2,122,451.55	33.6	7,836,823.70
4792	24.0	Ductile Iron	0.012	6-239	6,795.15	6-238	6,794.50	0.019	2,122,451.55	26.7	21,899,783.02
4793	24.0	PVC	0.010	6-238	6,794.50	PUMP House	6,791.15	0.009	2,122,451.55	40.1	18,489,476.32

STORMWATER MANAGEMENT REPORT

January 2023

Revised: -

Juniper Estates – PZ-22-000109-01

2951 S Masonic Ln
Flagstaff, Arizona, 86005

Prepared for
RedOak Development Group, LLC
2121 East 6th Street, Suite 203
Austin, TX 78702

Prepared By:
ViewPoint Engineering
2121 East 6TH Street, Suite 203
Austin, TX 78702
VPE Project No: **22004**

PRELIMINARY

ViewPoint Engineering

Table of Contents

1.0 Introduction....3
1.1 Legal Description....3
1.2 Existing Conditions....4
1.3 Proposed Conditions....4
1.4 Receiving Waters....4
1.5 Project Area Soils....4
1.6 Floodplains....5
1.7 Wetlands....5
2.0 Objectives and Procedures....5
2.1 Summary and Purpose....5
2.2 Design Criteria....5
2.2-1 City of Flagstaff Stormwater Management Design Manual....5
2.2-2 City of Flagstaff Low Impact Development Manual....6
2.3 Methodology....6
2.3-1 Curve Number (CN)....6
2.3-2 Time of Concentration (TOC)....7
2.3-3 Design Storm Rainfall....7
2.3-4 Runoff Hydrograph....7
3.0 Hydrology....8
3.1 Peak Rate Analysis....8
3.2 Volume Control/Recharge Volume....9
3.3 Water Quality Design....9
3.4 Conveyance Design....9
3.5 Upstream and Downstream Analysis....9
4.0 Conclusions....9
5.0 References....9

APPENDIX A: Supporting Documents
A.1 Project Location Map
A.2 FEMA Flood Insurance Rate Map
A.3 TR-55 Curve Numbers
APPENDIX B: Site Soils investigation
B.1 USGS Custom Web Soil Survey
B.2 Soils Testing Report
APPENDIX C: Peak Rate & Volume Analysis
APPENDIX D: Water Quality Analysis
APPENDIX E: Conveyance Design
APPENDIX F: Drainage Maps

ViewPoint Engineering

1.0 INTRODUCTION

Red Oak Development Group, LLC (RODG) is proposing the development of the property located at 2651 S Masonic LN. Juniper Estates is an 87-unit townhome/condominium residential community. The project site is ±13.82 gross acres with ±5.12 acres developed.

The property in questions is further identified parcel number 103-26-002-D. A project location map can be found in the appendix.

Tract Area: **13.82 acres**
Limit of Disturbance: **5.12 acres**

1.1 LEGAL DESCRIPTION

The land referred to herein below is situated in the county of Coconino, state of Arizona, and is described as follows:

A tract of land in the Southeast quarter of Section 28 and in the Southwest quarter of the Southwest quarter of Section 27, Township 21 Norther, Range 7 East of the Gila and Salt River Base and Meridian, Coconino County, Arizona, more particularly described as follows:
BEGINNING at the Southeast corner of said Section 28;
Thence South 89° 13’00” West, a distance of 1321.47 feet along the Section line to the Southwest corner of the Southeast quarter of the Southeast quarter of said Section 28;
Thence South 89° 13’00” West, a distance of 24.80 feet along the Section line to the intersection of the Southerly right-of-way line of Zuni Drive as described in Docket 350, page 203 of the Coconino County Records.
Thence along said Southerly right-of-way line as follows:
North 61° 32’00” East, a distance of 826.32 feet;
Thence along a curve to the right having a radius of 170.00 feet and having a central angle of 24° 32’00” a distance of 72.30 feet;
Thence North 86° 04’00” East, a distance of 549.48 feet to a point on the East line of said Section 28;
Thence North 86° 04’00” East, a distance of 241.41 feet;
Thence along a curve to the right having a radius of 170.00 feet and having a central angle of 33° 52’00”, a distance of 100.42 feet, said curve having tangents bearing North 86° 04’00” East and South 60° 02’00” East, to the Westerly right-of-way line of Lone Tree Road;
Thence South 32° 00’00” East along said Westerly right-of-way line, a distance of 502.08 feet to the Southerly line of said Section 27;

Thence South 89° 48’00” West along Section line, a distance of 601.21 feet to the POINT OF BEGINNING.

1.2 Existing Conditions

The site is currently an existing undeveloped parcel that is densely wooded with pine trees. The ground is rocky with moderate grass coverage. The site has steep slopes that slope towards the north and northwest directing most of the surface runoff towards Zuni Drive and to Masonic Lane. Surface runoff is sheet flow and shallow concentrated flow throughout the site. A single analysis point is representative of the site as all the flow converges to a single point and flows under Zuni Drive after leaving the site. The site zoning does have an RPO layer, both tree and slope preservation have been considered and maintained in this development. To the south of the site is the Pinnacle Pines development consisting of townhomes. To west of the site is National Forest. To the north and the east of the site is vacant undeveloped land that has been purchased by the board of regents for Northern Arizona University. The site currently is intersected with an underground pipe conveying the flow of the upstream development, Pinnacle Pines. These flows have been included in the analysis.

1.3 Proposed Conditions

This report identifies and quantifies the existing runoff conditions and estimates future runoff conditions based on the proposed development. Juniper Estates will comprise of new streets, town homes, open spaces, a nature trail, and sidewalks. Analysis of the proposed site conditions will be utilized to manage and plan development to reduce negative impacts on the proposed homes as well as the existing upstream and downstream developments. Any estimated increases in runoff rates will be mitigated.

1.4 Receiving Waters

The SITE is within the Lower Bow and Arrow Wash. Runoff from the site is intercepted to nearby bow and arrow stream. Bow and arrow stream continues northeast and flows into Rio De Flag.

1.5 Project Area Soils

The site was evaluated using the latest soil survey information and mapped accordingly. The soil types for this site were obtained from the United States Department of Agriculture NRCS Web Soil Survey and a custom report generated (see Appendix). The mapped area extended beyond the property boundary line to ensure adequate coverage of the site.

Table 1: Site Soils

Description	Slopes	Hydrologic Soil Group	Acres of Site
Jacques Clay Loam	0% - 2%	C	0.001
Lynx Loam	0% - 2%	B	2.5
Tortugas-Daze Complex	0% - 15%	D	1.5
Tortugas Cobbly and Gravelly Loam	15% - 30%	D	9.7

1.6 FLOODPLAINS

The site does lie within a regulated flood area. FEMA's Flood Insurance Rate Map for Coconino County, AZ designates the site and surrounding area as "Zone X" or "Areas determined to be outside the 0.2% (500-year) annual chance floodplain" (see Map in Appendix). The northeast corner of the site is in the "Zone AE" or "Areas determined to be within the 0.1% (100-year) annual chance floodplain". Per the City of Flagstaff's resource protection plan there will be no disturbance to the flood plain.

1.7 WETLANDS

There are no wetlands located on site.

2.0 OBJECTIVES AND PROCEDURES

2.1 SUMMARY AND PURPOSE

This report is in relation to the new development of Juniper Estates. The analysis was performed, and this report was written, during the site plan development phase of the project. This report is also pertinent to the rezoning process which will accompany this project.

2.2 DESIGN CRITERIA

The stormwater design standards for the development are set forth by The City of Flagstaff Stormwater Management Design Manual and The City of Flagstaff Low impact Development Manual. Specific design standards and project site conditions are as follows:

2.2-1 CITY OF FLAGSTAFF STORMWATER MANAGEMENT DESIGN MANUAL

1. §8.1 Storage and Detention Facilities: Detention facility storage volume shall be adequate to attenuate the post-development peak discharge rates to pre-development discharge rates for the 2, 10, and 100-year design storms. Reservoir routing calculations must be used to demonstrate that the storage volume is adequate. Detention facility outlet structure release rates shall be less than the pre-development peak runoff rates for the 2, 10, and 100-year storm events, with emergency overflow provisions. Design calculations are required to demonstrate that developed runoff from the 2, 10, and 100-year design storms are controlled. The total combined post-development discharge from a development cannot exceed the total pre-development peak discharge for the 2, 10, and 100-year storms. Drainage flows of all frequencies shall enter and depart the property to be developed in substantially the same manner as under the pre-developed condition.

2. §9.1 Low Impact Development Requirements for Infiltration and Reuse of Stormwater: Developments will be required to retain/infiltrate one (1) inch of runoff from all additional impervious surfaces.

2.2-2 City of Flagstaff Low Impact Development Manual

1. §2.7 Types of ROCV Facilities: Draining impervious areas over vegetated buffers slows down runoff and encourages infiltration, in effect reducing the impact of the impervious area. Runoff from 100-percent of the impervious surfaces of a site must flow through a properly designed installation of one or more of the ROCV IMPs that are listed herein. Alternate designs may be considered, but they must have equivalent functional requirements of these IMPs, including ROCV and its drain times.

2.3 Methodology

The SCS method was utilized to analyze the pre-development and pos-development stormwater flows. The computer program “Hydrocad” Ver. 10 by “Hydrocad Software Solutions LLC” was used to calculate and plot the runoff hydrographs. The SCS Method incorporates the time of concentration, runoff coefficients, the 24-hour rainfall, and associated drainage area to calculate the runoff rates. Input values were obtained from existing and proposed site conditions and the City of Flagstaff Stormwater Management Design Manual.

2.3-1 Curve Number (CN)

The conveyance systems have been designed using the SCS equations to determine peak runoff rates within the systems. The cover conditions within the respective structure/systems drainage

area were analyzed. The curve numbers used in analysis were obtained from ADWR, *Oak Creek Flood Warning System Hydrology Report, TR 90-4, September 1990* and USDA, SCS TR -55, "*Urban hydrology for Small Watersheds"*, June 1986, per the City of Flagstaff Stormwater Management Design Manual. See Appendix for the tables used.

Table 2: SCS Curve Numbers

Cover Type	Hydrologic Soil Group	Curve Numbers (CN)
Ponderosa Pine	D	80
Residential 1/8 Acre (Townhomes)	D	92

2.3-2 TIME OF CONCENTRATION (TOC)

Time of concentrations were determined based on the methodology specified in the USDA Urban Hydrology for Small Watersheds (TR55) manual. A minimum time of concentration of 5 minutes has been utilized and a maximum of 60 minutes per the City of Flagstaff Stormwater Management Design Manual.

2.3-3 DESIGN STORM RAINFALL

Design storm rainfall intensities were taken from table 3-2 of The City of Flagstaff SWM Design Manual.

Table 3: City of Flagstaff Rainfall Intensities (in/hr)

Duration	Frequency (YR)					
	2	5	10	25	50	100
5-min	3.96	5.04	5.76	6.84	7.68	8.52
10-min	3.06	3.90	4.50	5.34	6.00	6.66
15-min	2.48	3.20	3.48	4.40	4.92	5.48
30-min	1.58	2.06	2.40	2.86	3.22	3.58
1-hour	0.95	1.25	1346	1.76	1.98	2.21
2-hour	0.56	0.73	0.85	1.02	1.15	1.28
3-hour	0.41	0.53	0.62	0.74	0.83	0.92
6-hour	0.24	0.31	0.36	0.43	0.48	0.53
12-hour	0.14	0.19	0.21	0.26	0.29	0.32
24-hour	0.08	0.11	0.12	0.15	0.17	0.18

2.3-4 RUNOFF HYDROGRAPH

Hydrographs for the 1-yr, 10-yr, and 100-yr storms were computed with the SCS TR-55 Method utilizing Hydrocad version 10.0 software and the weighted CN's and time of concentration values computed as mentioned above. See the runoff hydrograph in the Appendix of this report for details.

3.0 HYDROLOGY

3.1 PEAK RATE ANALYSIS

Pre-Development Drainage Area 1: Runoff from the Existing conditions of Drainage Area 1 flows via sheet flow for approximately 300 feet before beginning to form shallow concentrated flow. The flows are then intercepted by the storm sewer system of the Pinnacle Pines development and routed downstream onto the Juniper Estates project area. Then the upstream flows are combined with the flows on the West side of Masonic Lane. The combined flows then cross underneath Masonic Lane. The combined flow then converges with the flows from the East side of Masonic Lane and travel to the discharge point #1.

Post-Development: The post-development drainage areas and are described as follows (refer to the drainage area maps in the appendix):

- Proposed DA 1: This area consists of the upstream development, Pinnacle Pines, and the areas on site which will not be routed through the storm system.
- DA1 West: This area encompasses the areas West of Masonic Lane that will be captured, routed, and released to flow to discharge point #1.
- DA1 East: This area encompasses the area East of Masonic Lane that will be captured, routed, and released to flow to discharge point #1.

The following table summarizes the peak rate analysis for the project.

Table 4: Peak Discharge Summary

Design Storm	Pre-Dev (cfs)	Post Dev (cfs)	Net Change (cfs)
2-yr	20.00	17.73	-2.27
10-yr	48.24	44.25	-3.99
100-yr	105.51	98.24	-7.27

3.2 Volume Control/Recharge Volume

In accordance with municipal code, development is required to recharge one inch of runoff from the impervious area.

3.3 Water Quality Design

In accordance with the City of Flagstaff Stormwater Management Design Manual and the City of Flagstaff Low Impact Development Manual 100% of the impervious surfaces must flow through one or more of a ROCV IMP.

3.4 Conveyance Design

Storm sewers have been designed for inlet capacity and conveyance of the 10-yr storm design storm for structures within the tributary area of the peak control device. The Rational Method was utilized to analyze the stormwater flows. The rainfall intensities are taken from the City of Flagstaff Stormwater Management Design Manual.

The computer program “Hydraflow Storm Sewers Extension for Autocad Civil 3D” Ver. 2014 by Autodesk is utilized to design the proposed storm sewer conveyance system.

3.5 Upstream and Downstream Analysis

The flows from the upstream development are not significantly altered within the proposed storm design. Therefore, there are no adverse impacts anticipated. As shown above, the peak rates for the 2-, 5-, and 100-year storms have been reduced when compared to pre-development rates. Erosion potential is a function of velocity of flow, which is directly proportional to flow rate. Therefore, a reduction in the overall rate from the development areas will correspond to a similar reduction is velocity, thereby reducing erosion of the downstream channel.

4.0 Conclusions

The stormwater management facility design detailed within this Stormwater Management Report meets or exceeds the standards set forth by The City of Flagstaff Stormwater Management Design Manual and The City of Flagstaff Low Impact Development Manual.

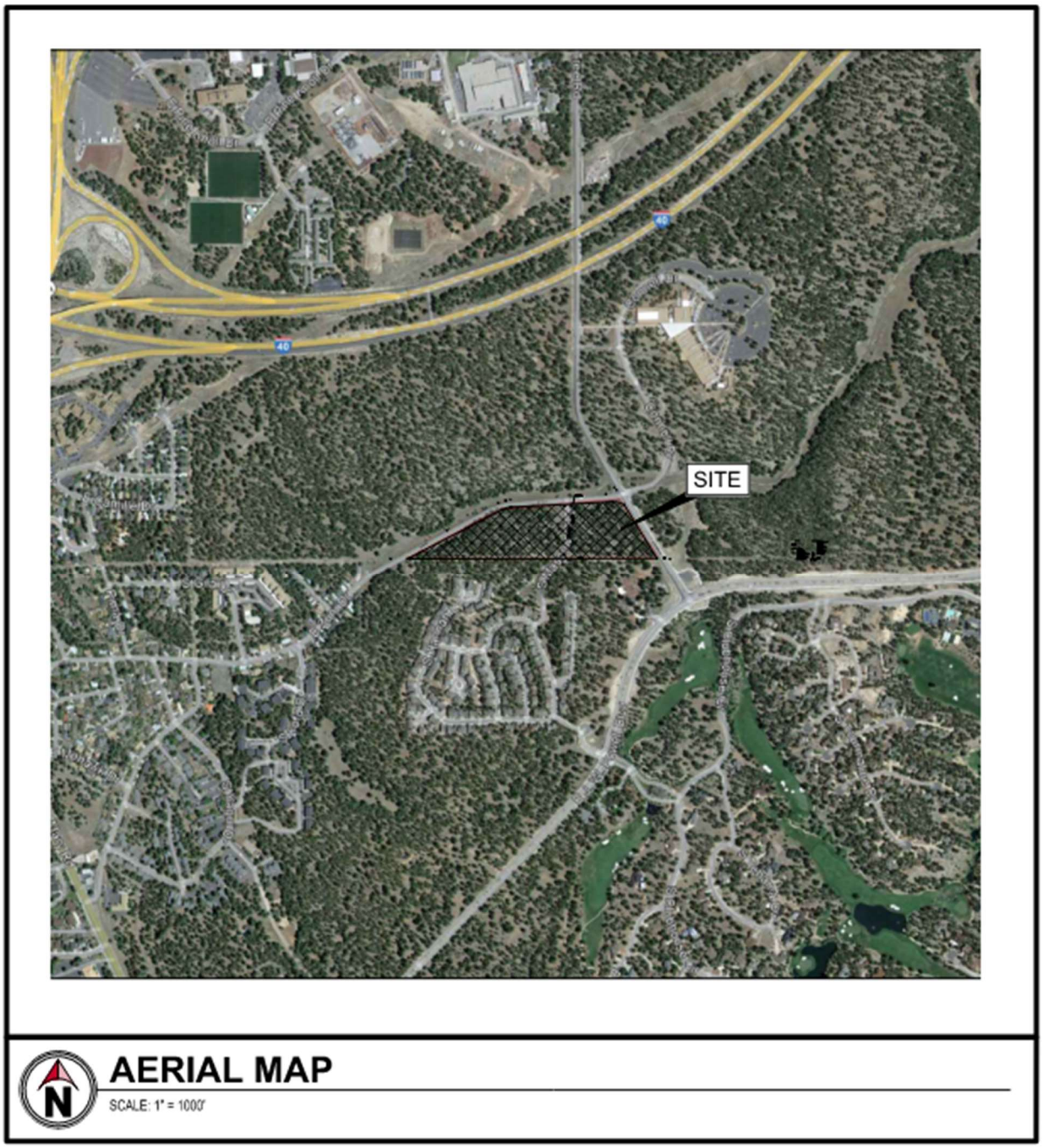
5.0 References

- City of Flagstaff Stormwater Management Design Manual

- City of Flagstaff Low Impact Development Manual
- “ADWR, Oak Creek Flood Warning System Hydrology Report, TR 90-4, September 1990”
- “USDA Urban Hydrology for Small Watersheds Technical Release 55 (TR55)”

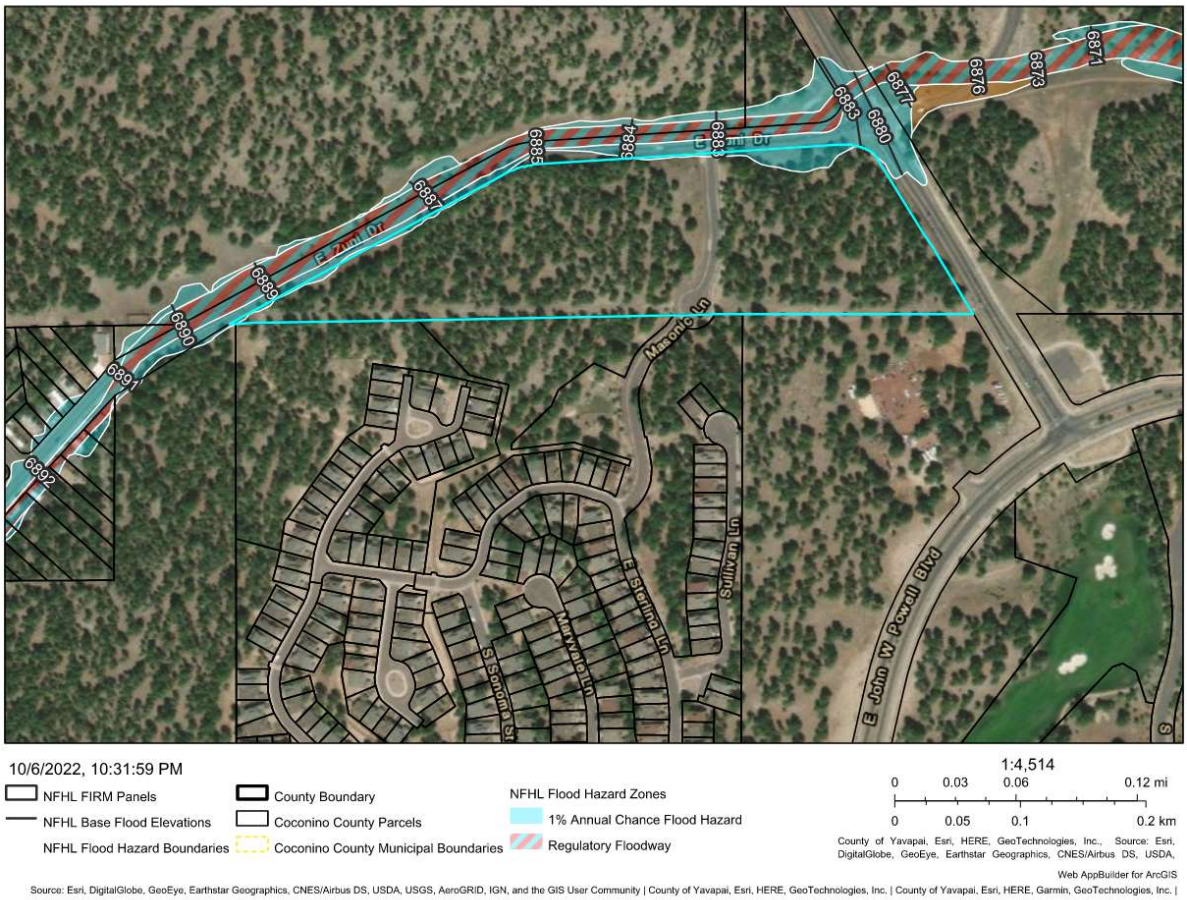
APPENDIX A: SUPPORTING DOCUMENTS

A.1 PROJECT LOCATION MAP



A.2 FEMA Flood Insurance Rate Map

ArcGIS Web Map



A.3 TR-55 Curve Numbers

Table 2-2a Runoff curve numbers for urban areas [1]

Cover description: Cover type and hydrologic condition	Average percent impervious area [2]	Curve numbers for hydrologic soil group: A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.) [3]:					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) [4]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation) [5]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

[1] Average runoff condition, and $I_a = 0.2S$.
[2] The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.
[3] CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.
[4] Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.
[5] Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

APPENDIX B: SITE SOILS INVESTIGATION

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Oak Creek-San Francisco Peaks Area, Arizona, Part of Coconino County

January 12, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface.....2
How Soil Surveys Are Made.....5
Soil Map.....8
Soil Map.....9
Legend.....10
Map Unit Legend.....12
Map Unit Descriptions.....12
Oak Creek-San Francisco Peaks Area, Arizona, Part of Coconino County.....14
1—Jacques clay loam, 0 to 2 percent slopes.....14
13—Lynx loam, 0 to 2 percent slopes.....15
15A—Tortugas-Daze complex, 0 to 15 percent slopes.....16
15B—Tortugas cobbly and gravelly loam, 15 to 30 percent slopes.....17
Soil Information for All Uses.....19
Soil Properties and Qualities.....19
Soil Qualities and Features.....19
Hydrologic Soil Group.....19
References.....25

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:3,300 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 45 90 180 270

Feet
0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Oak Creek-San Francisco Peaks Area, Arizona, Part of Coconino County
Survey Area Data: Version 12, Aug 29, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 5, 2021—Aug 3, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Jacques clay loam, 0 to 2 percent slopes	0.0	0.0%
13	Lynx loam, 0 to 2 percent slopes	2.5	18.1%
15A	Tortugas-Daze complex, 0 to 15 percent slopes	1.5	11.2%
15B	Tortugas cobbly and gravelly loam, 15 to 30 percent slopes	9.7	70.7%
Totals for Area of Interest		**13.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Oak Creek-San Francisco Peaks Area, Arizona, Part of Coconino County

1—Jacques clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1vhjq
Elevation: 6,580 to 7,080 feet
Mean annual precipitation: 18 to 24 inches
Mean annual air temperature: 43 to 49 degrees F
Frost-free period: 90 to 115 days
Farmland classification: Not prime farmland

Map Unit Composition

Jacques and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Jacques

Setting

Landform: Valleys, drainageways
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 16 inches: clay loam
H2 - 16 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: C
Ecological site: R039XA108AZ - Meadow 17-22" p.z.
Hydric soil rating: No

13—Lynx loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1vhk6
Elevation: 6,560 to 7,030 feet
Mean annual precipitation: 18 to 24 inches
Mean annual air temperature: 43 to 49 degrees F
Frost-free period: 90 to 115 days
Farmland classification: Not prime farmland

Map Unit Composition

Lynx and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lynx

Setting

Landform: Flood plains, alluvial fans
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 60 inches: loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: B
Ecological site: R039XA130AZ - Loamy Bottom 17-22" p.z.
Hydric soil rating: No

15A—Tortugas-Daze complex, 0 to 15 percent slopes

Map Unit Setting

National map unit symbol: 1vhkb
Elevation: 6,670 to 7,090 feet
Mean annual precipitation: 18 to 24 inches
Mean annual air temperature: 43 to 49 degrees F
Frost-free period: 90 to 115 days
Farmland classification: Not prime farmland

Map Unit Composition

Tortugas and similar soils: 55 percent
Daze and similar soils: 45 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tortugas

Setting

Landform: Hills
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Alluvium and/or residuum weathered from limestone

Typical profile

H1 - 0 to 3 inches: cobbly loam
H2 - 3 to 14 inches: very cobbly loam
R - 14 to 24 inches: bedrock

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: 6 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 percent
Available water supply, 0 to 60 inches: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: D
Ecological site: F039XA134AZ - Limestone Upland 17-22" p.z. (PIPO)
Hydric soil rating: No

Description of Daze

Setting

Landform: Hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone and sandstone

Typical profile

H1 - 0 to 3 inches: fine sandy loam
H2 - 3 to 7 inches: clay loam
H3 - 7 to 18 inches: clay
R - 18 to 28 inches: bedrock

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: D
Ecological site: F039XA139AZ - Limestone/Sandstone Upland 17-22"
Hydric soil rating: No

15B—Tortugas cobbly and gravelly loam, 15 to 30 percent slopes

Map Unit Setting

National map unit symbol: 1vhkc
Elevation: 6,380 to 7,070 feet
Mean annual precipitation: 18 to 24 inches
Mean annual air temperature: 43 to 49 degrees F
Frost-free period: 90 to 115 days
Farmland classification: Not prime farmland

Map Unit Composition

Tortugas and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tortugas

Setting

Landform: Hills
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Alluvium and/or residuum weathered from limestone

Typical profile

H1 - 0 to 3 inches: cobbly loam
H2 - 3 to 14 inches: very cobbly loam
R - 14 to 24 inches: bedrock

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: 6 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 percent
Available water supply, 0 to 60 inches: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: D
Ecological site: F039XA110AZ - Limestone Hills 17-22" p.z. (PIPO, JUDE2)
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

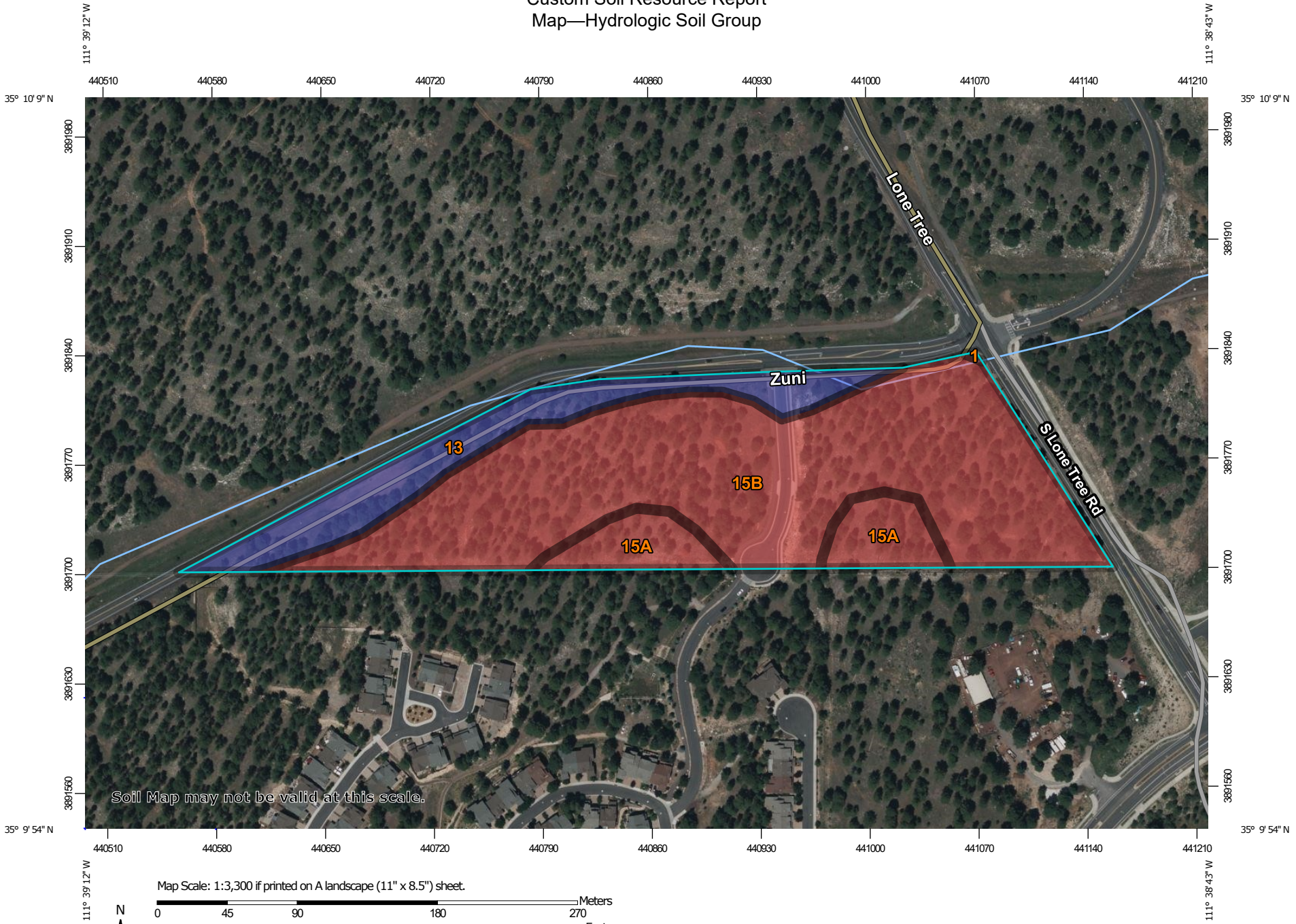
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report
Map—Hydrologic Soil Group



Map Scale: 1:3,300 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 45 90 180 270

Feet
0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Oak Creek-San Francisco Peaks Area, Arizona, Part of Coconino County
Survey Area Data: Version 12, Aug 29, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 5, 2021—Aug 3, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND	MAP INFORMATION
	imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Jacques clay loam, 0 to 2 percent slopes	C	0.0	0.0%
13	Lynx loam, 0 to 2 percent slopes	B	2.5	18.1%
15A	Tortugas-Daze complex, 0 to 15 percent slopes	D	1.5	11.2%
15B	Tortugas cobbly and gravelly loam, 15 to 30 percent slopes	D	9.7	70.7%
Totals for Area of Interest			**13.7**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

B.2 SOILS TESTING REPORT

Western Technologies Inc.

GEOTECHNICAL EVALUATION REPORT

MASONIC LANE TOWNHOMES
APN # 103-26-002D
2951 South Masonic Lane
Flagstaff, Arizona
WT Reference No. 2522JB158

PREPARED FOR:
Red Oak Development Group, LLC
8512 Bestride Bend
Austin, Texas 78744
Attn: Mr. Dan Ross, V.P. of Operations
Attn: Ms. Jill Manlove, P.M.
August 19, 2022

Gregory L. E. Burr, R.G., E.I.T.
Director of Geotechnical Services

Craig P. Wiedeman, P.E.
Senior Geotechnical Engineer

Western Technologies Inc.
The Quality People
Since 1955

2400 East Huntington Drive
Flagstaff, Arizona 86004-8934
(928) 774-8700 • fax 774-6469

August 19, 2022

Red Oak Development Group, LLC
8512 Bestride Bend
Austin, Texas 78744

Attn: Mr. Dan Ross, V.P. of Operations
Attn: Ms. Jill Manlove, P.M.

Re: Geotechnical Evaluation — Job No. 2522JB158
Masonic Lane Townhomes
APN # 103-26-002D
2951 South Masonic Lane
Flagstaff, Arizona

Western Technologies Inc. has completed the geotechnical evaluation for the proposed townhomes to be located in Flagstaff, Arizona. This study was performed in general accordance with our proposal number 2522PW273 dated July 8, 2022. The results of our study, including the test pit location diagram, laboratory test results, test pit logs, and the geotechnical recommendations are attached.

We have appreciated being of service to you in the geotechnical engineering phase of this project and are prepared to assist you during the construction phases as well. If design conditions change, or if you have any questions concerning this report or any of our testing, inspection, design and consulting services, please do not hesitate to contact us. We look forward to working with you on future projects.

Sincerely,
WESTERN TECHNOLOGIES, INC.
Geotechnical Engineering Services

Gregory L. E. Burr, R.G., E.I.T.
Director of Geotechnical Services

Copies to: Addressee (emailed)

TABLE OF CONTENTS

1.0 PURPOSE 1

2.0 PROJECT DESCRIPTION 1

3.0 SCOPE OF SERVICES 2
3.1 Field Exploration 2
3.2 Laboratory Analyses 2
3.3 Analyses and Report 3

4.0 SITE CONDITIONS 3
4.1 Surface 3
4.2 Subsurface 4

5.0 GEOTECHNICAL PROPERTIES AND ANALYSIS 4

6.0 RECOMMENDATIONS 5
6.1 General 5
6.2 Design Considerations 5
6.3 Foundations 5
6.4 Lateral Design Criteria 7
6.5 Seismic Considerations 8
6.6 Conventional Slab-on-Grade Support 9
6.7 Drainage 9
6.8 Corrosivity 11
6.9 Pavements 11
6.9.1 Pavement Analyses 12

7.0 EARTHWORK 12
7.1 General 12
7.2 Site Clearing 13
7.3 Excavation 13
7.4 Foundation Preparation 13
7.5 Slab-on-Grade Preparation 14
7.6 Exterior Slab Preparation 15
7.7 Pavement Preparation 15
7.8 Materials 15
7.9 Placement and Compaction 17
7.10 Compliance 18

8.0 ADDITIONAL SERVICES 18

9.0 LIMITATIONS 18

TABLE OF CONTENTS (Continued)

10.0 CLOSURE 19

TEST PIT LOCATION DIAGRAM ..... Plate 1

APPENDIX A

Definition of Terminology A-1
Method of Classification A-2
Test Pit Log Notes A-3
Test Pit Logs ..... A-4 to A-17

APPENDIX B

Laboratory Tests ..... B-1 to B-7

GEOTECHNICAL EVALUATION
MASONIC LANE TOWNHOMES
APN # 103-26-002D
2951 SOUTH MASONIC LANE
FLAGSTAFF, ARIZONA
JOB NO. 2522JB158

1.0 PURPOSE

This report contains the results of our geotechnical evaluation for the proposed townhomes to be located at 2951 South Masonic Lane in Flagstaff, Arizona. The purpose of these services is to provide information and recommendations regarding:

- Subsurface conditions
- Foundation design parameters
- Slabs-on-grade
- On-site pavements
- Lateral earth pressures
- Seismic considerations
- Earthwork guidelines
- Drainage
- Corrosivity

Results of the field exploration, field tests, and laboratory testing program are presented in the Appendices.

2.0 PROJECT DESCRIPTION

Based on information provided by Ms. Jill Manlove, P.M., the proposed project will consist of a subdivision containing one-hundred and five townhomes that will be either single-story or two-story with attached garages, and plan areas ranging from about 1,300 to 3,900 square feet, to be constructed on a lot with a total area of 13.82-acres. It is assumed that the structures will use wood frame and/or masonry construction with slab-on-grade ground floors. Maximum wall and column loads for the structures are assumed to be 3 kips per linear foot and 45 kips, respectively. We anticipate no extraordinary slab-on-grade criteria and that the finished first floor levels will be within about 2 to 3 feet of the existing site grades, although grading plans were not available at the time of this report. In addition, asphalt paved access roads will be included as part of the

proposed development. Should any of our information or assumptions not be correct, we request that the Client notify Western Technologies (WT) immediately.

3.0 SCOPE OF SERVICES

3.1 Field Exploration

Fourteen test pits were excavated to depths ranging from about 1 to 10 feet below existing site grades at the approximate locations shown on the attached Test Pit Location Diagram. A field log was prepared for each test pit.

These logs contain visual classifications of the materials encountered during excavating as well as interpolation of the subsurface conditions between samples. Final logs, included in Appendix A, represent our interpretation of the field logs and may include modifications based on laboratory observations and tests of the field samples. The final logs describe the materials encountered, their thickness, and the locations where samples were obtained. Two samples of the on-site rock were obtained for laboratory testing.

The Unified Soil Classification System was used to classify soils. The soil classification symbols appear on the test pit logs and are briefly described in Appendix A. Local and regional geologic characteristics were used to estimate the seismic design criteria and liquefaction potential.

3.2 Laboratory Analyses

Laboratory analyses were performed on representative soil and rock samples to aid in material classification and to estimate pertinent engineering properties of the on-site soils and rock for preparation of this report. Testing was performed in general accordance with applicable standard test methods. The following tests were performed and the results are presented in Appendix B.

- Water content
- Dry density
- Compression
- Expansion
- Optimum moisture/maximum density
- Sieve analysis

- Plasticity
- Water soluble salt/sulfate/chloride content
- Corrosivity (ASTM A674)
- Unit weight (rock)
- Unconfined compressive strength (rock)

Test results were utilized in the development of the recommendations contained in this report.

3.3 Analyses and Report

This geotechnical engineering report includes a description of the project, a discussion of the field and laboratory testing programs, a discussion of the subsurface conditions, and design recommendations as appropriate to the purpose. The scope of services for this project does not include, either specifically or by implication, any environmental assessment of the site, discovery of underground storage tanks or other underground structures, or identification of contaminated or hazardous materials or conditions. If there is concern about the potential for such contamination, other studies should be undertaken. We are available to discuss the scope of such studies with you.

4.0 SITE CONDITIONS

4.1 Surface

At the time of our field exploration, the site was a developed lot. Previous development on the site consisted of a north-south oriented asphalt paved residential roadway with a cul-de-sac that bisects the site, and includes concrete curbs and gutters that all appeared to be in good condition. The site is bordered on the north and west by East Zuni Drive, on the south by developed townhomes, and on the east by South Lone Tree Road. The ground surface was rolling and exhibited gentle to steep slopes down to the north. Evidence of previous surface water ponding was observed throughout the flatter portions of the site. Surface drainage appeared to be poor to good by means of sheet flow to the north. Vegetation on the site consisted of a sparse to heavy growth of ponderosa pine trees, grasses and weeds.

4.2 Subsurface

As presented on the Test Pit Logs, shallow surface and subsoils extending to the full depth of exploration in all but one test pit were found to be low to medium plasticity Silty, Clayey SANDS and Clayey SANDS, both with variable amounts of gravel; low to medium plasticity Silty, Clayey GRAVELS and Clayey GRAVELS, both with variable amounts of sand; and high plasticity CLAYS with variable amounts of sand and gravel. All soils encountered contained random amounts of cobbles and boulders. Refusal to excavator penetration occurred in all test pits, except Test Pit 10, at depths of about 1 to 5 feet on LIMESTONE. Groundwater was not encountered in any test pit at the time of exploration. A detailed description of the soils encountered can be found on the test pit logs in Appendix A.

The test pit logs included in this report are indicators of subsurface conditions only at the specific location and date noted. Variations from the field conditions represented by the test pits may become evident during construction. If variations appear, we should be contacted to re-evaluate our recommendations.

5.0 GEOTECHNICAL PROPERTIES AND ANALYSIS

Laboratory test results indicate that the site soils exhibit low to high compressibility at existing water contents. Moderate to moderately high expansive pressures develop when the water content is increased. Two samples of the on-site rock were tested for unit weight and unconfined compressive strength, and the results are presented in Appendix B.

Near-surface soils contain low to high plasticity fines. These soils exhibit moderately high to very high expansion potential when recompacted, confined by loads approximating floor loads and saturated in accordance with standard Arizona test methods. Slabs-on-grade supported on recompacted native soils have a high potential for heaving if the water content of the soil increases. Densification of the soil by the passage of construction equipment will increase the expansion potential of the native clayey soils.

6.0 RECOMMENDATIONS

6.1 General

Recommendations contained in this report are based on our understanding of the project criteria described in Section 2.0 and the assumption that the soil and subsurface conditions are those disclosed by the explorations. Others may change the plans, final elevations, number and type of structures, foundation loads, and floor levels during design or construction. Substantially different subsurface conditions from those described herein may be encountered or become known. Any changes in the project criteria or subsurface conditions shall be brought to our attention in writing. This report does not encompass the effects, if any, of underlying geologic hazards or regional groundwater withdrawal and expresses no opinion regarding their effects on surface movements at the project site.

6.2 Design Considerations

The borings indicate the presence of medium to high plasticity clayey/clay soils throughout the site. These soils will expand or swell significantly with an increase in moisture content. Structures and related improvements situated on expansive soils will be subject to relatively large movements if the supporting soils experience an increase in moisture content. It should be understood that if moisture penetrates expansive soils, there will be some heave and resultant cracking/distress of the proposed structures and related improvements. Construction of site fences, screen walls and other miscellaneous improvements such as exterior slabs-on-grade within the development that typically fall under building code guidelines will be susceptible to heave as well.

Cobbles and some boulders were encountered in the test pits. These oversized materials, greater than 3 inches, could present construction difficulties for foundation, utility trenches and other excavations. In cut areas and excavations, exposed oversized materials should be removed.

6.3 Foundations

A main geotechnical concern on this project will be the possibility of differential bearing conditions between rock areas and moderately deep soil/fill areas. Basically, four different types of bearing conditions may occur on this site:

1. Structures bearing entirely within shallow rock areas.
2. Structures bearing partially on rock and partially on shallow fills (less than 5 feet deep).
3. Structures bearing entirely on fill.
4. Structures bearing entirely in high plasticity soils

To help reduce differential movements, mixed bearing conditions (rock and fill) should be avoided within an individual structural unit.

Following removal of any existing fill materials, conventional shallow spread footings may be used to support the proposed structures. Footings should bear at least 2.5 feet below the lowest adjacent finished grade. Footings may be designed to impose a maximum dead plus live-load pressure of up to 2500 pounds per square foot. Foundation preparation procedures will vary depending on the structure location within the site. Refer to Section 7.5 **Foundation Preparation** in this report for details.

Settlements will also vary depending on the foundation bearing conditions. For foundation elements bearing on dense rock and/or lean mix (2-sack) concrete backfill extending to dense rock, total and differential settlements should be nominal. Settlement of foundation elements bearing on engineered fill will vary depending on the total depth of the fill, and may approach 1 inch in the deeper fill areas. Differential settlements are anticipated to be approximately one-half of the total settlements. Additional foundation movements could occur if water from any source infiltrates the foundation bearing soils. Therefore, proper drainage should be provided in the final design and during construction.

Finished grade is the lowest adjacent grade for perimeter footings and floor level for interior footings. The design bearing capacity applies to dead loads plus design live load conditions. Recommended minimum widths of column and wall footings are 24 inches and 16 inches, respectively. The bearing value given is a net bearing value and the weight of the concrete in the footings may be ignored.

All footings, stem walls and masonry walls should be reinforced to reduce the potential for distress caused by differential foundation movements. The use of joints at openings or other discontinuities in masonry walls is recommended. Site preparation procedures and foundation excavations should be observed by the geotechnical engineer to assess that adequate bearing conditions exist and that recompaction of native soils and/or placement of engineered fill has been performed satisfactorily. If the soil conditions encountered differ

significantly from those presented in this report, supplemental recommendations will be required.

6.4 Lateral Design Criteria

For cantilevered walls above any free water surface with level backfill and no surcharge loads, recommended equivalent fluid pressures and coefficients of base friction for unrestrained elements are:

- Active:
  Undisturbed subsoil .....38 psf/ft
  Compacted granular backfill .....30 psf/ft
  Compacted site soils (low expansive potential) .....38 psf/ft
  Clay/Clayey site soils (high expansive potential) ..... not recommended for use

- Passive:
  Shallow wall footings (soil) .....225 psf/ft
  Shallow column footings (soil) .....350 psf/ft
  Dense rock .....500 psf/ft

- Coefficient of base friction:
  Soil 0.35*
  Rock 0.55

  * The coefficient of base friction (soil) should be reduced to 0.25 when used in conjunction with passive pressure.

Where the design includes restrained elements, the following equivalent fluid pressures are recommended:

- At-rest:
  Undisturbed subsoil .....68 psf/ft
  Compacted granular backfill .....57 psf/ft

These lateral earth pressures are not applicable for submerged soils. We should be consulted for additional recommendations if such conditions are to be included in the

design. Any surcharge from adjacent loadings must also be considered. Walls below grade should be waterproofed.

We recommend a free-draining soil layer or manufactured geocomposite material, be constructed adjacent to the back of retaining walls. A filter may be required between the soil backfill and drainage layer. This drainage zone should help prevent hydrostatic pressure buildup. This vertical drain should be tied into a gravity drainage system at the base of the wall. It is important that all backfill be properly placed and compacted. Backfill should be mechanically compacted in layers. Flooding or jetting should not be permitted. Care should be taken not to damage the walls when placing the backfill. Backfills should be inspected and tested during placement.

Fill against footings, stem walls and retaining walls should be compacted to densities specified in **EARTHWORK**. Medium to high plasticity clay soils should not be used as backfill against retaining walls. Compaction of each lift adjacent to walls should be accomplished with hand-operated tampers or other lightweight compactors. Overcompaction may cause excessive lateral earth pressures which could result in wall movements.

6.5 Seismic Considerations

Structures should be designed in accordance with applicable building codes. The seismic design parameters presented in the following table, in accordance with the 2018 International Building Code and ASCE 7-16, are applicable to the project site:

Seismic Design Parameters International Building Code 2018, ASCE 7-16	
Soil Site Class	C
Mapped Spectral Response Acceleration at 0.2 sec period (S_s)	0.312g
Mapped Spectral Response Acceleration at 1.0 sec period (S_1)	0.096g
Site Coefficient for 0.2 sec period (F_a)	1.3
Site Coefficient for 1.0 sec period (F_v)	1.5
Design Spectral Response Acceleration at 0.2 sec period (S_{DS})	0.271g
Design Spectral Response Acceleration at 1.0 sec period (S_{D1})	0.096g

The soil site class is based upon conditions identified in shallow exploratory test pits and local knowledge of the geotechnical conditions in the vicinity of the site. Conditions extending

beyond the depth of our test pits to a depth of 100 feet were assumed for the purposes of providing the information presented in the table. Based upon the density of the on-site soils, the shallow rock conditions in some areas of the site, and lack of groundwater, the potential settlement and lateral spread due to liquefaction is not a considered to be a significant concern on this site.

6.6 Conventional Slab-on-Grade Support

Slabs-on-grade should be supported on a minimum thickness of 3 feet of properly placed and compacted, imported, low expansive, engineered fill. For design of interior slabs-on-grade, we recommend using a modulus of subgrade reaction (k) of 200 pounds per cubic inch (pci) for the on-site soils and 225 pci for imported fill material, based on a 30-inch diameter plate. For design of interior slabs-on-grade, we recommend using a modulus of subgrade reaction (k) of 200 pounds per cubic inch (pci) for the on-site soils and 225 pci for imported fill material, based on a 30-inch diameter plate. A minimum 4-inch thick layer of base course should be provided beneath all slabs to help prevent capillary rise and a damp slab.

The use of vapor retarders or barriers is desirable for any slab-on-grade where the floor will be covered by products using water-based adhesives, wood, vinyl backed carpet, impermeable floor coatings (urethane, epoxy, acrylic terrazzo, etc.) or where the floor will be in contact with moisture sensitive equipment or product. When used, the design and installation should be in accordance with the guidance given in ACI 302.1R and 302.2R. Final determination on the use of a vapor retarder should be left to the slab designer.

All concrete placement and curing operations should follow the American Concrete Institute manual recommendations. Improper curing techniques and/or high slump (high water-cement ratio) could cause excessive shrinkage, cracking or curling. The plastic properties of the concrete should be documented at the time of placement and specimens should also be prepared for strength testing to verify compliance with project specifications. Concrete slabs should be allowed to cure adequately before placing vinyl or other moisture sensitive floor covering.

6.7 Drainage

The major cause of soil-related foundation and slab-on-ground problems is moisture increase in soils below structures. Properly functioning conventional foundations and floor slabs-on-ground require appropriately constructed and maintained site drainage conditions.

Therefore, it is extremely important that positive drainage be provided during construction and maintained throughout the life of the residential structures. It is also important that proper planning and control of landscape and irrigation practices be performed.

Infiltration of water into utility or foundation excavations must be prevented during construction. Backfill against footings, exterior walls, and in utility and sprinkler line trenches should be well compacted and free of all construction debris to minimize the possibility of moisture infiltration. If utility line trenches are backfilled with a granular material, then a clay or concrete plug should be placed in the trench adjacent to the structures to prevent water from following the trench back under the structures.

In areas where sidewalks, patios or driveways do not immediately adjoin the structures, protective slopes should be provided with an outfall of about 5 percent for at least 10 feet from perimeter walls. Scuppers or gutters and drain pipes should be designed to provide drainage away from the structures for a minimum distance of 10 feet. Planters or other surface features that could retain water adjacent to residential structures should be avoided if at all possible. If planters and/or landscaping are adjacent to or near the structures, there will be a greater potential for moisture infiltration, soil movement and structure distress. As a minimum, we recommend the following:

- Grades should slope away from the structures.

- Planters should slope away from the structures and should not pond water. Drains should be installed in enclosed planters to facilitate flow out of the planters.
- Only shallow rooted landscaping should be used.

- Watering should be kept to a minimum. Irrigation systems should be situated on the far side of any planting and away from the structures to minimize infiltration beneath foundations from possible leaks.

- Trees should be planted no closer than a distance equal to three-quarters of their mature height or 15 feet, whichever is greater.

It should be understood that these recommendations will help minimize the potential for soil movement and resulting distress, but will not eliminate this potential.

6.8 Corrosivity

Based on the laboratory test results, the on-site soils exhibit a low to moderate corrosive potential to ductile iron piping. This information should be used as an aid in choosing the construction materials that will be in contact with these soils and that will need to be resistant to various corrosive forces. Manufacturers' representatives should be contacted regarding the specific corrosivity resistance for their particular product.

The chemical test results indicate that the site soils are negligibly corrosive to concrete. However, in order to be consistent with standard local practice and for reasons of material availability, we recommend that Type II portland cement be used for all concrete on and below grade.

6.9 Pavements

Based on existing subgrade conditions, the following pavement sections are recommended for the areas indicated:

Traffic Area	Asphalt Concrete (in.)	Base Course (in.)
Passenger car parking/drives (low traffic frequency)	3	7
Residential Roadways (high traffic frequency)	4	5

Bituminous surfacing should be constructed of dense-graded, central plant-mix, asphalt concrete. Base course and asphalt concrete should conform with City of Flagstaff specifications.

Material and compaction requirements should conform to the recommendations presented under **EARTHWORK**. The gradient of paved surfaces should ensure positive drainage. Water should not pond in areas directly adjoining paved sections. The native subgrade soils will soften and lose stability if subjected to conditions which result in an increase in water content.

Due to the high static loads imposed by parked trucks in loading and unloading areas and at dumpster locations, we recommend that a rigid pavement section be considered for these

areas. A minimum 6-inch thick concrete pavement over 4 inches of aggregate base course material is recommended.

6.9.1 Pavement Analyses

The recommended pavement sections are based on the following conditions. This firm should be contacted if any of these conditions change so that revised recommendations can be provided, if necessary.

a. A design R-value of 20 for the on-site soils which corresponds to a resilient modulus of approximately 5,700 pounds per square inch. Any required fills should be constructed using on-site or imported materials with subgrade support characteristics equal to or greater than the subgrade soils in the area being filled.

b. Structural coefficients of 0.40 for asphalt concrete and 0.12 for aggregate base course material.

c. A present serviceability index of 4.5, a terminal serviceability index of 2.5, an overall standard deviation of 0.35, a reliability factor of 85 percent, a drainage coefficient of 0.85, a seasonal variation factor of 3.5, and design life of 20 years.

d. A total 18-kip equivalent single axle load (ESAL) of 25,000 for the passenger car parking areas and 36,500 for the residential roadway areas.

7.0 EARTHWORK

7.1 General

The conclusions contained in this report for the proposed construction are contingent upon compliance with recommendations presented in this section. Any excavating, trenching, or disturbance that occurs after completion of the earthwork must be backfilled, compacted and tested in accordance with the recommendations contained herein. It is not reasonable to rely upon our conclusions and recommendations if any future unobserved and untested trenching, earthwork activities or backfilling occurs.

7.2 Site Clearing

Strip and remove all vegetation, debris, and any other deleterious materials from the building and pavement areas. The building area is defined as that area within the building footprint plus 5 feet beyond the perimeter of that footprint. All exposed surfaces should be free of mounds and depressions that could prevent uniform compaction.

7.3 Excavation

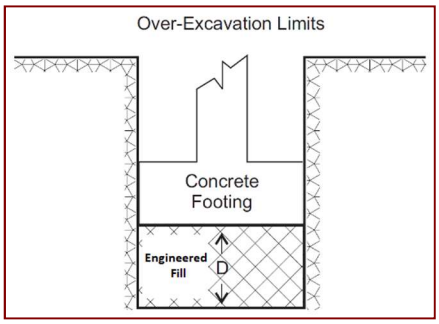
We anticipate that excavations into the site soils for the proposed construction can be accomplished with conventional equipment. Excavations penetrating the underlying limestone may require the use of heavy duty, specialized equipment to facilitate rock break-up and removal.

On-site soils will pump or become unworkable at high water contents. Workability may be improved by scarifying and drying. Over-excavation of wet zones and replacement with drier granular materials may be necessary. The use of lightweight excavation and compaction equipment may be required to minimize subgrade pumping.

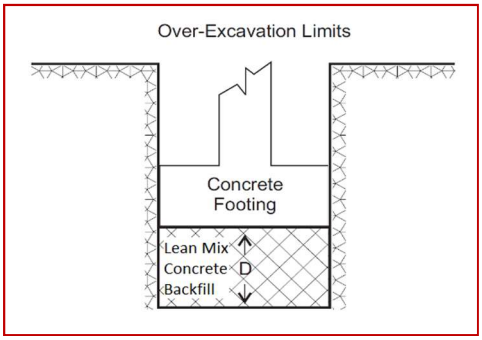
7.4 Foundation Preparation

For structures located within cut areas of the site where rock is encountered throughout the entire building area, remove all loose or disturbed materials from the bottoms and sides of the footing excavations prior to the placement of foundation reinforcement and concrete. The depth of removal required for this condition will vary and is best determined in the field during foundation excavation operations. If desired, lean mix (2-sack) concrete backfill may be used to backfill any deeper portions of the excavations to design bottom of foundation elevation.

For structures bearing partially on rock and partially on fill, provide a minimum thickness of 2 feet of engineered fill material below all foundation elements (depth D in the diagram to the right). Removal and replacement in rock areas may extend straight down along the sides of the footing.

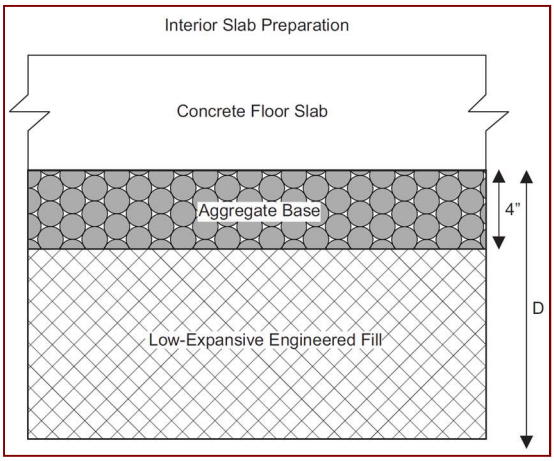


For structures bearing partially or entirely on high plasticity soils, remove existing soils to a minimum depth of 3 feet below the bottom of the footing (depth D in the diagram to the right). Removal should extend straight down along the sides of the footing. Replace the removed soils with properly consolidated, lean mix (2-sack) concrete backfill material.



7.5 Slab-on-Grade Preparation

Slabs-on-grade should be founded on a minimum thickness of 3 feet of imported, low expansive, engineered fill material. Remove native soils, as necessary, to a minimum depth of 3 feet below the bottom of the slab (depth D in the diagram below). Following the removal, scarify, moisten or dry as required, and compact all subgrade soils to a minimum depth of 8 inches. Replace the removed soils with properly compacted, imported, low to non-expansive, engineered fill material. The aggregate base course below the slab may be included as part of the low to non-expansive engineered fill. Removal and/or scarifying and compacting are not required in areas where dense limestone is encountered.



The subgrade preparation should be accomplished in a manner that will result in uniform water contents and densities after compaction.

7.6 Exterior Slab Preparation

Some of the soils on this site have the potential to expand and shrink with changes in moisture content. In addition, frost penetration in the upper soils may cause surface heaving. Therefore, relatively lightweight exterior concrete flatwork such as sidewalks and patios may experience movements resulting in cracking or vertical offsets. To reduce the potential for damage, we recommend:

- Use of fill with low expansion potential
- Use of fill with low to negligible frost susceptibility
- Placement of effective control joints on relatively close centers
- Moisture-density control during placement of subbase fills
- Provision for adequate drainage in areas adjoining the slabs
- Use of designs which allow vertical movement between the exterior slabs and adjoining structural elements

It should be understood that these recommendations will help reduce the potential for soil movement and resulting distress, but will not eliminate this potential. Furthermore, the use of municipal specifications and details may not mitigate the potential for movements of the expansive or frost susceptible on-site soils.

7.7 Pavement Preparation

Prior to placement of fill and/or pavement materials, the exposed subgrade soils should be proof-rolled and observed by the geotechnical engineer or his qualified representative to verify that stable subgrade conditions exist. Any loose, soft, disturbed, or otherwise unsuitable materials should be over-excavated and replaced with engineered fill. The subgrade should then be scarified, moisture conditioned as required, and recompacted for a minimum depth of 8 inches. Scarifying and compacting are not required in areas where dense limestone is encountered.

7.8 Materials

a. Clean on-site soils with low expansive potential and a maximum dimension of 6 inches or imported materials may be used as fill material for the following:

- Foundation areas
- Interior slab areas
- Pavement areas
- Backfill

b. On-site clay/clayey soils are not recommended for use beneath foundations, conventional interior or exterior slabs-on-grade or as backfill below slabs. Imported, low expansive, engineered fill should be used in these areas.

c. Frozen soils should not be used as fill or backfill.

d. Lean mix (2-sack) concrete backfill should consist of aggregate base course type material combined with 2 sacks of cement per cubic yard. A coarse rock mix should not be used.

e. Imported soils should conform to the following:

- Gradation (ASTM C136): percent finer by weight

6"	100
4"	85-100
¾”	70-100
No. 4 Sieve	50-100
No. 200 Sieve	40 (max)

- Maximum expansive potential (%)[1] 1.5

- Maximum soluble sulfates (%) 0.10

f. Base course should conform to City of Flagstaff, Current Edition specifications.

[1] Measured on a sample compacted to approximately 95 percent of the ASTM D698 maximum dry density at about 3 percent below optimum water content. The sample is confined under a 100 psf surcharge and submerged.

7.9 Placement and Compaction

a. Place and compact fill in horizontal lifts, using equipment and procedures that will produce recommended water contents and densities throughout the lift.

b. Uncompacted lift thickness should not exceed 8 inches.

c. Materials should be compacted to the following:

Material	Minimum Percent Compaction (ASTM D698)
• On-site soil, reworked:	
Below slabs-on-grade	90
Pavement areas	95
• On-site soil (moderate expansive potential), fill:	
Pavement areas	95
Landscape areas	85
• Imported and on-site soil (low expansive potential), fill:	
Below foundations	95
Below slabs-on-grade	95
Pavement areas	95
• Aggregate base:	
Below slabs-on-grade	95
Pavement areas	100
• Backfill:	
Structural	95
Nonstructural	90

d. On-site soils should be compacted with a moisture content in the range of optimum to 4 percent above optimum. Imported soils with low expansive potential and aggregate base course materials should be compacted with a moisture content in the range of 3 percent below to 3 percent above optimum.

7.10 Compliance

Recommendations for foundations, slabs-on-grade and pavements supported on compacted fills or prepared subgrade depend upon compliance with the **EARTHWORK** recommendations. To assess compliance, observation and testing should be performed under the direction of a WT geotechnical engineer. Please contact us to provide these observation and testing services.

8.0 ADDITIONAL SERVICES

The recommendations provided in this report are based on the assumption that a sufficient schedule of tests and observations will be performed during construction to verify compliance. At a minimum, these tests and observations should be comprised of the following:

- Observations and testing during site preparation and earthwork,
- Observation of foundation excavations, and
- Consultation as may be required during construction.

Retaining the geotechnical engineer who developed your report to provide construction observation is the best way to verify compliance and to help you manage the risks associated with unanticipated conditions.

9.0 LIMITATIONS

This report has been prepared assuming the project criteria described in **2.0 PROJECT DESCRIPTION**. If changes in the project criteria occur, or if different subsurface conditions are encountered or become known, the conclusions and recommendations presented herein shall become invalid. In any such event, WT should be contacted in order to assess the effect that such variations may have on our conclusions and recommendations. If WT is not retained for the construction observation and testing services to determine compliance with this report, our professional responsibility is accordingly limited.

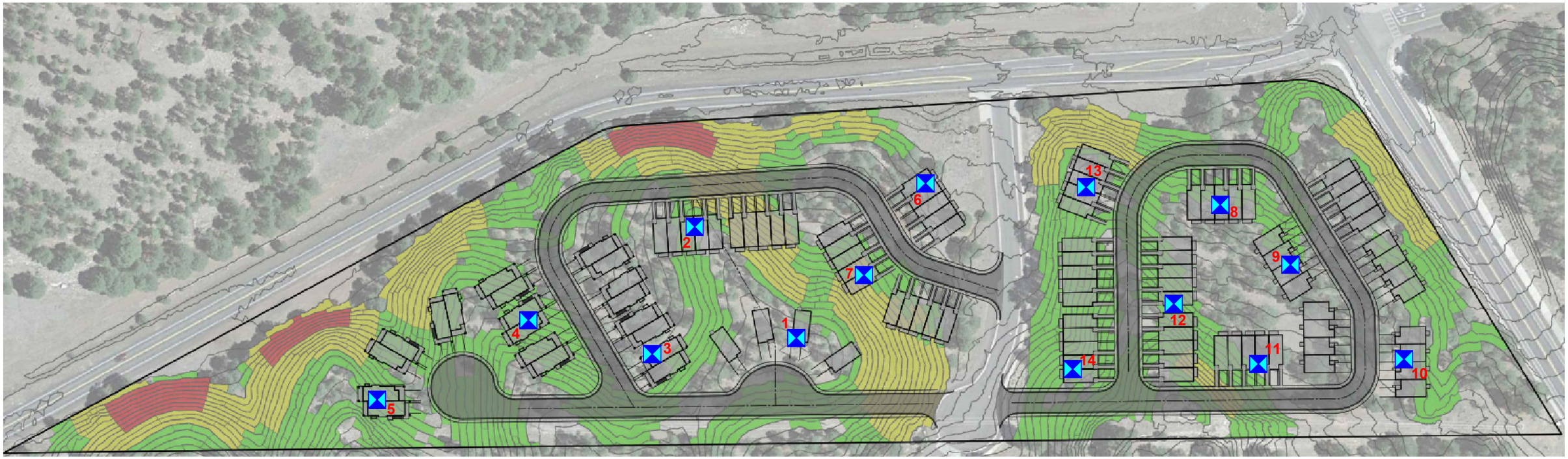
The recommendations presented are based entirely upon data derived from a limited number of samples obtained from widely spaced explorations. The attached logs are indicators of

subsurface conditions only at the specific locations and times noted. This report assumes the uniformity of the geology and soil structure between explorations, however variations can and often do exist. Whenever any deviation, difference, or change is encountered or becomes known, WT should be contacted.

This report is for the exclusive benefit of our client alone. There are no intended third-party beneficiaries of our contract with the client or this report, and nothing contained in the contract or this report shall create any express or implied contractual or any other relationship with, or claim or cause of action for, any third party against WT.
This report is valid for the earlier of one year from the date of issuance, a change in circumstances, or discovered variations. After expiration, no person or entity shall rely on this report without the express written authorization of WT.

10.0 CLOSURE

We prepared this report as an aid to the designers of the proposed project. The comments, statements, recommendations and conclusions set forth in this report reflect the opinions of the authors. These opinions are based upon data obtained at the location of the explorations, and from laboratory tests. Work on your project was performed in accordance with generally accepted standards and practices utilized by professionals providing similar services in this locality. No other warranty, express or implied, is made.



Not to Scale

Approximate Test Pit Location

Geotechnical Environmental Inspections Materials

Western Technologies Inc. The Quality People Since 1955

MASONIC LANE TOWNHOMES

Test Pit Location Diagram

Western Technologies Inc.

Job No.: 2522JB158

Plate: 1

Allowable Soil Bearing Capacity	The recommended maximum contact stress developed at the interface of the foundation element and the supporting material.
Backfill	A specified material placed and compacted in a confined area.
Base Course	A layer of specified aggregate material placed on a subgrade or subbase.
Base Course Grade	Top of base course.
Bench	A horizontal surface in a sloped deposit.
Caisson/Drilled Shaft	A concrete foundation element cast in a circular excavation which may have an enlarged base (or belled caisson).
Concrete Slabs-On-Grade	A concrete surface layer cast directly upon base course, subbase or subgrade.
Crushed Rock Base Course	A base course composed of crushed rock of a specified gradation.
Differential Settlement	Unequal settlement between or within foundation elements of a structure.
Engineered Fill	Specified soil or aggregate material placed and compacted to specified density and/or moisture conditions under observations of a representative of a soil engineer.
Existing Fill	Materials deposited through the action of man prior to exploration of the site.
Existing Grade	The ground surface at the time of field exploration.
Expansive Potential	The potential of a soil to expand (increase in volume) due to absorption of moisture.
Fill	Materials deposited by the actions of man.
Finished Grade	The final grade created as a part of the project.
Gravel Base Course	A base course composed of naturally occurring gravel with a specified gradation.
Heave	Upward movement.
Native Grade	The naturally occurring ground surface.
Native Soil	Naturally occurring on-site soil.
Rock	A natural aggregate of mineral grains connected by strong and permanent cohesive forces. Usually requires drilling, wedging, blasting or other methods of extraordinary force for excavation.
Sand and Gravel Base Course	A base course of sand and gravel of a specified gradation.
Sand Base Course	A base course composed primarily of sand of a specified gradation.
Scarify	To mechanically loosen soil or break down existing soil structure.
Settlement	Downward movement.
Soil	Any unconsolidated material composed of discrete solid particles, derived from the physical and/or chemical disintegration of vegetable or mineral matter, which can be separated by gentle mechanical means such as agitation in water.
Strip	To remove from present location.
Subbase	A layer of specified material placed to form a layer between the subgrade and base course.
Subbase Grade	Top of subbase.
Subgrade	Prepared native soil surface.

©81WTI 091614

COARSE-GRAINED SOILS

LESS THAN 50% FINES

GROUP SYMBOLS	DESCRIPTION	MAJOR DIVISIONS
GW	WELL-GRADED GRAVEL OR WELL-GRADED GRAVEL WITH SAND, LESS THAN 5% FINES	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE
GP	POORLY-GRADED GRAVEL OR POORLY-GRADED GRAVEL WITH SAND, LESS THAN 5% FINES	
GM	SILTY GRAVEL OR SILTY GRAVEL WITH SAND, MORE THAN 12% FINES	
GC	CLAYEY GRAVEL OR CLAYEY GRAVEL WITH SAND, MORE THAN 12% FINES	
SW	WELL-GRADED SAND OR WELL-GRADED SAND WITH GRAVEL, LESS THAN 5% FINES	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE
SP	POORLY-GRADED SAND OR POORLY-GRADED SAND WITH GRAVEL, LESS THAN 5% FINES	
SM	SILTY SAND OR SILTY SAND WITH GRAVEL, MORE THAN 12% FINES	
SC	CLAYEY SAND OR CLAYEY SAND WITH GRAVEL, MORE THAN 12% FINES	

NOTE: Coarse-grained soils receive dual symbols if they contain 5% to 12% fines (e.g., SW-SM, GP-GC).

FINE-GRAINED SOILS

MORE THAN 50% FINES

GROUP SYMBOLS	DESCRIPTION	MAJOR DIVISIONS
ML	SILT, SILT WITH SAND OR GRAVEL, SANDY SILT, OR GRAVELLY SILT	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50
CL	LEAN CLAY OF LOW TO MEDIUM PLASTICITY, SANDY CLAY, OR GRAVELLY CLAY	
OL	ORGANIC SILT OR ORGANIC CLAY OF LOW TO MEDIUM PLASTICITY	
MH	ELASTIC SILT, SANDY ELASTIC SILT, OR GRAVELLY ELASTIC SILT	SILTS AND CLAYS LIQUID LIMIT MORE THAN 50
CH	FAT CLAY OF HIGH PLASTICITY, SANDY FAT CLAY, OR GRAVELLY FAT CLAY	
OH	ORGANIC SILT OR ORGANIC CLAY OF HIGH PLASTICITY	
PT	PEAT AND OTHER HIGHLY ORGANIC SOILS	HIGHLY ORGANIC SOILS

NOTE: Fine-grained soils may receive dual classification based upon plasticity characteristics (e.g. CL-ML).

SOIL SIZES

COMPONENT	SIZE RANGE
BOULDERS	Above 12 in.
COBBLES	3 in. – 12 in.
GRAVEL	No. 4 – 3 in.
Coarse	¾ in. – 3 in.
Fine	No. 4 – ¾ in.
SAND	No. 200 – No. 4
Coarse	No. 10 – No. 4
Medium	No. 40 – No. 10
Fine	No. 200 – No. 40
Fines (Silt or Clay)	Below No. 200

NOTE: Only sizes smaller than three inches are used to classify soils

CONSISTENCY

CLAYS & SILTS	BLOWS PER FOOT
VERY SOFT	0 – 2
SOFT	3 – 4
FIRM	5 – 8
STIFF	9 – 15
VERY STIFF	16 – 30
HARD	OVER 30

RELATIVE DENSITY

SANDS & GRAVELS	BLOWS PER FOOT
VERY LOOSE	0 – 4
LOOSE	5 – 10
MEDIUM DENSE	11 – 30
DENSE	31 – 50
VERY DENSE	OVER 50

NOTE: Number of blows using 140-pound hammer falling 30 inches to drive a 2-inch-OD (1⅜-inch ID) split-barrel sampler (ASTM D1586).

PLASTICITY OF FINE GRAINED SOILS

PLASTICITY INDEX	TERM
0	NON-PLASTIC
1 – 7	LOW
8 – 20	MEDIUM
Over 20	HIGH

DEFINITION OF WATER CONTENT

DRY
SLIGHTLY DAMP
DAMP
MOIST
WET
SATURATED

©81 WTI
090414

The number shown in **"TEST PIT"** refers to the approximate location of the same number indicated on the "Test Pit Location Diagram" as positioned in the field by pacing or measurement from property lines and/or existing features.

"EQUIPMENT TYPE" refers to the equipment used in the excavation of the test pit, and may include the width of the bucket on the excavator and the use of “rock” teeth or attachments.

"SAMPLE TYPE" refers to the form of sample recovery, in which **R** = Ring sample and **G** = Grab Sample.

"DRY DENSITY (LBS/CU FT)" refers to the laboratory-determined dry density in pounds per cubic foot. A double vertical line within the symbol indicates no sample recovery. A circle within the symbol indicates sample disturbance.

"WATER (MOISTURE) CONTENT” (% of Dry Wt.) refers to the laboratory-determined water content in percent using the standard test method ASTM D2216.

"USCS" refers to the “Unified Soil Classification System” Group Symbol for the soil type as defined by ASTM D2487 and D2488. The soils were classified visually in the field, and where appropriate, classifications were modified by visual examination of samples in the laboratory and/or by appropriate tests.

These notes and test pit logs are intended for use in conjunction with the purposes of our services defined in the text. Test pit log data should not be construed as part of the construction plans nor as defining construction conditions.

The test pit logs depict our interpretations of subsurface conditions at the locations and on the date(s) noted. Variations in subsurface conditions and characteristics may occur between test pits. Groundwater levels may fluctuate due to seasonal variations and other factors.

The stratification lines shown on the test pit logs represent our interpretation of the approximate boundary between soil or rock types based upon visual field classification at the test pit location. The transition between materials is approximate and may be more or less gradual than indicated.

©81WTI
091614

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 1

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				GC		Clayey GRAVEL; with sand, cobbles and boulders, light brown/white, damp
					5			**Excavator Refusal at 2 Feet on LIMESTONE**
					10			

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE **A-4**

TEST PIT LOG

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 2

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				GC		Clayey GRAVEL; with sand, cobbles and boulders, dark brown, damp
					5			**Excavator Refusal at 2 Feet on LIMESTONE**
					10			

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE **A-5**

TEST PIT LOG

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 3

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				SC-SM		Silty, Clayey SAND; with gravel, cobbles and boulders, light brown, damp
					5			**Excavator Refusal at 4 Feet on LIMESTONE**
					10			

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE **A-6**

TEST PIT LOG

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 4

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				SC		Clayey SAND; with gravel, cobbles and boulders, brown, damp
								Excavator Refusal at 2 Feet on LIMESTONE

5

10

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE **A-7**

TEST PIT LOG

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 5

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				GC		Clayey GRAVEL; with sand, cobbles and boulders, dark brown, damp
					5			**Excavator Refusal at 3 Feet on LIMESTONE**
					10			

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE **A-8**

TEST PIT LOG

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 6

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				SC-SM		Silty, Clayey SAND; some gravel, cobbles and boulders, black/dark brown, damp
					5			**Excavator Refusal at 2 Feet on LIMESTONE**
					10			

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE **A-9**

TEST PIT LOG

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 7

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				GC-GM		Silty, Clayey GRAVEL; with sand, cobbles and boulders, brown, damp
					5			**Excavator Refusal at 3 Feet on LIMESTONE**
					10			

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE **A-10**

TEST PIT LOG

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 8

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				GC-GM		Silty, Clayey GRAVEL; with sand, cobbles and boulders, light brown, damp
		R		Push				
								Excavator Refusal at 4 Feet on LIMESTONE
					5			
					10			

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE **A-11**

TEST PIT LOG

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 9

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
						SC-SM		Silty, Clayey SAND; with gravel, cobbles and boulders, tan, damp
18.4	99	R		Push		CH		Sandy Fat CLAY; some gravel, brown, damp
		G						
					5			**Excavator Refusal at 5 Feet on LIMESTONE**
					10			

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE **A-12**

TEST PIT LOG

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 10

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				CH		Sandy Fat CLAY; some gravel, brown, moist
20.2	99	R		Push				
					5			
					10			**Excavation Stopped at 10 Feet**

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

Geotechnical Environmental Inspections Materials
Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE **A-13**

TEST PIT LOG

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 11

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				SC-SM		Silty, Clayey SAND; with gravel, cobbles and boulders, tan, damp
					5			**Excavator Refusal at 2 Feet on LIMESTONE**
					10			

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE
A-14

TEST PIT LOG

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 12

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				GC-GM		Silty, Clayey GRAVEL; with sand, cobbles and boulders, brown, damp
					5			**Excavator Refusal at 2 Feet on LIMESTONE**
					10			

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE **A-15**

TEST PIT LOG

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 13

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				GC-GM		Silty, Clayey GRAVEL; with sand, cobbles and boulders, black/dark brown, damp
								Excavator Refusal at 1 Foot on LIMESTONE
					5			
					10			

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE **A-16**

TEST PIT LOG

DATE EXCAVATED: **7-22-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

TEST PIT NO. 14

EQUIPMENT: **CASE 580 N**
EXCAVATION TYPE: **24" BUCKET**
FIELD ENGINEER: **C. Senior**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				GC-GM		Silty, Clayey GRAVEL; with sand, cobbles and boulders, black/dark brown, damp
								Excavator Refusal at 1 Foot on LIMESTONE
					5			
					10			

N- **STANDARD PENETRATION TEST**
R- **RING SAMPLE**
C- **CORE: %RECOVERY/RQD**
G- **GRAB SAMPLE**
B- **BUCKET SAMPLE**

NOTES: **Groundwater Not Encountered**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **MASONIC LANE TOWNHOMES**
PROJECT NO.: **2522JB158**

PLATE **A-17**

TEST PIT LOG

Test Pit No.	Depth (ft)	USCS Class.	Particle Size Distribution (%) Passing by Weight							Atterberg Limits		Laboratory Compaction Characteristics			Remarks
			3"	¾"	#4	#10	#40	#200	2µ	LL	PI	Dry Density (pcf)	Optimum Moisture (%)	Method	
1	0-2	GC	100	60	45	40	36	25.0		39	23				2
4	0-2	SC	100	88	80	76	71	36.3		34	16				2
5	0-3	GC	80	58	53	50	48	30.1		32	13				2
6	0-2	SC-SM		100	90	85	79	41.7		28	7				2
8	0-4	GC-GM	100	80	70	66	62	44.0		28	7				2
10	0-5	CH	100	92	89	87	83	51.1		53	38				2
12	0-2	GC-GM	83	60	49	45	40	18.9		30	7				2

NOTE: NP = Non-plastic
µ = microns (2µ = 0.002mm)

REMARKS

Classification / Particle Size / Moisture-Density Relationship
1. Visual
2. Laboratory Tested
3. Minus #200 Only
4. Test Method ASTM D698/AASHTO T99
5. Test Method ASTM D1557/AASHTO T180
6. From the ADOT Family of Curves

Geotechnical Environmental Inspections Materials
Western Technologies Inc.
The Quality People
Since 1955
wt-us.com

PROJECT: MASONIC LANE TOWNHOMES
JOB NO.: 2522JB158

PLATE
B-1

SOIL PROPERTIES

Test Pit No.	Depth (ft.)	USCS Class.	Initial Dry Density (pcf)	Initial Water Content (%)	Laboratory Compaction Characteristics			Expansion Properties		Plasticity		Soluble		Remarks
					Dry Density(pcf)	Optimum Moisture(%)	Method	Surcharge (ksf)	Expansion (%)	LL	PI	Salts (ppm)	Sulfate (ppm)	
4	0-2	SC	96.9	14.2	102.0	17.3	A	0.1	3.4					1,2,3
10	0-5	CH	88.2	19.7	92.5	23.2	A	0.1	8.1					1,2,3

Notes: Initial Dry Density and Initial Water Content are remolded.

Remarks

1. Compacted density (approx. 95% of ASTM D698 max. density at moisture content slightly below optimum.)
2. Submerged to approximate saturation.
3. Test Method ASTM D698/AASHTO T99
4. Test Method ASTM D1557/AASHTO T180
5. From the ADOT Family of Curves

Geotechnical Environmental Inspections Materials

Western Technologies Inc. The Quality People Since 1955

wt-us.com

PROJECT: MASONIC LANE TOWNHOMES

JOB NO.: 2522JB158

SOIL PROPERTIES

PLATE

B-2

Test No.	Depth (ft)	Rock Classification	Unit Weight (pcf)	Unconfined Compressive Strength (psi)	Remarks
1	Surface	Limestone	156.3	10,680	1,2
2	Surface	Limestone	160.1	13,700	1,2

REMARKS:

1. ASTM D7012 – Unit Weight of Rock Cores
2. ASTM C39 – Unconfined Compressive Strength of Rock Cores

CORROSIVITY TEST RESULTS

The procedures for soil survey tests and observations can be found in Appendix X1.1 of ASTM A674-10 and includes five soil properties: earth resistivity • pH • redox potential • sulfides • moisture.

Test Pit 4(0-2):

Analysis	Results		Points
Resistivity (ohm-cm)	2851		1
pH	8.2		0
Redox Potential (mV)	+396		0
Sulfides	trace		2
Moisture	fair		1
		Total Points	4

Test Pit 10(0-5):

Analysis	Results		Points
Resistivity (ohm-cm)	1136		10
pH	8.2		0
Redox Potential (mV)	+347		0
Sulfides	trace		2
Moisture	fair		1
		Total Points	13

The test procedure states that if the sum of the points is greater than 10, the soil is considered corrosive to ductile iron pipe and special protection against exterior corrosion is necessary. This conclusion is limited to soil corrosion and does not include consideration of stray direct current.

MOTZZ LABORATORY, INC.

Laboratory Analysis Report

Western Technologies - Flagstaff
Gregory L. E. Burr
2400 East Huntington
Flagstaff, AZ 86004-8934

Project: 2522JB158
Date Received: 7/29/2022
Date Reported: 8/3/2022
PO Number: 2522P163

Lab Number: 943102-1 **1 (0-2')**

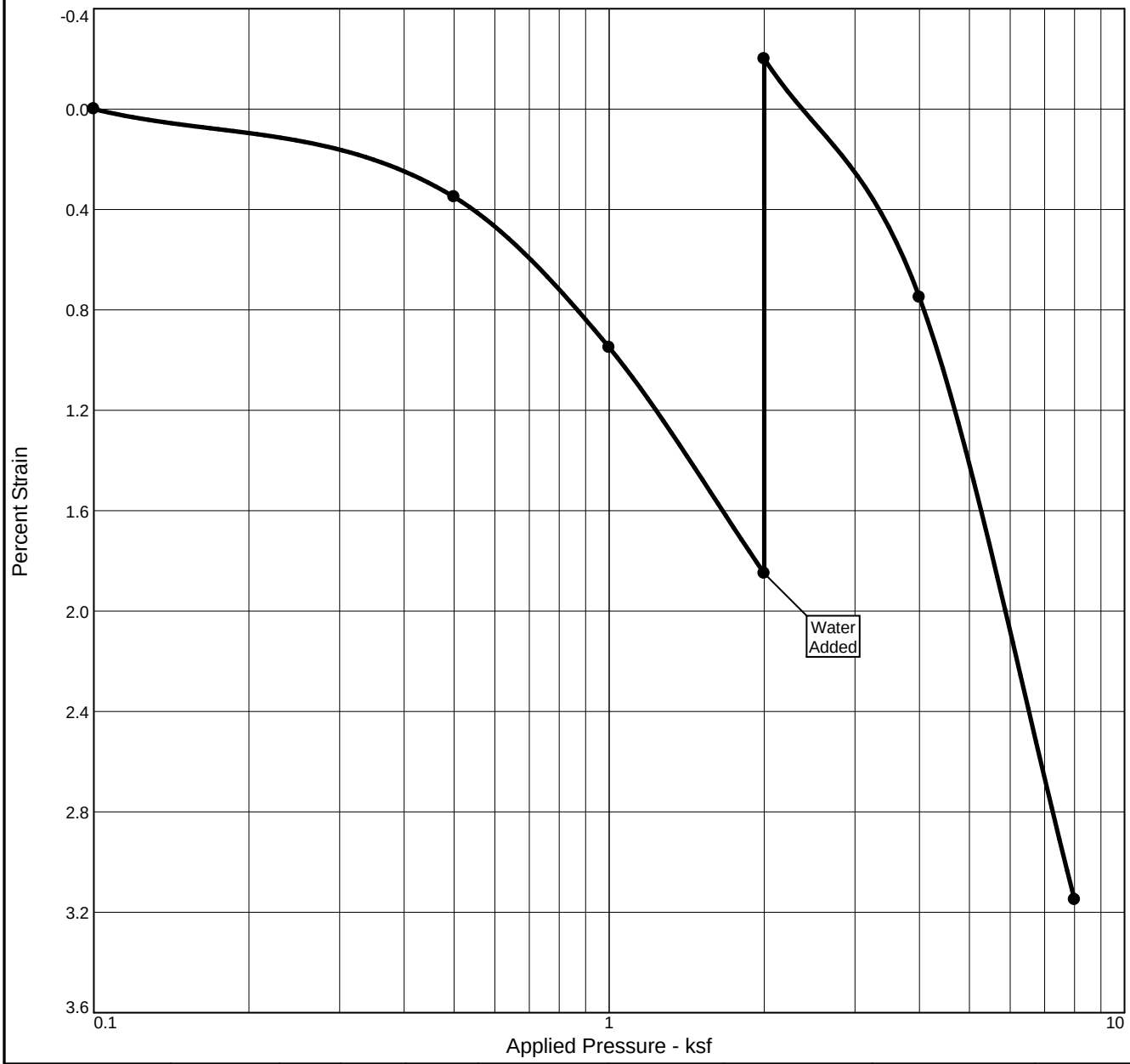
Test Parameter	Method	Result	Units	Levels
Soluble Salts	ARIZ 237b	326	ppm	
Sulfate	ARIZ 733b	9	ppm	
Chloride	ARIZ 736b	3	ppm	
Redox Potential	ASTM G200-09	396	(Eo) mV	

Lab Number: 943102-2 **12 (0-2')**

Test Parameter	Method	Result	Units	Levels
Soluble Salts	ARIZ 237b	402	ppm	
Sulfate	ARIZ 733b	19	ppm	
Chloride	ARIZ 736b	9	ppm	
Redox Potential	ASTM G200-09	347	(Eo) mV	

Plate B-5

COMPRESSION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (ksf)	e_o	Swell Press. (ksf)	Swell %	C_r
Sat.	Moist.									
71.9 %	18.4 %	98.6			2.65		0.678	3.6	2.0	

MATERIAL DESCRIPTION	USCS	AASHTO
SANDY FAT CLAY	CH	

Project No. 2522JB158 **Client:** RED OAK DEVELOPMENT GROUP, LLC

Project: MASONIC LANE TOWNHOMES

Source: RING SAMPLE **Depth:** 2-3 FEET **Sample No.:** TEST PIT 9

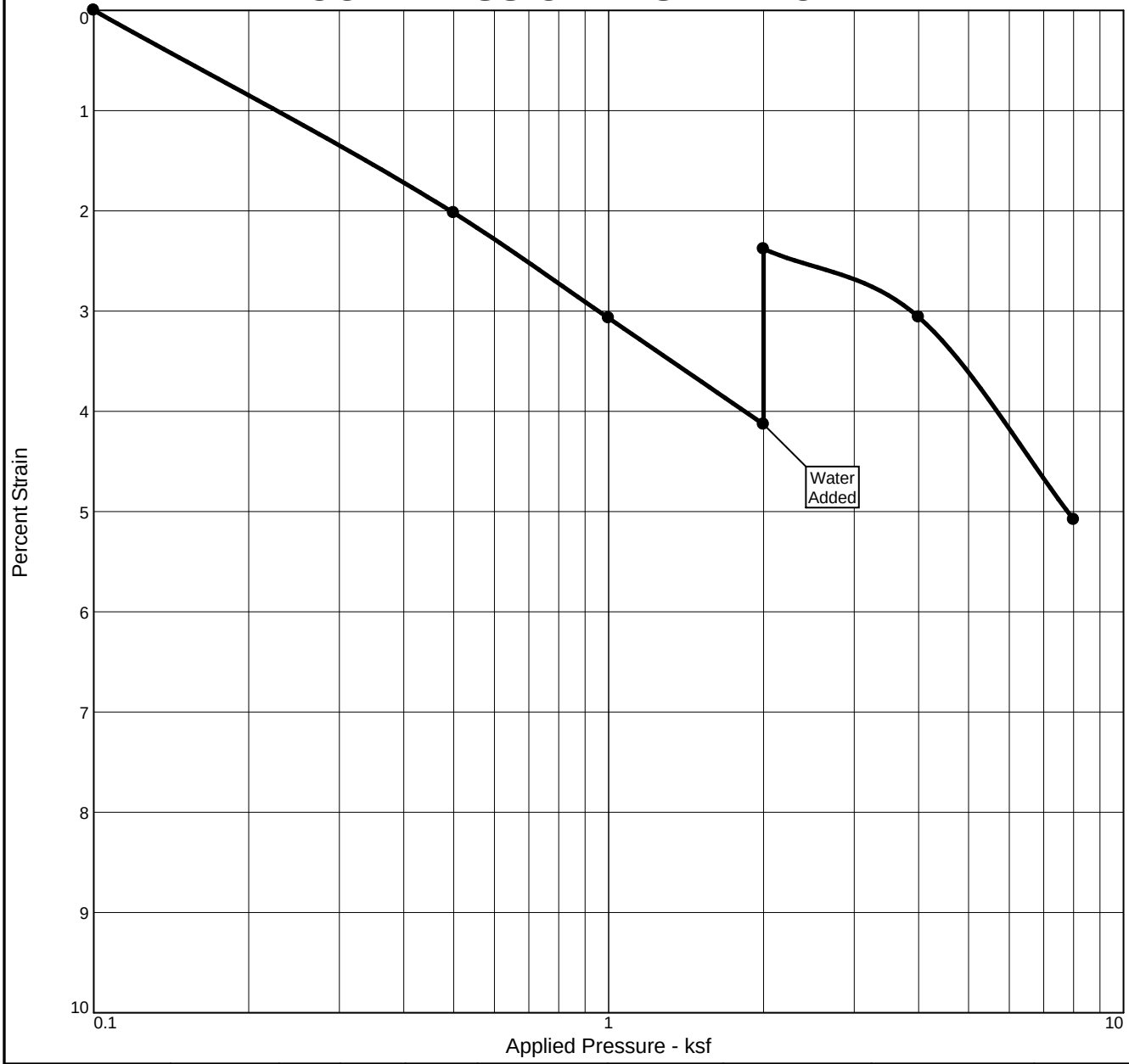
Remarks:

Western Technologies, Inc.

Flagstaff, AZ

Figure B-6

COMPRESSION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (ksf)	e_o	Swell Press. (ksf)	Swell %	C_r
Sat.	Moist.									
79.7 %	20.2 %	99.1			2.65		0.670	3.9	1.7	

MATERIAL DESCRIPTION	USCS	AASHTO
SANDY FAT CLAY	CH	

Project No. 2522JB158 **Client:** RED OAK DEVELOPMENT GROUP, LLC

Project: MASONIC LANE TOWNHOMES

Source: RING SAMPLE **Depth:** 2-3 FEET **Sample No.:** TEST PIT 10

Remarks:

Western Technologies, Inc.

Flagstaff, AZ

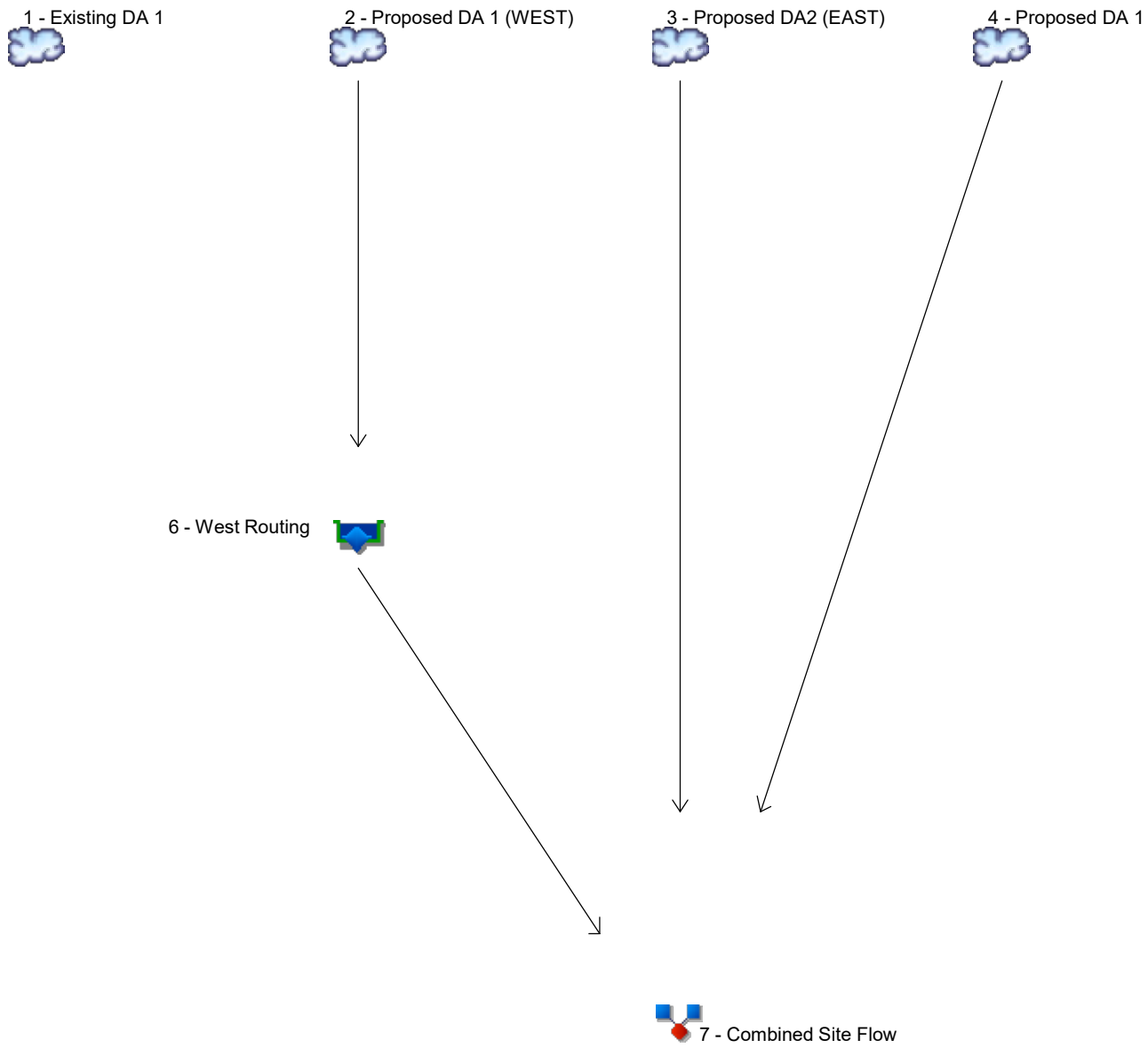
Figure B-7

ViewPoint Engineering

APPENDIX C: PEAK RATE & VOLUME ANALYSIS

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023



Legend

Hyd.	Origin	Description
1	SCS Runoff	Existing DA 1
2	SCS Runoff	Proposed DA 1 (WEST)
3	SCS Runoff	Proposed DA2 (EAST)
4	SCS Runoff	Proposed DA 1
6	Reservoir	West Routing
7	Combine	Combined Site Flow

Hydrograph Return Period Recap

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)							Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	------	-------	36.05	-------	-------	69.53	-------	-------	131.33	Existing DA 1
2	SCS Runoff	------	-------	4.872	-------	-------	8.346	-------	-------	14.40	Proposed DA 1 (WEST)
3	SCS Runoff	------	-------	4.387	-------	-------	7.515	-------	-------	12.97	Proposed DA2 (EAST)
4	SCS Runoff	------	-------	16.83	-------	-------	42.27	-------	-------	94.70	Proposed DA 1
6	Reservoir	2	-------	0.741	-------	-------	2.982	-------	-------	7.485	West Routing
7	Combine	3, 4, 6	-------	17.73	-------	-------	44.25	-------	-------	98.24	Combined Site Flow

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

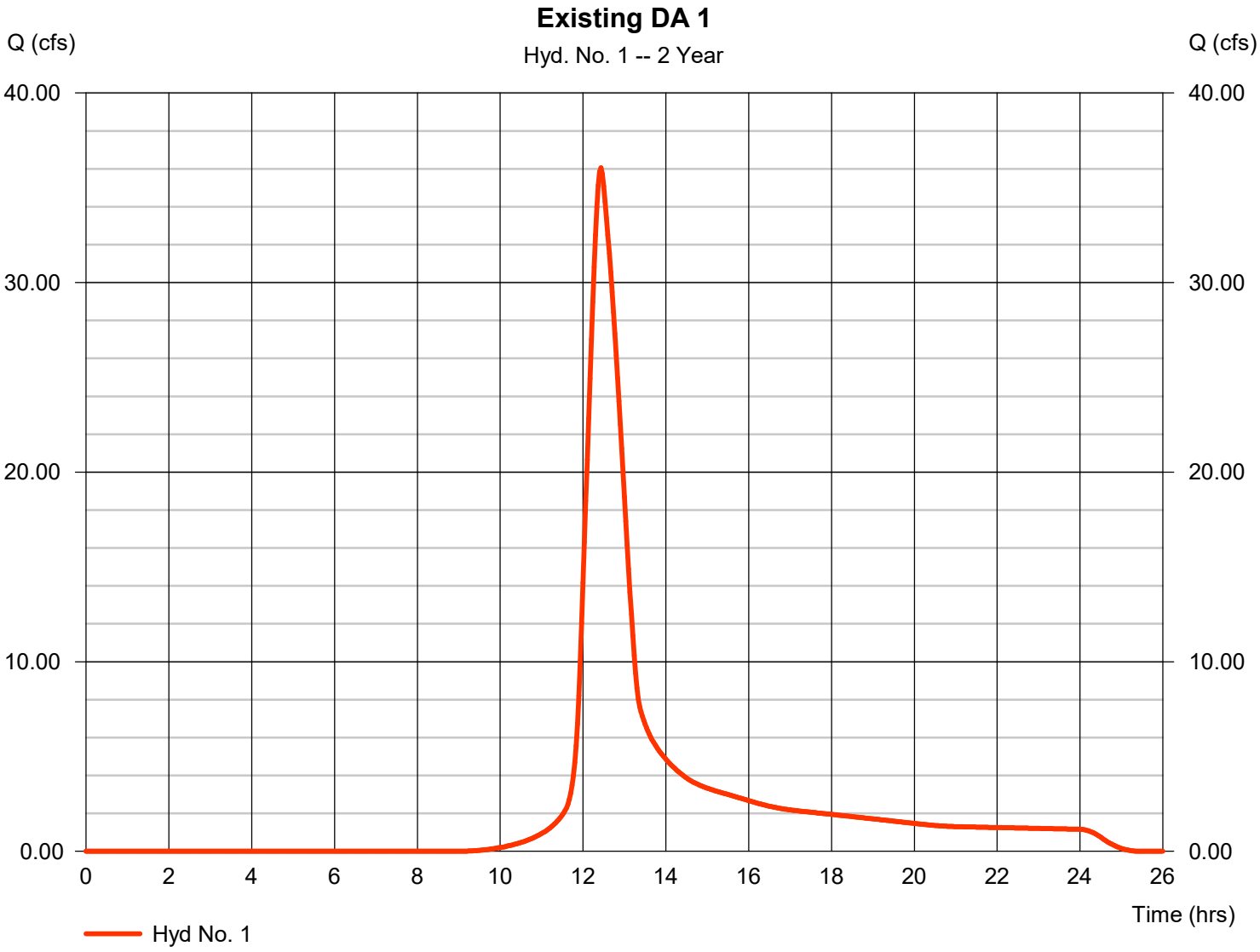
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	36.05	2	746	218,163	------	------	------	Existing DA 1
2	SCS Runoff	4.872	2	716	9,956	------	------	------	Proposed DA 1 (WEST)
3	SCS Runoff	4.387	2	716	8,965	------	------	------	Proposed DA2 (EAST)
4	SCS Runoff	16.83	2	748	115,807	------	------	------	Proposed DA 1
6	Reservoir	0.741	2	702	7,263	2	6883.88	4,608	West Routing
7	Combine	17.73	2	748	132,035	3, 4, 6	------	------	Combined Site Flow

Hydrograph Report

Hyd. No. 1

Existing DA 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	36.05 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.43 hrs
Time interval	=	2 min	Hyd. volume	=	218,163 cuft
Drainage area	=	66.170 ac	Curve number	=	88
Basin Slope	=	5.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	52.40 min
Total precip.	=	1.92 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

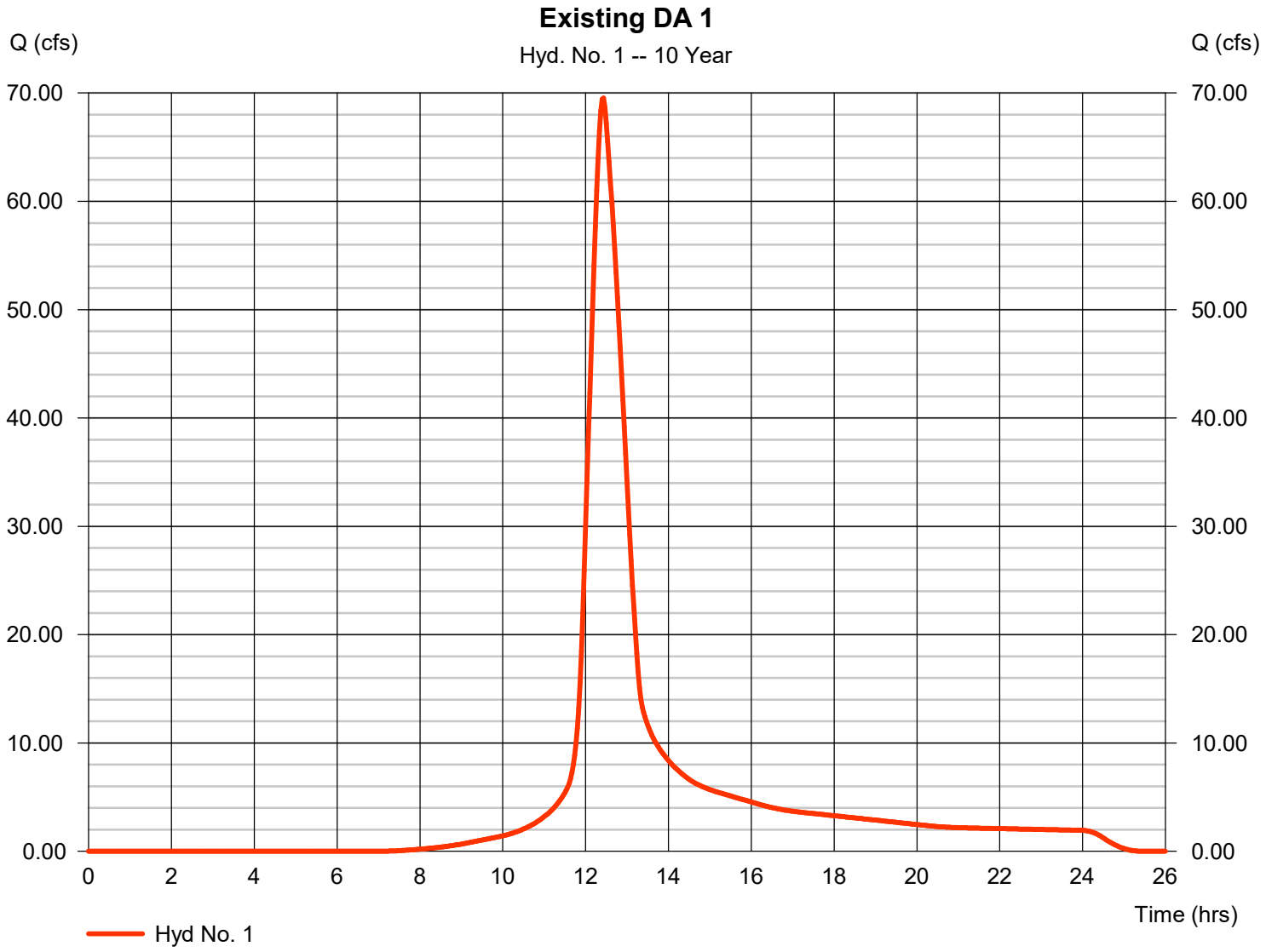
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	69.53	2	746	414,410	------	------	------	Existing DA 1
2	SCS Runoff	8.346	2	716	17,494	------	------	------	Proposed DA 1 (WEST)
3	SCS Runoff	7.515	2	716	15,751	------	------	------	Proposed DA2 (EAST)
4	SCS Runoff	42.27	2	746	261,323	------	------	------	Proposed DA 1
6	Reservoir	2.982	2	724	14,800	2	6884.31	6,789	West Routing
7	Combine	44.25	2	746	291,875	3, 4, 6	------	------	Combined Site Flow

Hydrograph Report

Hyd. No. 1

Existing DA 1

Hydrograph type	= SCS Runoff	Peak discharge	= 69.53 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.43 hrs
Time interval	= 2 min	Hyd. volume	= 414,410 cuft
Drainage area	= 66.170 ac	Curve number	= 88
Basin Slope	= 5.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 52.40 min
Total precip.	= 2.88 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

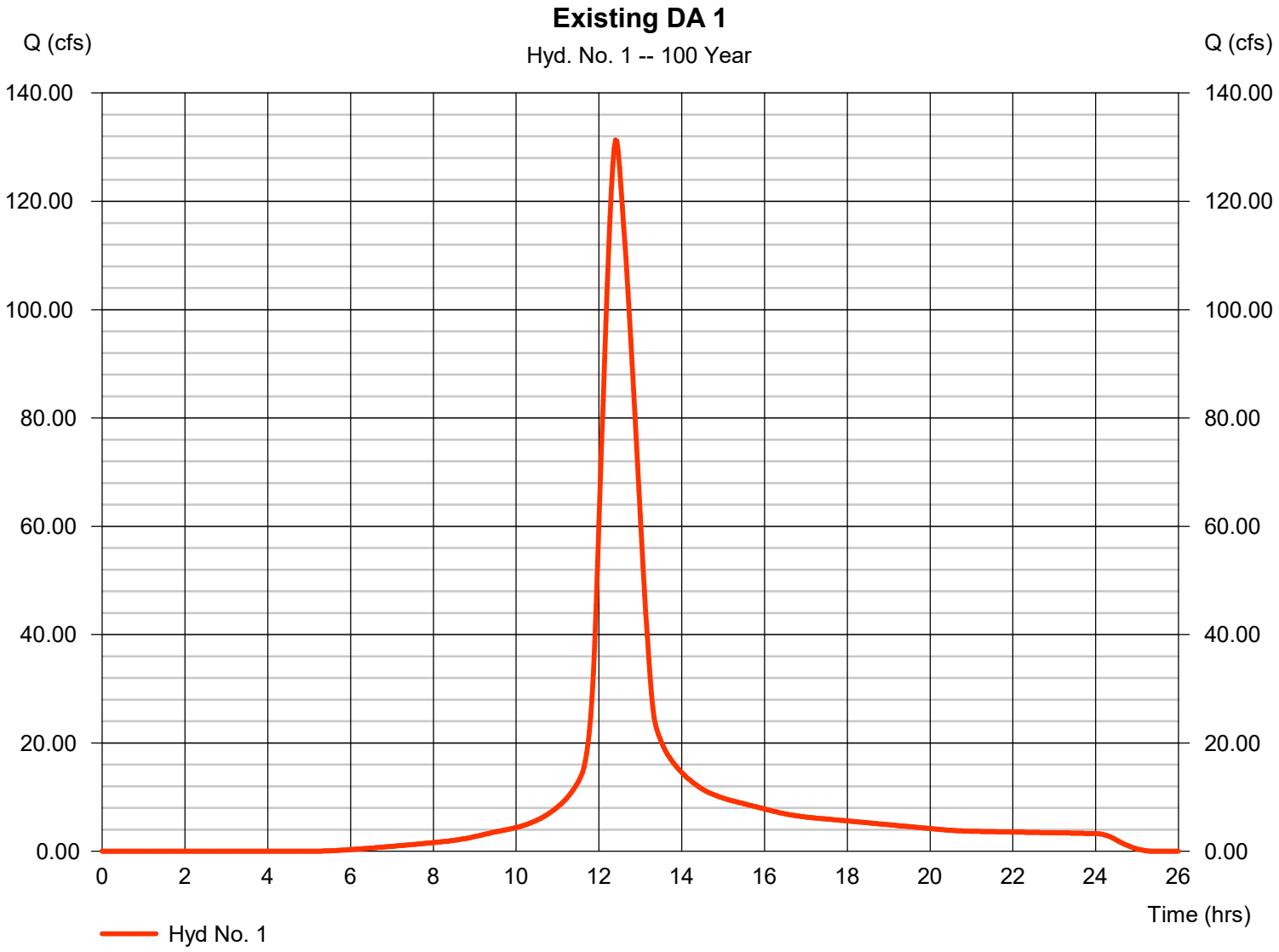
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	131.33	2	744	787,393	------	------	------	Existing DA 1
2	SCS Runoff	14.40	2	716	31,267	------	------	------	Proposed DA 1 (WEST)
3	SCS Runoff	12.97	2	716	28,152	------	------	------	Proposed DA2 (EAST)
4	SCS Runoff	94.70	2	746	565,707	------	------	------	Proposed DA 1
6	Reservoir	7.485	2	722	28,573	2	6885.03	10,134	West Routing
7	Combine	98.24	2	744	622,433	3, 4, 6	------	------	Combined Site Flow

Hydrograph Report

Hyd. No. 1

Existing DA 1

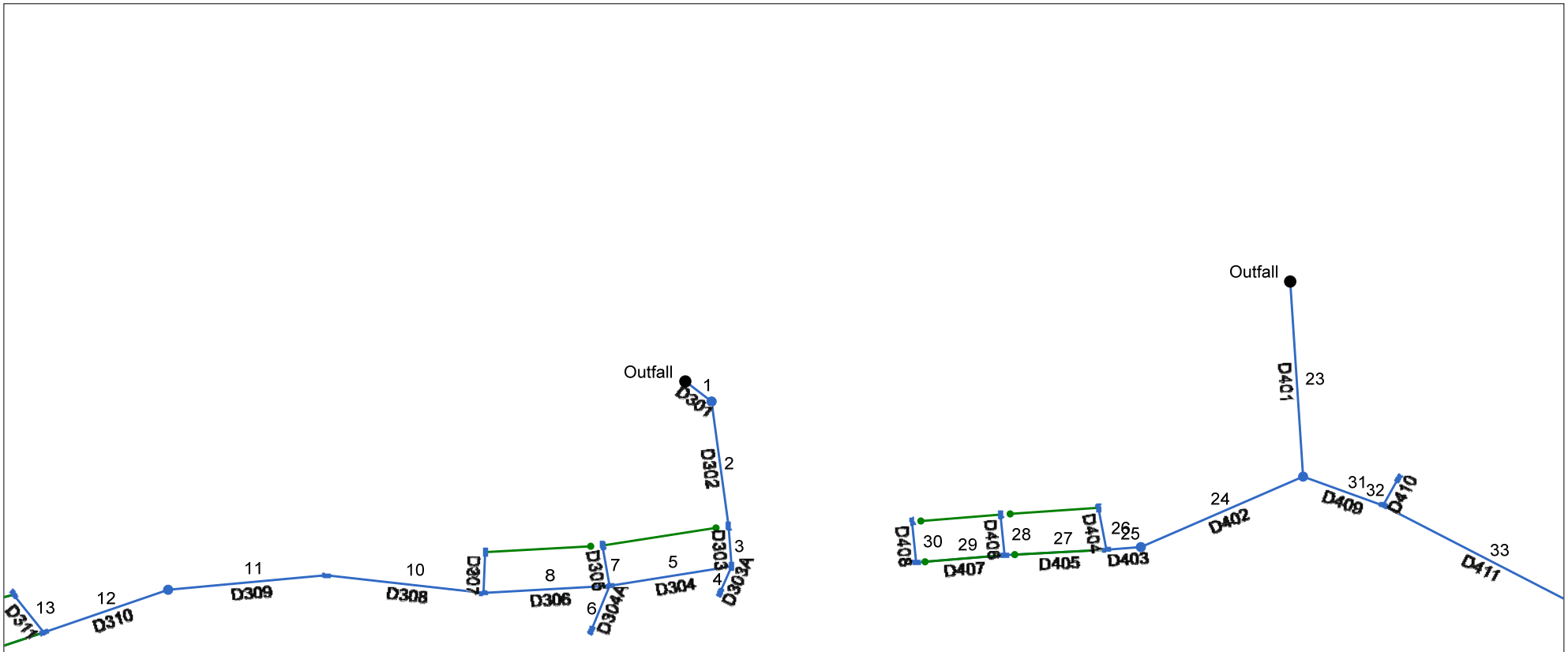
Hydrograph type	=	SCS Runoff	Peak discharge	=	131.33 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.40 hrs
Time interval	=	2 min	Hyd. volume	=	787,393 cuft
Drainage area	=	66.170 ac	Curve number	=	88
Basin Slope	=	5.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	52.40 min
Total precip.	=	4.56 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



APPENDIX D: WATER QUALITY ANALYSIS

APPENDIX E: CONVEYANCE DESIGN

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: 22004 Juniper Estates.stm	Number of lines: 40	Date: 5/26/2023

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
40	D418	0.10	18	Cir	22.48	6887.50	6887.61	0.489	6887.62	6887.73	0.04	6887.76	39	Grate
39	D417	0.15	18	Cir	42.65	6887.00	6887.30	0.703	6887.22	6887.44	n/a	6887.44 j	37	Grate
38	D416	0.19	18	Cir	21.81	6891.89	6892.00	0.504	6892.05	6892.16	0.06	6892.16	37	Grate
37	D415	0.34	18	Cir	33.18	6886.80	6887.00	0.603	6887.00	6887.22	n/a	6887.22	36	Grate
36	D414	0.40	18	Cir	49.08	6886.30	6886.60	0.612	6886.52	6886.83	n/a	6886.83	34	Grate
35	D413	0.19	18	Cir	21.87	6901.00	6901.19	0.869	6901.14	6901.35	0.06	6901.35	34	Grate
34	D412	0.63	18	Cir	28.82	6885.60	6885.80	0.693	6885.86	6886.09	0.14	6886.09	33	Grate
33	D411	0.62	18	Cir	115.21	6884.80	6885.40	0.521	6885.08	6885.69	n/a	6885.69	31	Manhole
32	D410	0.36	18	Cir	15.89	6899.92	6900.00	0.504	6900.14	6900.22	n/a	6900.22	31	Grate
31	D409	0.95	18	Cir	43.19	6884.30	6884.60	0.695	6884.69	6884.96	n/a	6884.96 j	23	Grate
30	D408	0.41	18	Cir	20.89	6889.90	6890.00	0.479	6890.13	6890.24	n/a	6890.24	29	Grate
29	D407	0.47	18	Cir	44.99	6889.40	6889.70	0.667	6889.63	6889.96	0.13	6889.96	27	Grate
28	D406	0.10	18	Cir	20.82	6889.40	6889.50	0.481	6889.63	6889.64	0.02	6889.66	27	Grate
27	D405	1.32	18	Cir	51.74	6888.90	6889.20	0.580	6889.30	6889.63	n/a	6889.63	25	Grate
26	D404	0.44	18	Cir	21.77	6897.09	6897.20	0.507	6897.33	6897.44	0.08	6897.44	25	Grate
25	D403	1.96	18	Cir	17.54	6888.20	6888.40	1.139	6888.61	6888.93	0.32	6888.93	24	Grate
24	D402	1.95	18	Cir	89.82	6887.60	6888.00	0.445	6888.12	6888.53	0.07	6888.53	23	Manhole
23	D401	2.39	18	Cir	99.59	6883.00	6884.10	1.105	6883.48	6884.69	0.21	6884.69	End	Manhole
22	D319	0.29	18	Cir	31.07	6889.61	6889.77	0.515	6889.80	6889.97	0.07	6889.97	21	Grate
21	D318	0.39	18	Cir	35.26	6889.23	6889.41	0.511	6889.45	6889.64	0.08	6889.64	19	Grate
20	D317A	0.41	18	Cir	17.91	6896.00	6897.00	5.582	6896.13	6897.24	n/a	6897.24	19	DropGrate
19	D317	0.86	18	Cir	23.93	6888.91	6889.03	0.500	6889.36	6889.37	n/a	6889.37 j	16	Grate
18	D316	2.16	18	Cir	48.20	6893.30	6898.00	9.752	6893.55	6898.55	0.21	6898.55	17	Grate
17	D315	2.20	18	Cir	50.90	6888.91	6889.62	1.395	6889.36	6890.18	n/a	6890.18	16	Grate

Project File: 22004 Juniper Estates.stm | Number of lines: 40 | Run Date: 5/26/2023

NOTES: Return period = 100 Yrs. ; j - Line contains hyd. jump.

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
16	D314	2.90	18	Cir	36.27	6888.54	6888.71	0.468	6889.18	6889.36	0.36	6889.36	15	Grate
15	D313	3.06	18	Cir	91.42	6887.88	6888.34	0.503	6888.52	6889.01	0.13	6889.01	12	Grate
14	D312	0.15	18	Cir	57.33	6901.04	6901.33	0.506	6901.18	6901.47	0.05	6901.52	13	Grate
13	D311	0.20	18	Cir	24.59	6900.73	6900.84	0.447	6900.90	6901.01	n/a	6901.08 j	12	Grate
12	D310	2.94	18	Cir	66.75	6887.03	6887.38	0.525	6887.65	6888.03	n/a	6888.03	11	Grate
11	D309	2.91	18	Cir	80.46	6886.46	6886.83	0.460	6887.10	6887.48	n/a	6887.48	10	Manhole
10	D308	3.03	18	Cir	80.41	6885.86	6886.26	0.497	6886.50	6886.92	0.13	6886.92	8	Grate
9	D307	0.41	18	Cir	20.82	6898.30	6898.50	0.962	6898.50	6898.74	n/a	6898.74	8	Grate
8	D306	3.42	18	Cir	64.04	6885.34	6885.66	0.500	6886.02	6886.37	0.42	6886.37	5	Grate
7	D305	0.12	18	Cir	20.82	6894.50	6894.60	0.481	6894.63	6894.73	0.04	6894.77	5	Grate
6	D304A	1.11	18	Cir	24.49	6896.00	6896.49	2.002	6896.27	6896.88	n/a	6896.88	5	DropGrate
5	D304	4.41	18	Cir	62.71	6884.83	6885.14	0.494	6886.06	6885.95	n/a	6885.95	3	Grate
4	D303A	1.31	18	Cir	14.75	6890.00	6890.50	3.389	6890.25	6890.93	n/a	6890.93	3	DropGrate
3	D303	5.40	18	Cir	20.70	6884.53	6884.63	0.483	6885.61	6885.64	0.43	6886.06	2	Grate
2	D302	5.44	18	Cir	63.98	6884.17	6884.33	0.250	6885.35	6885.50	0.10	6885.61	1	Grate
1	D301	5.42	18	Cir	16.80	6884.00	6884.17	1.012	6884.75	6885.07	n/a	6885.07	End	Manhole

Project File: 22004 Juniper Estates.stm | Number of lines: 40 | Run Date: 5/26/2023

NOTES: Return period = 100 Yrs. ; j - Line contains hyd. jump.

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
40	39	22.48	0.04	0.04	0.45	0.02	0.02	6.0	6.0	5.4	0.10	7.95	1.54	18	0.49	6887.50	6887.61	6887.62	6887.73	6893.99	6893.33	D418
39	37	42.65	0.03	0.07	0.45	0.01	0.03	6.0	12.8	4.8	0.15	9.54	1.37	18	0.70	6887.00	6887.30	6887.22	6887.44	6898.79	6893.99	D417
38	37	21.81	0.08	0.08	0.45	0.04	0.04	6.0	6.0	5.4	0.19	8.07	1.89	18	0.50	6891.89	6892.00	6892.05	6892.16	6898.79	6898.39	D416
37	36	33.18	0.03	0.18	0.45	0.01	0.08	6.0	20.3	4.2	0.34	8.84	2.30	18	0.60	6886.80	6887.00	6887.00	6887.22	6902.59	6898.79	D415
36	34	49.08	0.04	0.22	0.45	0.02	0.10	6.0	22.5	4.1	0.40	8.90	2.41	18	0.61	6886.30	6886.60	6886.52	6886.83	6907.11	6902.59	D414
35	34	21.87	0.08	0.08	0.45	0.04	0.04	6.0	6.0	5.4	0.19	10.60	2.09	18	0.87	6901.00	6901.19	6901.14	6901.35	6907.11	6906.49	D413
34	33	28.82	0.06	0.36	0.45	0.03	0.16	6.0	25.2	3.9	0.63	9.47	2.80	18	0.69	6885.60	6885.80	6885.86	6886.09	6908.25	6907.11	D412
33	31	115.21	0.00	0.36	0.00	0.00	0.16	0.0	26.2	3.8	0.62	8.21	2.65	18	0.52	6884.80	6885.40	6885.08	6885.69	6904.21	6908.25	D411
32	31	15.89	0.15	0.15	0.45	0.07	0.07	6.0	6.0	5.4	0.36	8.08	2.26	18	0.50	6899.92	6900.00	6900.14	6900.22	6904.21	6904.21	D410
31	23	43.19	0.08	0.59	0.45	0.04	0.27	6.0	30.2	3.6	0.95	9.49	2.76	18	0.70	6884.30	6884.60	6884.69	6884.96	6904.35	6904.21	D409
30	29	20.89	0.17	0.17	0.45	0.08	0.08	6.0	6.0	5.4	0.41	7.87	2.33	18	0.48	6889.90	6890.00	6890.13	6890.24	6896.56	6896.56	D408
29	27	44.99	0.03	0.20	0.45	0.01	0.09	6.0	7.5	5.2	0.47	9.29	2.56	18	0.67	6889.40	6889.70	6889.63	6889.96	6898.82	6896.56	D407
28	27	20.82	0.04	0.04	0.45	0.02	0.02	6.0	6.0	5.4	0.10	7.89	0.86	18	0.48	6889.40	6889.50	6889.63	6889.64	6898.82	6898.82	D406
27	25	51.74	0.37	0.61	0.45	0.17	0.27	6.0	12.3	4.8	1.32	8.67	3.35	18	0.58	6888.90	6889.20	6889.30	6889.63	6902.18	6898.82	D405
26	25	21.77	0.18	0.18	0.45	0.08	0.08	6.0	6.0	5.4	0.44	8.10	2.38	18	0.51	6897.09	6897.20	6897.33	6897.44	6902.18	6901.91	D404
25	24	17.54	0.13	0.92	0.45	0.06	0.41	6.0	13.4	4.7	1.96	12.14	4.29	18	1.14	6888.20	6888.40	6888.61	6888.93	6903.25	6902.18	D403
24	23	89.82	0.00	0.92	0.00	0.00	0.41	0.0	13.6	4.7	1.95	7.59	3.56	18	0.45	6887.60	6888.00	6888.12	6888.53	6904.35	6903.25	D402
23	End	99.59	0.00	1.51	0.00	0.00	0.68	0.0	31.1	3.5	2.39	11.96	4.32	18	1.10	6883.00	6884.10	6883.48	6884.69	6904.50	6904.35	D401
22	21	31.07	0.12	0.12	0.45	0.05	0.05	6.0	6.0	5.4	0.29	8.17	2.13	18	0.52	6889.61	6889.77	6889.80	6889.97	6896.13	6894.56	D319
21	19	35.26	0.05	0.17	0.45	0.02	0.08	6.0	9.1	5.1	0.39	8.13	2.32	18	0.51	6889.23	6889.41	6889.45	6889.64	6900.52	6896.13	D318
20	19	17.91	0.17	0.17	0.45	0.08	0.08	6.0	6.0	5.4	0.41	26.88	3.92	18	5.58	6896.00	6897.00	6896.13	6897.24	6900.52	6902.44	D317A
19	16	23.93	0.05	0.39	0.45	0.02	0.18	6.0	11.7	4.9	0.86	8.04	2.37	18	0.50	6888.91	6889.03	6889.36	6889.37	6901.66	6900.52	D317

Project File: 22004 Juniper Estates.stm | Number of lines: 40 | Run Date: 5/26/2023

NOTES:Intensity = 5465747000000000000000.00 / (Inlet time + 447.02) ^ 7.91; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
18	17	48.20	0.89	0.89	0.45	0.40	0.40	6.0	6.0	5.4	2.16	35.53	7.36	18	9.75	6893.30	6898.00	6893.55	6898.55	6901.16	6903.00	D316
17	16	50.90	0.03	0.92	0.45	0.01	0.41	6.0	6.7	5.3	2.20	13.44	4.33	18	1.39	6888.91	6889.62	6889.36	6890.18	6901.66	6901.16	D315
16	15	36.27	0.03	1.34	0.45	0.01	0.60	6.0	12.4	4.8	2.90	7.79	4.03	18	0.47	6888.54	6888.71	6889.18	6889.36	6905.28	6901.66	D314
15	12	91.42	0.08	1.42	0.45	0.04	0.64	6.0	12.8	4.8	3.06	8.07	4.15	18	0.50	6887.88	6888.34	6888.52	6889.01	6911.25	6905.28	D313
14	13	57.33	0.06	0.06	0.45	0.03	0.03	6.0	6.0	5.4	0.15	8.09	1.73	18	0.51	6901.04	6901.33	6901.18	6901.47	6910.94	6907.45	D312
13	12	24.59	0.04	0.10	0.45	0.02	0.05	6.0	17.6	4.4	0.20	7.60	1.85	18	0.45	6900.73	6900.84	6900.90	6901.01	6911.25	6910.94	D311
12	11	66.75	0.04	1.56	0.45	0.02	0.70	6.0	20.6	4.2	2.94	8.24	4.13	18	0.52	6887.03	6887.38	6887.65	6888.03	6911.79	6911.25	D310
11	10	80.46	0.00	1.56	0.00	0.00	0.70	0.0	21.2	4.2	2.91	7.72	4.02	18	0.46	6886.46	6886.83	6887.10	6887.48	6908.47	6911.79	D309
10	8	80.41	0.08	1.64	0.45	0.04	0.74	6.0	21.8	4.1	3.03	8.02	4.13	18	0.50	6885.86	6886.26	6886.50	6886.92	6903.22	6908.47	D308
9	8	20.82	0.17	0.17	0.45	0.08	0.08	6.0	6.0	5.4	0.41	11.16	2.65	18	0.96	6898.30	6898.50	6898.50	6898.74	6903.22	6903.25	D307
8	5	64.04	0.06	1.87	0.45	0.03	0.84	6.0	22.4	4.1	3.42	8.05	4.28	18	0.50	6885.34	6885.66	6886.02	6886.37	6899.30	6903.22	D306
7	5	20.82	0.05	0.05	0.45	0.02	0.02	6.0	6.0	5.4	0.12	7.89	1.63	18	0.48	6894.50	6894.60	6894.63	6894.73	6899.30	6899.30	D305
6	5	24.49	0.46	0.46	0.45	0.21	0.21	6.0	6.0	5.4	1.11	16.10	4.12	18	2.00	6896.00	6896.49	6896.27	6896.88	6899.30	6900.00	D304A
5	3	62.71	0.05	2.43	0.45	0.02	1.09	6.0	22.8	4.0	4.41	8.00	3.70	18	0.49	6884.83	6885.14	6886.06	6885.95	6896.88	6899.30	D304
4	3	14.75	0.54	0.54	0.45	0.24	0.24	6.0	6.0	5.4	1.31	20.94	4.87	18	3.39	6890.00	6890.50	6890.25	6890.93	6896.88	6896.58	D303A
3	2	20.70	0.02	2.99	0.45	0.01	1.35	6.0	23.2	4.0	5.40	7.91	4.12	18	0.48	6884.53	6884.63	6885.61	6885.64	6896.88	6896.88	D303
2	1	63.98	0.03	3.02	0.45	0.01	1.36	6.0	23.3	4.0	5.44	5.69	3.67	18	0.25	6884.17	6884.33	6885.35	6885.50	6892.56	6896.88	D302
1	End	16.80	0.00	3.02	0.00	0.00	1.36	0.0	23.5	4.0	5.42	11.44	5.53	18	1.01	6884.00	6884.17	6884.75	6885.07	6893.50	6892.56	D301

Project File: 22004 Juniper Estates.stm

Number of lines: 40

Run Date: 5/26/2023

NOTES:Intensity = 5465747000000000000000.00 / (Inlet time + 447.02) ^ 7.91; Return period =Yrs. 100 ; c = cir e = ellip b = box

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
40	D418	0.10	0.00	0.10	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.100	2.00	0.050	0.020	0.013	0.05	1.02	0.00	0.00	0.0	Off
39	D417	0.07	0.00	0.07	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.100	2.00	0.050	0.020	0.013	0.05	0.91	0.00	0.00	0.0	Off
38	D416	0.19	0.00	0.19	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.100	2.00	0.050	0.020	0.013	0.07	1.32	0.00	0.00	0.0	40
37	D415	0.07	0.00	0.07	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.100	2.00	0.050	0.020	0.013	0.05	0.91	0.00	0.00	0.0	39
36	D414	0.10	0.00	0.10	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.100	2.00	0.050	0.020	0.013	0.05	1.02	0.00	0.00	0.0	37
35	D413	0.19	0.00	0.19	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.030	2.00	0.050	0.020	0.013	0.08	1.66	0.00	0.00	0.0	38
34	D412	0.15	0.00	0.15	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.030	2.00	0.050	0.020	0.013	0.07	1.49	0.00	0.00	0.0	36
33	D411	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
32	D410	0.36	0.00	0.36	0.00	Grate	0.0	0.00	8.00	4.00	2.00	Sag	2.00	0.050	0.020	0.000	0.11	2.56	0.11	2.56	0.0	Off
31	D409	0.19	0.00	0.19	0.00	Grate	0.0	0.00	8.00	4.00	2.00	Sag	2.00	0.050	0.020	0.000	0.08	1.61	0.08	1.61	0.0	Off
30	D408	0.41	0.00	0.41	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.030	2.00	0.050	0.020	0.013	0.11	2.49	0.01	0.21	0.0	Off
29	D407	0.07	0.04	0.11	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.030	2.00	0.050	0.020	0.013	0.07	1.35	0.00	0.00	0.0	Off
28	D406	0.10	0.00	0.10	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.050	2.00	0.050	0.020	0.013	0.06	1.16	0.00	0.00	0.0	30
27	D405	0.90	0.00	0.86	0.04	Grate	0.0	0.00	0.00	4.00	2.00	0.050	2.00	0.050	0.020	0.013	0.13	3.60	0.04	0.83	0.0	29
26	D404	0.44	0.00	0.44	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.050	2.00	0.050	0.020	0.013	0.10	2.10	0.00	0.00	0.0	28
25	D403	0.32	0.00	0.32	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.050	2.00	0.050	0.020	0.013	0.09	1.80	0.00	0.00	0.0	27
24	D402	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
23	D401	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
22	D319	0.29	0.00	0.29	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.100	2.00	0.050	0.020	0.013	0.08	1.54	0.00	0.00	0.0	Off
21	D318	0.12	0.00	0.12	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.100	2.00	0.050	0.020	0.013	0.06	1.11	0.00	0.00	0.0	Off
20	D317A	0.41	0.00	0.41	0.00	DrGrt	0.0	0.00	8.00	4.00	2.00	Sag	2.00	0.020	0.020	0.000	0.05	7.07	0.05	7.07	0.0	Off
19	D317	0.12	0.00	0.12	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.100	2.00	0.050	0.020	0.013	0.06	1.11	0.00	0.00	0.0	21
18	D316	2.16	0.00	2.16	0.00	Grate	0.0	0.00	8.00	4.00	2.00	Sag	2.00	0.050	0.020	0.000	0.25	9.52	0.25	9.52	0.0	Off

Project File: 22004 Juniper Estates.stm | Number of lines: 40 | Run Date: 5/26/2023

NOTES: Inlet N-Values = 0.016; Intensity = 5465747000000000000000.00 / (Inlet time + 447.02) ^ 7.91; Return period = 100 Yrs. ; * Indicates Known Q added. All curb inlets are throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
17	D315	0.07	0.00	0.07	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.030	2.00	0.050	0.020	0.013	0.06	1.15	0.00	0.00	0.0	22
16	D314	0.07	0.00	0.07	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.100	2.00	0.050	0.020	0.013	0.05	0.91	0.00	0.00	0.0	22
15	D313	0.19	0.00	0.19	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.100	2.00	0.050	0.020	0.013	0.07	1.32	0.00	0.00	0.0	16
14	D312	0.15	0.00	0.15	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.100	2.00	0.050	0.020	0.013	0.06	1.19	0.00	0.00	0.0	19
13	D311	0.10	0.00	0.10	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.100	2.00	0.050	0.020	0.013	0.05	1.02	0.00	0.00	0.0	14
12	D310	0.10	0.00	0.10	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.100	2.00	0.050	0.020	0.013	0.05	1.02	0.00	0.00	0.0	15
11	D309	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
10	D308	0.19	0.00	0.19	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.050	2.00	0.050	0.020	0.013	0.08	1.50	0.00	0.00	0.0	8
9	D307	0.41	0.00	0.41	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.050	2.00	0.050	0.020	0.013	0.10	2.00	0.00	0.00	0.0	7
8	D306	0.15	0.00	0.15	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.050	2.00	0.050	0.020	0.013	0.07	1.35	0.00	0.00	0.0	5
7	D305	0.12	0.00	0.12	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.050	2.00	0.050	0.020	0.013	0.06	1.26	0.00	0.00	0.0	2
6	D304A	1.11	0.00	1.11	0.00	DrGrt	0.0	0.00	8.00	4.00	2.00	Sag	2.00	0.020	0.020	0.000	0.10	11.85	0.10	11.85	0.0	Off
5	D304	0.12	0.00	0.12	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.050	2.00	0.050	0.020	0.013	0.06	1.26	0.00	0.00	0.0	3
4	D303A	1.31	0.00	1.31	0.00	DrGrt	0.0	0.00	8.00	4.00	2.00	Sag	2.00	0.020	0.020	0.000	0.11	12.96	0.11	12.96	0.0	Off
3	D303	0.05	0.00	0.05	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.030	2.00	0.050	0.020	0.013	0.05	0.98	0.00	0.00	0.0	Off
2	D302	0.07	0.00	0.07	0.00	Grate	0.0	0.00	0.00	4.00	2.00	0.030	2.00	0.050	0.020	0.013	0.06	1.15	0.00	0.00	0.0	Off
1	D301	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off

Project File: 22004 Juniper Estates.stm | Number of lines: 40 | Run Date: 5/26/2023

NOTES: Inlet N-Values = 0.016; Intensity = 5465747000000000000000.00 / (Inlet time + 447.02) ^ 7.91; Return period = 100 Yrs. ; * Indicates Known Q added. All curb inlets are throat.

APPENDIX F: DRAINAGE MAPS

Date: 12/12/2022 **Pre-Scope** ☒ **Revised** ☐ **Final** ☐

TIA SCOPE OF WORK FORM

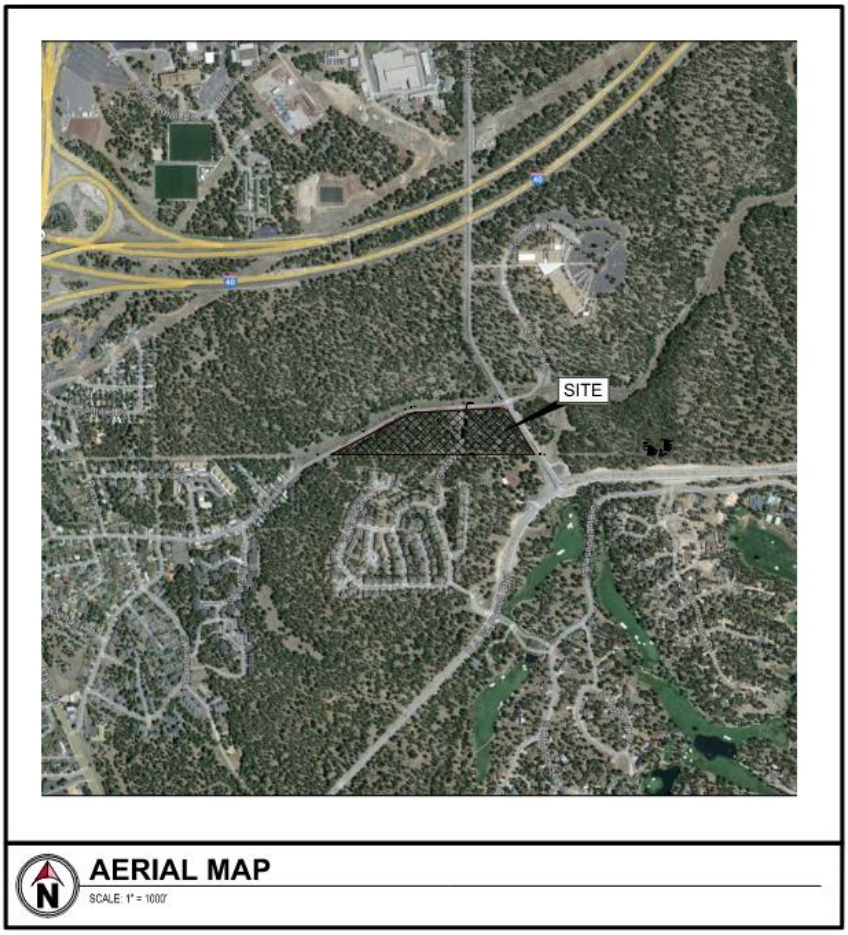
Information on the Project
Traffic Impact Analysis Base Assumptions

City of Flagstaff
211 W. Aspen Ave.
Flagstaff, AZ 86001

The applicant is responsible for entering the relevant information and submitting the form to the City of Flagstaff and the locality no less than three (3) business days prior to the scheduled meeting. If a form is not received by this deadline, the scope of work meeting may be postponed.

Contact Information	
Consultant Name:	Kentzie Mosley with ViewPoint Engineering
Telephone:	940-655-4881
E-Mail:	kmosley@viewpointengineering.com
Developer/Owner Name:	RedOak Development Group
Telephone:	512-779-9464
Email:	dan@redoakvc.com

Project Information	
Project Name:	Juniper Estates
Project Location: (Attach regional and site specific location map)	2651 Masonic LN Flagstaff, AZ



It is important for the applicant to provide sufficient information to the City of Flagstaff so questions regarding geographic scope, alternate methodology, or other issues can be answered at the scoping meeting.

Project Description: Including type of application (rezoning, subdivision, site plan), acreage, business square ft., number of dwelling units, access location, etc. Attach additional sheet if necessary.	Red Oak Development Group, LLC (RODG) is proposing the development of the property located at 2651 S Masonic LN, a total of 13.82 acres. The site will consist of condominium style townhomes. The site is currently zoned as a mix of rural residential and commercial suburban it will be rezoned to medium density suburban. The average townhome size will be approximately 700 square foot. The proposed site would have access from Zuni dr and Lonetree. The site will be pedestrian friendly and potentially have a bus stop to encourage the use of the City's transportation system			
Trip Generation (Attach calculation summary)	Residential ☒	Commercial ☒	Mixed Use ☐	Other ☐
Proposed Use: Number of Units: ITE Code(s):	Residential Condominium 87 230			
Proposed Use: Number of Units: ITE Code(s):	Click here to enter text. Click here to enter text. Click here to enter text.			
Proposed Use: Number of Units: ITE Code(s):	Click here to enter text. Click here to enter text. Click here to enter text.			
Proposed Use: Number of Units: ITE Code(s):	Click here to enter text. Click here to enter text. Click here to enter text.			
Proposed Use: Number of Units: ITE Code(s):	Click here to enter text. Click here to enter text. Click here to enter text.			

Traffic Impact Analysis Assumptions

Study Period:	Existing:	Opening:	Phase 1:		
	Phase 2:	Phase 3:	Build-Out:		
Study Area Boundaries: (Attach map)	North:	South:			
	East:	West:			
External Factors That Could Affect Project: (Planned road improvements, other nearby developments)	Click here to enter text.				
Available Traffic Data: (Historical, forecasts)	Click here to enter text.				
Trip Distribution: (Attach sketch)	Road Name:	N ____%	S ____%	E ____%	W ____%
	Road Name:	N ____%	S ____%	E ____%	W ____%
	Road Name:	N ____%	S ____%	E ____%	W ____%
	Road Name:	N ____%	S ____%	E ____%	W ____%
Annual Vehicle Trip Growth Rate:	Click here to enter text.				
Peak Period for Study: (Check all that apply)	☐ AM	☐ Midday	☐ PM	☐ SAT	
Study Intersections and/or Road Segments: (Attach additional sheets as necessary)	1. Click here to enter text.	2. Click here to enter text.			
	3. Click here to enter text.	4. Click here to enter text.			
	5. Click here to enter text.	6. Click here to enter text.			
	7. Click here to enter text.	8. Click here to enter text.			
	9. Click here to enter text.	10. Click here to enter text.			
Trip Adjustment Factors: (Attach calculations and assumptions)	Internal allowance: ☐ Yes ☐ No Reduction: _____% of trips	Pass-by allowance: ☐ Yes ☐ No Reduction: _____% of trips			
Software Methodology:	☐ Synchro ☐ HCS (v.2010) ☐ aaSIDRA ☐ CORSIM ☐ Other: _____				
Traffic Signal Proposed or Affected: (analysis software to be used, progression speed, cycle length)	Click here to enter text.				
Improvement(s) Assumed or to be Considered:	Click here to enter text.				
Relevant Traffic Studies Considered:	Click here to enter text.				
Plan Submission:	☐ Master Development Plan ☐ Preliminary / Sketch Plan	☐ Generalized Development Plan ☐ Other Plan Type (Final Site, Subd. Plan)			
Analysis Types:	☐ Queuing Analysis ☐ Merge Analysis ☐ TDM Measures ☐ Other: _____	☐ Actuation / Coordination ☐ Bike / Ped Accommodations ☐ LOS Analysis ☐ Other: _____	☐ Weaving Analysis ☐ Intersection(s) ☐ Delay Analysis		

It is important for the applicant to provide sufficient information to the City of Flagstaff so questions regarding geographic scope, alternate methodology, or other issues can be answered at the scoping meeting.

Notes on Assumptions

Click here to enter text.

Traffic Impact Analysis Fee

*TIA Analysis Category**	*Fee Schedule (Levels 1-5)***
0	1
1 & 2-M	2 & 3
2-L & 2-MULTI	4 & 5

TIA REVIEW FEE: $_____

*refer to Flagstaff City Code 13-05-002-0003.3 for TIA Analysis Category
**refer to Flagstaff City Code 3-10-001-0002 for current Fee Schedules

Applicant or Consultant

SIGNATURE: _____ DATE: Click to enter date.

PRINT NAME: _____

City of Flagstaff Approved ☐ Revisions Required ☐

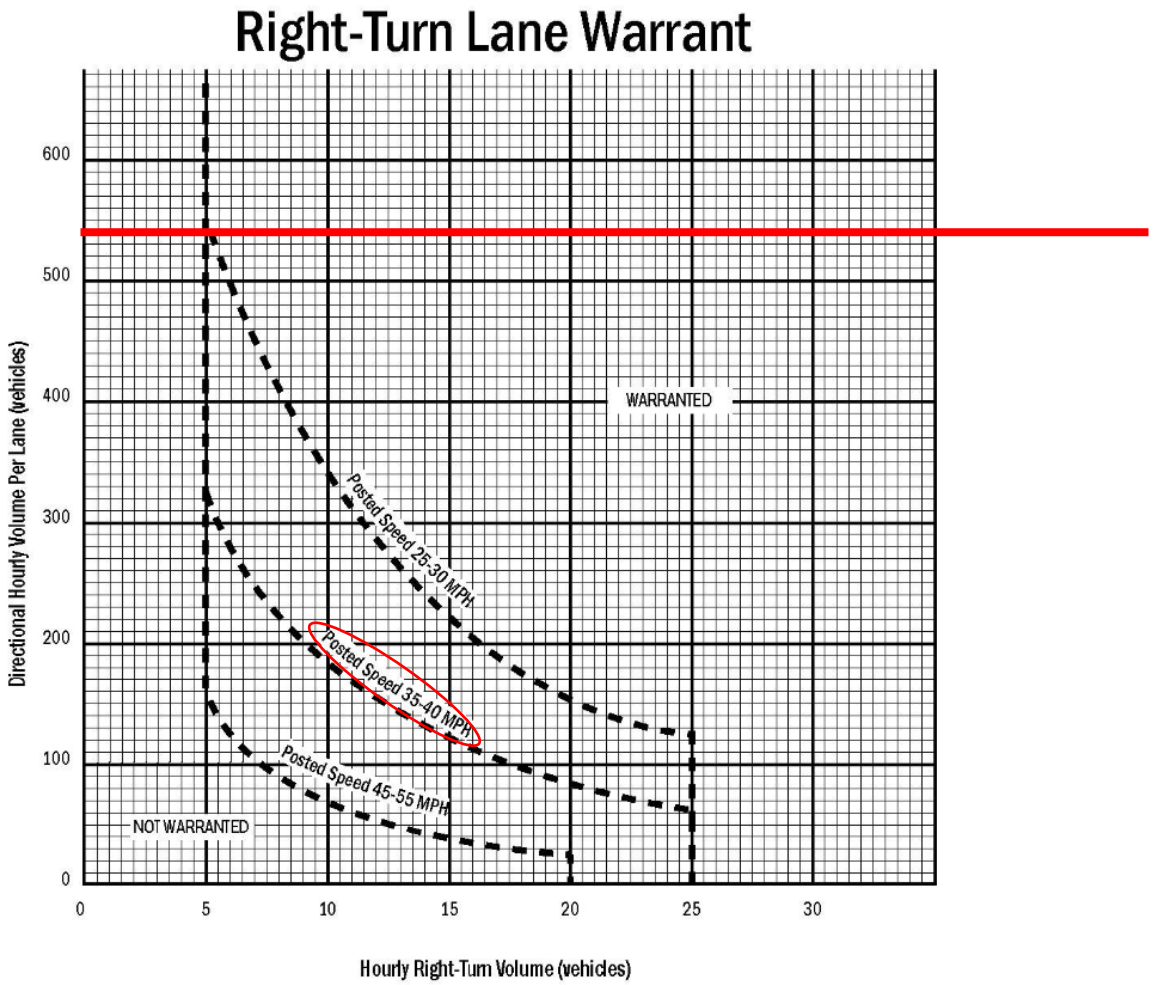
SIGNATURE: _____ DATE: _____

PRINT NAME: _____

It is important for the applicant to provide sufficient information to the City of Flagstaff so questions regarding geographic scope, alternate methodology, or other issues can be answered at the scoping meeting.

Juniper Estates Rough Calculations for Right Turn Warrant Analysis off Lone Tree

- Lone Tree SB volume 2019 is 501 vph grown at 2% in 2023 is **542 vph** = (1.02)^4*501
- Lone Tree posted speed limit is **35mph**
- Would need **6 vehicles** making a SBR turn to warrant a right turn lane.
- 82-unit multi-family residential community – ITE Code 220:
    - Weekday AM Peak
        - Fitted Curve: **48** (Total), 12 (Entry), 36 (Exit)
    - Weekday PM Peak
        - Fitted Curve: **56** (Total), **35 (Entry)**, 21 (Exit)
- In the PM, assuming 90% entering in the SB direction and 10% entering in the NB direction. Of the 90% SB 45% turn onto Zuni and 45% turn into site off Lone Tree. So, 45% of 35 vehicles is **16 vehicles** making a SBR into the site from Lone Tree. This meets warrants for a designated SB right turn lane with the project.
- When Lone Tree goes to a 4-lane cross-section, there would need to be less than 120 vehicles SB on Lone Tree, in the curb lane, to *NOT* meet warrants.



CITIZENS PARTICIPATION REPORT

November 2024

Revised: -December 2025

Pinehaven – Condominium Development

2951 S Masonic Lane
Flagstaff, AZ 86005

Prepared for

Red Oak Development Group, LLC

RODG DT Pine Haven Horizontal LLC
2121 East 6th Street, Suite 203
Austin, Texas 78702

Prepared By:

ViewPoint Engineering
2121 East 6TH Street, Suite 203
Austin, TX 78702
VPE Project No: **22004**

Luke Caraway, P.E.

ViewPoint Engineering

Table of Contents

1.0 Citizen Participation Report 3
1.1 Meetings Plan – Details of Techniques. 3
2.0 Summary of Concerns: Meeting #1-10/17/2024 3
2.1 Zoning 4
2.2 Traffic / Pedestrian Separation 4
2.3 Dark Skies / Firewise 5
2.4 Open Space / Clubhouse / Noise 5
2.5 Condominiums / Townhouses / Rentals / Fractional Ownership. 6
2.6 Architecture 13
2.7 Onsite Parking Adequacy / No Parking on Masonic 13
2.8 Trash / Snow Removal 13
2.9 Environment / Stormwater Management 14
3.0 Summary of Concerns - Meeting #2-11/21/2024 16
3.1 Zoning 16
3.2 Traffic / Pedestrian Separation 16
3.3 Dark Skies / Firewise 16
3.4 Open Space / Clubhouse / Noise 16
3.5 Condominiums / Townhouses / Rentals / Fractional Ownership. 17
3.6 Architecture 19
3.7 Onsite Parking Adequacy / No Parking on Masonic 20
3.8 Trash / Snow Removal 20
3.9 Environment / Stormwater Management 20
3.10 Construction / Timelines 21

APPENDIX A: Supporting Documents

A.1 Neighborhood Meeting Notification Techniques

A.2 Meeting Handouts

A.3 Presentation Boards

A.4 PowerPoint Presentations

A.5 Neighbor Comments Received

1.0 Citizen Participation Report

1.1 Meetings Plan – Details of Techniques.

The applicant provided a neighborhood meeting plan to the City for review and approval prior to implementation (see appendix for a copy). The plan details the dates of the anticipated meetings as well as the mailing list of properties effected within 300 feet of the project.

Notifications provided: The applicant sent a notification letter to the neighbors indicated on the plan. The letter provided the requisite information and provided additional attachments illustrating the project description, site criteria and location. Refer to the appendix for a copy of the notifications

General Notification: Additionally, a sign (meeting city criteria) was posted at the corner of Lone Tree and Zuni providing the appropriate meeting information.

2.0 Summary of Concerns: Meeting #1-10/17/2024

The Applicant provided a PowerPoint presentation (see appendix) describing the project to the neighbors and had an open discussion about impacts to the area and discussion of neighbor concerns. The meeting's sign in sheet and printouts of the received comments can be found in the appendix. The following is a summary of the concerns recorded at the meeting as well as written comments submitted to the applicant and/or city. The general items of concern / reasoning for opposition can be categorized as

- Zoning Use
- Traffic / Pedestrian Separation
- Dark Skies / Firewise
- Open Space / Clubhouse / Noise
- Condominiums / Townhouses / Rentals / Fractional Ownership.
- Architecture
- Onsite Parking Adequacy / No Parking on Masonic
- Trash / Snow Removal
- Environment / Stormwater

2.1 ZONING

The neighbors expressed concerns regarding the change of zoning from Rural Residential (RR) to Medium Density Residential (MR). They felt a denser zoning on the parcel would negatively impact traffic (see traffic below) and the environment (see natural resources below).

The current property zoning is primarily RR however the northeast corner of the property is zoned as SC – Urban Commercial. Upon review of the City's master plan, it was determined the zoning shown on the maps were placeholders based upon potential future growth in the overall region and not meant to be permanently defining. For instance, SC Commercial on the corner of a major intersection could likely be a gas station. These regional planning methods were illustrated to the neighbors. It should be noted those in attendance expressed more negative feelings about the possibility of the gas station.

In addition to the general regional planning aspect, the applicant described potential RR use implementation on site and, to be compliant with city code, given the challenges of the site from a topological standpoint would likely require the same level of disturbances to the surrounding environment.

Further, the applicant provided the zoning map of the surrounding area. Upon review of this map, it can be illustrated that the change in zoning is consistent with the area. The parcels to the south of the project site are either the same or more dense (high density residential HR) in nature. These developments, similar to the proposed, cluster residential units and preserve more open space. The tradeoff in density vs preservation provides a more sustainable community.

2.2 TRAFFIC / PEDESTRIAN SEPARATION

The neighbors expressed concerns about traffic in the immediate area. They provided stories of issues related to the intersection of Lone Tree and Zuni as well as Zuni and Masonic Lane. They felt the increased traffic from 83 residential units would obviously exacerbate the problems. Largely the neighbors questioned as to if the project would be providing a Traffic Light at the intersection of LoneTree and Zuni. They felt a signal would alleviate the traffic problems as the traffic is due to the turning movements.

Through consultation with City staff, the project did not warrant any traffic improvements to the intersection. The project is providing deceleration and turning lanes to address the immediate needs for the development only. However, also upon review with Staff, the applicant provided information related to the City's planned improvements to Lone Tree Road and more specifically to the intersection. The exact timing of the improvements was not known at the time of the meeting.

The city is proposing either a traffic signal or a roundabout at the intersection. These plans are still in progress and the city could not offer any more information for us to provide to neighbors except to say in progress. We are currently seeking additional information to provide to the community but the knowledge it is forthcoming was encouraging.

Another aspect of traffic from the development was increased traffic on Masonic Lane through the Pinnacle Pines development. This was not specifically studied; however, the project is providing multiple points of ingress and egress. As such, the project should provide a net neutral effect. In conjunction with the future improvements to Lone Tree, those in attendance seemed to indicate traffic had been addressed.

Separation of Pedestrian pathways from traffic has been mitigated/improved as much as possible with the proposed development. The project will be installing a sidewalk along the frontage of Zuni Road and , where feasible, a grass strip is provided to allow for a buffer from traffic. It was not possible to provide the buffer strip along the frontage where Zuni has a bend in the roadway. Providing a buffer in this area would disturb forested areas as well as protected steep slopes. The second area where a buffer was not viable was along Zuni to the east of Masonic Lane. This area is the bottom of the watershed and collects a good deal of runoff from this project as well as portions of Pinnacle Pines. As such conveyance of this area is critical to reduce any potential flooding. Based upon the topography, providing the gras buffer would have further impacted natural resources.

2.3 Dark Skies / Firewise

Flagstaff being the world's first Dark Skies city was one of the draws of the developer for this project. As such, we would like to confirm the project will meet all Dark Skies ordinance requirements of the city.

The Pinnacle Pines residents indicated they have been working to implement Firewise strategies within their development and would like to see measures also implemented as part of this project as well. The applicant is also committed to Firewise strategies and will implement them where feasible.

2.4 Open Space / Clubhouse / Noise

Of concern to neighbors was the use and/or implementation of the Clubhouse and Recreational areas of the project and its relation to increased noise. In addition, the neighbors were concerned regarding the duration of the project and associated construction noise.

Regarding construction noise, the applicant provided a rough timetable for the project and a representative of the intended contractor was present to discuss plans during construction. The project is anticipated to be constructed in three phases. Initial site work (rock excavation and rough

grading of both sides of Masonic Lane and construction of about half of the units west of Masonic. The remaining two phases would consist of construction of the remaining units and clubhouse west of Masonic with the final phase being construction of all units east of Masonic. The estimated timetable for the full construction was ~4 years. The large extent of noise will be generated during Phase 1 with the excavation of rock as part of rough grading. The contractor indicated at the meeting that although the site will require a large excavation of rock, the type of rock present can generally be removed with a bulldozer/backhoe and would only minimally require drilling. Further blasting would not be required.

In terms of noise from the clubhouse and recreation areas, the main concern dealt with outdoor activities such as pickleball courts and the like. Or use of the outdoor areas of the clubhouse should it contain a pool. The project does not offer facilities as described. Outdoor recreation areas are limited to walking/hiking trails through the open space areas; and an outdoor spa/plunge pool attached to the clubhouse. The outdoor clubhouse spaces do not provide large gathering areas. Noise levels from the clubhouse are not anticipated to be any greater than that of a typical backyard. In addition, the location of the clubhouse central to the site should buffer any excess noise that may occur.

2.5 CONDOMINIUMS / TOWNHOUSES / RENTALS / FRACTIONAL OWNERSHIP.

2.5-1 CONDOMINIUMS/TOWNHOMES

The community, in different ways, expressed concerns regarding Fractional Ownership vs Rental, as well as a miscommunication/misunderstanding of why the project indicates condominiums vs townhomes.

Regarding Condominiums vs Townhomes, it appears the misconception revolved around the impression a condo is more like an apartment structure. The residents could not understand what we were building and what it would look like. Once the following information was provided to those in attendance the concerns were alleviated.

The structures being proposed will be townhouse type buildings. Unit blocks will contain either 4 or 5 units. The condominium aspect of the development is more of an organization structure of the development which allows for the establishment of a homeowner's association as well as common spaces along with the providing for management of the grounds. The condominium designation is also applied as this is the designation the city requires for a development of this type.

2.5-2 FRACTIONAL/RENTAL/TIMESHARES

The following provides an in-depth explanation of the differences between timeshares and fractional ownership, focusing on ownership structures, financial models, usage flexibility, and community impact. The desire to own vacation property has given rise to various models of shared ownership, including timeshares and fractional ownership. Although both models allow multiple individuals to access the same property, the financial structures, ownership stakes, and usage terms differ significantly.

At Pinehaven, ONLY fractional ownership is offered as a purchase option, with no timeshare involvement. The following sections outline the fundamental differences between timeshares and fractional ownership, highlighting the advantages of Pinehaven's approach.

Additionally, this report will detail how Pinehaven seeks to manage and restrict rentals within the community.

Overview of Timeshares

Timeshares are a popular form of shared vacation property that allows individuals to purchase the right to use a property for a specific time period each year. Although timeshares offer access to desirable locations at a lower cost than full ownership, they come with several limitations that can hinder financial value, community stability and the longer-term aesthetics of a community.

Key Characteristics of Timeshares

1. **No Deeded Ownership**: Timeshare buyers **do not own a portion** of the property itself; instead, they acquire the right to use the property for a designated week or time period each year.
2. **Limited Flexibility**: Most time shares operate on fixed or floating schedules, meaning owners may face scheduling conflicts and lack the flexibility to adjust their vacations.
3. **High Maintenance Fees**: Owners are required to pay annual maintenance fees, regardless of whether they use the property. These fees often increase over time, adding financial burden.
4. **Depreciating Value:** Timeshares tend to lose value quickly, with limited resale opportunities due to an oversaturated market and lack of equity ownership.
5. **Short-Term Usage Focus**: The timeshare model encourages a transient population, with owners spending only one or two weeks per year at the property, leading to low community engagement.

Timeshares can attract vacationers seeking affordable travel options, but the lack of financial benefits and the transient nature of ownership often result in minimal long-term commitment to the property or the surrounding community. Pinehaven has a firm commitment to in no way allow timeshares as part of the community

Overview of Fractional Ownership

Fractional ownership offers a more appealing model for buyers seeking both real estate ownership and the lifestyle benefits of a vacation property. In this structure, multiple owners purchase deeded shares of the property, which gives them proportional ownership and usage rights. For example, at Pinehaven, buyers will have the option to acquire 1/4 shares, granting them three months of usage annually. Unlike timeshares, fractional ownership is structured to provide equity, flexibility, and long-term value in perpetuity. As a comparison, the community Seven Canyons, is a fractional ownership community in Sedona, Arizona.

Structure of Fractional Ownership

1. **Deeded Ownership:** Buyers own a percentage of the property and receive a title deed reflecting their ownership stake.
2. **Usage Periods:** Owners have proportional access to the property based on their share (e.g., a 1/4 share provides three months of access per year).
3. **Equity and Appreciation:** Owners benefit from any appreciation in the property's value and can sell their share, often at market value.
4. **Shared Maintenance Costs:** Costs such as repairs, insurance, and upkeep are divided among the owners, ensuring lower individual expenses.
5. **Fully Furnished:** Fractional properties come fully furnished and fully maintained both the interior and exterior

Key Differences Between Timeshares and Fractional Ownership

Aspect	Timeshare	Fractional Ownership
Ownership	No ownership stake, only usage rights	Deeded ownership with equity stake
Usage	1-2 weeks per year	Proportional usage (3 months for 1/4 share)
Flexibility	Fixed or floating weeks; limited adjustments	Flexible scheduling based on owner agreements
Resale Value	Limited resale opportunities	Potential for market-value resale
Maintenance Costs	High annual fees per person	Shared among co-owners, part of HOA fees
Community Impact	Transient users; minimal engagement	Consistent owner presence; fosters community
User Type	Tends to be for the short-term vacationer that seeks affordability above all else	Tends to be in the nicest parts of the world with access to 5-star amenities

Benefits of Fractional Ownership for the Pinehaven Community and Neighbors

1. **Economic Growth and Property Value Appreciation:** Fractional ownership models attract high-income buyers seeking second homes or vacation properties, which brings increased spending in the local economy. As owners have a vested interest in maintaining their property, this encourages well-maintained homes that contribute to overall property value appreciation within the neighborhood. Pinehaven's owners will be stakeholders in the community, driving demand for local services, businesses, and seeking to maximize their living experience.

2. **Long-Term Community Engagement:** Since fractional owners own a stake in the property, they tend to have a stronger attachment to the community compared to timeshare users. Rather than treating their time at Pinehaven as a fleeting vacation, fractional owners are likely to engage in community events, support local businesses, and establish relationships with neighbors. This results in a more connected and stable neighborhood atmosphere.

3. **Lower Impact on Neighborhood Stability:** Unlike timeshare developments that can lead to a high turnover of short-term vacationers, fractional ownership encourages consistent visitation patterns. Owners returning to Pinehaven multiple times a year will develop a connection to the area, contributing to a sense of familiarity and security among neighbors. This creates a more stable residential environment compared to areas with transient vacation renters.

4. **Better Property Maintenance and Care:** Fractional owners are financially invested in their properties, which motivates them to ensure that the homes remain in excellent condition. The cost-sharing model also ensures that high-quality maintenance and upkeep are feasible. Pinehaven's properties will be well-managed through professional services, ensuring that the entire development maintains a high aesthetic standard—benefiting both owners and the surrounding community.

5. **No Timeshare-Related Issues or Concerns:** Pinehaven’s decision to offer no timeshare options ensures that the development avoids the negative perceptions and logistical challenges associated with timeshares. Some communities oppose timeshares due to concerns about high traffic, overuse, and poor property maintenance. By focusing solely on fractional ownership, Pinehaven ensures that the properties will be used responsibly by invested owners who have a long-term stake in the community.

Pinehaven’s Strategy for Responsible Rentals

Pinehaven is committed to ensuring aesthetic appeal, cleanliness, and environmental harmony while offering owners the flexibility to rent their homes responsibly. We understand it is difficult to completely rule out rentals but that does not mean we cannot enforce restrictions to ensure rentals

are done in a responsible manner. With a focus on maintaining a peaceful neighborhood, Pinehaven enforces clear guidelines for short-term rentals through platforms like Airbnb and VRBO to balance rental opportunities with community well-being.

Aesthetic Appeal and Cleanliness Standards

Pinehaven will enforce community-wide design guidelines to ensure that all homes and public spaces maintain a consistent and appealing aesthetic. Owners will be responsible for keeping their properties in good condition, with support from professional maintenance services to ensure that exteriors, landscaping, and public areas meet the development's high standards.

Regular maintenance services, including landscaping, waste management, and seasonal cleaning, will be provided by the homeowners' association (HOA). These services will ensure that the community remains clean, attractive, and well-maintained year-round. Owners will be expected to comply with HOA regulations, and inspections will be conducted periodically to ensure homes meet community standards.

Noise and Traffic Control for Rentals

A priority for Pinehaven is to minimize noise pollution and traffic to preserve the tranquility of the neighborhood. Owners who rent their properties through Airbnb, VRBO, or other platforms must adhere to community rules designed to control noise levels and reduce traffic. Quiet hours will be strictly enforced, with guidelines provided to renters to ensure they respect the peace of the neighborhood.

To prevent congestion, parking limits will also be in place, ensuring that the influx of rental guests does not create traffic issues for neighbors. The HOA will monitor parking areas and provide clear instructions for renters to park in designated spaces. This will minimize disruptions for permanent residents and keep the neighborhood calm and orderly.

Two-Strike Rule for Rental Violations at Pinehaven

To maintain the peace, order, and high standards of the Pinehaven community, the HOA will implement a two-strike rule for owners who violate rental policies. This rule ensures compliance with rental guidelines and holds owners accountable for the behavior of their guests, fostering a safe, clean, and harmonious environment for all residents.

How the Two-Strike Rule Works

1. **First Strike – Formal Warning:**
    - Upon the first violation of rental policies—such as exceeding the 180-day limit, noise disturbances, parking violations, or failure to register guests—the owner will receive a formal warning from the HOA. This warning serves as a reminder of the community's standards and expectations, along with instructions to rectify the issue immediately.
    - The owner will also receive documentation of the violation and a clear outline of the potential consequences of a second infraction.
2. **Second Strike – Substantial Fines and Penalties:**
    - If the same or a similar violation occurs again, the HOA will issue a second warning, accompanied by substantial fines. These fines are designed to serve as a strong deterrent against further non-compliance.
    - In addition to fines, the owner's rental privileges may be suspended temporarily, and continued violations could lead to further penalties, such as permanent restrictions on rental activity.

Purpose of the Two-Strike Rule

The two-strike rule emphasizes accountability and fairness, giving owners the opportunity to correct issues after the first violation while ensuring that repeat offenses carry meaningful consequences. This policy ensures that owners take proactive steps to manage their rentals responsibly and ensures guests understand and comply with community rules.

By enforcing substantial fines and potential suspensions, Pinehaven maintains its commitment to a peaceful, well-regulated community, reducing the risks of noise pollution, traffic congestion, and disruptive behavior associated with short-term rentals.

Enforcing the 180-Day Rental Limit

To maintain the balance between owner use and rental activity, Pinehaven will limit rentals to 180 days per year. This ensures that properties remain primarily for personal enjoyment while still giving owners the opportunity to earn rental income. By capping rental days, Pinehaven prevents the overuse of homes as vacation rentals, reducing the risk of constant guest turnover, noise, and traffic congestion.

The HOA will enforce the 180-day rental cap through a monitoring system, tracking the rental activity of each property. Owners will be required to register all rentals with the HOA, including providing the dates of guest stays. Any property that exceeds the rental limit will be flagged, and owners will face fines or penalties for non-compliance.

Restrictions on Airbnb, VRBO, and Short-Term Rentals

In addition to the 180-day cap, Pinehaven will impose specific restrictions on Airbnb, VRBO, and other short-term rental platforms to ensure that rental activity aligns with the community's values. These restrictions include:

- **Guest Registration:** Owners must register rental guests with the HOA to ensure transparency and accountability.
- **Quiet Hours Compliance:** Renters must adhere to strict quiet hours to minimize noise disruptions for neighbors.
- **Parking Rules:** Guests will be required to follow the community's parking guidelines to prevent overcrowding and maintain smooth traffic flow.
- **Monitoring of Listings:** The HOA will monitor Airbnb, VRBO, and other rental platforms for compliance with the 180-day limit. Unauthorized or excessive rentals will result in penalties such as fines or temporary suspension of rental privileges.

By enforcing these restrictions, Pinehaven ensures that rental activity remains responsible and aligned with community values. The HOA will actively monitor guest behavior and respond promptly to any issues, ensuring that renters follow the rules and maintain respect for neighbors.

Supporting a Stable and Peaceful Community

The careful management of short-term rentals at Pinehaven will promote a stable and peaceful environment for all residents. Unlike developments that permit unlimited short-term rentals, Pinehaven's rental limitations reduce the transient nature of vacation guests, fostering a more consistent community atmosphere. Residents and neighbors will benefit from the stability of reduced guest turnover and well-regulated rental activity.

With the HOA actively involved in monitoring rentals and enforcing community rules, owners can enjoy rental flexibility without compromising the neighborhood's quality of life. This approach ensures that Pinehaven remains a desirable place to live and visit, with minimal noise, traffic, or disruption.

2.6 ARCHITECTURE

The community was exposed to early iterations of the architecture being proposed which had not gone through the full design process. The community concerns prior to the meeting focused on the proposed architecture being "too modern" and "in stark contrast" to the surrounding community. While the general shape of the structures has not changed some of the features were adjusted and material and color choices were made to become more cohesive with the community. The product presented at the meeting was met with support. While moving in a more modern direction, the resulting product compliments the surroundings.

2.7 ONSITE PARKING ADEQUACY / NO PARKING ON MASONIC

The project has been designed to exceed ordinance requirements for parking. The individual units are each provided with one garage space and one driveway space. Additionally, guest parking is provided at a rate of one space for every four units for a net requirement of 2.25 spaces per unit. As the clubhouse is this private community's amenity, it was located centrally to the site with the intent of residents walking to use the facility. However, additional spaces have been provided to accommodate residents who may need to drive to the building instead of walking.

In conjunction with fractional ownership/rental comments and typical multi-car households, neighbors expressed concerns about parking adequacy relating to the likelihood of multiple cars being needed for units instead of the 2.25 allotted. As part of the presentation the applicant provided further information regarding the expected financials related to the units and the demographics of likely owners. The expectation for ownership of the properties is as vacation homes of later in life individuals. Alternatively, as potential fractional ownership or even if rented, more than two cars is unlikely. As such the city required minimum parking is expected to account for any variations which may occur.

2.8 TRASH / SNOW REMOVAL

Neighbors expressed concerns regarding Trash Removal on site as well as the plan for snow removal. Specifically, they were curious how these two items would affect parking on site as they are issues in their neighborhood with spillover parking as a result being located on Masonic further complicating traffic.

Regarding trash removal, they indicate trash bins often impede vehicular movement during collection days. These thoughts were welcome feedback, and the applicant is re-evaluating this element for the development. The intent at this point is to provide curbside pickup, however, the community has a whole is not intended for year-round occupancy. As indicated above, parking should be limited to

garage /driveway spaces or guest parking so is not anticipated to adversely affect other parking or traffic conditions.

With regards to Snow Removal, the concerns of the neighbors were a welcome comment. The project was not evaluated for this aspect. The applicant is currently evaluating options for the development. The current plan is to provide snow storage areas for plows to push snow out of the roadway. This will allow for residents to safely shovel individual drives without being impacted by roadway accumulations. Further it is being evaluated to provide some sort of aspect as part of the home-owners association documents. The specifics have not been finalized at this stage, but the applicant is committed to providing a system which will not affect the other neighborhoods.

2.9 ENVIRONMENT / STORMWATER MANAGEMENT

Environmental concerns raised primarily focused upon the removal of trees from a forested area. Other concerns raised dealt with the resulting stormwater generated from the development as well as the quality of stormwater runoff. These concerns are also of importance to the applicant. The city has strict guidelines related to the protection of natural resources in the area to which the project is meeting or exceeding.

The topography of the site is challenging with several steep slope areas. Additionally, as mentioned, the site is forested with large growth ponderosa pines. To mitigate the impacts to these areas, the project development was designed with a tight limit of disturbance to ensure maximum protection. Upon initial layout, the design team visited the site so the design could be tailored to protect the best areas feasible. Through this design process and in conjunction with architectural design, the development will not only protect the environmental features but also the views of the features around the area.

As with any development the increase in impervious surfaces will generate additional runoff during storm events. This project is proposing a stormwater detention/retention basin to mitigate the effects of the development on the downstream area. The basin will serve two functions; 1) control the rate of runoff leaving the property; and 2) treat the runoff the address the water quality leaving the site. After analyzing the runoff from the site prior to and following construction, the site has been designed to keep the release of runoff at or below the predeveloped condition by holding the majority of runoff in the basin from the west side of Masonic Lane while allowing all of the runoff from east of Masonic to directly discharge downstream. This method allows for a net decrease in runoff from the site. Further the runoff detained in the basin is filtered through the soil media in the bottom of the basin to provide a cleansing effect. The basin is then slowly released. The basin design is intended to mimic the normal processes in nature.

Finally, by slowly filtering and releasing runoff in this fashion the temperature of the discharge is much lower. In a traditional basin, runoff collected picks up heat from the impervious surfaces and then further increases in temperature as it sits in the open. This water is then discharged from the basin within the next 24 hours or so. The short time frame does not provide sufficient time for even a small amount of water to evaporate. This higher temperature runoff can adversely affect the downstream environment. Within the proposed basin, by filtering through the soil media, this extra heat begins to dissipate into the soil. Further the discharge time is extended to permit additional evaporation from the water ponded on the surface.

3.0 SUMMARY OF CONCERNS - MEETING #2-11/21/2024

The Applicant provided a PowerPoint presentation (see appendix). This presentation recapped information previously provided as well as information regarding how the concerns we reviewed and addressed from the previous meeting. The meeting's sign in sheet and printouts of the received comments can be found in the appendix. No "new" concerns were raised at this meeting. Discussions during the meeting focused on clarifications for those who were not in attendance at the first meeting or clarifications on the solutions being presented. The following is a summary of the concerns recorded at the meeting as well as written comments submitted to the applicant and/or city.

3.1 ZONING

The presentation provided a recap of the previous zoning concerns, and a brief discussion took place. The discussion provided the previous clarifications and nNo additional comments were expressed.

3.2 TRAFFIC / PEDESTRIAN SEPARATION

Following a recap of the previous concerns, VPE provided additional information related to placing a traffic signal at the intersection of Lone Tree and Zuni. VPE discussed the 5yr plan with City officials and it said this intersection is not part of the plan and no signal is currently being proposed. No additional comments were expressed.

3.3 DARK SKIES / FIREWISE

Dark skies adherence was discussed following a recap. The project will comply with the appropriate sections of City code. One item of concern from the previous meeting was the presence of large windows (patio doors, etc.) on the proposed homes. These features are not being removed; however, the selected materials contain a Low-E film which provides some tinting effect and additional screening can also be provided.

Firewise aspects were recapped and discussed. The project is not proposing any new efforts as part of the project. City building codes require elements of Firewise methods.

3.4 OPEN SPACE / CLUBHOUSE / NOISE

The item of discussion focused on the park amenity (Pinecone Structure). The look of the structure was a main issue. Red Oak indicated they will look to replace the structure with something less impactful or remove the structure completely. No specific resolution was reached

3.5 CONDOMINIUMS / TOWNHOUSES / RENTALS / FRACTIONAL OWNERSHIP.

The fractional ownership plan was of great concern at the previous meeting. Upon review, **the developer has decided and committed to not building nor selling any timeshares or fractional ownership units.** The units will be sold individually; however, they still may be used as part of short-term rentals such as AirBnB, VRBO, etc. The developer has committed to specific restrictions which will be part of the Homeowners Association documentation.

Restrictions on Airbnb, VRBO, and Short-Term Rentals

Pinehaven will impose specific restrictions on Airbnb, VRBO, and other short-term rental platforms to ensure that rental activity aligns with the community's values. These restrictions include:

- **Guest Registration:** Owners must register rental guests with the HOA to ensure transparency and accountability.
- **Quiet Hours Compliance:** Renters must adhere to strict quiet hours to minimize noise disruptions for neighbors.
- **Parking Rules:** Guests will be required to follow the community's parking guidelines to prevent overcrowding and maintain smooth traffic flow.
- **Monitoring of Listings:** The HOA will monitor Airbnb, VRBO, and other rental platforms for compliance with the 180-day limit. Unauthorized or excessive rentals will result in penalties such as fines or temporary suspension of rental privileges.

By enforcing these restrictions, Pinehaven ensures that rental activity remains responsible and aligned with community values. The HOA will actively monitor guest behavior and respond promptly to any issues, ensuring that renters follow the rules and maintain respect for neighbors.

Supporting a Stable and Peaceful Community

The careful management of short-term rentals at Pinehaven will promote a stable and peaceful environment for all residents. Unlike developments that permit unlimited short-term rentals, Pinehaven's rental limitations reduce the transient nature of vacation guests, fostering a more consistent community atmosphere. Residents and neighbors will benefit from the stability of reduced guest turnover and well-regulated rental activity.

With the HOA actively involved in monitoring rentals and enforcing community rules, owners can enjoy rental flexibility without compromising the neighborhood's quality of life. This approach ensures that Pinehaven remains a desirable place to live and visit, with minimal noise, traffic, or disruption.

How the Two-Strike Rule Works

1. **First Strike – Formal Warning:**
    - Upon the first violation of rental policies—such as exceeding the 180-day limit, noise disturbances, parking violations, or failure to register guests—the owner will receive a formal warning from the HOA. This warning serves as a reminder of the community's standards and expectations, along with instructions to rectify the issue immediately.
    - The owner will also receive documentation of the violation and a clear outline of the potential consequences of a second infraction.
2. **Second Strike – Substantial Fines and Penalties:**
    - If the same or a similar violation occurs again, the HOA will issue a second warning, accompanied by substantial fines. These fines are designed to serve as a strong deterrent against further non-compliance.
    - In addition to fines, the owner's rental privileges may be suspended temporarily, and continued violations could lead to further penalties, such as permanent restrictions on rental activity.

Purpose of the Two-Strike Rule

The two-strike rule emphasizes accountability and fairness, giving owners the opportunity to correct issues after the first violation while ensuring that repeat offenses carry meaningful consequences. This policy ensures that owners take proactive steps to manage their rentals responsibly and ensures guests understand and comply with community rules.

By enforcing substantial fines and potential suspensions, Pinehaven maintains its commitment to a peaceful, well-regulated community, reducing the risks of noise pollution, traffic congestion, and disruptive behavior associated with short-term rentals.

Enforcing the 180-Day Rental Limit

To maintain the balance between owner use and rental activity, Pinehaven will limit rentals to 180 days per year. This ensures that properties remain primarily for personal enjoyment while still giving owners the opportunity to earn rental income. By capping rental days, Pinehaven prevents the overuse of homes as vacation rentals, reducing the risk of constant guest turnover, noise, and traffic congestion.

The HOA will enforce the 180-day rental cap through a monitoring system, tracking the rental activity of each property. Owners will be required to register all rentals with the HOA, including providing the dates of guest stays. Any property that exceeds the rental limit will be flagged, and owners will face fines or penalties for non-compliance.

Longer term Rentals

Pinehaven allows long-term rentals, which are defined as lease agreements with a duration of one year or longer. To ensure the safety and security of the community, all prospective tenants must submit a clean background check to the HOA for approval prior to finalizing a rental agreement. This requirement helps maintain the integrity and well-being of the Pinehaven community. Similar two strike rules apply to long term rentals and will be agreed upon with the owner to enforce an eviction if the long term tenant abuses such rules.

Clean Background Check:

A clean background check is defined as the absence of any of the following disqualifying factors within the timeframes specified below, as reviewed by the HOA or its designated representative:

Criminal History:

- Convictions for violent crimes, including assault, robbery, or offenses involving physical harm, within the past 7 years.
- Convictions for felony offenses related to property damage, theft, or fraud within the past 5 years.
- Convictions for drug manufacturing, trafficking, or distribution within the past 7 years.
- Registered sex offender status or crimes requiring lifelong reporting.

Rental History:

- Documented evictions, lease violations, or failure to pay rent in full within the past 5 years.
- Verified complaints from prior landlords for disruptive behavior or property damage.

Compliance with HOA Rules:

History of non-compliance with HOA or similar community regulations at prior residences, if applicable.

3.6 ARCHITECTURE

No Additional Comments received,

3.7 Onsite Parking Adequacy / No Parking on Masonic

Parking was another item of concern from the previous meeting. Discussion regarding parking were sporadically discussed as part of other elements of the meeting. The following is a list of items the developer is planning on implementing to address parking concerns on the project site.

- Signage / Towing: The project will install signage as require per city code to prevent on-street parking. Additional signage will be posted on Masonic Lane. Additional signage will be posted in parking areas designated for snow removal. The HOA will strictly enforce these restrictions and ensure towing as needed.
- Unit Restrictions / Rental Restrictions: The HOA documents will restrict cars per units and as part of any rental agreement. Fines will be assessed as needed.

3.8 Trash / Snow Removal

Neighbors previously expressed concerns regarding snow removal, more specifically related to parking and trash removal. The developer has contacted a local plow company to discuss servicing the project area. In conjunction with the company a plan was developed to indicate where snow will be piled up when needed. Additionally, to ensure roads are properly maintained during storms, the developer has committed to a 2 inch trigger for plowing services. Barring excessively intense storms, the plow company indicated this trigger should adequately maintain the roadways.

Trash: The project is proposing on-site dumpsters for trash collection. This will remove the need for individual curbside collection.

3.9 Environment / Stormwater Management

The developer recapped the previous presentation and clarified the protections being implemented. One previous concern pertained to the removal of trees and the sightlines from the adjacent development. The developer provided diagrams to illustrate the sightlines to the project as well as rendering of the final product. Further discussions occurred regarding the preservation of woodlands, but no changes were required.

No additional concerns were expressed.

3.10 CONSTRUCTION / TIMELINES

Construction and Timeline: Not so much a concern of the project, but more information. The Neighbors requested information regarding the construction process and what to expect. The following was presented to the neighbors.

- Anticipated Construction Timeline:
    a. Expected Start Date: April/May 2025
    b. Major Site Work (Rock Excavation): to last approx. 3-5 mos; completed End 2025
    c. First Units occupied Spring 2026
    d. Total Project: 3-5 Years
- Rock / Large Wall: What will they look like and will they be visible
    a. Should not be visible from Zuni Drive
    b. Will be surfaced with a Shock-crete type surface for stabilization. This surfacing will be textured and colored to match surrounding as much as possible.
- General Financing: Discussions on how the project will be finacially structured..
    a. Unit costs will be variable
    b. Financing based on Investors and Bank Debt

This information seemed adequate, and no additional comments were expressed.

APPENDIX A: SUPPORTING DOCUMENTS

A.1 NEIGHBORHOOD MEETING NOTIFICATION TECHNIQUES

- Meetings Plan
- Sample Notification Letter w/Handouts
- Sign Posting Notification
- Meeting Sign In Sheets

MEMORANDUM			
SUBJECT	**NEIGHBORHOOD MEETING PLAN – PINEHAVEN**	**VERSION**	v1.0
		DATE:	SEPTEMBER 2024

Objective: The goal is to outline the strategy for engaging property owners, citizens, jurisdictions, and public agencies through a series of neighborhood meetings.

We are submitting for your review and approval the attached plan outlining our approach for conducting neighborhood meetings concerning the proposed development project at [Development Address]. This plan aims to ensure effective public engagement and compliance with city regulations.

- **Notification Area:**
  a. Target Area: Notifications will be sent to property owners, citizens, jurisdictions, and public agencies within 300 feet of the development site.

Table 1: Parcels within Notification Area

OWNER NAME	SITE ADDRESS
Pinnacle Pines Community Association (Hoamco)	3100 S Masonic Ln
Thornquist Patricia & Brent	3097 S Hannah Ln
Nsh Llc	3079 S Hannah Ln
Glazar Joanne M & Richard C	3074 S Hannah Ln
Esmurdoc Revocable Family Trust Dtd 07-11-14	3073 S Hannah Ln
Styskal Jeff J & Emily J Revocable Trust Dtd 02-15-14	3080 S Hannah Ln
Van Der Werf Family Trust Dtd 09-18-97	3086 S Hannah Ln
Vukonich Michael W & Lisa R	3101 S Salvestrin Ln
3109 South Salvestrin Ln Llc	3109 S Salvestrin Ln

- **Notification Methods:**
  a. **Mail:** Formal notification letters will be sent to all identified recipients (see sample attached).
  b. **Newspaper:** Announcements will be published in local newspapers (see sample attached)
  c. **Posting:** Notices will be posted at the development site to adhere to the City's specifications.
  d. **Notification Timeline**: Notification letters will be dispatched, and the posting will be installed on October 7, 2024.

Neighborhood Meeting #1:

1. Meeting Details:
   a. Meeting Type:.....Community Information Meeting
   b. Date:.....October 17, 2024
   c. Time:.....3:00 pm- 5:00 pm
   d. Location:.....Flagstaff Aquaplex- Community Room- 1702 N Fourth St, Flagstaff, AZ 86004
   e. Agenda:
      i. Introduction to the project and its objectives
      ii. Presentation of the proposed development plans
      iii. Open forum for questions and discussion
      iv. Collection of initial feedback and suggestions
   f. Public Comment Period (Approx 45 mins planned)

2. Reporting and Follow-Up:
    a. Feedback Compilation: We will summarize the feedback collected from each meeting.
    b. Reporting to the Director: A detailed report of the meeting outcomes and feedback will be provided to the Director.
    c. Communication of Results: Updates on the status and results of the meetings will be shared through email.

Neighborhood Meeting #2:

1. Meeting Details:
    a. Meeting Type:.....Community Information Meeting
    b. Date:.....November 14, 2024
    c. Time:.....3:00 pm- 5:00 pm
    d. Location:.....Flagstaff Aquaplex- Community Room- 1702 N Fourth St, Flagstaff, AZ 86004
    e. Agenda:
        i. Overview of feedback received from the first meeting
        ii. Discussion of potential revisions and updates to the proposal
        iii. Open forum for further questions and input
        iv. Summary of next steps and project timeline
    f. Public Comment (Approx 45 min planned):

2. Reporting and Follow-Up:
    a. Feedback Compilation: We will summarize the feedback collected from each meeting.
    b. Reporting to the Director: A detailed report of the meeting outcomes and feedback will be provided to the Director.
    c. Communication of Results: Updates on the status and results of the meetings will be shared through email.

Contact Information:

Primary Contact: .....**Luke Caraway**
Title/Position:.....**President**
Organization/Company: .....**Viewpoint Engineering**
Phone Number:.....**737.717.3097**
Email Address:.....**Pinehaven-Zone@viewpointengineering.com**

ATTACHED:
Sample Public Meeting Notification Letter
Sample Public Meeting Newspaper Ad
Sample Public Notice Sign

MAILING ADDRESS
2121 East Sixth Street, Suite 203
Austin, TX 78702
ph: 512.779.9464
www.viewpointengineering.com

Date
via First Class Mail

Address
Street
City, State, Zip
Attn:

Subject: **Notice of Public Hearing regarding**
Direct to Ordinance Zoning Map Amendment
29551 S Masonic Lane
VPE#: 22004

Dear Neighbor,

This is a notice for a community information meeting for an upcoming request by **RedOak Development Group,** property owner, for a **Direct to Ordinance Zoning Map Amendment** for the property located **2951 S Masonic Lane**. The project contains two parcels: one at the southeast corner of Zuni Drive and Lone Tree Road and the second at the southeast corner of Zuni Drive and Masonic Lane. The owner is applying to have both parcels designated MR – Medium Residential in order to construct 83 residential homes as well as a clubhouse and public walking/hiking trails. The parcels are currently zoned RR – Rural Residential / SC – Suburban Commercial and RR – Rural Residential respectively. Refer to the attached documents for additional site-specific information.

The owner invites interested parties and/or authorized agents to attend a public hearing so that they be heard and offer comments. The meeting information is as follows:

- **Date:** ..... October 17, 2024
- **Time:** ..... 3:00 pm- 5:00 pm
- **Location:** ..... Flagstaff Aquaplex- Community Room- 1702 N Fourth St, Flagstaff, AZ 86004

Written comments can be submitted to the applicant and received no later than 2 days prior to the meeting date listed above. Comments can be submitted **via Regular Mail to** 2121 E 6th Street, Austin, TX 78702 or **via email to:** pinehaven-zone@viewpointengineering.com.

A complete application will be available for viewing at the City Planning office on October 2, 2024.

Thank you for your time, and we hope to see you at the meeting.

Sincerely,
ViewPoint Engineering

By: _____
Luke Caraway, PE, President

Attached: Project Description
Site Information
Location Map
FEMA Map
Zoning Map

cc: Client
File

https://viewpointengineering.sharepoint.com/sites/viewpoint/shared documents/vpls/horiz/22004 flagstaff 14/permitting/city/draft notice to property owners.docx

PROJECT DESCRIPTION

RODG DT Pine Haven Horizontal LLC (RODG) is proposing the development of the property located at 2651 S Masonic LN, a total of 13.82 acres. The project, Pinehaven, formerly Juniper Estates, (SITE) is an 83-unit condominium development with clubhouse. The site is currently zoned as a mix of rural residential (RR) and commercial suburban (SC).

The property in question is further identified parcel number 103-26-002-D. A project location map can be found in the appendix.

PLAN OVERVIEW

The project, Pinehaven, formerly Juniper Estates, (SITE) is an 83-unit condominium residential community. The project site is ±13.82 gross acres with ±5.12 acres developed and a proposed improvement density of 6.18 units per acre. (83 units/13.82 acres = ±6). Additionally, the project will construct a clubhouse, stormwater management basin and other associated infrastructure.

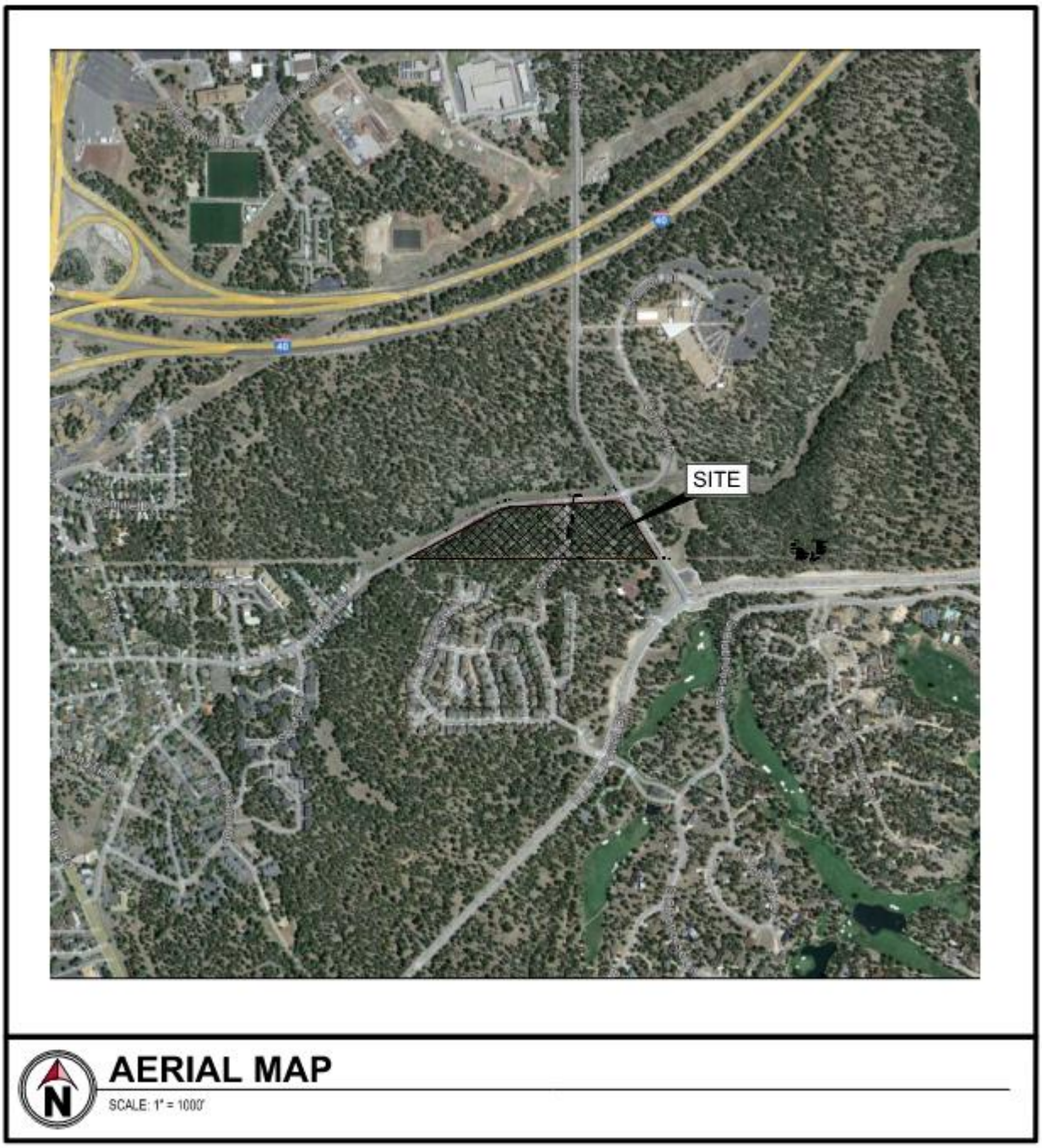
The project site is located on the southwest corner of E Zuni Drive and Lone Tree Road. The Site is bisected by Masonic Lane. To the south of the site is the Pinnacle Pines development consisting of condominium style townhomes. To the west of the site is the National Forest. To the north and the east of the site is vacant undeveloped land that has been purchased by the board of regents for Northern Arizona University.

The SITE will have four (4) access points. Two of the access points will be off Masonic Ln. There will be additional access from Zuni Dr and Lone Tree Rd. These access points will provide access for pedestrians, bicyclists, and motorists.

SITE DATA

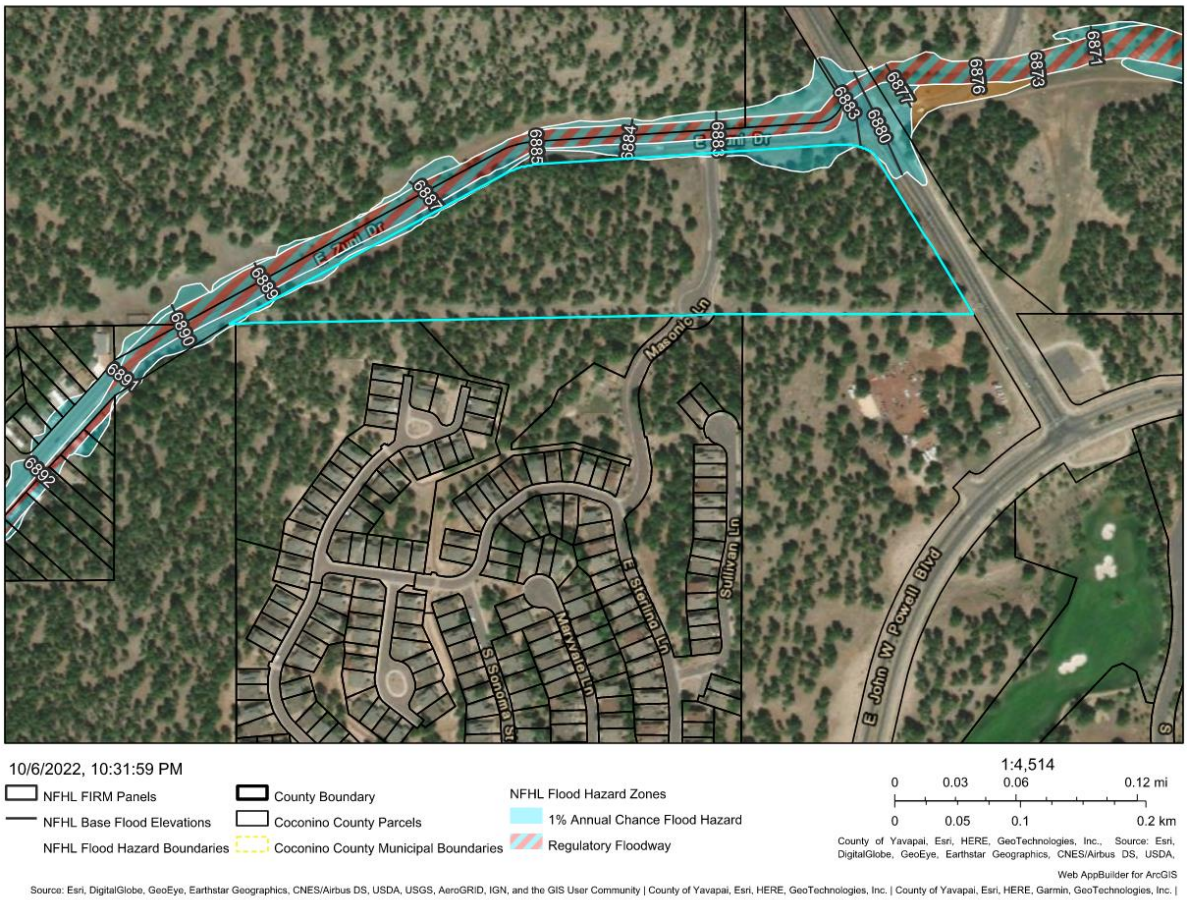
PLAN REFERENCE		
PLAN TITLE		**ALTA/NSPS LAND TITLE SURVEY**
		DATED: SEPT. 14, 2022
SURVEYOR		ARIZONA SURVEYING INC. 1843 W HEAVENLY CT FLAGSTAFF, AZ 86001 JOB NO: 22-42
OWNER APPLICANT		
NAME		**RODG DT PINE HAVEN HORIZONTAL LLC**
ADDRESS		2121 EAST 6TH STREET, SUITE 203 AUSTIN, TX 78702
PARCEL DATA		
ADDRESS		E. ZUNI DRIVE & S. MASONIC LANE FLAGSTAFF, AZ 86001
TAX MAP NO/ PARCEL ID		APN: 103-26-002D
ZONING DATA		
ZONING DISTRICT	*EXISTING*	*RURAL RESIDENTIAL, SUBURBAN COMMERCIAL* *[RPOZ: RESOURCE PROTECTION OVERLY ZONE]*
	PROPOSED	MEDIUM DENSITY RESIDENTIAL (MR)
USE	*EXISTING*	*UNDEVELOPED*
	PROPOSED	RESIDENTIAL (PERMITTED)
STATEMENT OF INTENT		
THE APPLICANT IS PROPOSING TO DEVELOP THE SUBJECT PARCEL WITH TWO NEW ROADS, TOWNHOUSES AND ASSOCIATED SITE IMPROVEMENTS		

A.1 PROJECT LOCATION MAP

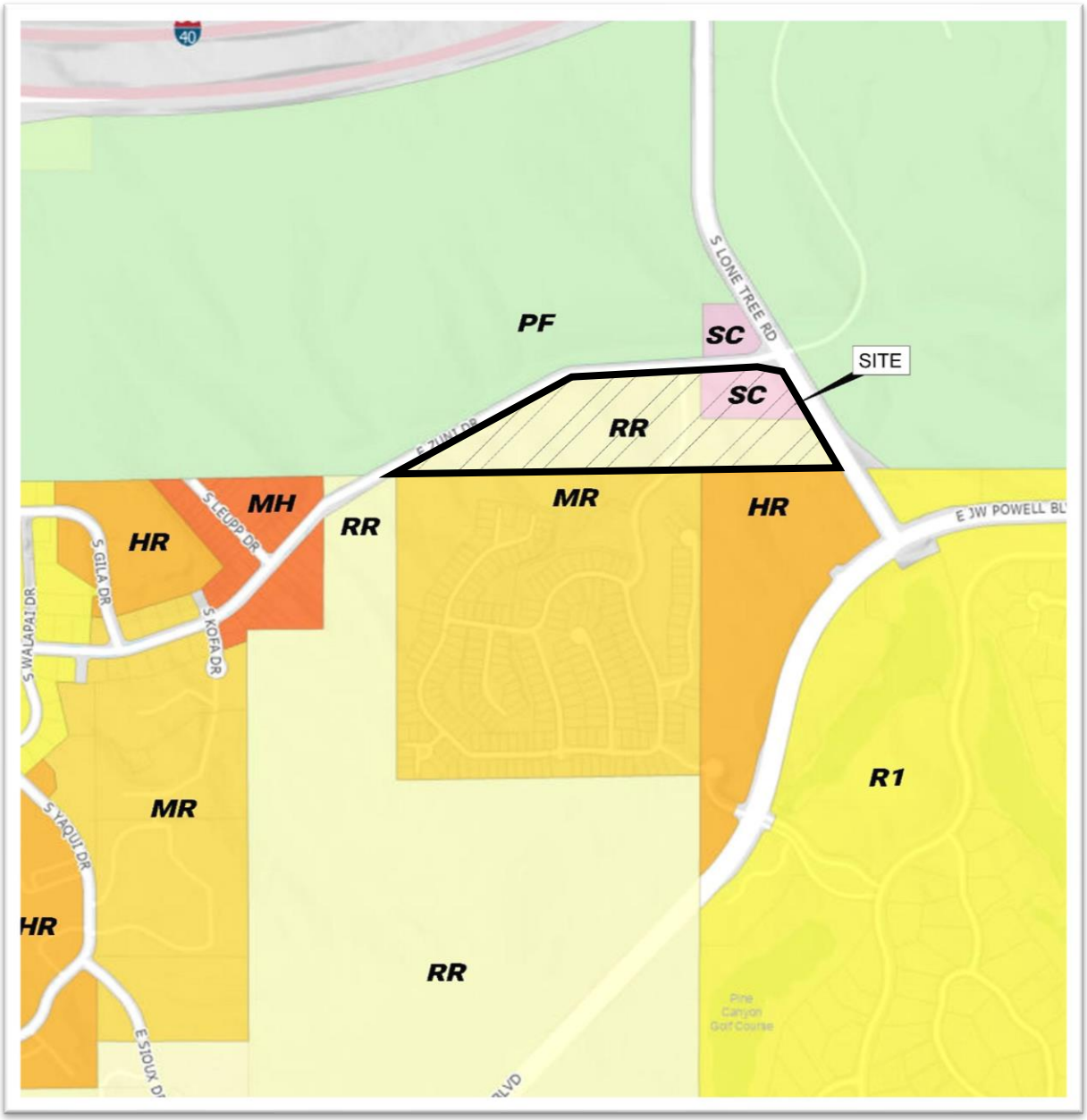


A.2 FLOOD MAP

ArcGIS Web Map



A.3 ZONING MAP



PROJECT DESCRIPTION

Red Oak Development Group, LLC (RODG) is proposing the development of the property located at 2651 S Masonic LN, a total of 13.82 acres. The project, Pinehaven, formerly Juniper Estates, (SITE) is an 83-unit condominium development with clubhouse. The site is currently zoned as a mix of rural residential (RR) and commercial suburban (SC).

The property in question is further identified parcel number 103-26-002-D. A project location map can be found in the appendix.

PLAN OVERVIEW

The project, Pinehaven, formerly Juniper Estates, (SITE) is an 83-unit condominium residential community. The project site is ±13.82 gross acres with ±5.12 acres developed and a proposed improvement density of 6.18 units per acre. (83 units/13.82 acres = ±6). Additionally, the project will construct a clubhouse, stormwater management basin and other associated infrastructure.

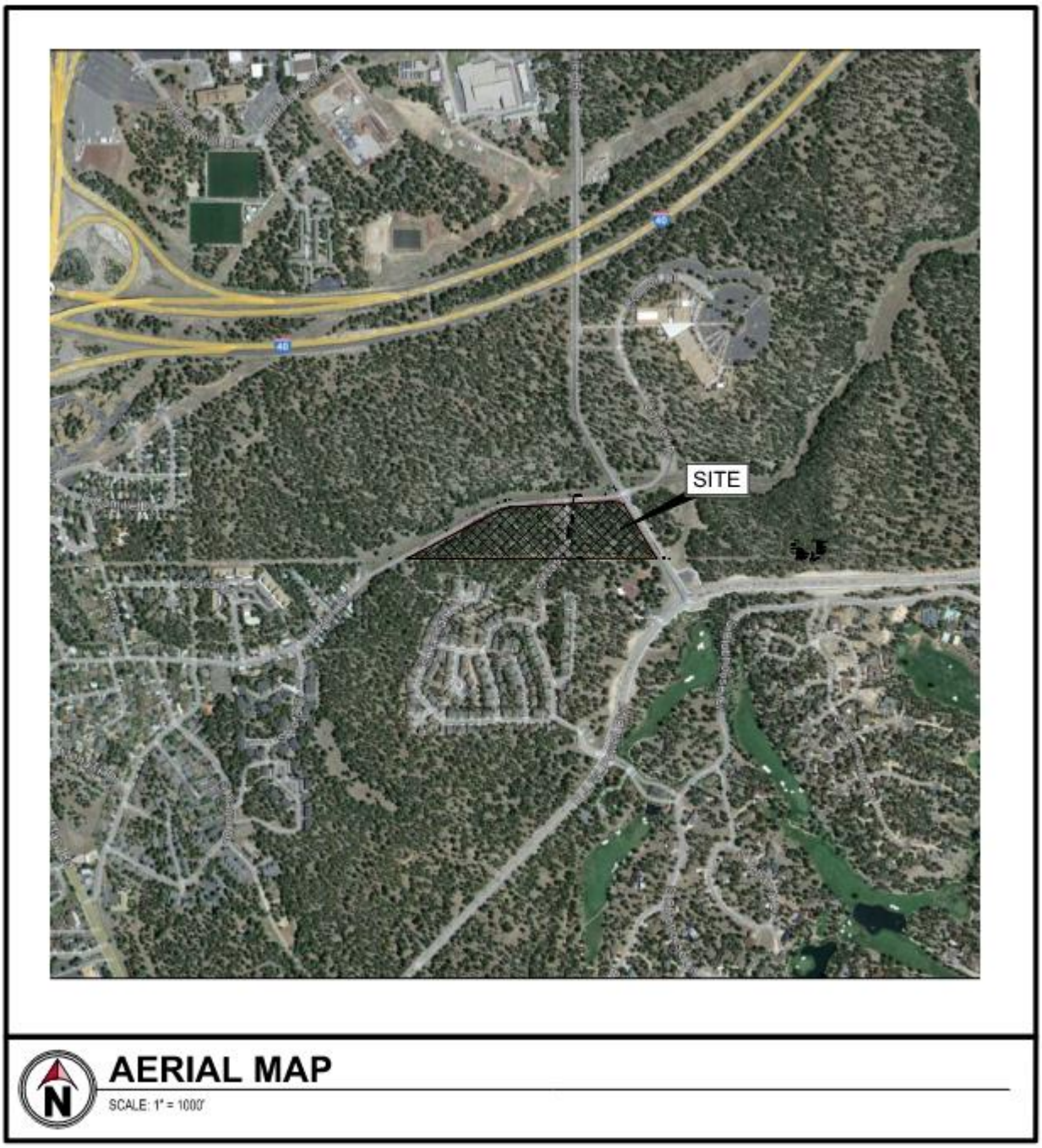
The project site is located on the southwest corner of E Zuni Drive and Lone Tree Road. The Site is bisected by Masonic Lane. To the south of the site is the Pinnacle Pines development consisting of condominium style townhomes. To the west of the site is the National Forest. To the north and the east of the site is vacant undeveloped land that has been purchased by the board of regents for Northern Arizona University.

The SITE will have four (4) access points. Two of the access points will be off Masonic Ln. There will be additional access from Zuni Dr and Lone Tree Rd. These access points will provide access for pedestrians, bicyclists, and motorists.

SITE DATA

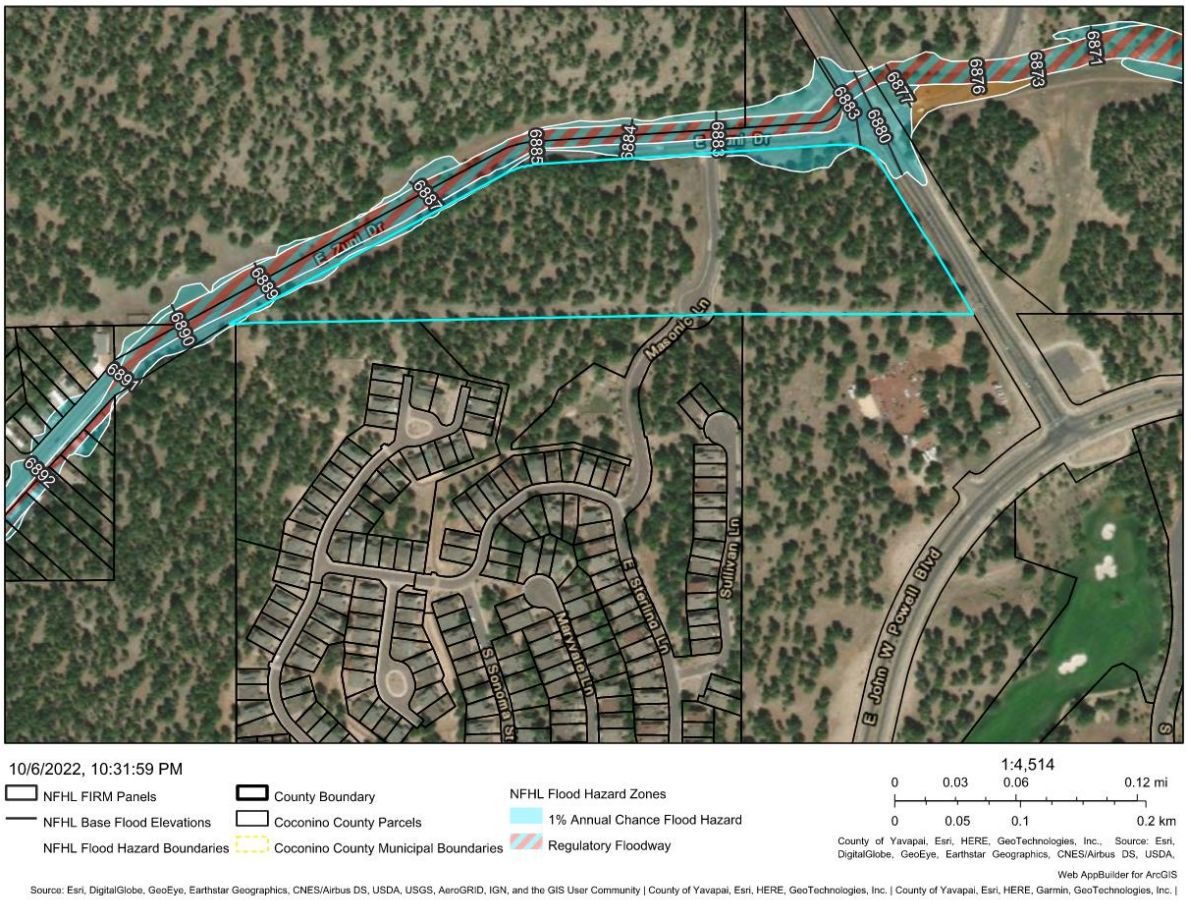
PLAN REFERENCE		
PLAN TITLE		**ALTA/NSPS LAND TITLE SURVEY**
		DATED: SEPT. 14, 2022
SURVEYOR		ARIZONA SURVEYING INC. 1843 W HEAVENLY CT FLAGSTAFF, AZ 86001 JOB NO: 22-42
OWNER of RECORD		
NAME		**FLAGSTAFF LODGE NO.7**
ADDRESS		2951 S MASONIC LANE FLAGSTAFF, AZ 86005
APPLICANT		
NAME		**RODG DT FLAGSTAFF PROP CO LLC**
ADDRESS		2121 EAST 6TH STREET, SUITE 203 AUSTIN, TX 78702
PARCEL DATA		
ADDRESS		E. ZUNI DRIVE & S. MASONIC LANE FLAGSTAFF, AZ 86001
TAX MAP NO/ PARCEL ID		APN: 103-26-002D
ZONING DATA		
ZONING DISTRICT	*EXISTING*	*RURAL RESIDENTIAL, SUBURBAN COMMERCIAL* *[RPOZ: RESOURCE PROTECTION OVERLY ZONE]*
	PROPOSED	MEDIUM DENSITY RESIDENTIAL (MR)
USE	*EXISTING*	*UNDEVELOPED*
	PROPOSED	RESIDENTIAL (PERMITTED)
STATEMENT OF INTENT		
THE APPLICANT IS PROPOSING TO DEVELOP THE SUBJECT PARCEL WITH TWO NEW ROADS, TOWNHOUSES AND ASSOCIATED SITE IMPROVEMENTS		

A.1 PROJECT LOCATION MAP

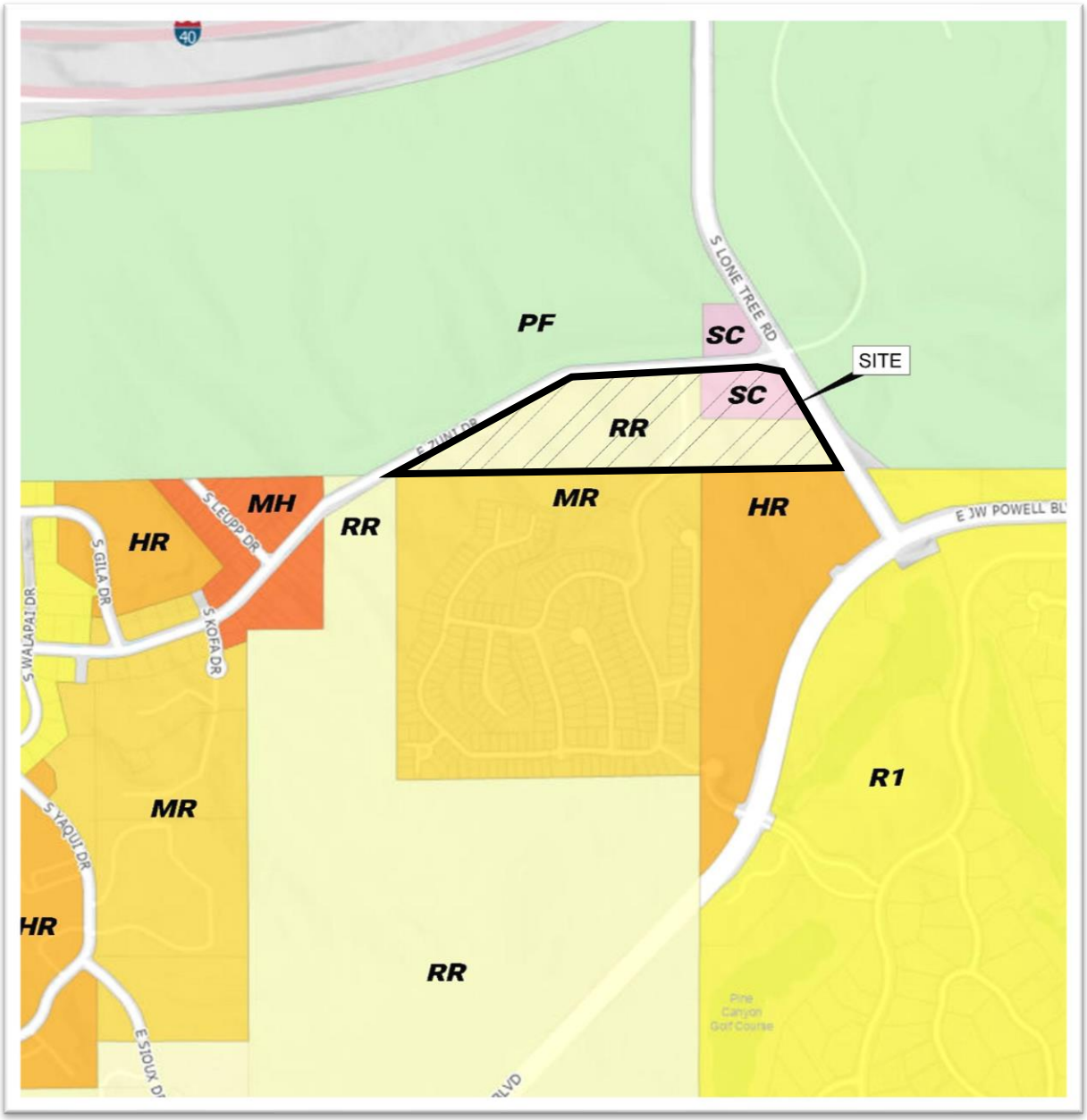


A.2 FLOOD MAP

ArcGIS Web Map



A.3 ZONING MAP



MAILING ADDRESS
2121 East Sixth Street, Suite 203
Austin, TX 78702
ph: 512.779.9464
www.viewpointengineering.com

Site Sign Posting Notification

CITY OF FLAGSTAFF
NEIGHBORHOOD MEETING

Date: Thursday, October 17, 2024
Time: 5:30 pm to 7:30 pm

LOCATION: Flagstaff Aquaplex- Community Room
702 N Fourth St, Flagstaff, AZ 86004.

REQUEST: Direct to Ordinance Zoning Map Amendment

PROPOSAL: NOTICE is hereby given that RODG DT Pine Haven Horizontal LLC , owner of the property located at 2951 S Masonic Lane, is requesting a Direct to Ordinance Zoning Map Amendment for said property. The Property consists of a parcel designated RR Rural Residential and SC Suburban Commercial. The Applicant is requesting a designation of MR Medium Residential.

SITE LOCATION: 2951 S Masonic Lane

SIZE: 13.82 ac

CASE #: PZ-22-00109-04

Applicant Contact Information:
Contact:..... **Marc Toth**
Organization/Company: ..... **Viewpoint Engineering**
Phone Number:..... **737.717.3097**
Email Address:..... **Pinehaven-Zone@viewpointengineering.com**

Flagstaff Planning & Development Services Division: **928.213.2600**

Posting Date: **>>to be filled in by Signarama<<**

MAILING ADDRESS
2121 East Sixth Street, Suite 203
Austin, TX 78702
ph: 512.779.9464
www.viewpointengineering.com

ViewPoint Engineering

Pinehaven Neighborhood Meeting

October 16 – 18, 2024

NAME	ADDRESS	PHONE NUMBER	EMAIL ADDRESS
L Stone + P Watters	3205 S. Hannah Lane		lstone.a3@gmail.com
STEVE WORTH	1164 E STERLING LN, FLAGSTAFF		STEVE.WORTH11@GMAIL.COM
Jim Van Dee Weef	3036 S HANNAH LN	380-244-8138	
Mary Norton	969 E Sterling Ln	979-300-4790	mnortoncomm@gmail.com
Bruce Ertmann	3279 S HANNAH LN		boe714@gmail.com
Irma Sandercock	1005 E Sterling		irma.sandercock@gmail.com
Michael Moreno	3109 S. Salvestrin Lane	602 525 9808	
Michael Pluper	918 E Sterling LANE	303-249-2621	Michaelgeana@gmail.com
Bob + Sue James	3225 So. Sodoma St.		bobjohnjames@GMail.com
CLAIRE WILKINSON	3117 S SALVESTRIN LANE	928-286-7069	MCW48@HOTMAIL.COM
Carol Newton	3202 S Sonoma ST	704.236.6374	Carol.newton@peter-voc.com
XMA	900 E Sterling Lane	6023731688	XMa@WLGov.com
Sheryl Dawson	3127 S Hannah Ln	281 451 4244	sdawson@celebratingchrist.com
Tania Cagnin	925 E. Sterling Lane	415 298 3363	TZWAVE@HOTMAIL.COM
VINCENT LOPEZ	925 E STERLING LN.	" " "	" " "
Patrick Hurley	Coconino College	928 853 9097	constnmgr@gmail.com

ViewPoint Engineering

MAILING ADDRESS
2121 East Sixth Street, Suite 203
Austin, TX 78702
ph: 512.779.9464
www.viewpointengineering.com

Pinehaven Neighborhood Meeting - November 21, 2024

(please print)

NAME	ADDRESS	PHONE NUMBER	EMAIL ADDRESS
Irma Sandercock	1005 E. Sterling Ln	480.390.2282	irma.sandercock@gmail.com
BILL SANDERCOCK	" " "	" " "	" "
Dana Coughlin	1037 E. Sterling Ln	480-205-6635	
Bill Coughlin	" " " "	" " "	billc1970@msn.com
BRUCE ERTMANN	3279 S. HANNAH	949-300-4770	bce714@gmail.com
JASON HALE	216 N HUMPHREYS ST	928.458.5155	CSGHALE@GMAIL.COM
PATRICK HURLEY	1701 N SLIPPERY ROCK RD	928 853-9097	CONSTNMGR@GMAIL.COM
Bob Jamm	3225 S. Sonoma St.	928-699-6977	bobjohnjamm@Gmail.com
Mary Norton	969 E Sterling	909-5135332	mnortoncomm@gmail.com
Carol Newton	3202 S Sonoma St	704 236 6374	Carol.newton@peter-rock...

A.2 MEETING HANDOUTS

- Handouts 10/17/2024 and 11/21/2024

PROJECT DESCRIPTION

RODG DT Pine Haven Horizontal LLC (RODG) is proposing the development of the property located at 2651 S Masonic LN, a total of 13.82 acres. The project, Pinehaven, formerly Juniper Estates, (SITE) is an 83-unit condominium development with clubhouse. The site is currently zoned as a mix of rural residential (RR) and commercial suburban (SC).

The property in question is further identified parcel number 103-26-002-D. A project location map can be found in the appendix.

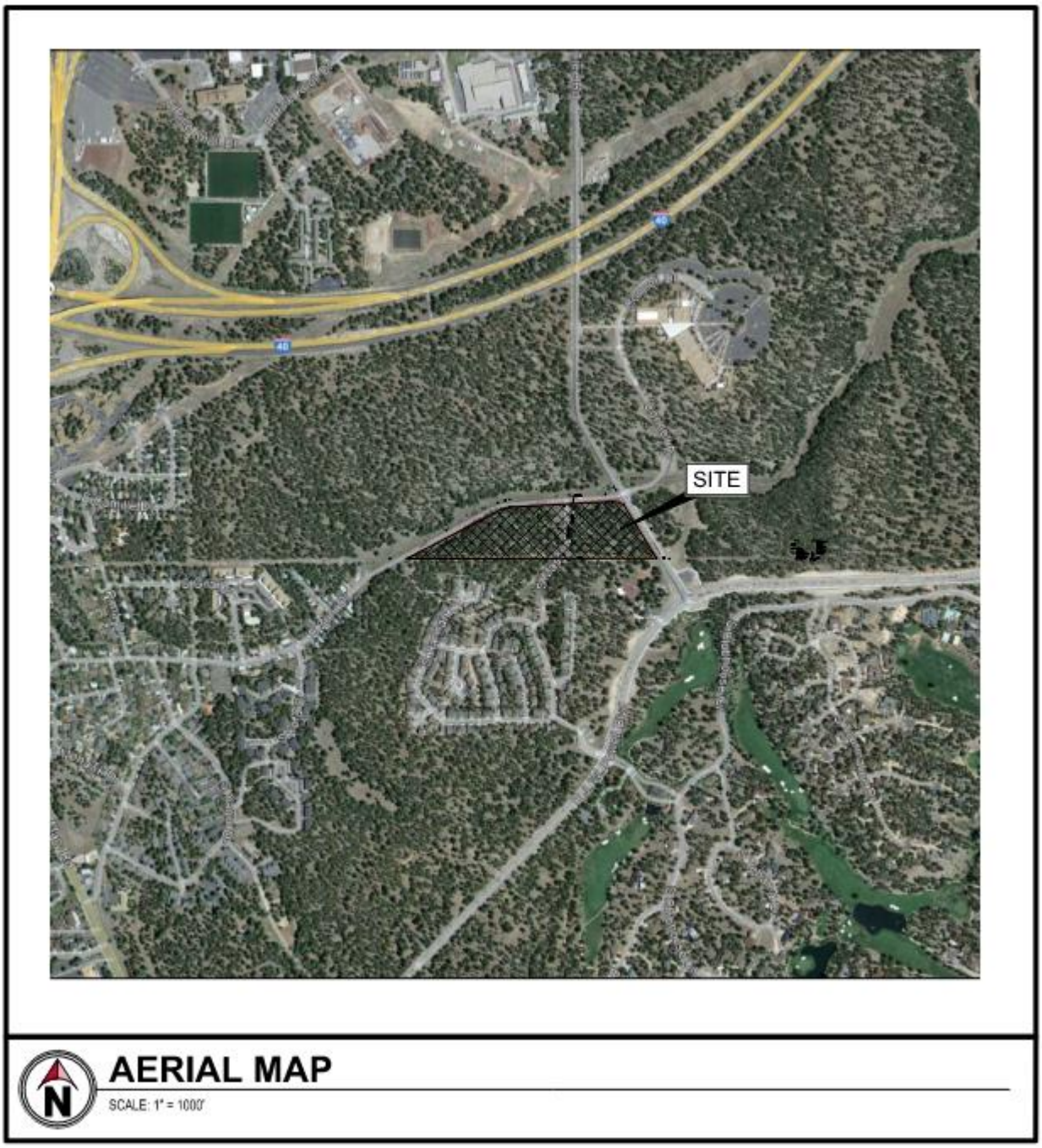
PLAN OVERVIEW

The project, Pinehaven, formerly Juniper Estates, (SITE) is an 83-unit condominium residential community. The project site is ±13.82 gross acres with ±5.12 acres developed and a proposed improvement density of 6.18 units per acre. (83 units/13.82 acres = ±6). Additionally, the project will construct a clubhouse, stormwater management basin and other associated infrastructure.

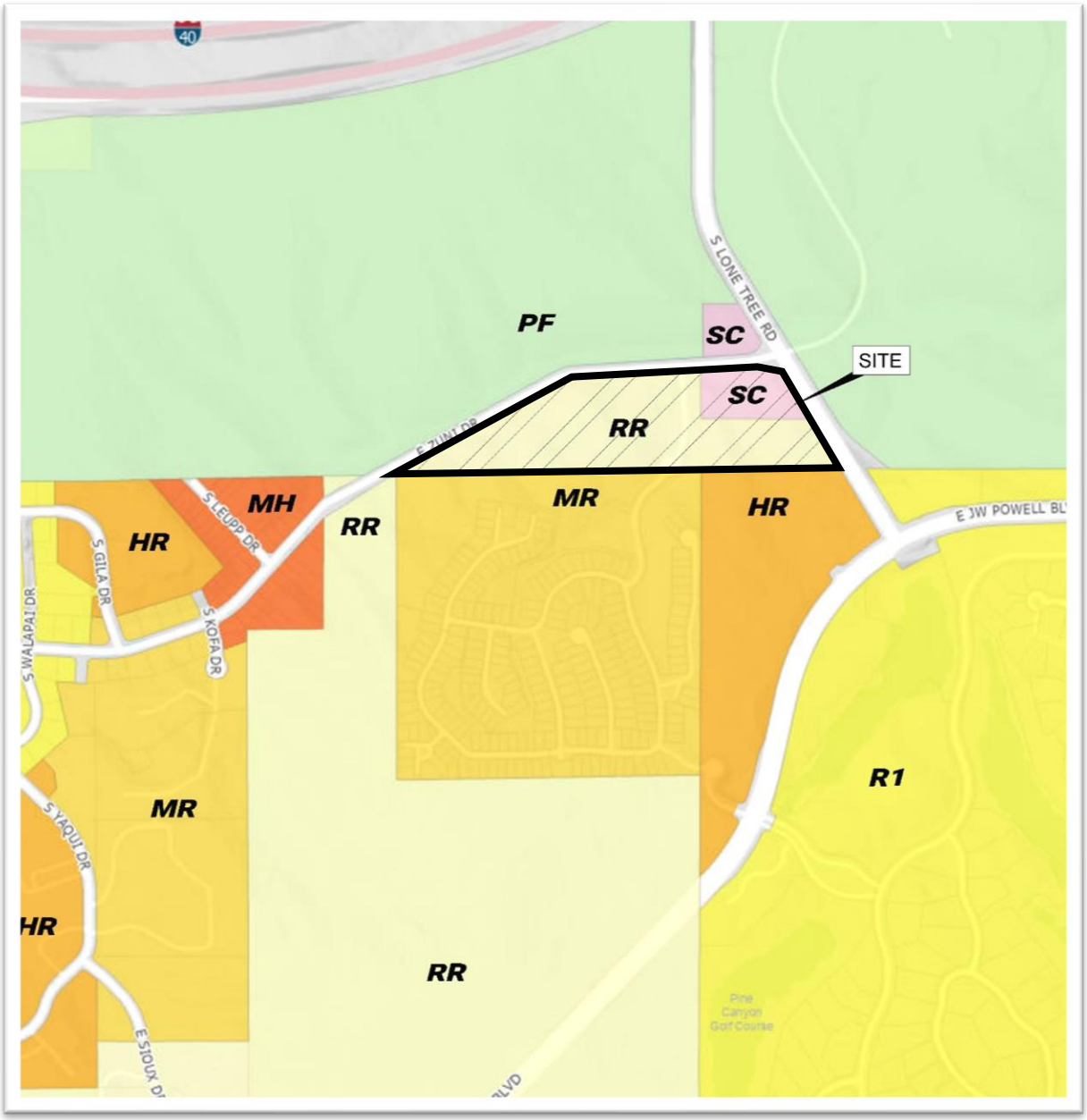
The project site is located on the southwest corner of E Zuni Drive and Lone Tree Road. The Site is bisected by Masonic Lane. To the south of the site is the Pinnacle Pines development consisting of condominium style townhomes. To the west of the site is the National Forest. To the north and the east of the site is vacant undeveloped land that has been purchased by the board of regents for Northern Arizona University.

The SITE will have four (4) access points. Two of the access points will be off Masonic Ln. There will be additional access from Zuni Dr and Lone Tree Rd. These access points will provide access for pedestrians, bicyclists, and motorists.

A.1 PROJECT LOCATION MAP



A.3 ZONING MAP



A.3 PRESENTATION BOARDS

- Meeting 10/17/2024 & 11/21/2024

ViewPoint Engineering
FIRM No. F-23395
viewpointengineering.com
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

ZUNI DRIVE

MASONIC LANE

SWM BASIN

PRELIMINARY
NOT FOR CONSTRUCTION
THIS PLAN HAS BEEN PREPARED FOR GENERAL DISCUSSION ONLY AND IS BASED UPON LIMITED DUE DILIGENCE.

PINEHAVEN RESIDENTIAL DEVELOPMENT

COCOCINO COUNTY, ARIZONA
OCTOBER 2024

V:\WORK_22004 FLAGSTAFF 141_DRAWINGS\EXHIBITS\24-1009 22004 RENDER SITE || MARCT

ViewPoint Engineering
FIRM No. F-23395
viewpointengineering.com
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

PINEHAVEN RESIDENTIAL DEVELOPMENT

COCOCINO COUNTY, ARIZONA
OCTOBER 2024

PRELIMINARY
NOT FOR CONSTRUCTION
THIS PLAN HAS BEEN PREPARED FOR GENERAL DISCUSSION ONLY AND IS BASED UPON LIMITED DUE DILIGENCE.

V:\WORK_22004 FLAGSTAFF 141\DRAWINGS\EXHIBITS\24-1009 22004 RENDER SITE || MARCT

LEGEND

- PROPERTY BOUNDARY
- LEGAL RIGHT-OF-WAY
- ULTIMATE RIGHT-OF-WAY
- ROAD/RIGHT-OF-WAY CENTER LINE
- EASEMENT LINE
- 100YR — APPROX. 100YR FEMA/RURAL FLOODPLAIN ZONE AE BOUNDARY
- FDWY — APPROX. FEMA FLOODWAY BOUNDARY
- FENCE LINE
- EDGE OF ASPHALT
- EDGE OF DIRT/GRAVEL
- S — S — EX. SANITARY SEWER MAIN
- ST — ST — EX STORM PIPE
- E — E — EX. UNDERGROUND ELECTRIC SERVICE LINE
- OH — OH — EX. OVERHEAD WIRE
- G — G — EX. GAS SERVICE MAIN
- T — T — EX TELEPHONE/COMMUNICATIONS LINE
- W — W — EX WATER MAIN
- 6985 — EX CONTOUR ELEVATION LINE
- 8"w — PROP 8" WATER MAIN
- 8"w — PROP 8" WATER MAIN
- L — PROP SAN LATERAL
- SS — PROP SAN SEWER MAIN
- 8"w — PROPERTY MONUMENT FOUND

SYMBOL LEGEND

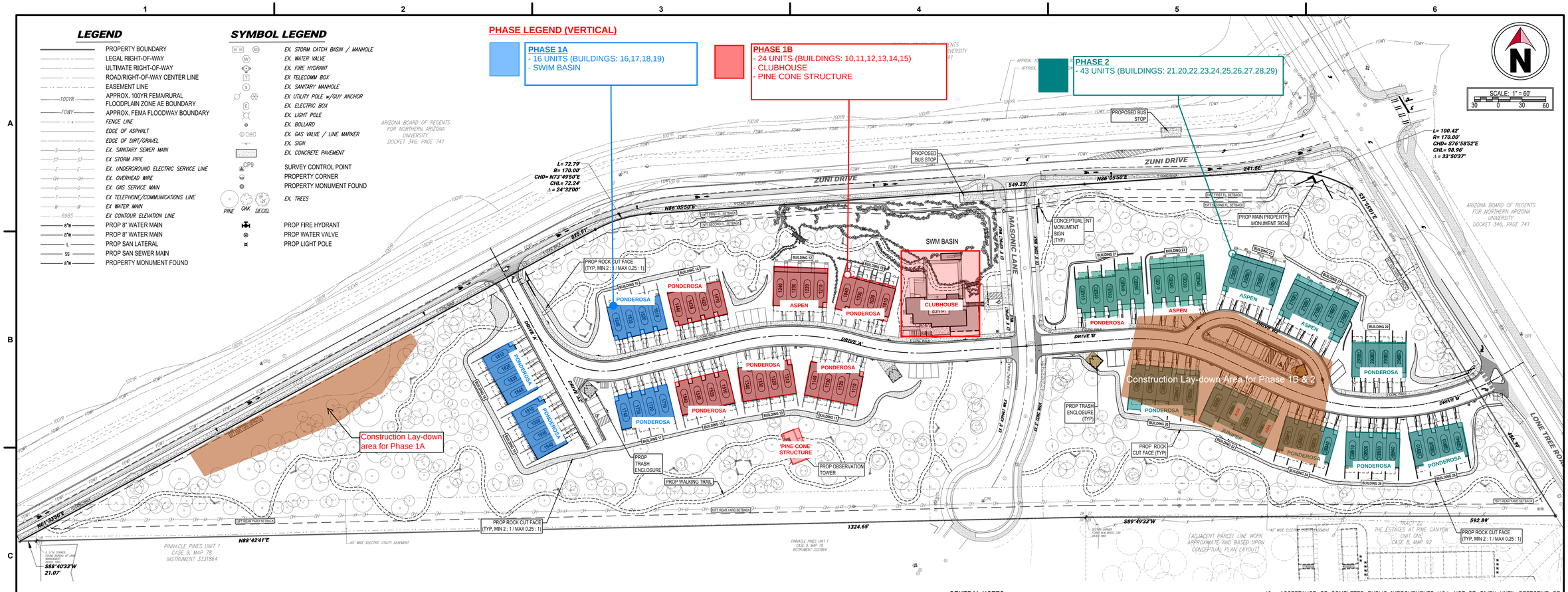
- EX. STORM CATCH BASIN / MANHOLE
- EX. WATER VALVE
- EX. FIRE HYDRANT
- EX TELECOMM BOX
- EX. SANITARY MANHOLE
- EX UTILITY POLE w/GUY ANCHOR
- EX. ELECTRIC BOX
- EX. LIGHT POLE
- EX. BOLLARD
- EX. GAS VALVE / LINE MARKER
- EX. SIGN
- EX. CONCRETE PAVEMENT
- CP9 — SURVEY CONTROL POINT
- PROPERTY CORNER
- PROPERTY MONUMENT FOUND
- PINE / OAK / DECID. — EX. TREES
- PROP FIRE HYDRANT
- PROP WATER VALVE
- PROP LIGHT POLE

PHASE LEGEND (VERTICAL)

PHASE 1A
- 16 UNITS (BUILDINGS: 16,17,18,19)
- SWIM BASIN

PHASE 1B
- 24 UNITS (BUILDINGS: 10,11,12,13,14,15)
- CLUBHOUSE
- PINE CONE STRUCTURE

PHASE 2
- 43 UNITS (BUILDINGS: 21,20,22,23,24,25,26,27,28,29)

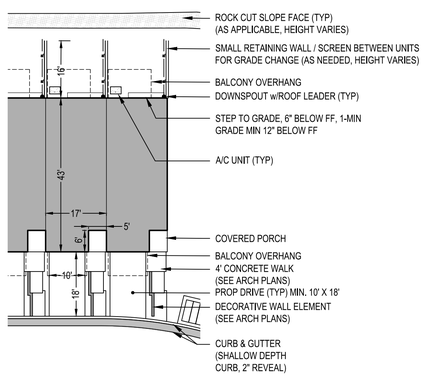


GENERAL NOTES

1. FIRE HYDRANTS, STREET LIGHTS AND LANDSCAPING ALONG ZUNI & LONE TREE FRONTAGES WILL BE PROVIDED IN ACCORDANCE WITH CITY OF FLAGSTAFF ENGINEERING STANDARDS.
2. ALL PROPOSED DRIVE AISLES WILL BE PROVIDED WITH RED CURBING AND NO PARKING/FIRE LANE SIGNAGE.

CITY OF FLAGSTAFF - GENERAL NOTES

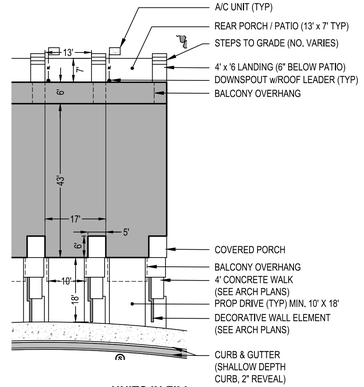
1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER IS FOR A ONE (1) YEAR PERIOD, SUBSEQUENT TO THE DATE OF APPROVAL. IF CONSTRUCTION WORK IS NOT STARTED WITHIN THE ONE (1) YEAR PERIOD, OR HAS BEEN DISCONTINUED FOR ANY REASON FOR LONGER THAN ONE (1) YEAR, THE PLANS SHALL BE RESUBMITTED FOR REVIEW AND RE-APPROVAL.
2. PLAN REVIEW BY THE CITY DOES NOT EXTEND TO MATERIAL QUANTITIES SHOWN ON THE PLANS.
3. A PUBLIC WORKS PERMIT, ISSUED BY THE CITY, IS REQUIRED FOR ALL WORK IN CITY RIGHTS-OF-WAY OR EASEMENTS AND FOR CONSTRUCTION OF ANY IMPROVEMENTS INTENDED TO BECOME PUBLIC PROPERTY.
4. THE CITY SHALL BE NOTIFIED TWENTY-FOUR (24) HOURS PRIOR TO BEGINNING DIFFERENT PHASES OF CONSTRUCTION SO THAT CITY INSPECTORS MAY BE SCHEDULED.
5. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH TITLE 13, ENGINEERING DESIGN STANDARDS AND SPECIFICATIONS FOR NEW INFRASTRUCTURE, CURRENT "MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION," THE CITY OF FLAGSTAFF STORMWATER DESIGN MANUAL, AND WITH GENERALLY ACCEPTED ENGINEERING DESIGN AND CONSTRUCTION PRACTICE. ALL WORK AND MATERIALS, WHICH DO NOT CONFORM TO THE STANDARDS AND SPECIFICATIONS, ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING CHAPTER 13-21, WHICH MAKES MINOR MODIFICATIONS TO CERTAIN MAG SPECIFICATIONS AND DETAILS.
6. ANY WORK PERFORMED WITHOUT THE KNOWLEDGE AND APPROVAL OF THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
7. THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE MAY SUSPEND THE WORK BY WRITTEN NOTICE WHEN, IN HIS JUDGMENT, PROGRESS IS UNSATISFACTORY, WORK BEING DONE IS UNAUTHORIZED OR DEFECTIVE, WEATHER CONDITIONS ARE UNSUITABLE, OR THERE IS DANGER TO THE PUBLIC HEALTH OR SAFETY.
8. THE CITY ENGINEER MAY ORDER ANY OR ALL MATERIALS USED IN THE WORK TO BE TESTED ACCORDING TO THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) AND THE AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARDS. THE CONTRACTOR SHALL, AT HIS EXPENSE, SUPPLY ALL SAMPLES REQUIRED FOR TESTING.
9. ACCESS THAT MEETS SECTION 13-13-004-0001, FIRE ACCESS, SHALL BE IN PLACE AND APPROVED BEFORE AND AT ALL TIMES DURING ON-SITE COMBUSTIBLE CONSTRUCTION AND/OR PRIOR TO ISSUANCE OF BUILDING PERMITS IN NEW SUBDIVISIONS. FIRE DEPARTMENT AND ENGINEERING SECTION APPROVAL IS REQUIRED FOR OBSTRUCTION OF ACCESS OR WATER SYSTEM SHUTDOWN.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE STREETS AND OF PARTIALLY COMPLETED PORTIONS OF THE WORK UNTIL FINAL ACCEPTANCE OF THE WORK. THE CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER FOR APPROVAL A CONSTRUCTION SCHEDULE FOR ANY STREETS REQUIRED TO BE CLOSED OR PARTIALLY CLOSED FOR THE CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL REOPEN THE STREETS NO LATER THAN THE OPENING DATE SHOWN ON THE CONSTRUCTION SCHEDULE OR UPON ORDER OF THE CITY ENGINEER. THE REGULATION AND CONTROL OF CONSTRUCTION TRAFFIC SHALL BE AS DIRECTED BY THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
11. APPROVAL OF A PORTION OF THE WORK IN PROGRESS DOES NOT GUARANTEE ITS FINAL ACCEPTANCE. TESTING AND EVALUATION MAY CONTINUE UNTIL WRITTEN FINAL ACCEPTANCE OF A COMPLETE WORKABLE UNIT. ANY DEFECTS WHICH APPEAR IN THE WORK WITHIN ONE (1) YEAR FROM THE DATE OF ACCEPTANCE AND WHICH ARE DUE TO IMPROPER WORKMANSHIP OR INFERIOR MATERIALS SUPPLIED SHALL BE CORRECTED BY OR AT THE EXPENSE OF THE OWNER/DEVELOPER OR THE CONTRACTOR.
12. ACCEPTANCE OF COMPLETED PUBLIC IMPROVEMENTS WILL NOT BE GIVEN UNTIL DEFECTIVE OR UNAUTHORIZED WORK IS REMOVED, AND FINAL CLEAN-UP IS COMPLETE.
13. LOCATION OF UNDERGROUND UTILITIES BEFORE WORK IS BEGUN IS TO BE ACCOMPLISHED IN ACCORDANCE WITH A.R.S. SECTION 40-360.22.
14. IF WORK IS DONE ON PRIVATE PROPERTY IN RELATION TO A PROJECT CONSTRUCTED UNDER THESE STANDARDS, THE CONTRACTOR WILL PROVIDE THE CITY WITH WRITTEN AUTHORIZATION FROM THE PROPERTY OWNER TO DO SO.
15. THE ESTABLISHMENT AND USE OF TEMPORARY CONSTRUCTION YARDS SHALL CONFORM TO THE CURRENT CITY ZONING CODE STANDARDS FOR TEMPORARY USES.
16. ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE CITY CODES AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED CITY APPROVALS AND PERMITS AS DEEMED NECESSARY BY THE CITY TO DISPOSE OF EXCAVATED MATERIAL.
17. ALL CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER AND PERFORMED UNDER THE DIRECT SUPERVISION OF A REGISTERED LAND SURVEYOR OR CIVIL ENGINEER.
18. ALL TRAFFIC SIGN SHEETING SHALL BE TYPE VIII AS DESIGNED BY ASTM D4956-07E1 STANDARD SPECIFICATIONS FOR RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL, UNLESS SPECIFIED OTHERWISE ON THE CONSTRUCTION PLANS.
19. WHEN THE CONSTRUCTION PLANS SPECIFY GRAFFITI CONTROL ON BRIDGES OR OTHER STRUCTURES, THE CONTRACTOR SHALL SEAL THE STRUCTURE FIRST USING MONOCHEM AQUASEAL ME 12 AND THEN APPLY MONOCHEM PERMASHIELD, SACRIFICIAL GRAFFITI CONTROL SYSTEM (OR APPROVED EQUAL).
20. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED AND RESEEDED IN ACCORDANCE WITH CHAPTER 13-17. IN THE EVENT THAT THE CONSTRUCTION ACTIVITY DISTURBS MORE THAN ONE (1) ACRE, A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE PREPARED IN ORDER TO OBTAIN A CONSTRUCTION GENERAL PERMIT FROM ADEQ. (ORD. 2017-22, REP&REEN, 07/05/2017)



UNITS IN CUT
(3-STORY / SLAB ON GRADE)

PONDEROSA UNIT

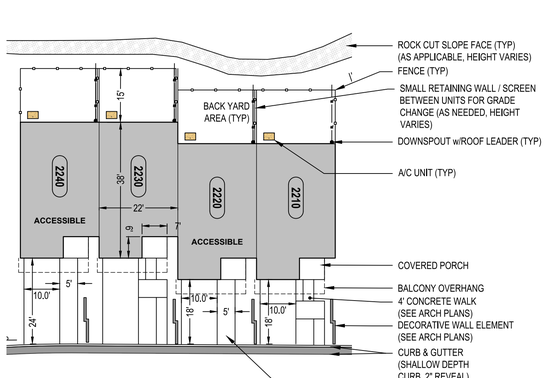
NOT TO SCALE



UNITS IN FILL
(2-STORY FRONT / 3-STORY REAR)

ASPEN UNIT

NOT TO SCALE



UNITS IN CUT
(2-STORY / SLAB ON GRADE)

JUNIPER UNIT

NOT TO SCALE

BUILDING SUMMARY

BUILDING MODEL	UNIT TYPE	Qty	FLOORS	TOTAL FLOOR AREA (SF)	BEDROOMS	BUILDING NUMBER
PONDEROSA	INTERIOR UNIT	32	3	2,226	3	10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 24, 26, 28, 29
	END UNIT	30	3	2,250	3	
ASPEN	INTERIOR UNIT	9	3	2,180	2	12, 23, 25, 27
	END UNIT	8	3	2,231	3	
JUNIPER	INTERIOR UNIT	2	2	1,565	3	22
	END UNIT [ACCESSIBLE]	2	2	1,585	4	
	TOTAL	83				
CLUBHOUSE			2	5,100	N/A	N/A

PARKING REQUIREMENTS

USE	REQUIREMENT [1]	PARKING REQUIRED	
		UNITS	PARKING
SINGLE-FAMILY (ATTACHED)			
STANDARD UNITS (<= 4 BEDROOMS)	2 SPACES PER UNIT	73	146
AFFORDABLE TYPE UNITS [2]	1.5 SPACES PER UNIT	10	15
GUEST PARKING	0.25 SPACES PER UNIT	83	20.8
TOTAL PARKING REQUIRED		TOTAL	181.8
		USE	182
PARKING PROVIDED			
GARAGE SPACE (1 PER UNIT, EXCL ADA UNITS)		81	
DRIVEWAY SPACE		83	
ADDITIONAL SPACES		22	
ADA SITE SPACES		3	
TOTAL PARKING PROVIDED		189	
REQUIRED BICYCLE PARKING			
5% OF TOTAL REQUIRED PARKING SPACES		182	9.1
TOTAL BICYCLE PARKING REQUIRED		USE	10
BICYCLE PARKING PROVIDED			12

1) PER TABLE 10-50.80.040.A

2) THE PROJECT HAS PROVIDED A FEE IN LIEU FOR AFFORDABLE HOUSING CREDITS FOR THE EQUIVALENT OF 10 SITE UNITS.

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA 811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 3/20/24 REGISTERED ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: **PINEHAVEN**
2625 SITE NATIONAL LAND DEVELOPMENT
2625 N MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **SITE PLAN REVIEW**
OVERALL SITE PLAN

PROJECT NO. **22004**
DATE **MAY 30, 2023**
SHEET ID **C100**
REV **3**

V:\WORK\22004 FLAGSTAFF 1\PLANNING\CIVIL DWG\22004 SITE PLAN

- /

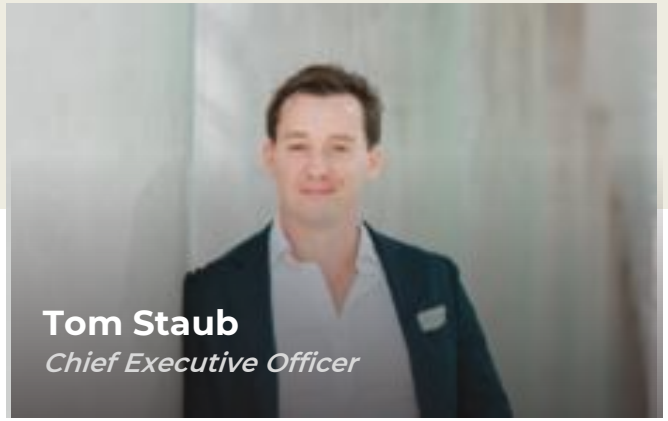
A.4 POWERPOINT PRESENTATIONS

- 10/17/2024

pine haven
pine haven
RedOak
Development
Group

Executive Expertise

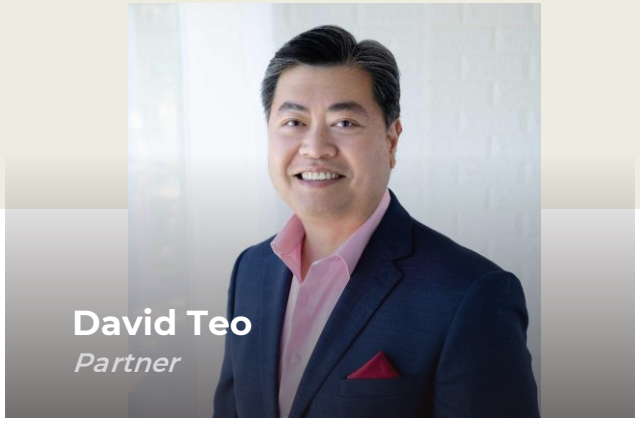
Red Oak Development Group



As CEO, Tom oversees the underwriting of projects, financial planning, debt and equity strategy, company growth and mission, and is focused on the viability of projects, partnerships, and land use strategy.

Tom oversees approx. $749M in projects and has been in real estate since 2010. Previously, he spent 10 years in a combination of Fortune 10 companies and silicon valley SaaS startups, helping small companies scale to unicorn status in annual revenue. Tom is a serial entrepreneur with a proven track record of execution

Tom is also the founder of the TEACH foundation, set to deliver economic advancement thru homeownership for our beloved Teachers



David Teo, as a Partner at Red Oak Development Group, is instrumental in underwriting projects, establishing strategic partnerships, and overseeing legal and tax compliance. He meticulously evaluates the financial viability of each project, ensuring alignment with market trends and minimizing risks. David leads strategic alliance focus, particularly with commercial and medical developers, to enhance the functionality and appeal of Red Oak's residential communities by integrating essential services like healthcare and retail.

He heads the legal review processes to ensure compliance with regulations and oversees entity planning to optimize operational efficiency. Collaborating with third-party consultants, David directs tax planning to maximize financial efficiency and safeguard investor interests.

Mike Miller oversees builder partnerships and negotiations, commercial partnership executions, CCRs and architectural standard compliance, HOA formation and execution, construction partnerships and negotiations and land acquisition feasibility & underwriting.

Prior to Red Oak, Mike was the Senior Vice President of the Land Division at the Signorelli Company one of Houston's largest land development companies leading the Land Division overseeing the Master Planned Community division playing a pivotal role in underwriting, envisioning, and launching two major projects: Austin Point, a 4,700-acre community, and Firefly, a 3,000-acre community. Mike was instrumental in the financial modeling of the communities, exploring investor relations opportunities, and leading investor discussions.

The Lead Design Team

TBG

Rob Parsons
Senior Associate

Wes Gentry
Senior Associate

Robert Acuña Pilgrim
Principal / Director of Planning

ViewPoint Land Solutions

Luke Caraway
President

Will Buzzelli
Director of Engineering & Design

Mark Lind
Architect & Director of Vertical Planning & Design

tst ink. Architectural Plan Review, LLC

Teri Slavik -Tsuyuki
Founder & Principal

A'Lisa Ozment
Owner and CEO Architectural Plan Review

TBG Notable Projects	
Easton Park	Pecan Square
The Groves	Austin Point
Wolf Ranch	Harvest

ViewPoint Land Solutions

- ViewPoint Land Realty
- ViewPoint Engineering
- ViewPoint Design Studio

RedOak Development Group

The Red Oak Way

- Interconnected Communities: Red Oak designs neighborhoods emphasizing walkability and accessibility, fostering dynamic spaces where residents can live, work, and play without needing to leave the community.
- Commitment to Wellness: Through the integration of parks, medical campuses, and wellness-oriented amenities, Red Oak prioritizes creating environments that promote health and well-being for residents.
- Unique Typology & Smart Design: Every development reflects Red Oak's commitment to distinct architecture, fiber-optic-enabled "smart" communities, and innovative housing models, ensuring each project stands apart.
- Creating Places with Purpose: Red Oak goes beyond development by crafting places that encourage connection and interaction, including micro-retail spaces, central parks, and sustainable design elements.
- Long-Term Legacy Focus: All developments align with the company's vision to leave a lasting impact, building thriving, sustainable communities with a forward-looking approach to education, infrastructure, and community engagement
- TEACH Initiative: The T.E.A.C.H. foundation (Teachers' Economic Advancement through Community Homeownership) provides affordable housing to educators by donating land and offering profit credits towards home purchases.

pine haven

"At Pine Haven, we've designed a community where architecture and nature coexist in harmony. Thoughtfully designed energy efficient homes that do not outshine the beauty of the Coconino Forest, but rather keep the focus on the natural beauty of the land, while a wellness-centered amenity hub invites residents to embrace a lifestyle of balance, health, and connection to the land through the extensive trail system"

Pinehaven: Project Overview

Aerial View

Architectural Design Inspiration

1. Public Trail System
2. Phase 1: 8-16 Units
3. Phase 2: 24-30 Units & Amenity Center
4. Pine Cove Park
5. Water Feature
6. Amenity Center, Cold Plunges, Saunas, Japanese Meditation Room
7. Phase 3: 43 Units

Phasing Plan: Pine Haven will be developed in multiple phases:

- Phase 1 includes 8-16 units
- Phase 2 will introduce 24-30 units, and the amenity center.
- Phase 3 will add 43 units, completing the project entirely

Amenities: Pine Haven's amenities are centered around promoting wellness and relaxation:

- A state-of-the-art amenity center includes features like cold plunges, saunas, and a Japanese meditation room, offering residents a wellness retreat in the heart of the community.
- Outdoor amenities include Pine Cove Park and an extensive public trail system, allowing residents to immerse themselves in the surrounding natural beauty.

Design Principles: Pine Haven's design philosophy is rooted in creating harmony between architecture and the natural environment:

- The community offers energy-efficient, sustainable homes that blend seamlessly into the surrounding forest, with architecture inspired by the simplicity and elegance of nature.
- Open space preservation is a priority, ensuring vast areas remain untouched, offering a sanctuary-like experience.
- The integration of thoughtful design and a strong focus on wellness sets Pine Haven apart as a community that nurtures both its residents and the environment.

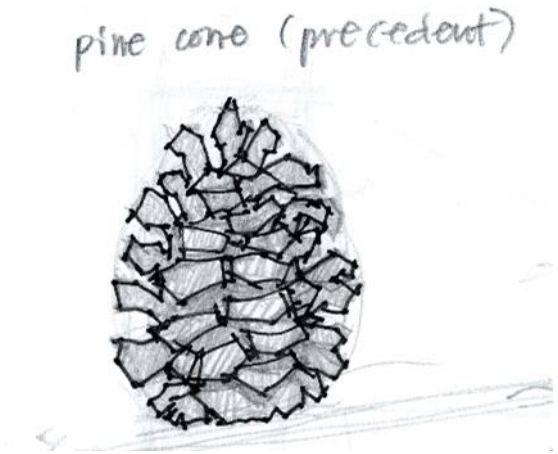
RedOak Development Group

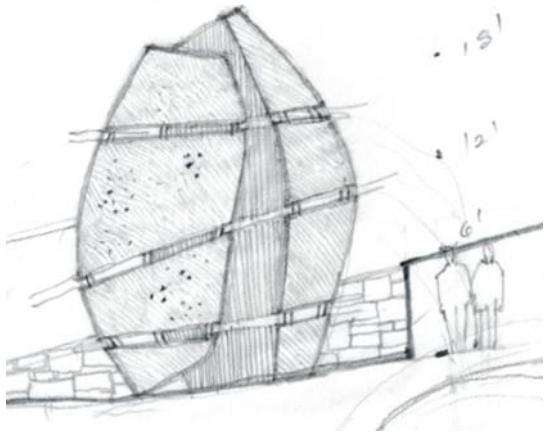
RedOak Development Group

Pine Haven

- Pine Haven Living draws inspiration from the timeless beauty of the Coconino Forest, creating a sanctuary where modern living harmonizes with the rhythms of nature.
- Architectural design embraces simplicity and elegance, with low-sloped roofs, natural stone accents, and earth-toned exteriors that merge seamlessly with the forest, allowing nature to be the true centerpiece.
- The community's layout prioritizes the preservation of open spaces, leaving vast stretches of the land untouched, offering residents a deep connection to the wilderness through trails, green spaces, and serene outdoor vistas.
- Sustainability is woven into every aspect of Pine Haven, with energy-efficient, fire-safe homes that honor and protect the forest, ensuring future generations can enjoy its beauty.
- At the heart of Pine Haven is the community clubhouse a gathering place designed to nurture the spirit and foster connections, with spaces dedicated to wellness, reflection and social engagement.
- Pine Haven is more than just a place to live; it is a lifestyle rooted in balance, where the tranquility of nature and the comforts of contemporary living coalesce into a sanctuary of peace and sustainability.

Pine Cone Park





RedOak Development Group

Home Types & Exterior Inspiration

Stone Elements

The use of stone on both the exterior and interior of the homes helps anchor the buildings to the earth, symbolizing a strong connection to the natural landscape and aligning with Pine Haven's philosophy of creating a seamless blend between architecture and the surrounding environment.

Contrasting Accents

The rust-colored metal siding provides a natural yet bold contrast to the green of the pines, creating visual interest while staying rooted in the organic, earthy tones of the forest. This thoughtful contrast reinforces the design philosophy of elegance and simplicity.

Subtle Integration

Dark-painted siding ensures that the homes harmonize with the forest, allowing the architecture to blend into the landscape rather than dominate it, reflecting Pine Haven's core principle of allowing nature to take center stage.

Interior Warmth and Natural Light

The strategic placement of large windows invites ample natural light into the homes and provides breathtaking views of the forest, continuing Pine Haven's goal of fostering a living experience that embraces the beauty and serenity of nature.

Architectural Design Inspiration Interior

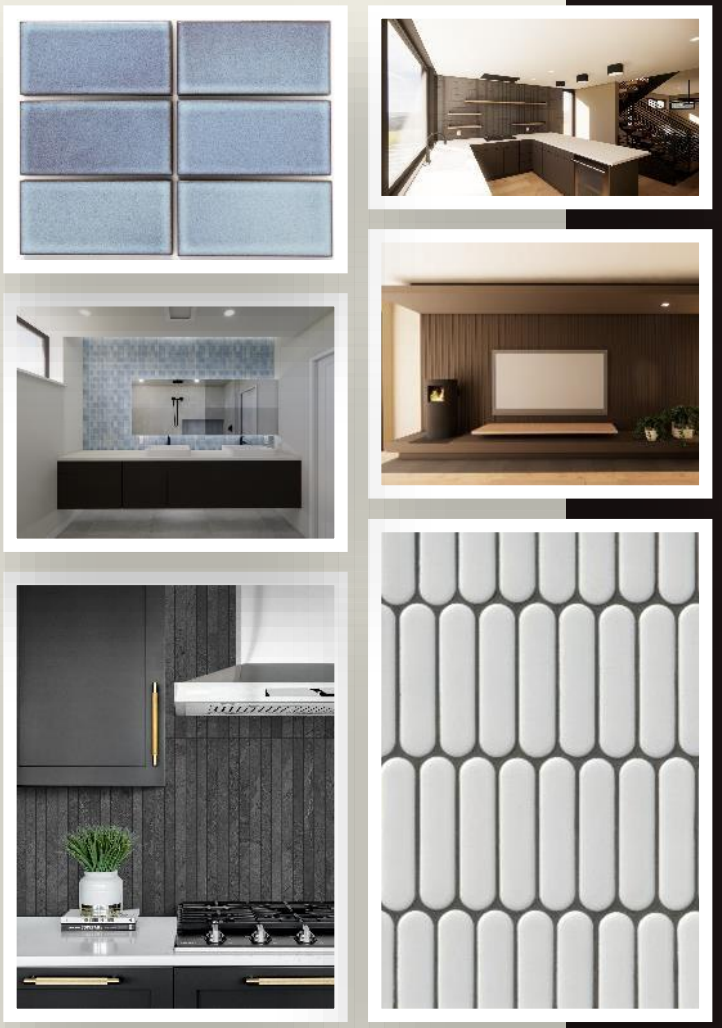
The interior design inspiration of Pine Haven connects with the natural landscape of Flagstaff, drawing from the surrounding trees and mountains.

Nature-Inspired Color Palette: The interior design reflects the surrounding environment with a color palette of greens and blues, bringing the calming and serene essence of the Coconino Forest indoors, in line with the community's emphasis on harmony with nature.

Warmth through Natural Materials: The use of wood flooring adds warmth to the living spaces, echoing the organic textures found in the forest and supporting Pine Haven's vision of creating a natural, welcoming atmosphere that feels grounded in its environment.

Maximizing Natural Light: Generous glazing on both the front and rear sides of the homes allows natural light to flood the spaces, fostering a strong connection between indoor living and the forested surroundings, emphasizing Pine Haven's philosophy of blending modern comfort with nature.

Anchoring to the Landscape: The interior design complements the exterior's natural stone elements, creating a seamless transition from the rugged beauty of the outdoors to the refined yet earthy aesthetic within the homes, staying true to the project's ethos of simplicity and elegance.

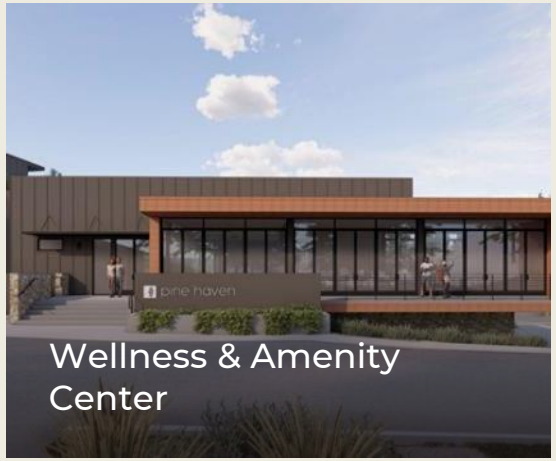


RedOak Development Group

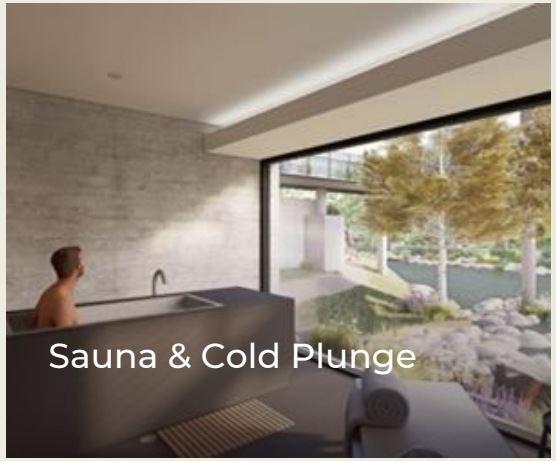
Above & Beyond - Amenities

Pine Cone Park

Event Center



Wellness & Amenity Center


Sauna & Cold Plunge

Wellness-Centered Amenities

Pine Haven's amenity center is designed with a strong focus on wellness, featuring cold plunges, saunas, and a Japanese meditation room. These spaces provide residents with opportunities for relaxation, health, and self-care, reinforcing the community's emphasis on balancing modern living with well-being.

Extensive Trail System

The public trail system is a central part of Pine Haven's design, offering residents direct access to nature and encouraging outdoor activities like walking, hiking, and reflecting in the serene beauty of the forest. This trail system preserves the community's connection to the natural landscape while fostering an active, health-conscious lifestyle.

Pine Cone Park

Pine Cone Park serves as a key communal space, integrating natural surroundings into the heart of the community. This park allows for gatherings, recreation, and quiet moments, enhancing residents' connection to the environment while maintaining a sense of community and shared space.

Integration of Nature and Wellness

By embedding nature into the daily living experience through amenities and green spaces, Pine Haven maintains a deep connection to the surrounding forest. This integration of natural beauty with wellness-focused design helps create a living environment where residents can enjoy the peace and balance that nature provides while benefiting from the comforts of modern life.

RedOak Development Group

Promoting Natural Resources

Challenging Topography

The unique topography of the site, while difficult to work with, ultimately became an opportunity; offering stunning views and natural light that were intentionally incorporated into the design of the homes. The elevation changes provided opportunities to maximize scenic vistas including Pine Cove Park being situated at a higher elevation

Rocky Soil as a Design Feature

The rocky soil, which posed initial challenges for construction, was creatively transformed into a landscape feature near the amenity center. The integration of natural stone into the landscape design allowed us to turn this obstacle into an aesthetic highlight, enhancing the organic beauty of the community.

Reducing Light Pollution

To preserve the natural nighttime environment and maintain the serene ambiance of the forest, we adopted dark sky ordinances. By minimizing artificial light pollution, Pine Haven aligns with its mission to create a community that respects and harmonizes with the natural environment.

Minimizing Environmental Impact

Throughout the development process, we adhered to strict environmental codes to limit the impact on the surrounding forest. Aligning with city regulations, we optimized the project while ensuring that environmental considerations were at the forefront of our design and planning, preserving the integrity and beauty of the natural landscape.

Preserving the biggest trees on the site

We are preserving the towering pines along the southern border, which, combined with the way the homes are carefully nestled into the natural slopes, creates a natural buffer that enhances privacy while maintaining uninterrupted views for residents to the south Disturbance is less than 40% much lower than a typical development.

Responsible Development

Traffic

- Drastically improving other modes of transportation- cycling, walking, bus transit
- Sidewalks across both Zuni and Lone Tree frontage and internal trails
- Bike Lanes across both Zuni (widening) and Lone Tree frontage
- Constructing two bus stations, one on each side of Zuni
- Providing improved connectivity to Pinehaven and Pinnacle
- New Driveways on Zuni and Lone Tree
- Dedicating ROW to facilitate future roadway improvements

Environmental

- Units at 6.18 vs 6.33 at Pinnacle Pines (lower density)
- **Disturbance of entire site below 40%, 20% below typical**
- Preserving the biggest trees on the site
- Buffer from Zuni, (less visibility for neighbors)
- Complied with city code

Public Park Access

- Pine Cone Park will be accessible to public (this is not a city requirement)
- Dog park
- Extensive trail system
- Sidewalk connection to Pinnacle Pines and masonic creating a walkable loop network for both Pine Haven and Pinnacle Pines

Dark Sky Ordinance

Strict HOA Guidelines

RedOak Development Group

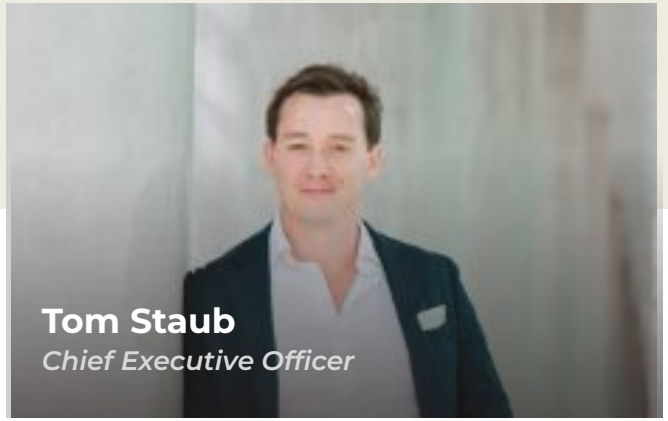
- 11/21/2024

pine haven

RedOak Development Group

Executive Expertise

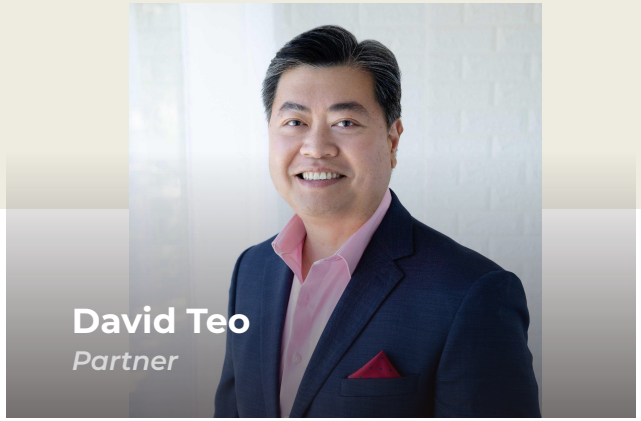
Red Oak Development Group



As CEO, Tom oversees the underwriting of projects, financial planning, debt and equity strategy, company growth and mission, and is focused on the viability of projects, partnerships, and land use strategy.

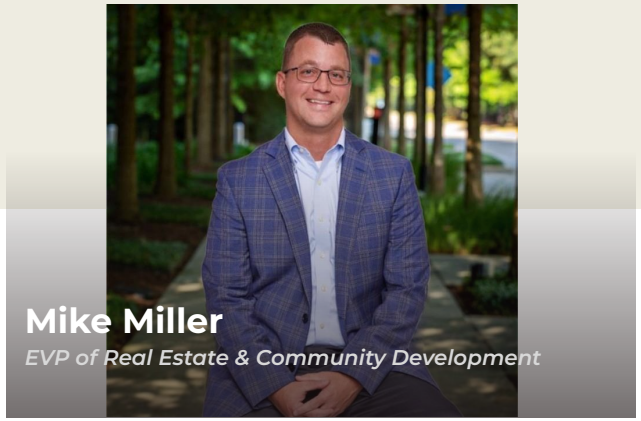
Tom oversees approx. $749M in projects and has been in real estate since 2010. Previously, he spent 10 years in a combination of Fortune 10 companies and silicon valley SaaS startups, helping small companies scale to unicorn status in annual revenue. Tom is a serial entrepreneur with a proven track record of execution

Tom is also the founder of the TEACH foundation, set to deliver economic advancement thru homeownership for our beloved Teachers



David Teo, as a Partner at Red Oak Development Group, is instrumental in underwriting projects, establishing strategic partnerships, and overseeing legal and tax compliance. He meticulously evaluates the financial viability of each project, ensuring alignment with market trends and minimizing risks. David leads strategic alliance focus, particularly with commercial and medical developers, to enhance the functionality and appeal of Red Oak's residential communities by integrating essential services like healthcare and retail.

He heads the legal review processes to ensure compliance with regulations and oversees entity planning to optimize operational efficiency. Collaborating with third-party consultants, David directs tax planning to maximize financial efficiency and safeguard investor interests.



Mike Miller oversees builder partnerships and negotiations, commercial partnership executions, CCRs and architectural standard compliance, HOA formation and execution, construction partnerships and negotiations and land acquisition feasibility & underwriting.

Prior to Red Oak, Mike was the Senior Vice President of the Land Division at the Signorelli Company one of Houston's largest land development companies leading the Land Division overseeing the Master Planned Community division playing a pivotal role in underwriting, envisioning, and launching two major projects: Austin Point, a 4,700-acre community, and Firefly, a 3,000-acre community. Mike was instrumental in the financial modeling of the communities, exploring investor relations opportunities, and leading investor discussions.

The Lead Design Team

TBG

Rob Parsons
Senior Associate

Wes Gentry
Senior Associate

Robert Acuña Pilgrim
Principal / Director of Planning

ViewPoint Land Solutions

Luke Caraway
President

Will Buzzelli
Director of Engineering & Design

Mark Lind
Architect & Director of Vertical Planning & Design

tst ink. Architectural Plan Review, LLC

Teri Slavik -Tsuyuki
Founder & Principal

A'Lisa Ozment
Owner and CEO Architectural Plan Review

TBG Notable Projects	
Easton Park	Pecan Square
The Groves	Austin Point
Wolf Ranch	Harvest

ViewPoint Land Solutions

- ViewPoint Land Realty
- ViewPoint Engineering
- ViewPoint Design Studio

RedOak Development Group

The Red Oak Way

- Interconnected Communities: Red Oak designs neighborhoods emphasizing walkability and accessibility, fostering dynamic spaces where residents can live, work, and play without needing to leave the community.
- Commitment to Wellness: Through the integration of parks, medical campuses, and wellness-oriented amenities, Red Oak prioritizes creating environments that promote health and well-being for residents.
- Unique Typology & Smart Design: Every development reflects Red Oak's commitment to distinct architecture, fiber-optic-enabled "smart" communities, and innovative housing models, ensuring each project stands apart.
- Creating Places with Purpose: Red Oak goes beyond development by crafting places that encourage connection and interaction, including micro-retail spaces, central parks, and sustainable design elements.
- Long-Term Legacy Focus: All developments align with the company's vision to leave a lasting impact, building thriving, sustainable communities with a forward-looking approach to education, infrastructure, and community engagement
- TEACH Initiative: The T.E.A.C.H. foundation (Teachers' Economic Advancement through Community Homeownership) provides affordable housing to educators by donating land and offering profit credits towards home purchases.

pine
haven
“At Pine Haven, we’ve designed a community where architecture and nature coexist in harmony. Thoughtfully designed energy efficient homes that do not outshine the beauty of the Coconino Forest, but rather keep the focus on the natural beauty of the land, while a wellness-centered amenity hub invites residents to embrace a lifestyle of balance, health, and connection to the land through the extensive trail system”

Areas of Concern from Last Meeting

Traffic

- Drastically improving other modes of transportation- cycling, walking, bus transit
- Sidewalks across both Zuni and Lone Tree frontage and internal trails
- Bike Lanes across both Zuni (widening) and Lone Tree frontage
- Constructing two bus stations, one on each side of Zuni
- Providing improved connectivity to Pinehaven and Pinnacle
- New Driveways on Zuni and Lone Tree
- Dedicating ROW to facilitate future roadway improvements

Snow Removal

- Reviewed site with Local Plow Company
- Developed Plan for Snow Pile Locations
- Will Provide 2” depth trigger for plowing
- Will provide additional Snow Areas with Signage and with HOA documents

Line of Sight

- Minimal interference
- Homes built below line of sight
- Variety of Tree Coverage to buffer

Firewise Plan

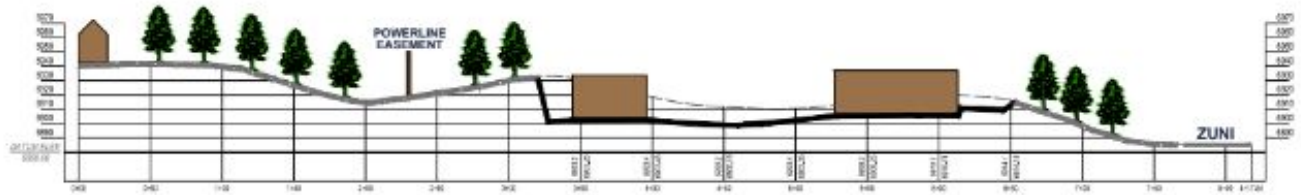
- Met with City Fire department to review standards
- City Building Code Incorporates most Firewise elements
- Working with Landscape architect to evaluate proposed plantings

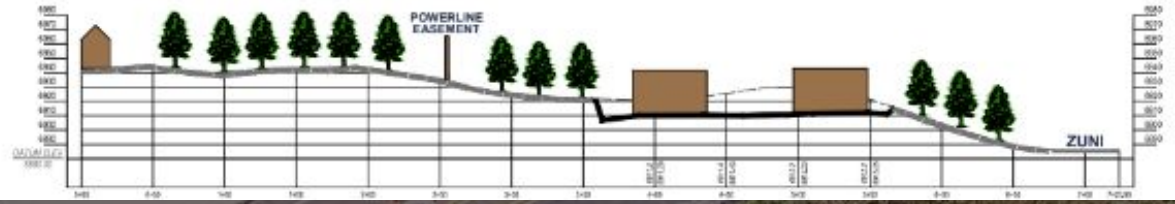
Timeshares & AirBnb

RedOak Development Group

Line of Sight 1

Line of Sight 2





Line of Sight 3

VIEW FROM MASONIC LANE + ZUNI DRIVE

Line of Sight 4

VIEW FROM CUL DE SAC ON MASONIC LANE

Line of Sight 5

VIEW FROM ENTRY AT ZUNI DRIVE

Snow Removal Plan

AirBnb & Fractional Ownership

Key Differences Between Timeshares and Fractional Ownership

Aspect	Timeshare	Fractional Ownership
Ownership	No ownership stake, only usage rights	Deeded ownership with equity stake
Usage	1-2 weeks per year	Proportional usage (3 months for 1/4 share)
Flexibility	Fixed or floating weeks; limited adjustments	Flexible scheduling based on owner agreements
Resale Value	Limited resale opportunities	Potential for market-value resale
Maintenance Costs	High annual fees per person	Shared among co-owners, part of HOA fees
Community Impact	Transient users; minimal engagement	Consistent owner presence; fosters community
User Type	Tends to be for the short term vacationer that seeks affordability above all else	Tends to be in the nicest parts of the world with access to 5 star amenities

Conclusion: Pinehaven will not be offering either Timeshare or Fractional Ownership purchase options

AirBnb Restrictions

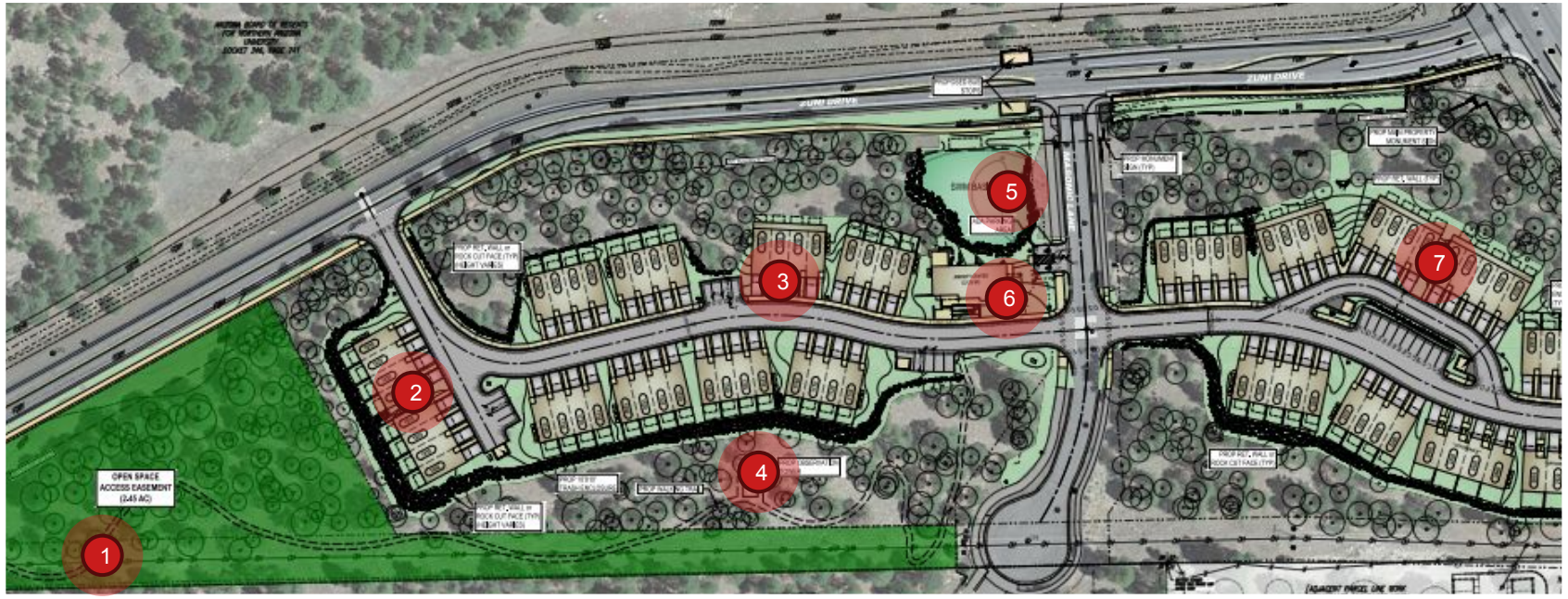
- Two-Strike Rule for Rental Violations
- 180-Day Rental Limit
- Guest Registration: Owners must register rental guests with the HOA to ensure transparency and accountability.
- Quiet Hours Compliance: Renters must adhere to strict quiet hours to minimize noise disruptions for neighbors.
- Parking Rules: Guests will be required to follow the community's parking guidelines to prevent overcrowding and maintain smooth traffic flow.
- Monitoring of Listings: The HOA will monitor Airbnb, VRBO, and other rental platforms for compliance with the 180-day limit. Unauthorized or excessive rentals will result in penalties such as fines or temporary suspension of rental privileges.

RedOak Development Group

Pinehaven: Project Overview

Aerial View

Architectural Design Inspiration



1. Public Trail System
2. Phase 1: 16 Units
3. Phase 2: 32 Units & Amenity Center
4. Pine Cove Park
5. Water Feature
6. Amenity Center, Cold Plunges, Saunas, Japanese Meditation Room
7. Phase 3: 35 Units

Phasing Plan: Pine Haven will be developed in multiple phases:

- Phase 1 includes 16 units
- Phase 2 will introduce 32 units, and the amenity center.
- Phase 3 will add 35 units, completing the project entirely

Amenities: Pine Haven's amenities are centered around promoting wellness and relaxation:

- A state-of-the-art amenity center includes features like cold plunges, saunas, and a Japanese meditation room, offering residents a wellness retreat in the heart of the community.
- Outdoor amenities include Pine Cove Park and an extensive public trail system, allowing residents to immerse themselves in the surrounding natural beauty.

Design Principles: Pine Haven's design philosophy is rooted in creating harmony between architecture and the natural environment:

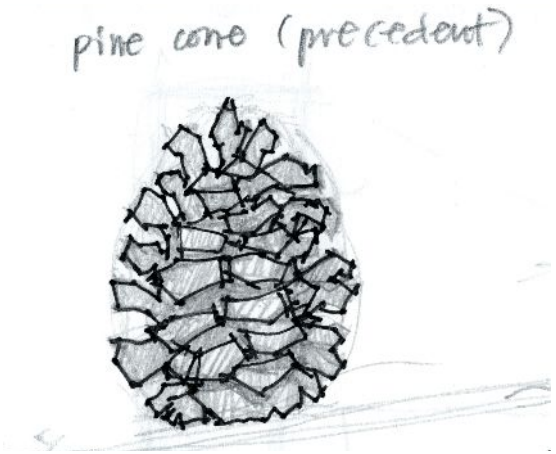
- The community offers energy-efficient, sustainable homes that blend seamlessly into the surrounding forest, with architecture inspired by the simplicity and elegance of nature.
- Open space preservation is a priority, ensuring vast areas remain untouched, offering a sanctuary-like experience.
- The integration of thoughtful design and a strong focus on wellness sets Pine Haven apart as a community that nurtures both its residents and the environment.

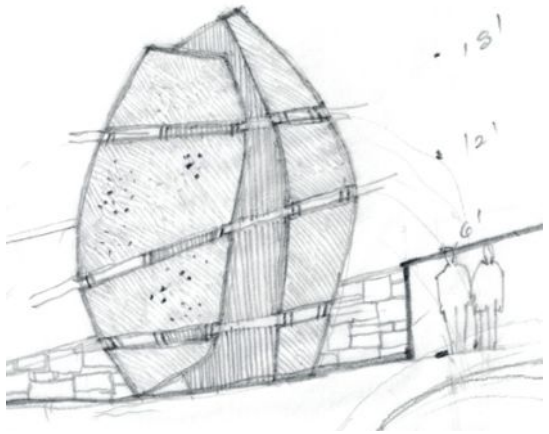
RedOak Development Group

Pine Haven

- Pine Haven Living draws inspiration from the timeless beauty of the Coconino Forest, creating a sanctuary where modern living harmonizes with the rhythms of nature.
- Architectural design embraces simplicity and elegance, with low-sloped roofs, natural stone accents, and earth-toned exteriors that merge seamlessly with the forest, allowing nature to be the true centerpiece.
- The community's layout prioritizes the preservation of open spaces, leaving vast stretches of the land untouched, offering residents a deep connection to the wilderness through trails, green spaces, and serene outdoor vistas.
- Sustainability is woven into every aspect of Pine Haven, with energy-efficient, fire-safe homes that honor and protect the forest, ensuring future generations can enjoy its beauty.
- At the heart of Pine Haven is the community clubhouse a gathering place designed to nurture the spirit and foster connections, with spaces dedicated to wellness, reflection and social engagement.
- Pine Haven is more than just a place to live; it is a lifestyle rooted in balance, where the tranquility of nature and the comforts of contemporary living coalesce into a sanctuary of peace and sustainability.

Pine Cone Park





RedOak Development Group

Home Types & Exterior Inspiration

Stone Elements

The use of stone on both the exterior and interior of the homes helps anchor the buildings to the earth, symbolizing a strong connection to the natural landscape and aligning with Pine Haven's philosophy of creating a seamless blend between architecture and the surrounding environment.

Contrasting Accents

The rust-colored metal siding provides a natural yet bold contrast to the green of the pines, creating visual interest while staying rooted in the organic, earthy tones of the forest. This thoughtful contrast reinforces the design philosophy of elegance and simplicity.

Subtle Integration

Dark-painted siding ensures that the homes harmonize with the forest, allowing the architecture to blend into the landscape rather than dominate it, reflecting Pine Haven's core principle of allowing nature to take center stage.

Interior Warmth and Natural Light

The strategic placement of large windows invites ample natural light into the homes and provides breathtaking views of the forest, continuing Pine Haven's goal of fostering a living experience that embraces the beauty and serenity of nature.

Architectural Design Inspiration Interior

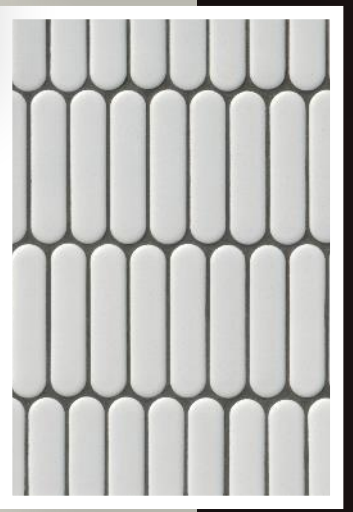
The interior design inspiration of Pine Haven connects with the natural landscape of Flagstaff, drawing from the surrounding trees and mountains.

Nature-Inspired Color Palette: The interior design reflects the surrounding environment with a color palette of greens and blues, bringing the calming and serene essence of the Coconino Forest indoors, in line with the community's emphasis on harmony with nature.

Warmth through Natural Materials: The use of wood flooring adds warmth to the living spaces, echoing the organic textures found in the forest and supporting Pine Haven's vision of creating a natural, welcoming atmosphere that feels grounded in its environment.

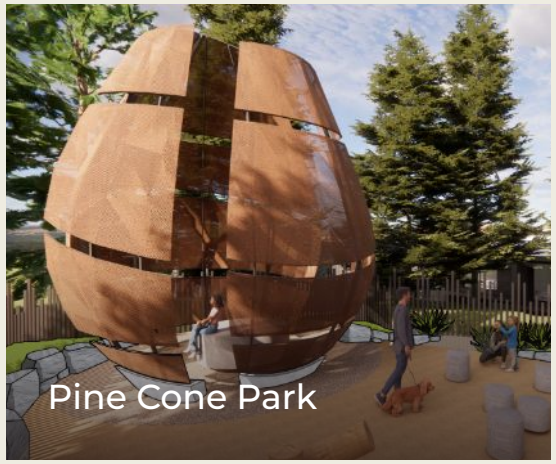
Maximizing Natural Light: Generous glazing on both the front and rear sides of the homes allows natural light to flood the spaces, fostering a strong connection between indoor living and the forested surroundings, emphasizing Pine Haven's philosophy of blending modern comfort with nature.

Anchoring to the Landscape: The interior design complements the exterior's natural stone elements, creating a seamless transition from the rugged beauty of the outdoors to the refined yet earthy aesthetic within the homes, staying true to the project's ethos of simplicity and elegance.



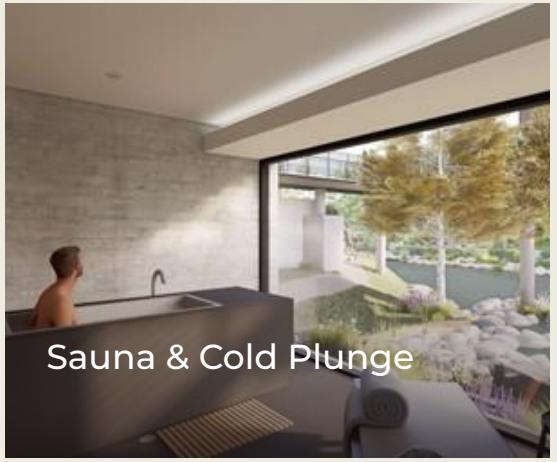
RedOak Development Group

Above & Beyond - Amenities


Pine Cone Park

Event Center

Wellness & Amenity Center


Sauna & Cold Plunge

Wellness-Centered Amenities

Pine Haven's amenity center is designed with a strong focus on wellness, featuring cold plunges, saunas, and a Japanese meditation room. These spaces provide residents with opportunities for relaxation, health, and self-care, reinforcing the community's emphasis on balancing modern living with well-being.

Extensive Trail System

The public trail system is a central part of Pine Haven's design, offering residents direct access to nature and encouraging outdoor activities like walking, hiking, and reflecting in the serene beauty of the forest. This trail system preserves the community's connection to the natural landscape while fostering an active, health-conscious lifestyle.

Pine Cone Park

Pine Cone Park serves as a key communal space, integrating natural surroundings into the heart of the community. This park allows for gatherings, recreation, and quiet moments, enhancing residents' connection to the environment while maintaining a sense of community and shared space.

Integration of Nature and Wellness

By embedding nature into the daily living experience through amenities and green spaces, Pine Haven maintains a deep connection to the surrounding forest. This integration of natural beauty with wellness-focused design helps create a living environment where residents can enjoy the peace and balance that nature provides while benefiting from the comforts of modern life.

Promoting Natural Resources

Challenging Topography

The unique topography of the site, while difficult to work with, ultimately became an opportunity; offering stunning views and natural light that were intentionally incorporated into the design of the homes. The elevation changes provided opportunities to maximize scenic vistas including Pine Cove Park being situated at a higher elevation

Rocky Soil as a Design Feature

The rocky soil, which posed initial challenges for construction, was creatively transformed into a landscape feature near the amenity center. The integration of natural stone into the landscape design allowed us to turn this obstacle into an aesthetic highlight, enhancing the organic beauty of the community.

Reducing Light Pollution

To preserve the natural nighttime environment and maintain the serene ambiance of the forest, we adopted dark sky ordinances. By minimizing artificial light pollution, Pine Haven aligns with its mission to create a community that respects and harmonizes with the natural environment.

Minimizing Environmental Impact

Throughout the development process, we adhered to strict environmental codes to limit the impact on the surrounding forest. Aligning with city regulations, we optimized the project while ensuring that environmental considerations were at the forefront of our design and planning, preserving the integrity and beauty of the natural landscape.

Preserving the biggest trees on the site

We are preserving the towering pines along the southern border, which, combined with the way the homes are carefully nestled into the natural slopes, creates a natural buffer that enhances privacy while maintaining uninterrupted views for residents to the south Disturbance is less than 40% much lower than a typical development.

Responsible Development

Traffic

- Drastically improving other modes of transportation- cycling, walking, bus transit
- Sidewalks across both Zuni and Lone Tree frontage and internal trails
- Bike Lanes across both Zuni (widening) and Lone Tree frontage
- Constructing two bus stations, one on each side of Zuni
- Providing improved connectivity to Pinehaven and Pinnacle
- New Driveways on Zuni and Lone Tree
- Dedicating ROW to facilitate future roadway improvements

Environmental

- Units at 6.18 vs 6.33 at Pinnacle Pines (lower density)
- **Disturbance of entire site below 40%, 20% below typical**
- Preserving the biggest trees on the site
- Buffer from Zuni, (less visibility for neighbors)
- Complied with city code

Public Park Access

- Pine Cone Park will be accessible to public (this is not a city requirement)
- Dog park
- Extensive trail system
- Sidewalk connection to Pinnacle Pines and masonic creating a walkable loop network for both Pine Haven and Pinnacle Pines

Dark Sky Ordinance

Strict HOA Guidelines

RedOak Development Group

A.5 NEIGHBOR COMMENTS RECEIVED

- Prior to 10/17/2024

Marc Toth

Subject: FW: Pine Haven - Follow-up

From: ANTHONY BRAU[redacted]
Date: October 18, 2024 at 11:13:52 AM MST
To: Tom Staub <tom@redoakvc.com>
Subject: Re: Pine Haven - Follow-up

Hello Tom,

I want to thank you for your letter explaining the specifics about your proposed development. So many times the developer and the neighbors are at odds and nothing is resolved. I really appreciate your reaching out to my wife and me. It appears that much thought has gone into the plan for Pine Haven. It was especially encouraging hearing that you will be a resident of the development.
My wife and I purchased our townhome summer of 2023. It is our second home and our primary residence is in Scottsdale. Scottsdale is turning into a major metro area due to excessive development. In the past two to three years, over 14,000 residential medium and high density units have been constructed. Thus our concern about seeing a very special area turning into a conglomeration of residential units. Your letter has certainly helped to resolve our concerns.

I do have a questions regarding the proposed clubhouse. Will it be in close proximity to Pinnacle Pines? Also, will it be more of a clubroom with exercise area and pool area? Or is there going to be (the bane of every homeowner) a Pickle Ball Court. As I had mentioned in our letter, I have a degree in Urban Planning and have been a residential appraiser for almost 30 years. My most recent experience with properties close to residential developments with the Courts is that there is a direct relationship to loss of value and close proximity to Pickle Ball amenities. One of the main reasons we decide to purchase in Pinnacle Pines was due to not having ANY community facilities other than sidewalks and roads. Also, what is the position in Pine Haven with Short Term Rentals? I am the President of our HOA in Scottsdale. I know that one can't stop units being used as STR's. However, we were able to limit the adverse impact of STR's by having a minimum requirement of a 30 day rental period. Is that something you have considered in the Declaration?

Again, I want to thank you for your response and we certainly feel much better about your proposed community. Oh...and yes...I did notice that a portion of the 14 acres was zoned commercial....and yes...a gas station would be my personal HELL.....
Wishing you success with your project.

Best Regards,

Tony & Kathy Brau

On Thursday, October 17, 2024 at 03:45:54 PM MST, Tom Staub <tom@redoakvc.com> wrote:

Hello Anthony & Kathleen - Hope all is well. Tom Staub here, CEO of Red Oak, and developer on this project.

I hear you will not be able to attend tonight's neighborhood meeting. I also understand you have several concerns with Pine Haven and I can appreciate your concerns. We will be sure to provide all materials to you shortly.

I do believe part of the concern is due to no one seeing the site plan and concepts.

However, in the meantime, I'd like to address a few items that may help provide clarity.

1) The property, approx. 14 acres, while zoned residential is also zoned commercial with about 2 acres fronting the main thoroughfare. This commercial tract is an ideal location for a gas station and what we are doing is bringing a community that is one Red Oak can be proud of for a number of reasons which then removes the chance of a gas station or convenience store a baseball throw away from Pinnacle Pines
2) We are investing heavily in extensive trail systems which will be open to the public
3) Pine Cone Park will also be public access (not required by the city)
4) Our substantial traffic investments have a number of mitigations that not only solve for our 83 units but will enhance the current plan
5) In terms of density, if you compare Pine Haven to Pinnacle Pines, Pine Haven is actually less dense at 6.18 units per acre vs. 6.33 in Pinnacle Pines
6) We are focusing heavily on ensuring we disturb the site as little as possible and we are under 40% disturbance about 20% lower than most other projects in Flagstaff
7) We have a number of other environmental concepts to maintain the biggest trees on site, create a buffer from main roads to lesson visibility by our neighbors, and a number of other ways we are doing all that we can to protect the beauty of the land
7) Our dark sky ordinance and strict HOA guidelines are there to enforce strict rules to ensure this community achieves our long term goals.

Lastly, it's important to note that I myself plan to live here with my family and so selfishly I am very invested in HOW this community lives.

Given that you are unable to attend, I would welcome a phone call at your convenience.

I sincerely want to ensure our neighbors are informed and hear any concerning parties out.

Thanks for the comments, Anthony and Kathleen.

--
Best,
Tom Staub
CEO
Red Oak Development Group
Austin, TX 78702
m 717.856.0018
tom@redoakvc.com
Schedule a Call

Disclosure: The financial information provided is solely an estimate based on best estimates given the current market conditions and are not guaranteed. Always do your own due diligence.

Marc Toth

From: Ben Mejia <Ben.Mejia@flagstaffaz.gov>
Sent: Tuesday, October 15, 2024 4:13 PM
To: Pinehaven-zone
Subject: FW: Proposed Zoning Change Pine Haven Horizontal LLC

Forwarding this email for your record.

Thanks,

Ben Mejia, AICP
Senior Planner | Current Planning Section
City of Flagstaff | 211 W. Aspen Ave. | Flagstaff, AZ 86001
ben.mejia@flagstaffaz.gov | 928-213-2616

From: ANTHONY BRAU[redacted]
Sent: Monday, October 14, 2024 12:58 PM
To: Ben Mejia <Ben.Mejia@flagstaffaz.gov>
Subject: Proposed Zoning Change Pine Haven Horizontal LLC

You don't often get email from abrau@cox.net. Learn why this is important

Mr. Ben Mejia
Senior Planner City of Flagstaff

Dear Mr. Mejia:

I am writing to you regarding Pinehaven Condo Development (formerly Juniper Estates) and our objection to the City of Flagstaff changing zoning on a 13.82 acre site from RR Rural Residential to MR Medium Residential. Per information provided by the Developer, there will be a public hearing on October 17, 2024 regarding the change in zoning to the site. My wife and I are residents at the Pinnacle Pines condominium community which is adjacent to the proposed Pinehaven Condo Development, and we will be unable to attend to deliver our objections to the zoning change. I have a Masters Degree in Urban Planning from the University of Wisconsin-Milwaukee campus and have been a residential real estate appraiser for almost 30 years. The proximity of the site and proposed development of 83 condo units will have a direct impact on home values in Pinnacle Pines. The 13.82 acre site is heavily wooded and to destroy that environment is unconscionable!

Does Flagstaff really need another residential development? Currently there are a number of medium to high density residential developments existing and under construction along Lake Mary Road. The explosion of residential units in the Pine Canyon area currently has a negative impact on traffic in the area. As the number of residential units in the area increases, traffic along JW Powell Boulevard, Lone Tree Road, and Masonic Lane/Zuni Drive has increased exponentially. The site, which is located at the southeast corner of Lone Tree Road and Masonic Lane, will negatively impact the traffic along those two roadways. Both Lone Tree Road and Masonic Lane are narrow two lane unimproved (no curbs or gutters) roadways that will make travel a nightmare. Already traffic has increased on the major roadways in the area to the point that infrastructure is in dire need of improvement. Do we really need more residential units in the neighborhood to compound the traffic situation?

Perhaps the most objectionable and infuriating maneuver by developers is to purchase a site knowing that the site is zoned Rural Residential and then ask the City to change the zoning so that the developer may make a sizable profit at the expense of residents in the area. The 83 units will also have a negative impact on services…sewer and water, refuse collection, roadway improvements. Who has to pay for those services….those of us who live in the area…not the developer!

One other aspect of the development that is a negative for our community is 1st.. the noise associated with the construction of the development and 2nd.. the noise associated with the recreational facilities (clubhouse) proposed by the developer. Pinnacle Pines is a very quite community with common grounds being streets and sidewalks. There are no recreational facilities (pool, clubhouse, gym, etc) in the community.

In closing, please take our objections to the zoning change into consideration. I ask you the question…would you like to have such a development adjacent to your property? My guess is: NO.

Sincerely,

Anthony & Kathleen Brau
3091 S. Hannah Lane
Flagstaff, AZ 86005

Marc Toth

From: Chris Lucaire [redacted]
Sent: Thursday, October 17, 2024 6:26 PM
To: Pinehaven-zone
Subject: Horizontal llc 83 residential homes plus Clubhouse etc.

Dear mr. Toth!

We are absolutely AGAINST having that high a density in this neighborhood. 83 residential homes will bring 163 cars into the area! Unrest!
Traffic! All the builder.developers want to have is the most bang for the bucks so to speak, meaning whatever they can get out of the land use and is permitted by the City will be done. The City of course sides with the developers, why I never could figure this out. The other residential Areas around the development and its course what might happen to them bears little consequence to them. We are against the density Change!!!

CHRIS/CLAUDIA LUCAIRE
3191 S. MARRYVALE
FLAGSTAFF, AZ 86005

Marc Toth

From: Claudia Lucaire [redacted]
Sent: Friday, October 18, 2024 12:22 AM
To: Pinehaven-zone; ben.mejia@flagstaff.gov
Subject: Against Medium Density Housing

Engineering Team and Project Managers,

I am an owner of 2 residences that back to the new project and am shocked at the request to expand this small area to medium density housing. This saturation of 83 condominiums with only 1 car garages raises concern with parking on where other residents or visitors will be parking. Additionally I question what a fractional share ownership will be? Would this be for college students buying into fractional shares of a condominium, so the project becomes more of a mixed use or student housing development?

It is important to mention that our community strictly abides by the DarkSky Rules to reduce light pollution. Will this community be doing the same? We have also spent countless hours to become a Firewise community to protect our community and the forest, will you be doing the same ?

Claudia Lucaire
[redacted]

Marc Toth

From: Janet Leger [redacted]
Sent: Tuesday, October 15, 2024 11:22 AM
To: Pinehaven-zone
Subject: Questions on Pine Haven development

Hello,
Unfortunately I will not be able to attend the meeting on Thursday evening.

I have one comment and four questions:

Comment:
1. The style of the Pine Haven units is very stark and modern. It doesn't blend well with the style of homes in the surrounding area, in particular, Pinnacle Pines and Pine Canyon.

Questions:
1. Will something be done to address traffic at Zuni and Lone Tree? It is already difficult to turn left onto Lone Tree from Zuni. This development will add to traffic.
2. Will a sidewalk be build on the south side of Zuni between Masonic and Lone Tree?
3. How will parking be addressed? It looks like the units have only 1 car garages. We know most units will need space for 2 cars.
4. Will owners be allowed to rent out their units? (Short term rentals)

Thank you.

Janet Leger
[redacted]

Marc Toth

From: Judith Nordburg [redacted]
Sent: Thursday, October 17, 2024 6:19 PM
To: Pinehaven-zone
Subject: VPE# 22004 Notice of Neighborhood Meeting on Direct to Ordinance Zoning Map Amendment Pine Haven Comments/Questions

1. Understanding the nature of fractional share ownership and the momentum towards short term rentals nationally, will short term rentals (under 30 days) be allowed in the HOA Regulations? As a point of fact, one national source indicates that 43% of fractional share developments underway have short term rentals as a significant goal of ownership.

2. If short term rentals are allowed, how would a single garage and single driveway accommodate the typical short term rental group with multiple autos? Typically, "vacation mode" means multiple families or groups of non-related persons.

3. Reviewing Intent and Purpose of Zoning Chapter 10-02-005-0007.A., how will the development achieve "better separation of pedestrian and vehicular traffic"? The site plan shows no indication of that intent.

4. Also, under my Item 3, above, how will the development achieve "more efficient use of open space"? The open space appears to be an afterthought of leftover, not easily developable land that one would traverse the crowded streets to gain access (assuming there is street parking).

5. Reviewing 10-02-005-0007.E. OFF STREET PARKING, if only "minimum off-street parking shall be provided in accordance with Chapter 10-07 of this Ordinance" is required, how can my Item 2, above, be achieved?

Apologies for the late comments, but as a Pinnacle Pines homeowner, we only found out about this meeting today. Better communication for those neighboring communities would be appreciated.

Judith Nordburg

Marc Toth

From: Skip Allen [redacted]
Sent: Thursday, October 17, 2024 3:00 PM
To: Pinehaven-zone
Cc: 'Pinnacle Pines Community Association'
Subject: 2951 S. MASONIC LANE

Regarding the Pine Haven Development, please address the following concerns:

1. Traffic at the cross street of Zuni & Lone Tree Rd, are you putting a traffic signal for that intersection? If not, why not?
2. If a traffic study has been completed, please share the information.
3. A better and a more complete explanation of the parking requirements and the handling of parking during the winter.
4. For the Factual Ownership, how is the parking going to be controlled?
5. How is the “No Parking” on the S. Masonic Lane going to be controlled?

Regards,

Skip Allen

- Prior to 11/21/2024

Marc Toth

From: Michael Banker <michael.banker7@gmail.com>
Sent: Thursday, October 31, 2024 4:04 PM
To: Marc Toth
Subject: Pinehaven Questions

Marc,
I am a full-time resident in Pinnacle Pines and a former HOA Board member. I was on vacation in Santa Barbara during your initial meeting. I plan to attend the next meeting. In the meantime, I have a few comments for your consideration. I have listed them in no particular order of priority.

1. **Parking**—Parking is always a challenge. All of our units have two-car garages and, of course, driveway spaces for two cars. This accommodates both owner's vehicles and short-term renters for those properties that rent out to vacation groups. Your comment that even if rented, the parking proposed is adequate is unrealistic. Relying on the City's opinion or guidance is not wise. I have found the City to be "out of touch" with reality. I do understand that providing two garage spaces and the driveway space to accommodate two vehicles would dramatically impact your design. Just so you know, Pinnacle Pines streets are private, and we have a strict parking policy that is aggressively enforced. if any vehicle is found parked on our streets and is not an owner's vehicle or a renter's vehicle, it will be immediately towed. Parking on Masonic or Zuni that might impede emergency vehicle access to Pinnacle Pines will be aggressively reported to the City.
2. **Snow Removal** - I am sharing our experience here in Pinnacle Pines for your education and consideration. Snow removal is a huge issue, particularly when we have a heavy accumulation of snow. There are several issues. One is securing competent and reliable snow removal contractors. Most contractors do it as a winter side job. So their competence varies greatly. When they plow the streets, they have to have open areas to pile the snow. And the plowing typically produces snow berms in front of driveways. This puts an increased burden on the owner to clear the driveway. This typically leads to multiple complaints to the property manager or HOA.
3. **Short-Term Rentals** - I applaud your 180 Cap. However, I would like to see it at 90 days. In the worst case, a property could be rented out 50% of the time. Unfortunately, short-term rentals are here to stay despite significant pushback from citizens. The laws in Arizona very much favor STR owners. In the disclosure documents, you will most likely be providing to owners, I suggest you let them know that the City of Flagstaff has an ordinance that requires registration of STR properties. Certainly, your real estate agent should be disclosing this. As a point of interest, there are 2,500 STR known STR properties in the Flagstaff area, Of which 1,500 are in Flagstaff. Pinnacle Pines has 40 STR properties. We closely monitor properties being rented as STRs and report to the City any that are not registered.
4. **Noise and other nuisance issues** - The City has a fairly strict ordinance regarding these issues. We encourage our owners to immediately call the police if they are experiencing these issues. I have found the Flagstaff police to be very quick to respond.

Although you are planning for as minimal destruction of forest land as possible, forest land will be destroyed. There is no way to "put lipstick on this pig". it is what it is. In any case, I wish you great success with your endeavor. Fractional ownership is an innovative approach that I hope works. What we do not

need is a failed development going into bankruptcy and then going through years of efforts to find new ownership.

Respectfully,

--
Michael Banker
602-820-1372 Cell
michael.banker7@gmail.com

Marc Toth

From: claire wilkinson <mcw48@hotmail.com>
Sent: Tuesday, November 5, 2024 12:22 AM
To: Marc Toth
Subject: Response to your recent letter to Pinnacle Pines Community

November 1, 2024

Dear Mr. Toth,

After I attended your first neighborhood meeting in which you unveiled your development plans for the Masonic land adjacent to Pinnacle Plans, I gave all of this a great deal of thought. Although your presentation was very impressive, I have the following reservations about this project:

1. **Condominium Design**: My husband and I have traveled extensively during his military career and lived in neighborhoods in many locations around the United States. Although the condominiums are very nice looking, they look like something that belongs in an urban setting. They are very different from the type of construction more common in this more rural area, and just don't fit.

2. **Dark Sky Concerns**: During the meeting, the fact that Flagstaff is a Dark Skies Community was discussed. I am concerned that with glass fronts on these condominiums, we are going to have a lot of light from these condominiums at night. You stated that the glass would not be tinted, so how is the light going to be controlled? Is your HOA going to require window coverings? Pinnacle Pines does not allow excessive light in our neighborhood, so I do not want to have yours right next to me. It diminishes our beautiful night sky with all the constellations that can be seen.

3. **Bus Stops**: You mentioned that you are going to build two bus stops on Zuni, and assured the attendees at your meeting that those would not interfere with the traffic flow on Zuni. Since there are no pull out lanes planned for these bus stops, I beg to differ with you. Zuni is a two lane road and there is not enough room to pass, so traffic will be backed up when the buses stop to load or unload. I believe that a better location would be near the corner of Lone Tree and Zuni. There is room for a pull out area so that traffic would not be impeded. If one has to be built on Zuni, it would be better to have one on the side of Zuni, where a pull out area is more logical since the other side of Zuni has a ditch.

4. **Condominium ownership**: You mentioned that there is a strong possibility that there will be multiple owners for each condominium. Since we have experienced short term rentals in Pinnacle Pines, it is not a selling idea to have to deal with multiple owners in lieu of one owner when there is a problem unless you plan to have on site management.

5. **One Car Garage**: It is my experience in Pinnacle Pines that even a 2-car garage with enough room in the driveway for 2 additional cars is often not enough parking when people have visiting family, friends, or other guests. I believe that by building a 1-car garage in your condominiums, there will be a real parking problem in spite of the limited additional parking spaces you have planned. I would hate to see cars, legally or illegally, lined up on the sides of Masonic as we drive into our neighborhood. There are some years when we have a great deal of snow, which has left us with basically a one lane road and very high berms of snow on each side of our roads in Pinnacle Pines. The 170 feet plus of snow during the year before last would have covered your

additional parking spaces due to the fact that there would be no place else to put it. Our turn around on Masonic before entering our neighborhood usually has an enormous amount of snow in the center, which creates a circular entry to Pinnacle Pines there due to lack of a better alternative.

6. **Financial Concerns**: People like to protect their cars by parking in the garage. Do you really think that people are going to pay the price you are asking for a 1-car garage? Empire Homes went bankrupt after building most of Pinnacle Pines Stage 1, and then unfinished townhomes sat empty for an extended period of time. I would hate for your company to begin this project and then for it to sit due to lack of sales after you've cut trees and leveled the landscape. It would be a real eyesore, and extremely sad for humans and wildlife alike.

7. **Our Home**: My husband and I live here full time, as do many of our neighbors. We are retired and our home is not just a vacation get away for us. We love our forests, the wild flowers, the trails, and our wild life (namely, elk herds and deer). These are what brought us to Flagstaff, and are probably the type of things which attracted you to Flagstaff. We made Flagstaff our home because we really value all of this. Please reconsider what you want to build on this forest land, and how it will effect those who live here, and not just vacation here occasionally.

Thank you for your consideration. My email address is mcw48@hotmail.com should you wish to contact me.

Sincerely,

Claire Wilkinson

3117 S Salvestrin Lane

Flagstaff, AZ 86005

Marc Toth

From: mnortoncomm@gmail.com
Sent: Monday, November 18, 2024 5:08 PM
To: Marc Toth; tom@redoakvc.com
Subject: Pinehaven community comment

Hello Tom Staub and Marc Toth,

Thank you for the detailed report from the first community meeting, of which I was in attendance. I and my husband are owners & full-time residents at 969 Sterling near the entrance of Pinnacle Pines closest to your property. I have been involved with the HOA since moving here in late 2014 currently serving on two committees, and I am the Residential Leader for the Firewise USA program of which we spoke briefly about at the first community meeting. I am also retired from the homebuilding industry, having spent over 30 years in the southern California and Flagstaff markets.

As a neighboring community member, I wanted to express these concerns about the development:

1. I am against the Fractional Ownership option. Our community and Flagstaff is in need of housing for residents who wish to be part of our community more than ¼ of the time. And, fractional ownership coupled with loose rental allowances is not conducive to community or fulfilling the need of appropriate residential development in Flagstaff.
2. I am against the allowance of Short-Term Rentals and the looseness of allowing 180 annual days of rentals. In Arizona, a Short-Term Rental is defined as "a lodging rental stay of less than 30 days". **I encourage you to adopt that definition**. While your anticipated HOA rules of oversight on rentals and short term rentals is well-intended, I can tell you that we here in Pinnacle Pines HOA attempt the same and it is not only difficult but ineffective. Allowing 180 days of rentals could result in 60, 3-day rental intervals! **My recommendation would be to limit rentals to not less than a 30-day interval and not more than 180 days a year.**
3. In "Pinecone Park", you call for an architectural element of a very large/tall "pine cone". We find this to be obtrusive in scale, design and location as it is near the highest elevation of the site. It is both unnecessary and unnatural to add an artificial pine cone among the ponderosa pines that we Flagstaff residents hold dear. If you'd like to add elements to the park, my suggestion would be metal or teak benches for quiet reflection in the park or along your trails where appropriate.
4. I find the exterior architecture incompatible with the newer surrounding communities of Pinnacle Pines, and even beyond to Juniper Point and Pine Canyon. While mountain-modern is being seen among new developments, it is still tapered with elements of craftsman creating a more complimentary look for this area of Flagstaff. I would encourage you to make some revisions to your elevations.
5. As an additional comment on the architecture, the abundance of glass sliding doors will inevitably create light spill and sky glow in our dark skies. While the development is being held to dark sky standards, there is more that can be done to be a good neighbor in protection of our dark skies with regard to design, glass tinting, and included window coverings for glass doors.
6. This parcel (as well as a neighboring parcel) have long been rumored among our local developers to be undevelopable and difficult/expensive to develop due to the terrain such as slope and rock. Such elements are noted in your acknowledgement of the site's natural resources (and challenges). Your plan is to dig in to the slope & down 30'-35'. What will the retaining wall structure look like? Please provide details and drawings.
7. The Pinehaven marketing website (not the investor website for Red Oak) was to be updated, but is still offline. When will those updates be made? There are a few elements that were of additional concern represented in that first website iteration:
    a. Rooftop deck for the community center. Please confirm this element has been removed from the plans as mentioned at the first meeting.

b. There was a rendering of the monument signage/architectural art. It is my hope that element has also been removed from the plans as it is not consistent with Flagstaff neighborhoods, communities, or even master planned communities here.

8. In your presentation to our community, the Suburban Commercial piece was explained that it would likely be a gas station if left as is. I found this to be an unwelcome scare tactic. There are MANY allowable uses in the SC zone that could be appropriate for a parcel of this size that are in-line with Flagstaff desires such a recreational facility (rock gym, yoga studio, etc.), education such as a preschool or day care, a café, small retail, veterinarian office, etc.

Thank you for your time in taking these comments.

Mary & Jeff Norton

969 E. Sterling Lane

From: Claudia Lucaire
To: Ben Mejia
Subject: Re: Against Medium Density Housing
Date: Tuesday, November 12, 2024 1:08:01 PM

[You don't often get email from clucaire@gmail.com. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

This was the email that I had sent.

Claudia Lucaire
602.620.8009

> On Oct 17, 2024, at 9:22 PM, Claudia Lucaire <clucaire@gmail.com> wrote:
>
> Engineering Team and Project Managers,
>
> I am an owner of 2 residences that back to the new project and am shocked at the request to expand this small area to medium density housing. This saturation of 83 condominiums with only 1 car garages raises concern with parking on where other residents or visitors will be parking. Additionally I question what a fractional share ownership will be? Would this be for college students buying into fractional shares of a condominium, so the project becomes more of a mixed use or student housing development?
>
> It is important to mention that our community strictly abides by the DarkSky Rules to reduce light pollution. Will this community be doing the same? We have also spent countless hours to become a Firewise community to protect our community and the forest, will you be doing the same ?
>
> Claudia Lucaire
> 602.620.8009

Outlook

Viewpoint Engineering

From TYLER HOWLAND <tshowland@cox.net>
Date Mon 7/14/2025 8:23 PM
To Ben Mejia <Ben.Mejia@flagstaffaz.gov>
Cc awebb@hoamco.com <awebb@hoamco.com>; Christy Lang <clang@hoamco.com>

You don't often get email from tshowland@cox.net. Learn why this is important

Hello Ben, my name is Tyler Howland and I have resided at 3298 S Hannah Lane in Flagstaff since April of 2018. I have a great concern with changing the residential property owned by RODG DT Pine Haven Horizontal LLC to "medium density residential" by adding 84 units into that space. While I concede that there may be physical space to build such suggested units however, the roads in and out of that space are ALREADY inadequate to the current traffic volume and much less the future volume by expansions in progress. Where does this traffic go. And you can't say that they will bike or walk as there is not one complete sidewalk on one side of either road at this intersection, down Zuni or Lone Tree. Very few people bike that now little lone walk it, usually its NAU track students running.
I strongly suggest that Rodg or the City come up with a plan to improve the traffic flow by Lura Kinsey Community School, which is already a current pinch point, soon to be worse with the completion and selling out of the individual home units north of JW Powel and East of Lone Tree on S Cottonrose lane area. Or simply leave the Zone designation as it is currently, Residential.

Thank you for your time,
Tyler Howland

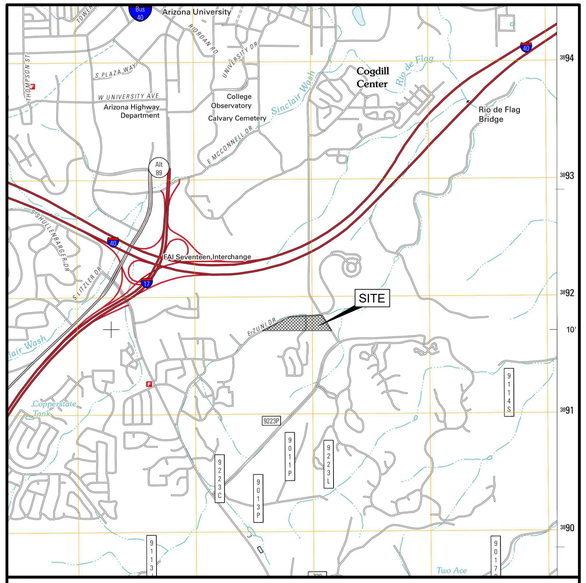
SITE PLAN REVIEW

FOR

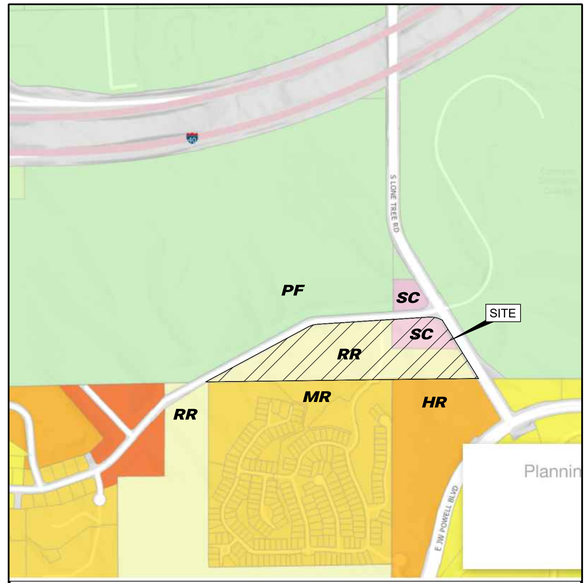
PINEHAVEN

CONDOMINIUM DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

AERIAL MAP
SCALE: 1" = 1000'
SCALE: 1" = 1000'
500 0 500 1000'



VICINITY MAP
SCALE: 1" = 5000'
SCALE: 1" = 5000'
2500 0 2500 5000'



ZONING MAP
SCALE: 1" = 5000'
SCALE: 1" = 5000'
2500 0 2500 5000'

SITE DATA

PLAN REFERENCE		
PLAN TITLE		**ALTA/NSPS LAND TITLE SURVEY**
		DATED: SEPT. 14, 2022
SURVEYOR		ARIZONA SURVEYING INC. 1843 W HEAVENLY CT FLAGSTAFF, AZ 86001 JOB NO: 22-42
OWNER of RECORD		
NAME		**FLAGSTAFF LODGE NO.7**
ADDRESS		2951 S MASONIC LANE FLAGSTAFF, AZ 86005
APPLICANT		
NAME		**RODG DT FLAGSTAFF PROP CO LLC**
ADDRESS		2121 EAST 6TH STREET, SUITE 203 AUSTIN, TX 78702
PARCEL DATA		
ADDRESS		E. ZUNI DRIVE & S. MASONIC LANE FLAGSTAFF, AZ 86001
TAX MAP NO/ PARCEL ID		APN: 103-26-002D
ZONING DATA		
ZONING DISTRICT	*EXISTING*	*RURAL RESIDENTIAL, SUBURBAN COMMERCIAL [RPOZ: RESOURCE PROTECTION OVERLY ZONE]*
	PROPOSED	MEDIUM DENSITY RESIDENTIAL (MR)
USE	*EXISTING*	*UNDEVELOPED*
	PROPOSED	RESIDENTIAL (PERMITTED)
STATEMENT OF INTENT		
THE APPLICANT IS PROPOSING TO DEVELOP THE SUBJECT PARCEL WITH TWO NEW ROADS, TOWNHOUSES AND ASSOCIATED SITE IMPROVEMENTS		

BULK REQUIREMENTS (MR)

REQUIREMENT		REQUIRED	EXISTING	PROPOSED
BUILDING REQUIREMENTS				
MINIMUM LOT AREA	(SF)	6,000	585,346	581,069 [2]
	(AC)	-	13.44	13.34
MINIMUM YARD SETBACKS				
FRONT YARD	(FT)	10	N/A	>10
FRONT YARD (above second floor)	(FT)	15		>15
SIDE YARD	(FT)	5		>5
REAR YARD	(FT)	15		>15
MAXIMUM IMPERVIOUS COVERAGE	(%)	40		39.7
	(SF)	-		230,613
MAXIMUM BUILDING COVERAGE	(%)	20		10.8
	(SF)	-		62,646
MAXIMUM BUILDING HEIGHT	(FT)	35		< 35
OPEN SPACE				
CIVIC SPACE	(%)	5	N/A	6.7 [1]
	(SF)	29,268 [1]		39,450
COMMON OPENS SPACE	(%)	15	N/A	15.0 [1]
	(SF)	87,802 [1]		87,981
MINIMUM / MAXIMUM DENSITY	(UNITS/AC)	6 / 9	N/A	6.18 [1]
	UNITS	81 / 120 [1]		**83**
1) BASED UPON EXISTING GROSS TRACT AREA				
2) NET LOT AREA: GROSS LOT AREA LESS RIGHT-OF-WAY DEDICATIONS ON ZUNI AND LONE LONETREE AS APPLICABLE. NOTE FINAL DIMENSIONS FOR R.O.W. DEDICATION TO BE DETERMINED DURING CIVIL PLAN REVIEW				

SHEET INDEX

SHEET TITLE	SHEET ID	PAGE NO.	
COVER SHEET	CVR	1	of 46
GENERAL NOTES	C001	2	of 46
OVERALL SITE PLAN	C100	3	of 46
PHASE 1 SITE PLAN (1 TO 2 OF 2)	C101, C102	4-5	of 46
PHASE 2 SITE PLAN	C103	6	of 46
EASEMENT PLAN	C105	7	of 46
NATURAL RESOURCES PLAN (1 OF 2)	C201	8	of 46
NATURAL RESOURCES PLAN (2 OF 2)	C202	9	of 46
PHASE 1 GRADING & DRAINAGE PLAN (1 TO 2 OF 2)	C301, C302	10-11	of 46
PHASE 2 GRADING & DRAINAGE PLAN	C303	12	of 46
BUILDING HEIGHT DETAILS	C305	13	of 46
ADA GRADING PLAN	C306	14	of 46
STORM SEWER PLAN AND PROFILE			
DRIVE 'A'	C310	15	of 46
DRIVE 'A2' & CROSS PROFILES	C311	16	of 46
DRIVE 'B'	C312	17	of 46
DRIVE 'B2' & CROSS PROFILES	C313	18	of 46
STORMWATER DETAILS	C321 - C323	19-21	of 46
PRE-DEVELOPMENT DRAINAGE MAP	C391	22	of 46
POST-DEVELOPMENT DRAINAGE MAP	C392	23	of 46
INLET DRAINAGE MAP (DRIVE 'A')	C393	24	of 46
INLET DRAINAGE MAP (DRIVE 'B')	C394	25	of 46
PHASE 1 UTILITY PLAN (1 TO 2 OF 2)	C401	26-27	of 46
PHASE 2 UTILITY PLAN	C402	28	of 46
UTILITY PLAN AND PROFILE			
DRIVE 'A'	C410	29	of 46
DRIVE 'B'	C411	30	of 46
UTILITY DETAILS	C420 - C421	31-32	of 46
ROAD GEOMETRY PLAN AND PROFILE			
DRIVE 'A'	C501	33	of 46
DRIVE 'B'	C502	34	of 46
DRIVE 'A2' AND 'B2'	C502	35	of 46
CONSTRUCTION DETAILS	C510 - C511	36-37	of 46
TRASH ENCLOSURE DETAILS	C512	38	of 46
TRASH VEHICLE MOVEMENT PLAN	C513	39	of 46
SIGNAGE & STRIPING PLAN	C601	40	of 46
SIGNAGE & STRIPING DETAILS	C602	41	of 46
LONETREE ROAD IMPROVEMENT PLAN	C701	42	of 46
ZUNI ROAD IMPROVEMENT PLAN (1 TO 2 OF 2)	C702 - C703	43-44	of 46
ROAD IMPROVEMENT DETAILS	C704 - C705	45-46	of 46
ADDITIONAL PLANS (by others)			
LANDSCAPE PLANS prepared by THE WLB GROUP, INC. 500 N BEAVER ST, FLAGSTAFF, AZ 86001			
LANDSCAPE COVER SHEET		L1.0	
LANDSCAPE PLANS		L1.1, L1.2	
IRRIGATION PLANS		L2.1, L2.2	
ALTA/NSPS LAND TITLE SURVEY 2951 S. MASONIC LANE, FLAGSTAFF, ARIZONA 86005 APN: 103-26-002D prepared by: ARIZONA SURVEYING, INC, 1843 W HEAVENLY CT, FLAGSTAFF, ARIZONA 86001		1 to 3 of 3	

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-26-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO.
77934
ERIC S. BEALS
5/02/24
DATE SIGNED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 BLUE STAKE, INC.
Call 811 or click Arizona811.org
LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

PROFESSIONAL ENGINEER SIGNATURE BLOCK
STATE OF ARIZONA
COUNTY OF COCOCINO:

I HEREBY CERTIFY THAT PROPER ENGINEERING CONSIDERATION HAS BEEN GIVEN TO THIS PLAT TO THE MATTERS OF STREETS, LOTS, AND DRAINAGE LAYOUT. TO THE BEST OF MY KNOWLEDGE THIS PLAT CONFORMS TO ALL REQUIREMENTS AND THAT THIS PLAT IS FEASIBLE FROM AN ENGINEERING STANDPOINT AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

ERIC S. BEALS, P.E.
ARIZONA REGISTRATION NO. **77934**; EXPIRATION: **3/31/2026**
VIEWPOINT ENGINEERING
2121 E 6TH STREET, SUITE 203
AUSTIN, TEXAS 78702

SURVEYOR SIGNATURE BLOCK
STATE OF ARIZONA
COUNTY OF COCOCINO

I, _____, A REGISTERED PROFESSIONAL LAND SURVERYOR IN THE STATE OF ARIZONA, INDICATE TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PLAT IS TRUE AND CORRECT, CONFORMS TO THE MINIMUM STANDARDS SET FORTH BY THE ARIZONA BOARD OF PROFESSIONAL LAND SURVEYORS, AND WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE ON THE GROUND, UNDER MY SUPERVISION.

>>name<<
REGISTERED PROFESSIONAL LAND SURVEYOR NO. **6503**
ARIZONA SURVEYING, INC
1843 W. HEAVENLY CT
FLAGSTAFF, AZ 86001

OWNER SIGNATURE BLOCK
I (WE) THE UNDERSIGNED OWNER(S) OF THE LAND SHOWN ON THE PLAT, AND DESIGNATED HEREIN AS **WILLOW CREEK** SUBDIVISION, GUADALUPE COUNTY, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, DO HEREBY SUBDIVIDE SUCH PROPERTY AND DEDICATE TO THE USE OF THE PUBLIC ALL STREETS, ALLEYS, PARKS, WATERCOURCES DRAINS, EASEMENTS, AND PUBLIC PLACES FOR THE PURPOSE AND CONSIDERATION THEREIN EXPRESSED.

OWNER/AGENT: THOMAS STAUB _____ DATE
RODG ASPIRE SEGUIN 2 PROP, LLC
2121 E 6TH STREET, SUITE 203
AUSTIN, TX 78702

NOTARY SIGNATURE BLOCK
STATE OF ARIZONA:
COUNTY OF COCOCINO:

BEFORE ME THE UNDERSIGNED AUTHORITY ON THIS DAY PERSONALLY APPEARED _____, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FORGOING CERTIFICATION, AND ACKNOWLEDGED TO ME THAT HE/SHE EXECUTED THE SAME FOR THE PURPOSES OF CONSIDERATIONS THEREIN EXPRESSED AND CAPACITY THEREIN STATED. GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____ 20_____ AD.

NOTARY SIGNATURE\
MY COMMISSION EXPIRES _____

CITY ENGINEER APPROVAL:
DATA ON THIS PLAT REVIEWED AND APPROVED THIS _____DAY OF_____ 20____
BY CITY ENGINEER OF THE CITY OF FLAGSTAFF ARIZONA

CITY ENGINEER _____ DATE

FINAL PLAT SIGNATURE BLOCK:
APPROVED BY THE ZONING AND PLANNING COMMISSION ON THIS _____DAY OF _____ 20____. THIS PLAT IS HEREBY APPROVED BY THE ZONING PLANNING COMMISSION OF THE CITY OF FLAGSTAFF ARIZONA, OR ITS AGENT IN TESTIMONY WHERE OF WITNESS OF THE OFFICIAL SIGNATURE.

CHAIRPERSON _____ DATE

RECORDER _____ DATE

DIRECTOR OF PLANNING _____ DATE

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
COVER SHEET

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID CVR
REV 4
SHEET 1 of 46

S:\2022\22004 PLAN\DWG\ [C100_OVERALL SITE PLAN.dwg]Layout: CVR

GENERAL NOTES

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL MAKE CERTAIN THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
2. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND DRAWINGS OF THE CITY, COUNTY AND/OR AZDOT (AS WELL AS THE REQUIREMENTS OF THE ENVIRONMENTAL PROTECTION AGENCY (EPA) AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)).
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES TO LOCATE EXISTING FACILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION CONFERENCE WITH PERMITTING AUTHORITY, CONSULTING ENGINEER, CONTRACTOR(S), UTILITY COMPANIES AND ANY OTHER AFFECTED PARTIES.
5. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION. COPIES OF OSHA STANDARDS MAY BE PURCHASED FROM THE U.S. GOVERNMENT PRINTING OFFICE.
6. NECESSARY BARRICADES, SUFFICIENT LIGHTS, SIGNS, AND OTHER TRAFFIC CONTROL METHODS AS MAYBE NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC, SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MAINTAINED AT ALL TIMES (24 HRS. PER DAY) DURING THE CONSTRUCTION PROCESS.
7. THE INFORMATION CONTAINED ON THESE DRAWINGS IN REGARDS TO EXISTING UTILITIES, TOPOGRAPHY, CONTOURS, HYDROGRAPHY, OR SUBSURFACE CONDITIONS IS FURNISHED SOLELY AS THE BEST INFORMATION AVAILABLE AT THIS TIME. ITS ACCURACY IS NOT GUARANTEED AND ITS USE IN NO WAY RELIEVES THE CONTRACTOR OF ANY RESPONSIBILITY FOR DAMAGES DUE TO ANY INACCURACIES.
8. THE LOCATION AND ELEVATION OF IMPROVEMENTS TO BE DONE SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO THE CONSTRUCTION OF THE WORK. THE CONTRACTOR IS TO MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL THE NECESSARY ARRANGEMENTS WITH THE RESPECTIVE UTILITY COMPANIES. GRAVITY LINE CONSTRUCTION IS REQUIRED TO BE VERIFIED AT CONNECTION POINT THEN BUILD UPSTREAM.
9. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING FACILITIES FROM DAMAGE AND COST OF REPAIR TO EXISTING FACILITIES AND IMPROVEMENTS AS A RESULT OF CONTRACTOR'S WORK. THE CONTRACTOR SHALL NOTIFY ALL UTILITY OFFICES PRIOR TO STARTING WORK AND SHALL COORDINATE THEIR WORK WITH THE UTILITY OFFICES.
10. DURING CONSTRUCTION, THE OWNER WILL PROVIDE A GEOTECHNICAL LAB TO PERFORM MATERIALS TESTING DURING THE CONSTRUCTION. RETESTS REQUIRED DUE TO CONTRACTOR PERFORMANCE SHALL BE PAID FOR BY THE CONTRACTOR.
11. THE CONTRACTOR SHALL KEEP AND LEAVE THE AREA NEAT AND CLEAN DURING CONSTRUCTION. DEBRIS SHALL NOT BE BURIED OR DUMPED ANYWHERE WITHIN THE LIMITS OF THE PROJECT. ALL DEBRIS, CONSTRUCTION MATERIALS, CONTRACTOR'S BUILDINGS OR EQUIPMENT, LOGS, STUMPS, BOULDERS, OR ANY OTHER EXTRANEOUS MATERIAL DEPOSITED DURING CONSTRUCTION SHALL BE DISPOSED OFFSITE PROMPTLY IN COMPLIANCE WITH APPLICABLE REGULATIONS.
12. ANY EXISTING PAVEMENT, CURBS AND/OR SIDEWALKS DAMAGED OR REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
13. ALL UNDERGROUND FACILITIES SHALL BE CONSTRUCTED, CONNECTED AND TESTED PRIOR TO THE CONSTRUCTION OF SURFACE IMPROVEMENTS, SUCH AS SIDEWALKS, CURBS, GUTTERS AND PAVING.
14. ALL SURVEY MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A LICENSED SURVEYOR AND PAID FOR BY THE CONTRACTOR.
15. THE CONTRACTOR SHALL KEEP THE APPROVED SET OF PLANS ON SITE AT ALL TIMES. THE CONTRACTOR SHALL REDLINE THE ACTUAL LOCATIONS AND DIMENSIONS (VERTICAL AND HORIZONTAL) OF UTILITIES, STRUCTURES, SERVICES, AND OTHER DETAILS DEFERRING FROM OR NOT SHOWN ON THE ORIGINAL DRAWINGS. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL SUBMIT THE RECORD DRAWINGS TO THE ENGINEER OF RECORD.
16. THE CONTRACTOR SHALL RESTORE AND REVEGETATE ALL DISTURBED AREAS NOT COVERED BY LANDSCAPE PLANS AT THEIR EXPENSE.
17. CONTRACTOR SHALL MAKE REQUIRED SUBMITTALS AT LEAST 14 DAYS PRIOR TO USE.
18. IF THE CONTRACTOR INTENDS TO HAVE FUEL TANKS STORED ON THE PROJECT SITE AT ANY TIME, THE CONTRACTOR WILL NEED TO PROVIDE THE OWNER AND ENGINEER WITH A COPY OF THEIR "SPILL PREVENTION, CONTROL AND COUNTERMEASURE" (SPCC) PLAN MEETING THE REQUIREMENTS OF TITLE 40, CODE OF FEDERAL REGULATIONS, PART 112 AS GOVERNED BY THE USEPA. THIS IS A CONTRACTOR PROVIDED ITEM.

PAVEMENT NOTES

1. DESIGN MIX SUBMITTALS SHALL BE PROVIDED FOR REVIEW AT LEAST 14 DAYS PRIOR TO PLACEMENT.
2. DO NOT UNLOAD OR USE ANY HEAVY CONSTRUCTION EQUIPMENT ON NEW CONCRETE FOR AT LEAST 7 DAYS AFTER CONCRETE IS POURED.
3. JOINTS SHALL BE PLACED IN ANY PROPOSED CONCRETE PAVEMENT AND CURBING AS RECOMMENDED IN THE GEOTECHNICAL STUDY FOR THIS SITE OR JOINT LAYOUT AND DESIGN SHALL CONFORM TO THE AMERICAN CONCRETE PAVEMENT ASSOCIATION (ACPA) TECHNICAL PUBLICATION 150 61.01P, TABLE Z AND FIGURE 13.
4. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WORK SUCH THAT UTILITIES ARE INSTALLED PRIOR TO PAVEMENT BASE BEING INSTALLED OR ELSE LOCATE AND PLACE LINES FOR PROPOSED UNDERGROUND UTILITIES.
5. ALL CONCRETE WORK SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF ACI 330. FLY ASH CAN BE USED IN MIX DESIGNS WHERE SUITABLE.
6. ALL CONCRETE PAVING AND FLATWORK SHALL BE CURED IN CONFORMANCE WITH AMERICAN CONCRETE PAVEMENT ASSOCIATION GUIDELINES.
7. ALL REPORTS AND SUPPLEMENTAL LETTERS OR AMENDMENTS FROM GEOTECHNICAL ENGINEER, MUST BE REVIEWED AND ADHERED TO.
8. AN EXISTING SLAB MAY BE LEFT IN PLACE, WHEN GRADES ALLOW, PROVIDED THE FOLLOWING OCCURS WITH REGARDS TO PAVEMENT PERFORMANCE:
   - 8.1. IF FILL THICKNESS BETWEEN THE TOP OF SLAB AND BOTTOM OF PAVEMENT BASE IS AT LEAST 2 FEET, SLAB MAY BE LEFT AS IS WITH NO SPECIAL PREPARATION.
   - 8.2. IF FILL THICKNESS BETWEEN TOP OF SLAB AND BOTTOM OF PAVEMENT BASE IS LESS THAN 2 FEET, SLAB MAY BE LEFT IN PLACE PROVIDED A STRIP OF GEOGRID (TENSAR BX 1100) AND 6 INCHES OF GRANULAR BASE ARE PLACED IMMEDIATELY ABOVE THE EDGE OF THE SLAB THAT IS LEFT IN PLACE. CENTER THE GRID OVER THE EDGE OF THE LAB. ADD WIDTH OF GRID STRIP SHOULD BE SAME AS STANDARD ROLL. THE SLAB SHALL BE SAW CUT AND REMOVED IN AREAS WHERE THE ABOVE CANNOT BE ACHIEVED.
9. WHEN GRADES PERMIT, NEW BASE CAN BE PLACED DIRECTLY ON TOP OF THE EXISTING ASPHALT PAVEMENT, IN MOST CASES IN AREAS TO BE COVERED WITH FILL, NO NEED TO REMOVE EXISTING ASPHALT PAVEMENT. THE ASPHALT SURFACE SHALL BE "LIGHTLY SCARIFIED" OR "ROUGHENED" TO HELP PROMOTE BOND WITH FILL. THIS SHOULD BE DONE WITH EITHER A SHEEPSFOOT ROLLER OR SCARIFYING TEETH ON A MAINTAINER. DISCUSS THIS ISSUE WITH GEOTECHNICAL ENGINEER PRIOR TO STARTING. IT MAY BE PRUDENT NOT TO DAMAGE THE EXISTING ASPHALT PAVEMENT BY "SCARIFICATION" AND/OR "ROUGHENING".
10. ASPHALT CRACKS EQUAL TO OR LARGER THAN 1/16" SHALL BE REPAIRED BASED ON GEOTECHNICAL ENGINEER'S RECOMMENDATIONS PRIOR TO OVERLAY INSTALLATION.

HOT MIX ASPHALT CONCRETE PAVING

PROVIDE NECESSARY LABOR AND MATERIALS TO INSTALL THE HOT MIX ASPHALT PAVING SHOWN ON THE PLANS, GEOTECHNICAL REPORT AND IN THE PAVEMENT DESIGN DETAILS. THIS INCLUDES THE SUBGRADE PREPARATION, AGGREGATE, ASPHALT MATERIALS, MINERAL FILLER, PRIME COAT, TACK COAT AND FINAL ASPHALT PAVING SURFACE.

ALL ASPHALT MUST MEET A RETAINED STRENGTH OF AT LEAST 70% ON THE TXDOT 531-C TEST OR HAVE ALL LIMESTONE AGGREGATE. IF SILICEOUS AGGREGATES (WHICH INCLUDE GRAVEL, CRUSHED GRAVEL OR GRANITE) ARE USED, ADD HYDRATED LIME (AT LEAST 1%) OR ANTI-STRIP AGENT TO THE MIX TO MEET THE RETAINED STRENGTH REQUIREMENTS. THE MIXTURE MUST BE DESIGNED FOR 97% OF OPTIMUM LABORATORY DENSITY. ASPHALT GRADE SHALL BE PG 64-22.

EXECUTION:

1. START OF THIS WORK ITEM INDICATES ACCEPTANCE BY THE CONTRACTOR OF THE SUBGRADE PREPARATION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE FINAL RESULTS.
2. CONTRACTOR SHALL ESTABLISH AND MAINTAIN REFERENCE POINTS TO HOLD PROPER ELEVATIONS AND GRADES. ALL PAVEMENT SHOULD BE WITHIN 0.5 INCH OF PROPOSED GRADES.
   - 2.1. UNLESS OTHERWISE SHOWN ON THE PLANS, RECOMMENDED BY THE GEOTECHNICAL ENGINEER OR APPROVED BY THE ENGINEER, MATERIALS AND INSTALLATION OF SUCH SHALL COMPLY WITH THE FOLLOWING ITEMS WITHIN THE ARIZONA DEPARTMENT OF TRANSPORTATION 2021 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION:
   - 2.2. SECTION 303 - AGGREGATE BASE AND SUBBASE.
   - 2.3. SCETION 340 - HOT MIX ASPHALTIC CONCRETE PAVEMENT.
3. IN PLACE COMPACTED THICKNESS WILL NOT BE ACCEPTABLE IF EXCEEDING THE FOLLOWING ALLOWABLE VARIATION FROM REQUIRED THICKNESS:
   - 3.1. HMAC SURFACE COURSE: 1/4", PLUS OR MINUS
   - 3.2. SURFACE SMOOTHNESS: TEST FINISHED SURFACE OF EACH ASPHALT CONCRETE COURSE FOR SMOOTHNESS, USING 10' STRAIGHTEDGE APPLIES PARALLEL WITH AND AT RIGHT ANGLES TO CENTERLINE OF PAVED AREA. SURFACE SMOOTHNESS WILL NOT BE ACCEPTABLE IF THE WEARING COURSE SURFACE EXCEEDING 3/16".
4. THE INITIAL QUALITY CONTROL TESTING SHALL BE PERFORMED AT THE OWNER'S COST. ANY NECESSARY REPAIRS OR REPLACEMENTS, ALONG WITH ADDITIONAL TESTING, SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE. TESTING PROCEDURES SHALL BE IN COMPLIANCE WITH OWNER'S STANDARD SPECIFICATION FOR MATERIAL TESTING.
5. CONTRACTOR SHALL ENSURE THE FOLLOWING:
6. TESTING LAB TO VERIFY THICKNESS OF BASE MATERIAL INSTALLED.
7. VERIFY APPROVED MIX DESIGN MATCHES DELIVERY TICKETS IN FIELD.
8. RECORD ARRIVAL TIMES OF TRUCKS AND MIX TEMPERATURE UPON ARRIVAL. RECORD LIST OF EQUIPMENT USED TO LAY AND COMPACT ASPHALT.
9. RECORD AIR TEMPERATURE & MIX TEMPERATURE AT TIME OF LAYDOWN.
10. GEO-TECH ENGINEER OF RECORD TO MAKE MIN. OF THREE SITE VISITS.
11. ASPHALT JOB MIX FORMULA APPROVED IN ADVANCE (WITH ACCOMPANYING LAB TEST DATA) MINIMUM 14 DAYS PRIOR TO PAVING. THIS INCLUDES VERIFYING THE AGGREGATE MEETS ITEM 340 REQUIREMENTS AND ALL OTHER SPECIFICATIONS REQUIREMENTS.
12. HMAC SURFACE COURSE SHALL BE ORIENTED SUCH THAT JOINTS OR SEAMS ARE PARALLEL WITH THE DIRECTION OF TRAFFIC.

PORTLAND CEMENT CONCRETE PAVING

FURNISH AND INSTALL THE PORTLAND CEMENT CONCRETE PAVING AND PREPARED BASE COURSE TO THE EXTENT SHOWN ON THE DRAWINGS. THESE AREAS INCLUDE CURBS, GUTTERS, WALKS AND PAVING AGGREGATE.

EXECUTION:

1. ALL CONCRETE ITEMS SHALL COMPLY WITH THE REQUIREMENTS OF APPLICABLE DIVISION 3 SECTIONS FOR CONCRETE MIX DESIGN, SAMPLING AND TESTING, CURING AND QUALITY CONTROL, AND AS HEREIN SPECIFIED.
2. UNLESS OTHERWISE SHOWN ON THE PLANS, RECOMMENDED BY THE GEOTECHNICAL ENGINEER OR APPROVED BY THE ENGINEER, CONCRETE AREAS SHALL COMPLY WITH THE FOLLOWING ITEMS WITHIN THE ARIZONA DEPARTMENT OF TRANSPORTATIONS 2021 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION:
   - 2.1. SECTION 303 - AGGREGATE SUBBASES AND AGGREGATE BASES
   - 2.2. SECTION 401 - CONCRETE PAVING
   - 2.3. SECTION 1006 - PORTLAND CEMENT CONCRETE
   - 2.4. SECTION 908 - CONCRETE CURBS, GUTTER, SIDEWALKS AND DRIVEWAYS
3. UNLESS OTHERWISE SHOWN ON THE PLANS OR RECOMMENDED BY THE GEOTECHNICAL ENGINEER, DESIGN MIX SHALL PRODUCE NORMAL-WEIGHT CONCRETE WITH THE FOLLOWING PROPERTIES:
   - 3.1. COMPRESSIVE STRENGTH: (4000 PSI FOR PAVEMENTS AND 3000 PSI FOR ALL OTHER FLATWORK, MINIMUM AT 28 DAYS.)
   - 3.2. SLUMP RANGE: 4" TO 6"
   - 3.3. AIR CONTENT: 3 TO 5%
4. FORMS WILL BE SET TO GRADE LINES WITHIN THE FOLLOWING TOLERANCES:
5. TOP OF FORMS NOT MORE THAN 1/8" IN 10'.
6. VERTICAL FACE ON LONGITUDINAL AXIS, NOT MORE THAN 1/4" IN 10'.
7. LOCATE, PLACE AND SUPPORT REINFORCEMENT AS SPECIFIED IN THE GEOTECHNICAL REPORT AND IN COMPLIANCE WITH TXDOT ITEM 440.
8. PRE-POUR INSPECTION BY THE GEOTECH LAB IS REQUIRED PRIOR TO FINAL PLACEMENT OF CONCRETE.
9. AUTOMATIC MACHINE MAY BE USED FOR CURB AND GUTTER PLACEMENT. IF MACHINE PLACEMENT IS USED, CONTRACTOR SHALL SUBMIT REVISED MIX DESIGN AND LABORATORY TEST RESULTS THAT MEET OR EXCEED MINIMUMS SPECIFIED. MACHINE PLACED CURBS MUST MEET THE CROSS SECTION, LINES, GRADES, FINISH AND JOINTING SPECIFIED, OR SHALL BE REMOVED AND REPLACED WITH FORMED CONCRETE AS SPECIFIED.
10. AFTER COMPLETION OF FLOATING AND TROWELING WHEN EXCESS MOISTURE OR SURFACE SHEEN HAS DISAPPEARED, BROOM FINISH BY DRAWING A FINE-HAIR BROOM ACROSS
11. CONCRETE SURFACE PERPENDICULAR TO THE LINE OF TRAFFIC. REPEAT OPERATION IF REQUIRED TO PROVIDE A TEXTURE ACCEPTABLE TO THE OWNER OR DESIGNATED REPRESENTATIVE.
12. CONTRACTOR SHALL PROTECT CONCRETE FROM DAMAGE UNTIL ACCEPTANCE OF WORK.
13. VEHICULAR TRAFFIC SHALL BE PROHIBITED FOR AT LEAST 7 DAYS AFTER PLACEMENT.
14. BROKEN OR DEFECTIVE CONCRETE WILL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER.
15. DRILL TEST CORES WHERE DIRECTED BY THE ENGINEER, WHEN NECESSARY TO DETERMINE MAGNITUDE OF CRACKS OR DEFECTIVE AREAS. TESTING WILL BE IN ACCORDANCE WITH THE MATERIAL TESTING SPECIFICATION.
16. CONCRETE PAVED AREAS SHALL BE MAINTAINED BY THE CONTRACTOR SUCH THAT AT FINAL INSPECTION, CONCRETE SHALL BE FREE OF STAINS, DISCOLORATIONS, DIRT AND OTHER FOREIGN MATERIAL.

EARTHWORK

PREPARE SUBGRADE BY EXCAVATION OR EMBANKMENT FOR BUILDING SLABS, WALKS AND PAVEMENTS. EXCAVATION AND BACKFILL FOR UNDERGROUND UTILITIES AND DRAINAGE FILL COURSE FOR SUPPORT OF BUILDING SLABS ARE INCLUDED IN THIS ITEM.

EXECUTION:

1. ALL EXCAVATION, BACKFILL AND COMPACTION SHALL BE PERFORMED AS SHOWN IN THE PLANS AND GEOTECHNICAL REPORT FOR THE SITE.
2. EXCESS MATERIAL RESULTING FROM EXCAVATION OPERATIONS IS THE PROPERTY OF THE CONTRACTOR. APPROPRIATE DISPOSAL SHALL BE AT THE CONTRACTOR'S EXPENSE.
3. ALL EXCAVATION SHALL BE PERFORMED AS DIRECTED IN THE PLANS AND IN COMPLIANCE WITH OSHA STANDARDS.
4. OWNER WILL ENGAGE AT THE OWNER'S COST SOIL TESTING AND INSPECTION SERVICE IN ACCORDANCE WITH MATERIAL TESTING SPECIFICATION TO VERIFY COMPLIANCE WITH THE PLANS & SPECIFICATIONS. REPLACEMENT AND RETESTING OF DEFICIENT WORK SHALL BE DONE BY CONTRACTOR AT NO ADDITIONAL COMPENSATION.
5. DATA ON SUBSURFACE CONDITIONS IS AVAILABLE TO THE CONTRACTOR. THE OWNER MAKES NO WARRANTY AS TO THE CORRECTNESS OF THESE REPORTS. THE CONTRACTOR MAY, AT HIS OWN EXPENSE, PERFORM ADDITIONAL TEST BORINGS.
6. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ALL AFFECTED UTILITY COMPANIES. THIS SHALL INCLUDE LOCATION OF FACILITIES, PROTECTION DURING CONSTRUCTION, DAMAGE REPAIRS AND DISRUPTION OF SERVICE.
7. THE EXCAVATION IS UNCLASSIFIED, AND CONTRACTOR SHALL PERFORM EXCAVATION TO THE ELEVATIONS INDICATED IN THE PLANS, REGARDLESS OF CHARACTER OF MATERIAL, WITH NO ADDITIONAL COMPENSATION FROM THE OWNER. USE OF EXPLOSIVE IS PROHIBITED.
8. CONTRACTOR IS RESPONSIBLE FOR PROVIDING BARRICADES REQUIRED TO WARN AND/OR PREVENT ACCESS TO CONSTRUCTION AREA.
9. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ADJACENT FACILITIES FROM DAMAGE.
10. EARTHWORK SHALL BE PERFORMED IN COMPLIANCE WITH LANDSCAPE PROTECTION REQUIREMENTS.
11. OVER-EXCAVATION IS NON-COMPENSABLE, AND SHALL BE BACKFILLED AND COMPACTED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
12. CONTRACTOR SHALL PROVIDE ALL LABOR AND EQUIPMENT NECESSARY TO PROPERLY DEWATER EXCAVATION AREAS - AS REQUIRED.
13. EXCAVATED MATERIAL SHALL BE STOCKPILED WHERE DIRECTED IN THE PLANS. STOCKPILE SHALL BE MAINTAINED IN COMPLIANCE WITH ALL RELEVANT POLLUTION PREVENTION PLANS.
14. EARTHWORK SHALL BE PERFORMED TO THE TOLERANCES SHOWN IN THE PLANS AND/OR SPECIFIED IN THE GEOTECHNICAL REPORT FOR THE PROJECT.
15. TRENCHES SHALL BE BACKFILLED ONLY AFTER INSPECTION AND APPROVAL OF THE TESTING LAB. BACKFILL MATERIAL AND PROCEDURES FOR TRENCHES SHALL BE IN COMPLIANCE WITH THE ARIZONA DEPARTMENT OF TRANSPORTATION 2021 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 203-5 STRUCTURAL EXCAVATION AND STRUCTURE BACKFILL.

WATER DISTRIBUTION AND WASTEWATER COLLECTION SYSTEMS

FURNISH AND INSTALL THE FIRE LINE, DOMESTIC WATER LINE AND WASTEWATER COLLECTION SYSTEM AND ALL RELATED APPURTENANCES FROM THE PUBLIC MAIN TO THE BUILDING PAD(S) AS SHOWN ON THE PLANS, INCLUDING BUT NOT LIMITED TO ALL PIPING, FITTINGS, VAULTS, VALVES, METERS, MANHOLES AND JUNCTION BOXES REQUIRED.

EXECUTION:

1. INSTALLATION OF WASTEWATER LINES SHALL BEGIN AT THE TAP TO THE PUBLIC WASTEWATER SYSTEM AND PROGRESS UPSTREAM. WATER AND WASTEWATER LINES SHALL BE EXTENDED TO SERVICE ENTRANCE INTO BUILDING(S). CONTRACTOR SHALL PROVIDE A WATERTIGHT SLEEVE IN FOUNDATION FOR WATER LINE.
2. CONTRACTOR IS RESPONSIBLE FOR TAP AT PUBLIC MAIN AND ALL LINES, FITTINGS AND APPURTENANCES SHOWN ON PLANS OR REQUIRED BY THE LOCAL UTILITY COMPANY.
3. ALL MATERIALS, INSTALLATION, INSPECTION AND TESTING OF WATER METER AND RELATED PIPING AND APPURTENANCES SHALL CONFORM TO UPC STANDARDS, AWWA STANDARDS, TCEQ STANDARDS, AND THE APPLICABLE LOCAL UTILITY COMPANY REGULATIONS. ALL MATERIALS AND INSTALLATIONS REQUIRED FOR FIRE PROTECTION SHALL MEET FACTORY MUTUAL GLOBAL STANDARDS.
4. TRENCH EXCAVATION SHALL BE PERFORMED AND BACKFILL MATERIAL AND PROCEDURES SHALL BE IN COMPLIANCE WITH THE ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES.

STORM WATER COLLECTION SYSTEM

FURNISH AND INSTALL ALL MATERIAL COMPRISING THE STORM WATER COLLECTION SYSTEM SHOWN ON THE PLANS.

EXECUTION

1. ALL WORK UNDER THIS ITEM SHALL BE IN COMPLIANCE WITH ANY GOVERNING PERMITS FOR THIS SITE INCLUDING BUT NOT LIMITED TO FEDERAL TPDES PERMITS OR LOCAL WATERWAY OR SITE DEVELOPMENT PERMITS.
2. ALL MATERIALS AND INSTALLATION OF STORM SEWER PIPING SHALL COMPLY WITH THE FOLLOWING ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES.
3. INSTALLATION OF THE STORM SEWER SYSTEM SHALL BEGIN AT THE OUTFALL AND PROGRESS UPSTREAM.
4. ANY WORK DONE IN THE PUBLIC RIGHT OF WAY WILL BE COMPLETED ACCORDING TO GOVERNING SPECIFICATIONS AND REGULATIONS.
5. TRENCH EXCAVATION SHALL BE PERFORMED AND BACKFILL MATERIAL AND PROCEDURES SHALL BE IN COMPLIANCE WITH THE ARIZONA DEPARTMENT OF TRANSPORTATION 2021 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 203-5 STRUCTURAL EXCAVATION AND STRUCTURE BACKFILL.

STORM SEWER NOTES

1. THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR UTILITIES PRIOR TO STARTING CONSTRUCTION. (SEE SITE INFORMATION SHEET FOR UTILITY CONTACTS)
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING INVERTS AND RIM ELEVATIONS PRIOR TO CONSTRUCTION. CONTACT ENGINEER WITH ANY DISCREPANCIES.
3. CONTRACTOR IS RESPONSIBLE TO COMPLETE OR COORDINATE ADJUSTMENT OF OTHER UTILITIES IN ORDER TO CONSTRUCT STORM SEWER TO ELEVATIONS PROVIDED.
4. THE FOLLOWING STORM SEWER PIPES ARE ALLOWABLE:
   - 4.1. 2" THRU 48" RCP, D-LOAD DESIGN
   - 4.2. 6" THRU 12" PVC, SDR 35 OR SCH. 40
   - 4.3. 12" THRU 18" GALVANIZED CORRUGATED METAL (2-2/3"X 1/2" CORRUGATED) (N= 0.013 MAX.)
   - 4.4. 12" THRU 48" "ULTRAFLO" SPIRAL RIB PIPE (AASHTO M-36 TYPE I.R. WITH GALVANIZED STEEL AS PER AASHTO M-218)
   - 4.5. 6" THRU 36", HDPE
5. ALL SLOPES STEEPER THAN 3:1 SHALL BE OVERLAID WITH GEOWEB 8204, 4" CELLULAR CONFINEMENT SYSTEM. SUPAC 8NP WILL BE PLACED UNDER GEOWEB AND SYSTEM ANCHORED PER MANUFACTURERS RECOMMENDATIONS.
6. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED AND GRADED TO DRAIN.

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-26-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2655 S. WINSTON LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
GENERAL NOTES

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C001
REV 4

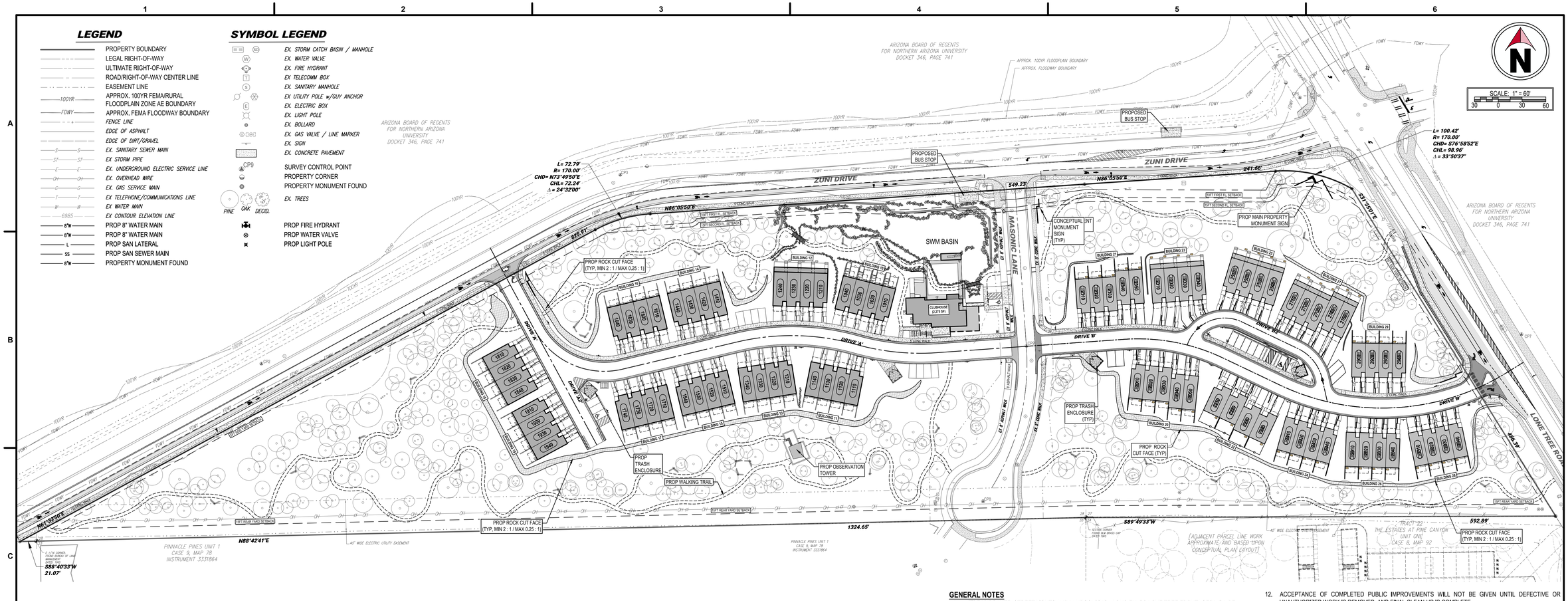
S:\HOME\22004 PLANS\SHEET FILES\MAIN\[C001 GNRL] 22004 C001

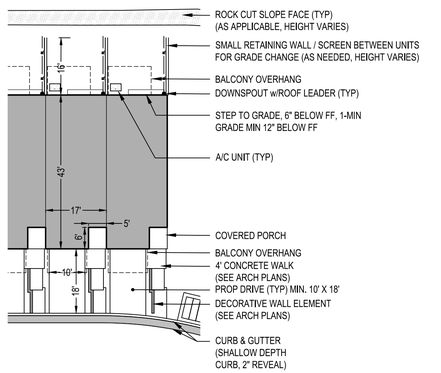
LEGEND

- PROPERTY BOUNDARY
- LEGAL RIGHT-OF-WAY
- ULTIMATE RIGHT-OF-WAY
- ROAD/RIGHT-OF-WAY CENTER LINE
- EASEMENT LINE
- 100YR — APPROX. 100YR FEMA/RURAL FLOODPLAIN ZONE AE BOUNDARY
- FDWY — APPROX. FEMA FLOODWAY BOUNDARY
- FENCE LINE
- EDGE OF ASPHALT
- EDGE OF DIRT/GRAVEL
- S — S — EX. SANITARY SEWER MAIN
- ST — ST — EX STORM PIPE
- E — E — EX. UNDERGROUND ELECTRIC SERVICE LINE
- OH — OH — EX. OVERHEAD WIRE
- G — G — EX. GAS SERVICE MAIN
- T — T — EX TELEPHONE/COMMUNICATIONS LINE
- W — W — EX WATER MAIN
- 6985 — EX CONTOUR ELEVATION LINE
- 8"W — PROP 8" WATER MAIN
- 8"W — PROP 8" WATER MAIN
- L — PROP SAN LATERAL
- SS — PROP SAN SEWER MAIN
- 8"W — PROPERTY MONUMENT FOUND

SYMBOL LEGEND

- EX. STORM CATCH BASIN / MANHOLE
- EX. WATER VALVE
- EX. FIRE HYDRANT
- EX TELECOMM BOX
- EX. SANITARY MANHOLE
- EX UTILITY POLE w/GUY ANCHOR
- EX. ELECTRIC BOX
- EX. LIGHT POLE
- EX. BOLLARD
- EX. GAS VALVE / LINE MARKER
- EX. SIGN
- EX. CONCRETE PAVEMENT
- CP9 — SURVEY CONTROL POINT
- PROPERTY CORNER
- PROPERTY MONUMENT FOUND
- PINE, OAK, DECID. — EX. TREES
- PROP FIRE HYDRANT
- PROP WATER VALVE
- PROP LIGHT POLE

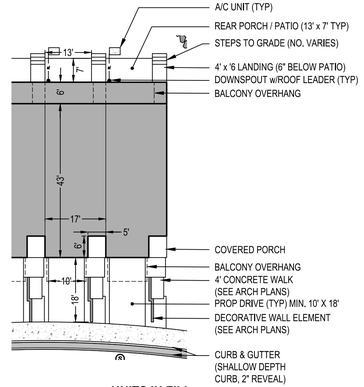




UNITS IN CUT
(3-STORY / SLAB ON GRADE)

PONDEROSA UNIT

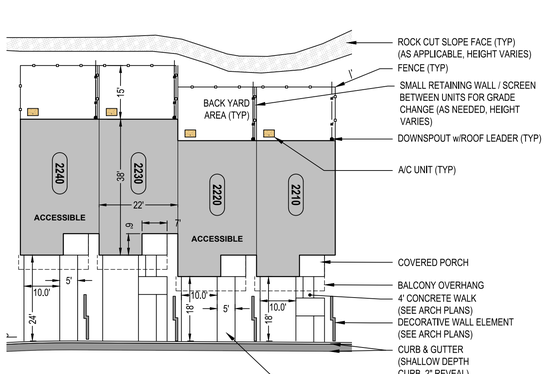
NOT TO SCALE



UNITS IN FILL
(2-STORY FRONT / 3-STORY REAR)

ASPEN UNIT

NOT TO SCALE



UNITS IN CUT
(2-STORY / SLAB ON GRADE)

JUNIPER UNIT

NOT TO SCALE

BUILDING SUMMARY

BUILDING MODEL	UNIT TYPE	Qty	FLOORS	TOTAL FLOOR AREA (SF)	BEDROOMS	BUILDING NUMBER
PONDEROSA	INTERIOR UNIT	32	3	2,226	3	10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 24, 26, 28, 29
	END UNIT	30	3	2,250	3	
ASPEN	INTERIOR UNIT	9	3	2,180	2	12, 23, 25, 27
	END UNIT	8	3	2,231	3	
JUNIPER	INTERIOR UNIT	2	2	1,565	3	22
	END UNIT [ACCESSIBLE]	2	2	1,585	4	
	TOTAL	83				
CLUBHOUSE			2	5,100	N/A	N/A

GENERAL NOTES

1. FIRE HYDRANTS, STREET LIGHTS AND LANDSCAPING ALONG ZUNI & LONE TREE FRONTAGES WILL BE PROVIDED IN ACCORDANCE WITH CITY OF FLAGSTAFF ENGINEERING STANDARDS.
2. ALL PROPOSED DRIVE AISLES WILL BE PROVIDED WITH RED CURBING AND NO PARKING/FIRE LANE SIGNAGE.

CITY OF FLAGSTAFF - GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER IS FOR A ONE (1) YEAR PERIOD, SUBSEQUENT TO THE DATE OF APPROVAL. IF CONSTRUCTION WORK IS NOT STARTED WITHIN THE ONE (1) YEAR PERIOD, OR HAS BEEN DISCONTINUED FOR ANY REASON FOR LONGER THAN ONE (1) YEAR, THE PLANS SHALL BE RESUBMITTED FOR REVIEW AND RE-APPROVAL.
2. PLAN REVIEW BY THE CITY DOES NOT EXTEND TO MATERIAL QUANTITIES SHOWN ON THE PLANS.
3. A PUBLIC WORKS PERMIT, ISSUED BY THE CITY, IS REQUIRED FOR ALL WORK IN CITY RIGHTS-OF-WAY OR EASEMENTS AND FOR CONSTRUCTION OF ANY IMPROVEMENTS INTENDED TO BECOME PUBLIC PROPERTY.
4. THE CITY SHALL BE NOTIFIED TWENTY-FOUR (24) HOURS PRIOR TO BEGINNING DIFFERENT PHASES OF CONSTRUCTION SO THAT CITY INSPECTORS MAY BE SCHEDULED.
5. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH TITLE 13, ENGINEERING DESIGN STANDARDS AND SPECIFICATIONS FOR NEW INFRASTRUCTURE, CURRENT "MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION," THE CITY OF FLAGSTAFF STORMWATER DESIGN MANUAL, AND WITH GENERALLY ACCEPTED ENGINEERING DESIGN AND CONSTRUCTION PRACTICE. ALL WORK AND MATERIALS, WHICH DO NOT CONFORM TO THE STANDARDS AND SPECIFICATIONS, ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING CHAPTER 13-21, WHICH MAKES MINOR MODIFICATIONS TO CERTAIN MAG SPECIFICATIONS AND DETAILS.
6. ANY WORK PERFORMED WITHOUT THE KNOWLEDGE AND APPROVAL OF THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
7. THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE MAY SUSPEND THE WORK BY WRITTEN NOTICE WHEN, IN HIS JUDGMENT, PROGRESS IS UNSATISFACTORY, WORK BEING DONE IS UNAUTHORIZED OR DEFECTIVE, WEATHER CONDITIONS ARE UNSUITABLE, OR THERE IS DANGER TO THE PUBLIC HEALTH OR SAFETY.
8. THE CITY ENGINEER MAY ORDER ANY OR ALL MATERIALS USED IN THE WORK TO BE TESTED ACCORDING TO THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) AND THE AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARDS. THE CONTRACTOR SHALL, AT HIS EXPENSE, SUPPLY ALL SAMPLES REQUIRED FOR TESTING.
9. ACCESS THAT MEETS SECTION 13-13-004-0001, FIRE ACCESS, SHALL BE IN PLACE AND APPROVED BEFORE AND AT ALL TIMES DURING ON-SITE COMBUSTIBLE CONSTRUCTION AND/OR PRIOR TO ISSUANCE OF BUILDING PERMITS IN NEW SUBDIVISIONS. FIRE DEPARTMENT AND ENGINEERING SECTION APPROVAL IS REQUIRED FOR OBSTRUCTION OF ACCESS OR WATER SYSTEM SHUTDOWN.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE STREETS AND OF PARTIALLY COMPLETED PORTIONS OF THE WORK UNTIL FINAL ACCEPTANCE OF THE WORK. THE CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER FOR APPROVAL A CONSTRUCTION SCHEDULE FOR ANY STREETS REQUIRED TO BE CLOSED OR PARTIALLY CLOSED FOR THE CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL REOPEN THE STREETS NO LATER THAN THE OPENING DATE SHOWN ON THE CONSTRUCTION SCHEDULE OR UPON ORDER OF THE CITY ENGINEER. THE REGULATION AND CONTROL OF CONSTRUCTION TRAFFIC SHALL BE AS DIRECTED BY THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
11. APPROVAL OF A PORTION OF THE WORK IN PROGRESS DOES NOT GUARANTEE ITS FINAL ACCEPTANCE. TESTING AND EVALUATION MAY CONTINUE UNTIL WRITTEN FINAL ACCEPTANCE OF A COMPLETE WORKABLE UNIT. ANY DEFECTS WHICH APPEAR IN THE WORK WITHIN ONE (1) YEAR FROM THE DATE OF ACCEPTANCE AND WHICH ARE DUE TO IMPROPER WORKMANSHIP OR INFERIOR MATERIALS SUPPLIED SHALL BE CORRECTED BY OR AT THE EXPENSE OF THE OWNER/DEVELOPER OR THE CONTRACTOR.
12. ACCEPTANCE OF COMPLETED PUBLIC IMPROVEMENTS WILL NOT BE GIVEN UNTIL DEFECTIVE OR UNAUTHORIZED WORK IS REMOVED, AND FINAL CLEAN-UP IS COMPLETE.
13. LOCATION OF UNDERGROUND UTILITIES BEFORE WORK IS BEGUN IS TO BE ACCOMPLISHED IN ACCORDANCE WITH A.R.S. SECTION 40-360.22.
14. IF WORK IS DONE ON PRIVATE PROPERTY IN RELATION TO A PROJECT CONSTRUCTED UNDER THESE STANDARDS, THE CONTRACTOR WILL PROVIDE THE CITY WITH WRITTEN AUTHORIZATION FROM THE PROPERTY OWNER TO DO SO.
15. THE ESTABLISHMENT AND USE OF TEMPORARY CONSTRUCTION YARDS SHALL CONFORM TO THE CURRENT CITY ZONING CODE STANDARDS FOR TEMPORARY USES.
16. ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE CITY CODES AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED CITY APPROVALS AND PERMITS AS DEEMED NECESSARY BY THE CITY TO DISPOSE OF EXCAVATED MATERIAL.
17. ALL CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER AND PERFORMED UNDER THE DIRECT SUPERVISION OF A REGISTERED LAND SURVEYOR OR CIVIL ENGINEER.
18. ALL TRAFFIC SIGN SHEETING SHALL BE TYPE VIII AS DESIGNED BY ASTM D4956-07E1 STANDARD SPECIFICATIONS FOR RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL, UNLESS SPECIFIED OTHERWISE ON THE CONSTRUCTION PLANS.
19. WHEN THE CONSTRUCTION PLANS SPECIFY GRAFFITI CONTROL ON BRIDGES OR OTHER STRUCTURES, THE CONTRACTOR SHALL SEAL THE STRUCTURE FIRST USING MONOCHEM AQUASEAL ME 12 AND THEN APPLY MONOCHEM PERMASHIELD, SACRIFICIAL GRAFFITI CONTROL SYSTEM (OR APPROVED EQUAL).
20. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED AND RESEEDED IN ACCORDANCE WITH CHAPTER 13-17. IN THE EVENT THAT THE CONSTRUCTION ACTIVITY DISTURBS MORE THAN ONE (1) ACRE, A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE PREPARED IN ORDER TO OBTAIN A CONSTRUCTION GENERAL PERMIT FROM ADEQ. (ORD. 2017-22, REP&REEN, 07/05/2017)

PARKING REQUIREMENTS			
REQUIRED PARKING CALCULATION			
USE	REQUIREMENT [1]	PARKING REQUIRED UNITS	PARKING
SINGLE FAMILY (ATTACHED)			
STANDARD UNITS (2 - 3 BEDROOMS)	2.00 SPACES PER UNIT	81	162.00
STANDARD UNITS (4 BEDROOMS)	2.50 SPACES PER UNIT	2	5.00
GUEST PARKING	0.25 SPACES PER UNIT	83	20.75
TOTAL PARKING REQUIRED		TOTAL	187.75
		USE	188
PARKING PROVIDED			
GARAGE SPACE (1 PER UNIT, EXCL ADA UNITS)		81	
DRIVEWAY SPACE		83	
ADDITIONAL SPACES		22	
ADA SITE SPACES		3	
TOTAL PARKING PROVIDED		189	
REQUIRED BICYCLE PARKING			
5% OF TOTAL REQUIRED PARKING SPACES		188	9.4
TOTAL BICYCLE PARKING REQUIRED		USE	10
BICYCLE PARKING PROVIDED			12
1) PER TABLE 10-50.80.040.A			
2) THE PROJECT WILL PROVIDE AN AFFORDABLE HOUSING CONTRIBUTION TO THE CITY FOR THE EQUIVALENT OF 10 SITE UNITS.			

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 BLUE STAKE, INC.
Call 811 or click Arizona811.org
LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-26-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 DATE SIGNED ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

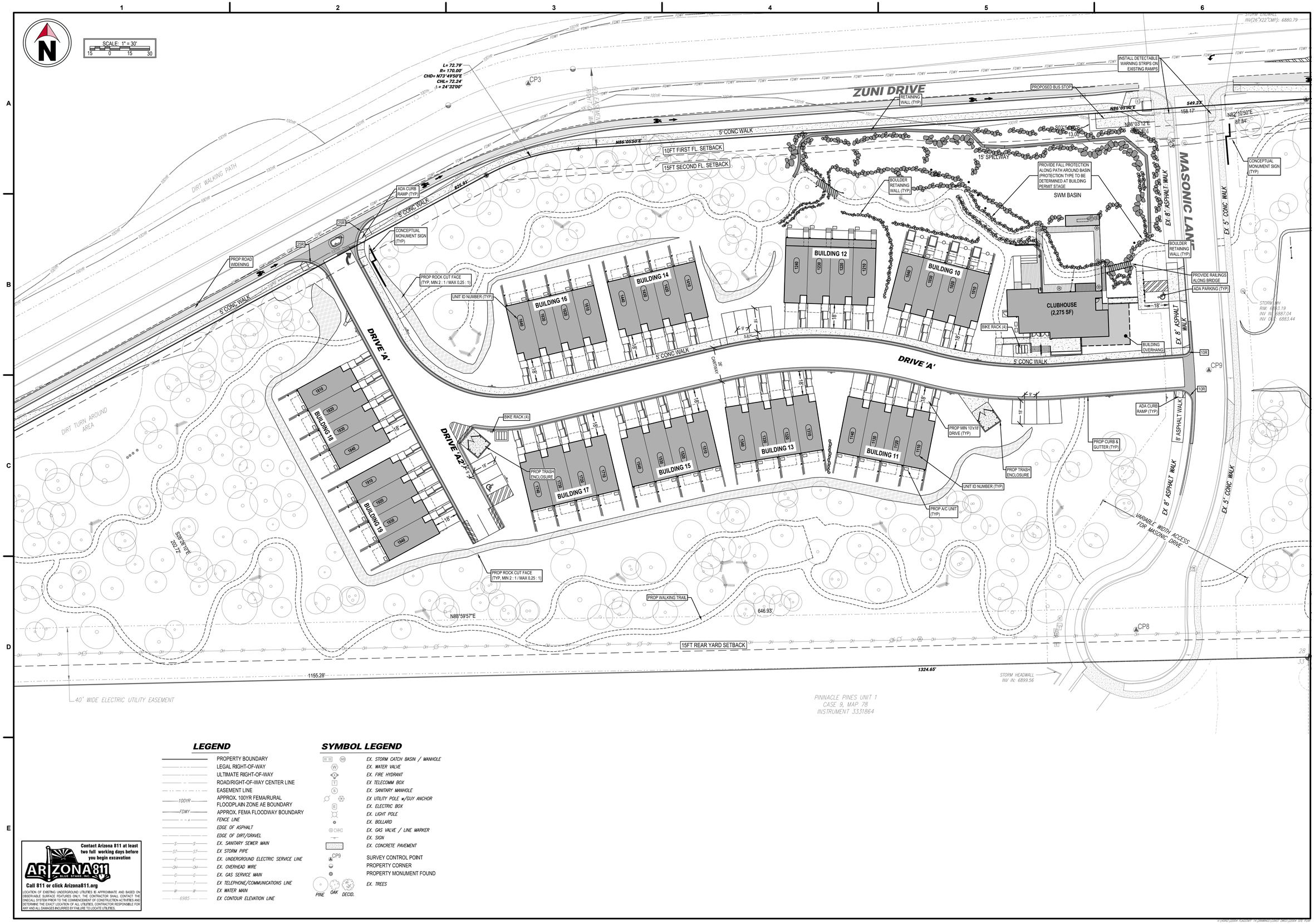
DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2500 N MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
OVERALL SITE PLAN

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C100
REV 4
SHEET 3 of 46



LEGEND

- PROPERTY BOUNDARY
- LEGAL RIGHT-OF-WAY
- ULTIMATE RIGHT-OF-WAY
- ROAD/RIGHT-OF-WAY CENTER LINE
- EASEMENT LINE
- 100YR — APPROX. 100YR FEMA/RURAL FLOODPLAIN ZONE AE BOUNDARY
- FDWY — APPROX. FEMA FLOODWAY BOUNDARY
- FENCE LINE
- EDGE OF ASPHALT
- EDGE OF DIRT/GRAVEL
- S — S — EX. SANITARY SEWER MAIN
- ST — ST — EX STORM PIPE
- E — E — EX. UNDERGROUND ELECTRIC SERVICE LINE
- OH — OH — EX. OVERHEAD WIRE
- G — G — EX. GAS SERVICE MAIN
- T — T — EX TELEPHONE/COMMUNICATIONS LINE
- W — W — EX WATER MAIN
- 6985 — EX CONTOUR ELEVATION LINE

SYMBOL LEGEND

- EX. STORM CATCH BASIN / MANHOLE
- EX. WATER VALVE
- EX. FIRE HYDRANT
- EX TELECOMM BOX
- EX. SANITARY MANHOLE
- EX UTILITY POLE w/GUY ANCHOR
- EX. ELECTRIC BOX
- EX. LIGHT POLE
- EX. BOLLARD
- EX. GAS VALVE / LINE MARKER
- EX. SIGN
- EX. CONCRETE PAVEMENT
- CP9 — SURVEY CONTROL POINT
- PROPERTY CORNER
- PROPERTY MONUMENT FOUND
- EX. TREES (PINE, OAK, DECID.)

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 DATE SIGNED ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

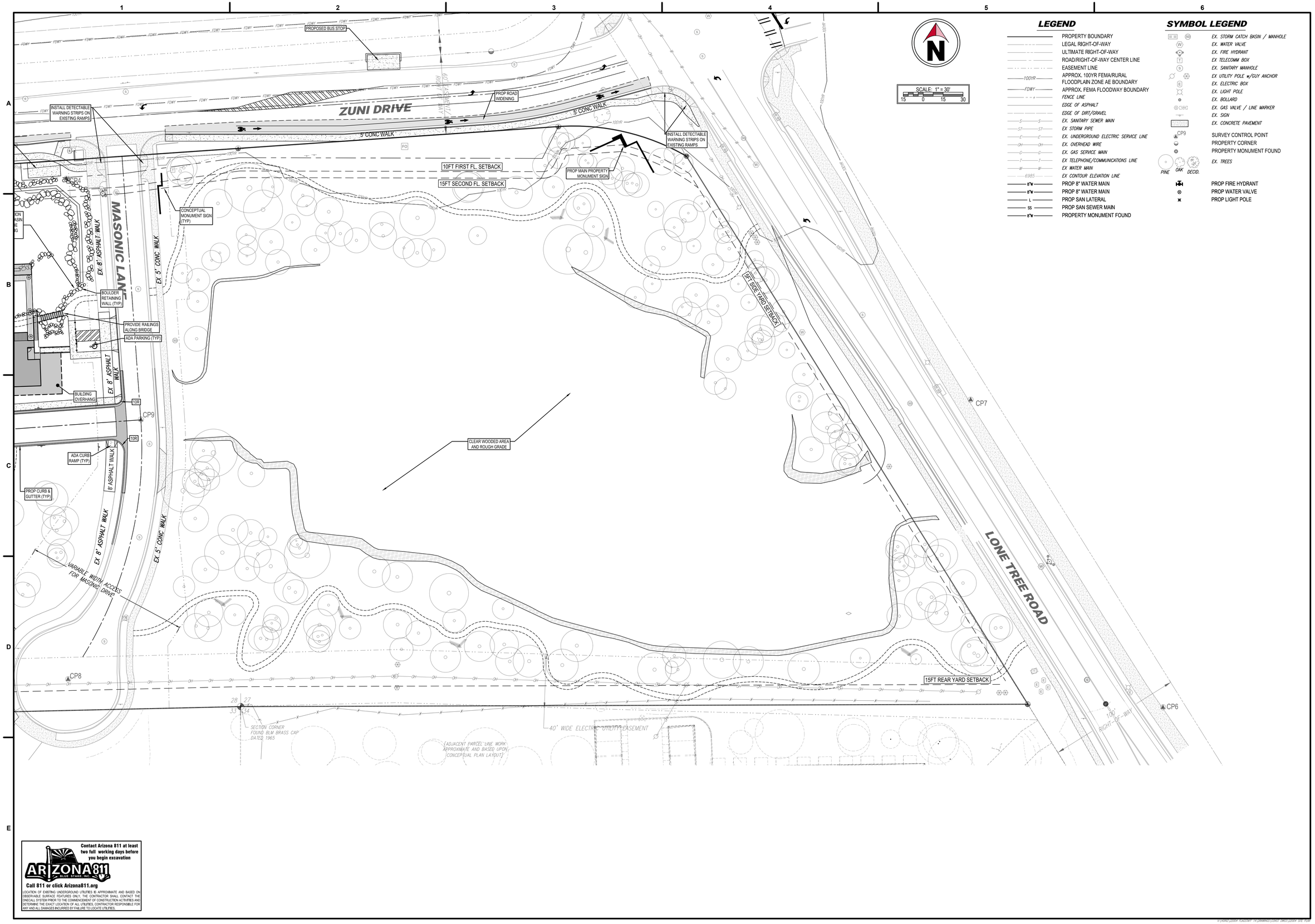
DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2651 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
PHASE 1 SITE PLAN (1 OF 2)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C101
REV 4
SHEET 4 of 46



LEGEND

- PROPERTY BOUNDARY
- LEGAL RIGHT-OF-WAY
- ULTIMATE RIGHT-OF-WAY
- ROAD/RIGHT-OF-WAY CENTER LINE
- EASEMENT LINE
- 100YR — APPROX. 100YR FEMA/RURAL FLOODPLAIN ZONE AE BOUNDARY
- FDWY — APPROX. FEMA FLOODWAY BOUNDARY
- FENCE LINE
- EDGE OF ASPHALT
- EDGE OF DIRT/GRAVEL
- S — S — EX. SANITARY SEWER MAIN
- ST — ST — EX STORM PIPE
- E — E — EX. UNDERGROUND ELECTRIC SERVICE LINE
- OH — OH — EX. OVERHEAD WIRE
- G — G — EX. GAS SERVICE MAIN
- T — T — EX TELEPHONE/COMMUNICATIONS LINE
- W — W — EX WATER MAIN
- 6985 — EX CONTOUR ELEVATION LINE
- 8"W — PROP 8" WATER MAIN
- 8"W — PROP 8" WATER MAIN
- L — PROP SAN LATERAL
- SS — PROP SAN SEWER MAIN
- 8"W — PROPERTY MONUMENT FOUND

SYMBOL LEGEND

- EX. STORM CATCH BASIN / MANHOLE
- EX. WATER VALVE
- EX. FIRE HYDRANT
- EX. TELECOMM BOX
- EX. SANITARY MANHOLE
- EX UTILITY POLE w/GUY ANCHOR
- EX. ELECTRIC BOX
- EX. LIGHT POLE
- EX. BOLLARD
- EX. GAS VALVE / LINE MARKER
- EX. SIGN
- EX. CONCRETE PAVEMENT
- CP9 — SURVEY CONTROL POINT
- PROPERTY CORNER
- PROPERTY MONUMENT FOUND
- PINE / OAK / DECID. — EX. TREES
- PROP FIRE HYDRANT
- PROP WATER VALVE
- PROP LIGHT POLE

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 DATE SIGNED ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

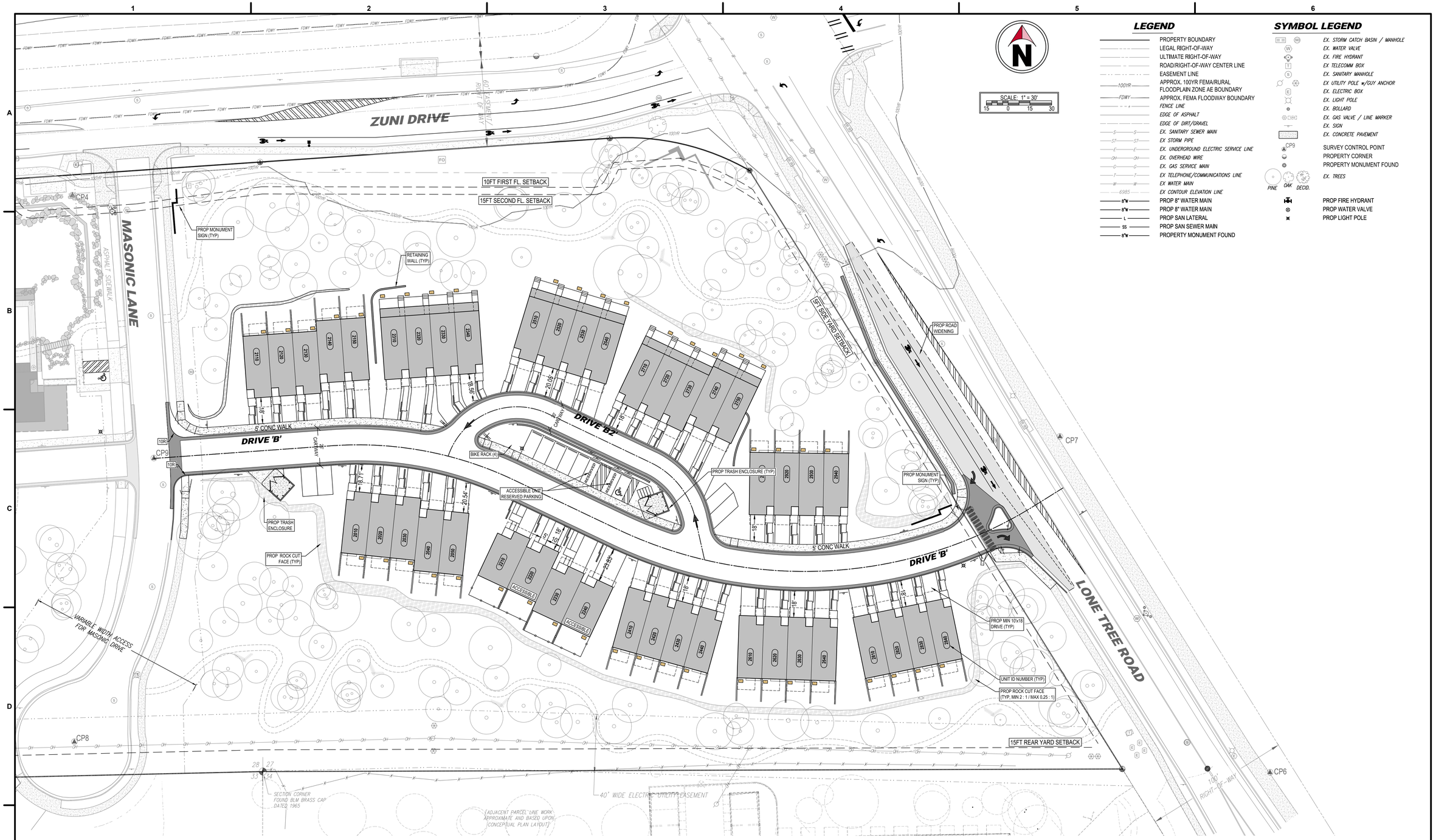
PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2955 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **SITE PLAN REVIEW**
PHASE 1 SITE PLAN (2 OF 2)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C102
REV 4

V:\WORK\22004 FLAGSTAFF 1\PLANNING\CIVIL DWG\22004 SITE PLAN



LEGEND

- PROPERTY BOUNDARY
- LEGAL RIGHT-OF-WAY
- ULTIMATE RIGHT-OF-WAY
- ROAD/RIGHT-OF-WAY CENTER LINE
- EASEMENT LINE
- 100YR — APPROX. 100YR FEMA/RURAL FLOODPLAIN ZONE AE BOUNDARY
- FDWY — APPROX. FEMA FLOODWAY BOUNDARY
- FENCE LINE
- EDGE OF ASPHALT
- EDGE OF DIRT/GRAVEL
- S — S — EX. SANITARY SEWER MAIN
- ST — ST — EX STORM PIPE
- E — E — EX. UNDERGROUND ELECTRIC SERVICE LINE
- OH — OH — EX. OVERHEAD WIRE
- G — G — EX. GAS SERVICE MAIN
- T — T — EX TELEPHONE/COMMUNICATIONS LINE
- W — W — EX WATER MAIN
- 6985 — EX CONTOUR ELEVATION LINE
- 8"W — PROP 8" WATER MAIN
- 8"W — PROP 8" WATER MAIN
- L — PROP SAN LATERAL
- SS — PROP SAN SEWER MAIN
- 8"W — PROPERTY MONUMENT FOUND

SYMBOL LEGEND

- EX. STORM CATCH BASIN / MANHOLE
- EX. WATER VALVE
- EX. FIRE HYDRANT
- EX. TELECOMM BOX
- EX. SANITARY MANHOLE
- EX. UTILITY POLE w/GUY ANCHOR
- EX. ELECTRIC BOX
- EX. LIGHT POLE
- EX. BOLLARD
- EX. GAS VALVE / LINE MARKER
- EX. SIGN
- EX. CONCRETE PAVEMENT
- CP9 — SURVEY CONTROL POINT
- PROPERTY CORNER
- PROPERTY MONUMENT FOUND
- EX. TREES (PINE, OAK, DECID.)
- PROP FIRE HYDRANT
- PROP WATER VALVE
- PROP LIGHT POLE

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer, (Civil)
CERTIFICATE NO.
77934
ERIC S. BEALS
DATE SIGNED
5/02/24
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2955 S MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **SITE PLAN REVIEW**
PHASE 2 SITE PLAN

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C103
REV 4
SHEET 6 of 46

LEGEND

- PROPERTY BOUNDARY
- LEGAL RIGHT-OF-WAY
- ULTIMATE RIGHT-OF-WAY
- ROAD/RIGHT-OF-WAY CENTER LINE
- EASEMENT LINE
- 100YR — APPROX. 100YR FEMA/RURAL FLOODPLAIN ZONE AE BOUNDARY
- FDWY — APPROX. FEMA FLOODWAY BOUNDARY
- FENCE LINE
- EDGE OF ASPHALT
- EDGE OF DIRT/GRAVEL
- S — S — EX. SANITARY SEWER MAIN
- ST — ST — EX STORM PIPE
- E — E — EX. UNDERGROUND ELECTRIC SERVICE LINE
- OH — OH — EX. OVERHEAD WIRE
- G — G — EX. GAS SERVICE MAIN
- T — T — EX TELEPHONE/COMMUNICATIONS LINE
- W — W — EX WATER MAIN
- EX. CONTOUR ELEVATION LINE

SYMBOL LEGEND

- SD — EX. STORM CATCH BASIN / MANHOLE
- W — EX. WATER VALVE
- EX. FIRE HYDRANT
- T — EX TELECOMM BOX
- S — EX. SANITARY MANHOLE
- EX UTILITY POLE w/GUY ANCHOR
- E — EX. ELECTRIC BOX
- EX. LIGHT POLE
- EX. BOLLARD
- GAS — EX. GAS VALVE / LINE MARKER
- EX. SIGN
- EX. CONCRETE PAVEMENT
- CP9 — SURVEY CONTROL POINT
- PROPERTY CORNER
- PROPERTY MONUMENT FOUND
- PINE OAK DECID. — EX. TREES

ARIZONA BOARD OF REGENTS FOR NORTHERN ARIZONA UNIVERSITY DOCKET 346, PAGE 741

PROPOSED RIGHT-OF-WAY DEDICATION (5,385 SF, 0.123AC)

SCALE: 1" = 60'

ZUNI DRIVE

L= 72.79'
R= 170.00'
CHD= N73°49'50"E
CHL= 72.24'
Δ = 24°32'00"

N86°05'50"E 825.31'

PUBLIC UTILITY EASEMENT (0.93 AC)

CIVIC OPEN SPACE (~39,450 SF / 0.90 AC)
[EIGHT (8) FOOT WIDE EASEMENT CENTERED ON FOUR (4) FOOT WIDE TRAIL, ~4,950 L.F.]

PUBLIC USE TRAIL (TYP.)

MASONIC LANE

VARIABLE WIDTH ACCESS FOR MASONIC DRIVE

L= 100.42'
R= 170.00'
CHD= S76°58'52"E
CHL= 98.96'
Δ = 33°50'37"

S03°54'10"E 13.00'
N86°03'12"E 76.54'
549.23'
158.17'
N82°10'50"E 87.84'
N86°05'50"E
N83°37'22"E
241.66'
S89°52'04"E 228.63'
N28°39'08"E 26.80'
S71°53'01"E

100' RIGHT-OF-WAY

LONE TREE ROAD

COMMON OPEN SPACE EASEMENT (2.01 AC)

S28°26'10"E 201.72'
490.00'
N61°33'50"E
S88°40'33"W 21.07'
N88°42'41"E 1155.28'
N88°59'57"E 646.93'
S02°35'46"E 39.94'
S89°49'33"W 1324.65'
592.89'
486.39'

R= 321.00'
L= 182.59'
R= 279.00'
L= 158.71'
R= 279.00'
L= 86.20'
R= 315.00'
L= 144.36'
R= 285.00'
L= 68.10'
R= 315.00'
L= 20.46'
R= 315.00'
L= 40.58'
R= 115.00'
R= 271.00'
L= 69.74'
L= 121.10'
R= 235.00'
R= 279.00'
L= 158.54'
L= 270.73'
R= 316.00'

N76°36'54"E 148.31'
N76°36'54"E 149.31'
N85°54'52"E
S13°32'57"W 7.08'
S76°27'03"E 20.00'
S13°32'57"W 5.88'
N13°32'57"E 7.08'
N61°33'57"E 20.56'
N61°33'53"E 28.00'
S71°54'26"W 17.39'
S84°33'56"E 78.54'
S84°33'56"E 78.72'
N12°37'48"W 3.13'
N76°57'13"W 16.57'
N09°49'22"E 7.65'

VARIABLE WIDTH ACCESS FOR MASONIC DRIVE

40' WIDE ELECTRIC UTILITY EASEMENT

[ADJACENT PARCEL LINE WORK APPROXIMATE AND BASED UPON CONCEPTUAL PLAN LAYOUT]

ARIZONA BOARD OF REGENTS FOR NORTHERN ARIZONA UNIVERSITY DOCKET 346, PAGE 741

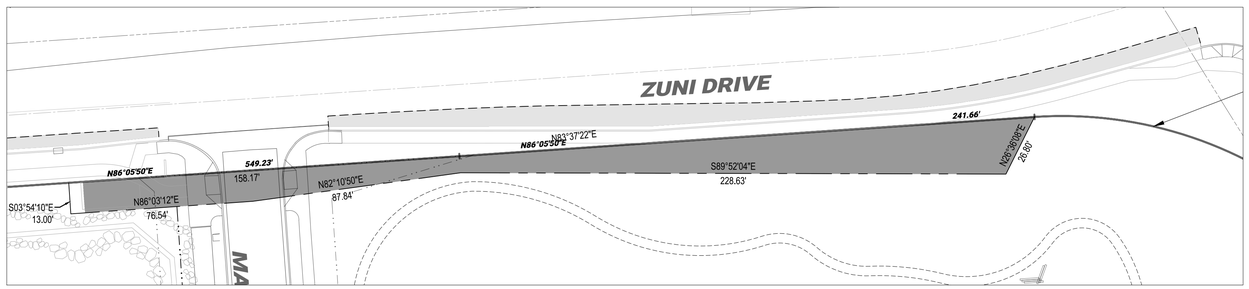
PINNACLE PINES UNIT 1 CASE 9, MAP 78 INSTRUMENT 3331864

PINNACLE PINES UNIT 1 CASE 9, MAP 78 INSTRUMENT 3331864

40' WIDE ELECTRIC UTILITY EASEMENT

TRACT 22 THE ESTATES AT PINE CANYON UNIT ONE CASE 8, MAP 92

NOTE: RIGHT-OF-WAY AND EASEMENT DIMENSIONS SHALL BE FINALIZED DURING CIVIL PLAN REVIEW



D1 ZUNI DRIVE RIGHT-OF-WAY DEDICATION

SCALE: 1" = 30'

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-26-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 REGISTERED ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2655 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

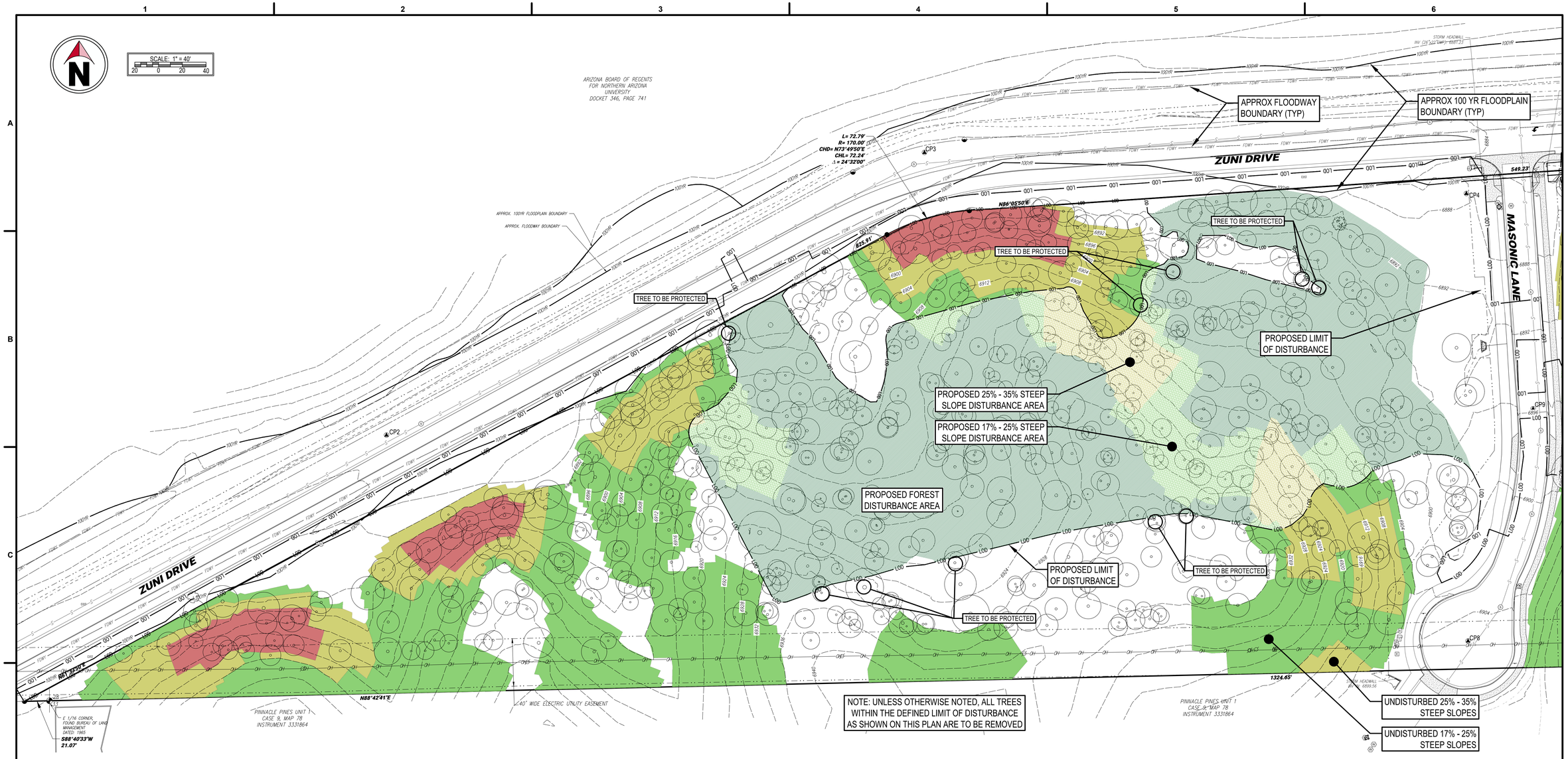
APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E 6TH STREET, SUITE 205, AUSTIN, TEXAS 78702

TITLE: **SITE PLAN REVIEW**
EASEMENT PLAN

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C105 REV 4

SHEET 7 of 46

R:\PROJECTS\22004 PEAKS\SHEET FILES\DRAWINGS\CURRENT DWGS\22004 SITE PLAN



HATCH LEGEND

UNDISTURBED STEEP SLOPES
- SLOPES >35%
- SLOPES 25% - 35%
- SLOPES 17% - 25%

DISTURBED AREAS
- SLOPES >35%
- SLOPES 25% - 35%
- SLOPES 17% - 25%
- WOODLAND AREAS

LEGEND

- PROPERTY BOUNDARY
- LEGAL RIGHT-OF-WAY
- ULTIMATE RIGHT-OF-WAY
- ROAD/RIGHT-OF-WAY CENTER LINE
- EASEMENT LINE
- APPROX. 100YR FEMA/RURAL FLOODPLAIN ZONE AE BOUNDARY
- APPROX. FEMA FLOODWAY BOUNDARY
- *FENCE LINE*
- *EDGE OF ASPHALT*
- *EDGE OF DIRT/GRAVEL*
- *EX. SANITARY SEWER MAIN*
- *EX STORM PIPE*
- *EX. UNDERGROUND ELECTRIC SERVICE LINE*
- *EX. OVERHEAD WIRE*
- *EX. GAS SERVICE MAIN*
- *EX. TELEPHONE/COMMUNICATIONS LINE*
- *EX. WATER MAIN*
- *EX. CONTOUR ELEVATION LINE*

SYMBOL LEGEND

- *EX. STORM CATCH BASIN / MANHOLE*
- *EX. WATER VALVE*
- *EX. FIRE HYDRANT*
- *EX. TELECOMM BOX*
- *EX. SANITARY MANHOLE*
- *EX. UTILITY POLE w/GUY ANCHOR*
- *EX. ELECTRIC BOX*
- *EX. LIGHT POLE*
- *EX. BOLLARD*
- *EX. GAS VALVE / LINE MARKER*
- *EX. SIGN*
- *EX. CONCRETE PAVEMENT*
- SURVEY CONTROL POINT
- PROPERTY CORNER
- PROPERTY MONUMENT FOUND
- *EX. TREES* (PINE, OAK, DECID.)

RESOURCE PROTECTION LAND

RESOURCE	TOTAL RESOURCE PROTECTION LAND (SF)	AREA IN A MORE RESTRICTIVE RESOURCE (SF)	NET RESOURCE PROTECTION AREA (SF)	REQ. RESOURCE PROTECTION (%)	ADJUSTED REQ. RESOURCE PROTECTION [2] (%)	ALLOWED DISTURBANCE AREA (SF)	PROPOPSED DISTURBANCE (SF / %)		PROPOSED PROTECTION (%)
FLOODPLAIN	147,602	0	147,602	100%	100%	0	0	0.0%	100.0%
STEEP SLOPES									
>35%	13,072	1,012	12,060	100%	100%	0	0	0.0%	100.0%
25% - 34.99%	56,355	0	56,355	80%	80%	11,271	9,948	17.7%	82.3%
17% - 24.99%	134,233	0	134,233	70%	70%	40,270	34,468	25.7%	74.3%
FOREST	423,852	154,857	268,995	50%	32.5% [2]	181,572	178,535	66.4%	33.6%

1) VALUES PROVIDED IN THE TABLE ARE MEASURED WITHIN THE TITLE BOUNDARY ONLY. IMPROVEMENTS REQUIRED WITHIN ROAD RIGHTS-OF-WAY HAVE BEEN EXCLUDED.

2) AFFORDABLE HOUSING REDUCTION: THE PROJECT IS PROPOSING A FEE IN LIEU FOR THE EQUIVALENT OF 10 AFFORDABLE UNITS OUT OF 83 TOTAL UNITS (10 / 83 = 12.04 %). THE PROJECT IS A CATEGORY 1 PROJECT, THEREFORE IN ACCORDANCE WITH TABLE 10-30.20.040.B, A RESOURCE REDUCTION OF 35% HAS BEEN APPLIED TO THE PROTECTION REQUIREMENTS INDICATED. [50% x (1 - 35%)]

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 BLUE STAKE, INC.
Call 811 or click Arizona811.org
LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer, (Civil)
CERTIFICATE NO.
77934
ERIC S. BEALS
5/02/24
DATE SIGNED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2551 S MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E 6th STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **SITE PLAN REVIEW**
NATURAL RESOURCES PLAN (1 OF 2)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C201
REV 4
SHEET 8 of 46

HATCH LEGEND

- UNDISTURBED STEEP SLOPES
  - SLOPES >35%
  - SLOPES 25% - 35%
  - SLOPES 17% - 25%
- DISTURBED AREAS
  - SLOPES >35%
  - SLOPES 25% - 35%
  - SLOPES 17% - 25%
  - WOODLAND AREAS

LEGEND

- PROPERTY BOUNDARY
- LEGAL RIGHT-OF-WAY
- ULTIMATE RIGHT-OF-WAY
- ROAD/RIGHT-OF-WAY CENTER LINE
- EASEMENT LINE
- 100YR — APPROX. 100YR FEMA/RURAL FLOODPLAIN ZONE AE BOUNDARY
- FDWY — APPROX. FEMA FLOODWAY BOUNDARY
- *FENCE LINE*
- *EDGE OF ASPHALT*
- *EDGE OF DIRT/GRAVEL*
- *EX. SANITARY SEWER MAIN*
- *EX STORM PIPE*
- *EX. UNDERGROUND ELECTRIC SERVICE LINE*
- *EX. OVERHEAD WIRE*
- *EX. GAS SERVICE MAIN*
- *EX TELEPHONE/COMMUNICATIONS LINE*
- *EX WATER MAIN*
- 6985 — *EX CONTOUR ELEVATION LINE*

SYMBOL LEGEND

- *EX. STORM CATCH BASIN / MANHOLE*
- *EX. WATER VALVE*
- *EX. FIRE HYDRANT*
- *EX. TELECOMM BOX*
- *EX. SANITARY MANHOLE*
- *EX. UTILITY POLE w/GUY ANCHOR*
- *EX. ELECTRIC BOX*
- *EX. LIGHT POLE*
- *EX. BOLLARD*
- *EX. GAS VALVE / LINE MARKER*
- *EX. SIGN*
- *EX. CONCRETE PAVEMENT*
- CP9 — SURVEY CONTROL POINT
- PROPERTY CORNER
- PROPERTY MONUMENT FOUND
- *EX. TREES*
  - PINE
  - OAK
  - DECID.

RESOURCE PROTECTION LAND

RESOURCE	TOTAL RESOURCE PROTECTION LAND (SF)	AREA IN A MORE RESTRICTIVE RESOURCE (SF)	NET RESOURCE PROTECTION AREA (SF)	REQ. RESOURCE PROTECTION (%)	ADJUSTED REQ. RESOURCE PROTECTION [2] (%)	ALLOWED DISTURBANCE AREA (SF)	PROPOPOSED DISTURBANCE (SF / %)		PROPOSED PROTECTION (%)
FLOODPLAIN	147,602	0	147,602	100%	100%	0	0	0.0%	100.0%
STEEP SLOPES									
>35%	13,072	1,012	12,060	100%	100%	0	0	0.0%	100.0%
25% - 34.99%	56,355	0	56,355	80%	80%	11,271	9,948	17.7%	82.3%
17% - 24.99%	134,233	0	134,233	70%	70%	40,270	34,468	25.7%	74.3%
FOREST	423,852	154,857	268,995	50%	32.5% [2]	181,572	178,535	66.4%	33.6%

1) VALUES PROVIDED IN THE TABLE ARE MEASURED WITHIN THE TITLE BOUNDARY ONLY. IMPROVEMENTS REQUIRED WITHIN ROAD RIGHTS-OF-WAY HAVE BEEN EXCLUDED.

2) AFFORDABLE HOUSING REDUCTION: THE PROJECT IS PROPOSING A FEE IN LIEU FOR THE EQUIVALENT OF 10 AFFORDABLE UNITS OUT OF 83 TOTAL UNITS (10 / 83 = 12.04 %). THE PROJECT IS A CATEGORY 1 PROJECT, THEREFORE IN ACCORDANCE WITH TABLE 10-30.20.040.B, A RESOURCE REDUCTION OF 35% HAS BEEN APPLIED TO THE PROTECTION REQUIREMENTS INDICATED. [50% x (1 - 35%)]

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 DATE SIGNED ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

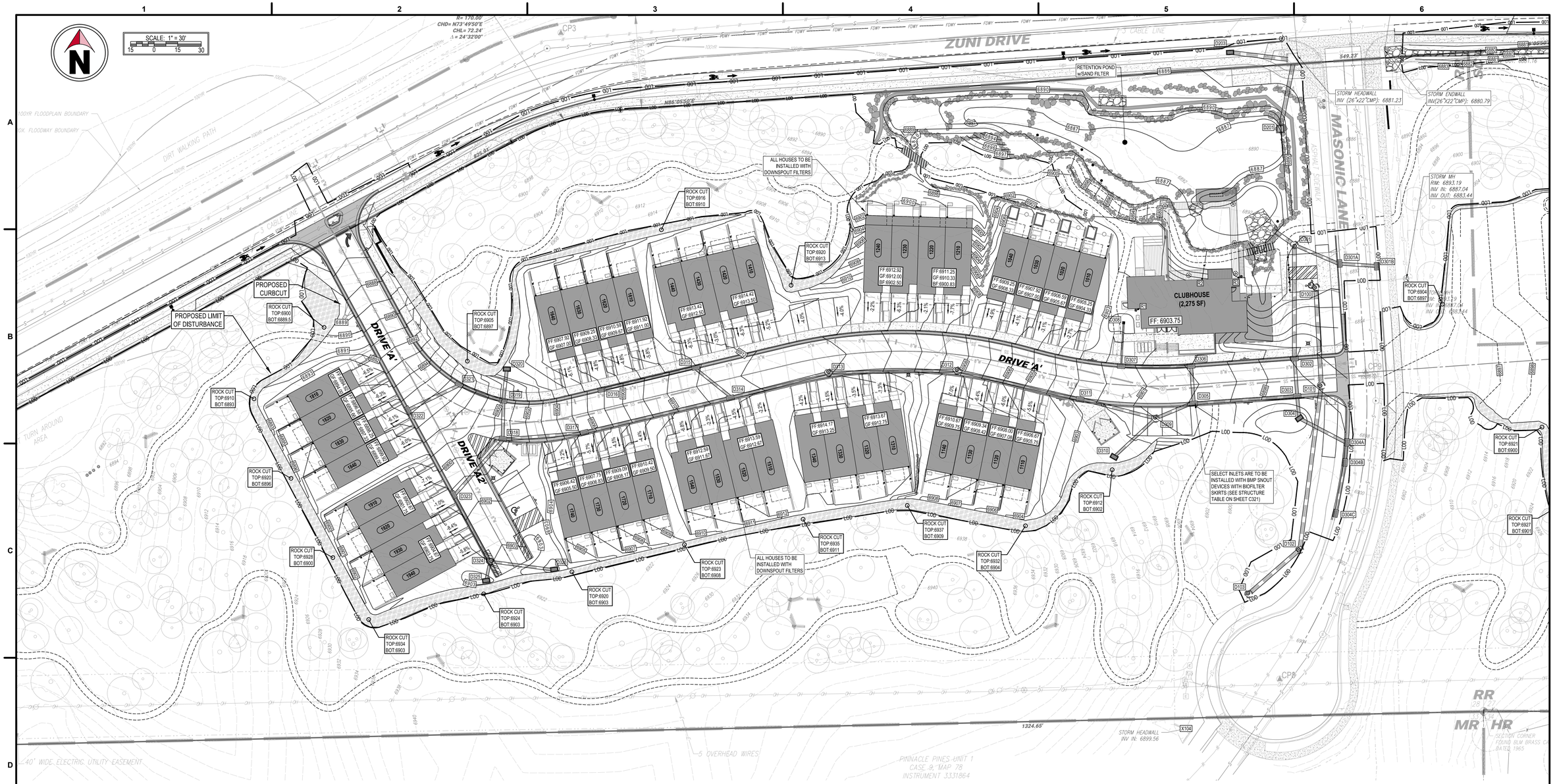
DWN BY: M TOTH
CHK BY: E BEALS

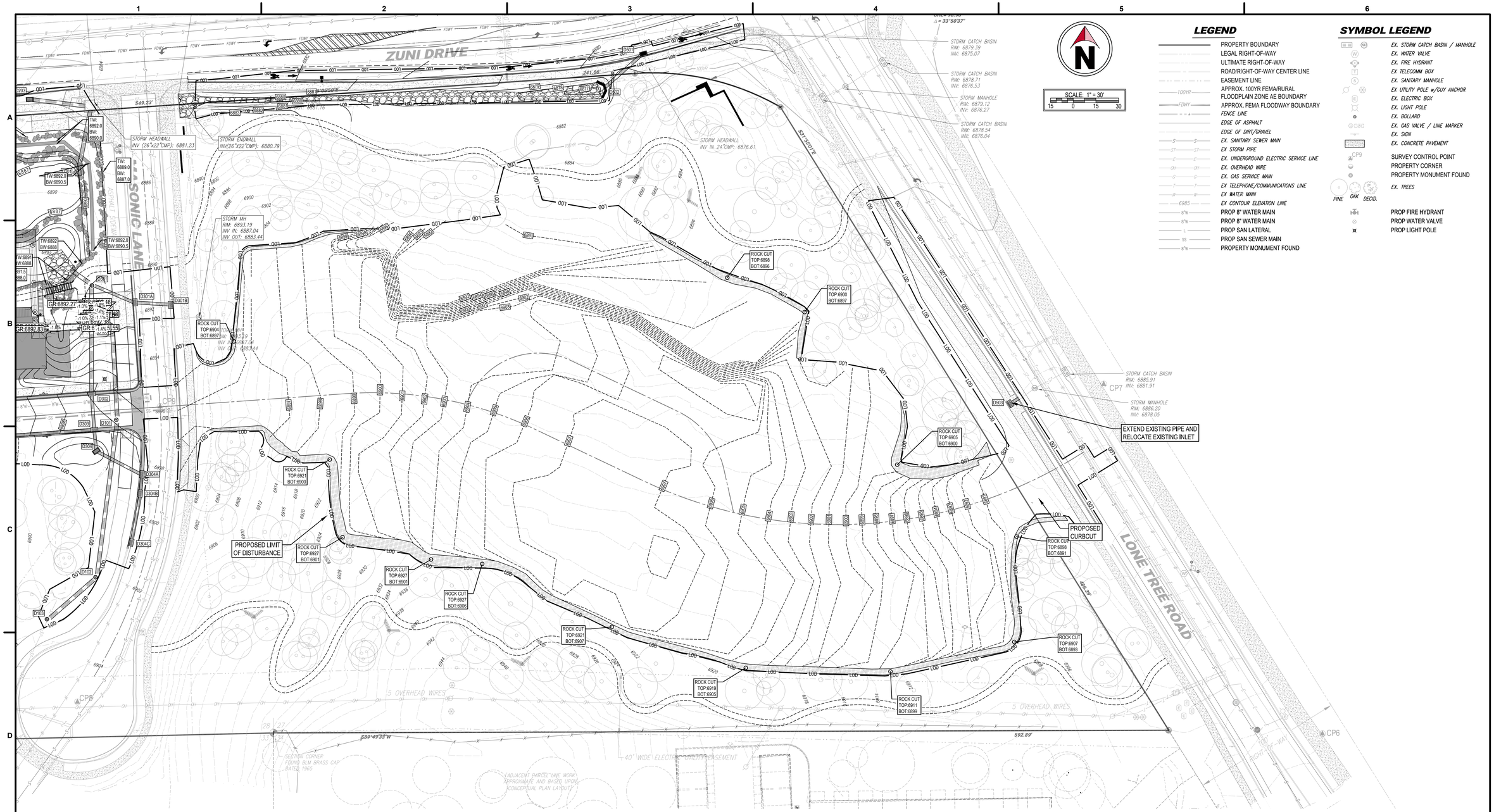
PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2955 MASONIC LANE
COCONINO COUNTY, ARIZONA

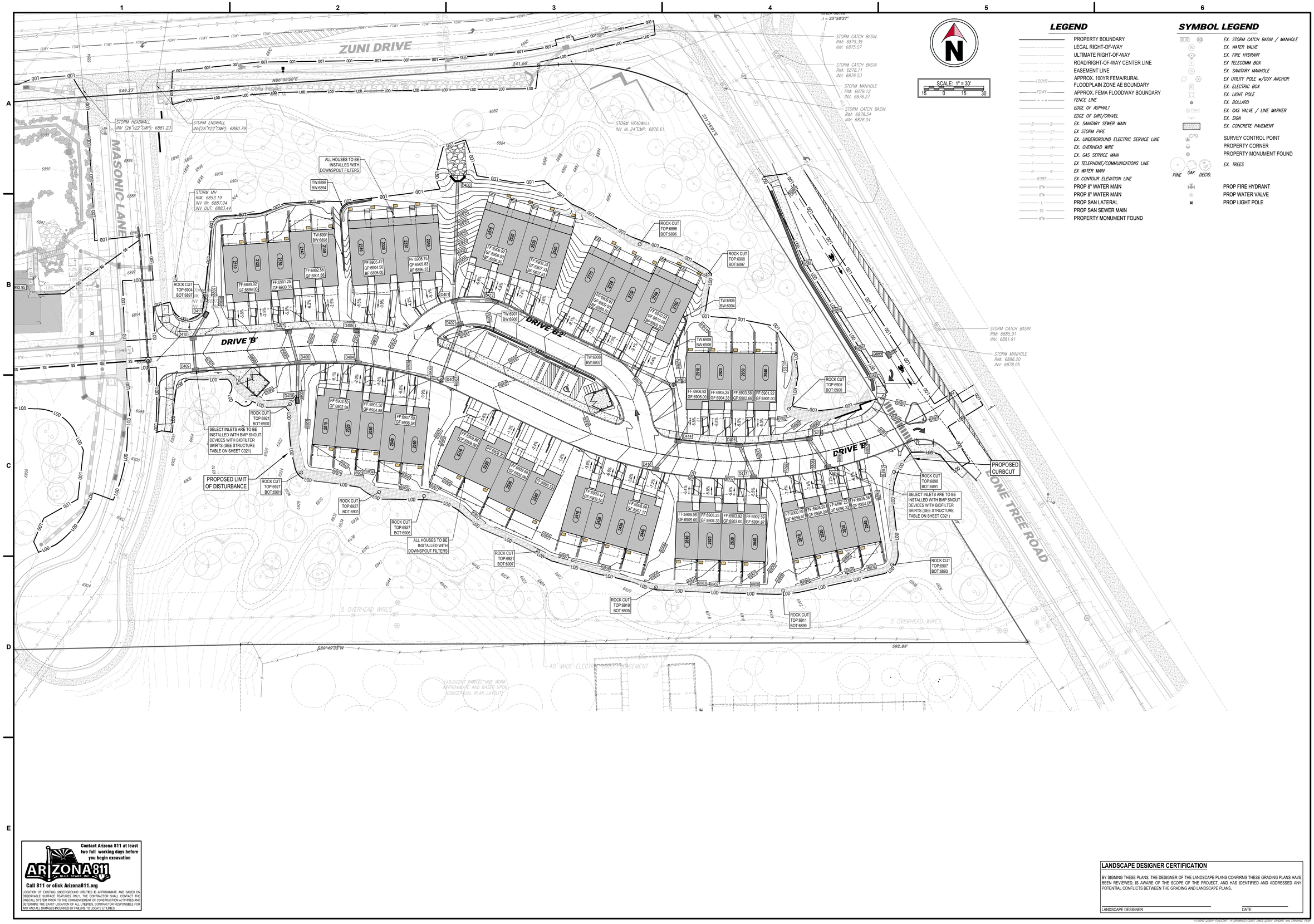
APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

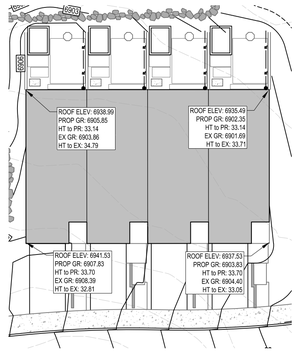
TITLE: SITE PLAN REVIEW
NATRUAL RESOURCES PLAN (2 OF 2)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C202
REV 4
SHEET 9 of 46


SCALE: 1" = 30'
15 0 15 30
N= 170.00'
CHD= N73°49'50"E
CHL= 72.24'
Δ = 24°32'00"
ZUNI DRIVE
MASONIC LANE
DRIVE 'A'
DRIVE 'A2'
DIRT WALKING PATH
TURN AROUND AREA
100YR FLOODPLAIN BOUNDARY
FOX. FLOODWAY BOUNDARY
40' WIDE ELECTRIC UTILITY EASEMENT
5 OVERHEAD WIRES
5 CABLE LINE
RETENTION POND w/SAND FILTER
CLUBHOUSE (2,275 SF)
FF: 6903.75
PROPOSED CURBCUT
PROPOSED LIMIT OF DISTURBANCE
ALL HOUSES TO BE INSTALLED WITH DOWNSPOUT FILTERS
SELECT INLETS ARE TO BE INSTALLED WITH BMP SNOUT DEVICES WITH BIOFILTER SKIRTS (SEE STRUCTURE TABLE ON SHEET C321)
STORM HEADWALL INV (26"x22"CMP): 6881.23
STORM ENDWALL INV(26"X22"CMP): 6880.79
STORM MH RIM: 6893.19 INV IN: 6887.04 INV OUT: 6883.44
STORM HEADWALL INV IN: 6899.56
PINNACLE PINES UNIT 1 CASE 9, MAP 78 INSTRUMENT 3331864
SECTION CORNER FOUND BLM BRASS CAP DATED 1965
549.33'
635.84'
1324.65'
N86°25'58"E
ROCK CUT TOP:6916 BOT:6910
ROCK CUT TOP:6920 BOT:6913
ROCK CUT TOP:6905 BOT:6897
ROCK CUT TOP:6910 BOT:6893
ROCK CUT TOP:6900 BOT:6889.5
ROCK CUT TOP:6920 BOT:6895
ROCK CUT TOP:6928 BOT:6900
ROCK CUT TOP:6934 BOT:6903
ROCK CUT TOP:6924 BOT:6903
ROCK CUT TOP:6920 BOT:6903
ROCK CUT TOP:6923 BOT:6908
ROCK CUT TOP:6935 BOT:6911
ROCK CUT TOP:6937 BOT:6909
ROCK CUT TOP:6932 BOT:6904
ROCK CUT TOP:6912 BOT:6902
ROCK CUT TOP:6904 BOT:6897
ROCK CUT TOP:6921 BOT:6900
ROCK CUT TOP:6927 BOT:6901
FF:6907.92 GF:6907.00
FF:6909.25 GF:6909.33
FF:6910.88 GF:6909.67
FF:6911.92 GF:6911.00
FF:6913.47 GF:6912.50
FF:6914.42 GF:6913.50
FF:6912.92 GF:6912.00 BF:6902.50
FF:6911.25 GF:6910.33 BF:6900.83
FF:6906.25 GF:6906.33
FF:6907.92 GF:6907.00
FF:6906.59 GF:6905.67
FF:6903.25 GF:6904.33
FF:6906.42 GF:6905.50
FF:6907.75 GF:6906.83
FF:6909.09 GF:6908.17
FF:6910.42 GF:6909.50
FF:6911.59 GF:6911.67
FF:6912.59 GF:6912.67
FF:6914.17 GF:6913.25
FF:6913.67 GF:6912.75
FF:6910.67 GF:6909.75
FF:6909.34 GF:6909.42
FF:6908.01 GF:6907.08
FF:6906.67 GF:6905.75
FF:6906.92 GF:6906.00
FF:6907.75 GF:6906.83
FF:6909.09 GF:6908.17
FF:6910.42 GF:6909.50
FF:6911.75 GF:6910.83
FF:6913.09 GF:6912.17
FF:6914.42 GF:6913.50
FF:6915.75 GF:6914.83
FF:6917.09 GF:6916.17
FF:6918.42 GF:6917.50
FF:6919.75 GF:6918.83
FF:6921.09 GF:6920.17
FF:6922.42 GF:6921.50
FF:6923.75 GF:6922.83
FF:6925.09 GF:6924.17
FF:6926.42 GF:6925.50
FF:6927.75 GF:6926.83
FF:6929.09 GF:6928.17
FF:6930.42 GF:6929.50

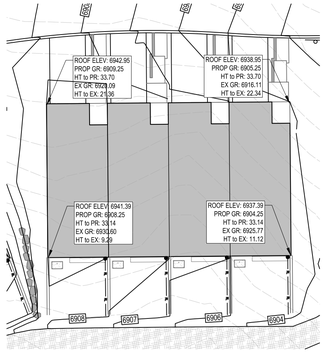

ZUNI DRIVE
SASONIC LANE
LONE TREE ROAD
PROPOSED LIMIT OF DISTURBANCE
PROPOSED CURBCUT
EXTEND EXISTING PIPE AND RELOCATE EXISTING INLET
STORM HEADWALL INV (26"x22"CMP): 6881.23
STORM ENDWALL INV(26"x22"CMP): 6880.79
STORM MH RIM: 6893.19 INV IN: 6887.04 INV OUT: 6883.44
STORM HEADWALL INV IN 24"CMP: 6876.61
STORM CATCH BASIN RIM: 6879.39 INV: 6875.07
STORM CATCH BASIN RIM: 6878.71 INV: 6876.53
STORM MANHOLE RIM: 6878.12 INV: 6876.27
STORM CATCH BASIN RIM: 6878.54 INV: 6876.04
STORM CATCH BASIN RIM: 6885.91 INV: 6881.91
STORM MANHOLE RIM: 6886.20 INV: 6878.05
ROCK CUT TOP:6898 BOT:6896
ROCK CUT TOP:6900 BOT:6897
ROCK CUT TOP:6904 BOT:6897
ROCK CUT TOP:6905 BOT:6900
ROCK CUT TOP:6901 BOT:6900
ROCK CUT TOP:6927 BOT:6901
ROCK CUT TOP:6927 BOT:6906
ROCK CUT TOP:6921 BOT:6907
ROCK CUT TOP:6919 BOT:6905
ROCK CUT TOP:6911 BOT:6899
ROCK CUT TOP:6898 BOT:6891
ROCK CUT TOP:6907 BOT:6893
TW: 6892.0 BW: 6890.0
TW: 6889.0 BW: 6887.0
TW:6892 BW:6888
TW:6892.0 BW:6890.5
GR 6892.27
GR 6892.83
GR 6.1% 5.55
S71°59'01"E
549.23'
341.66'
S89°49'33"W
592.89'
486.97'
5 OVERHEAD WIRES
40' WIDE ELECTRIC UTILITY EASEMENT
SECTION CORNER FOUND BLM BRASS CAP DATED 1965
(ADJACENT PARCEL ONE WORK APPROXIMATE AND BASED UPON CONCEPTUAL PLAN LAYOUT)
CP5
CP6
CP7
CP9
D101
D102
D103
D301A
D301B
D302
D303
D304
D304A
D304B
D304C
D501
D502
D503
D504
D505
D506
D507
D508
D509
D510
D511
D512
D513
D514
D515
D516
D517
D518
D519
D520
D521
D522
D523
D524
D525
D526
D527
D528
D529
D530
D531
D532
D533
D534
D535
D536
D537
D538
D539
D540


ZUNI DRIVE
MASONIC LANE
DRIVE 'B'
DRIVE 'B1'
DRIVE 'B2'
DRIVE 'B3'
DRIVE 'B4'
DRIVE 'B5'
DRIVE 'B6'
DRIVE 'B7'
DRIVE 'B8'
DRIVE 'B9'
DRIVE 'B10'
DRIVE 'B11'
DRIVE 'B12'
DRIVE 'B13'
DRIVE 'B14'
DRIVE 'B15'
DRIVE 'B16'
DRIVE 'B17'
DRIVE 'B18'
DRIVE 'B19'
DRIVE 'B20'
DRIVE



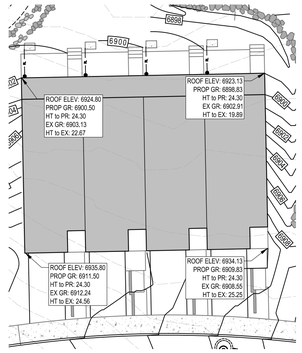
BUILDING 10 HEIGHT

SCALE: 1" = 20'



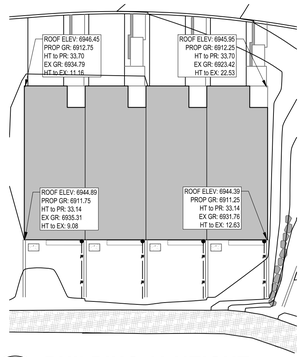
BUILDING 11 HEIGHT

SCALE: 1" = 20'



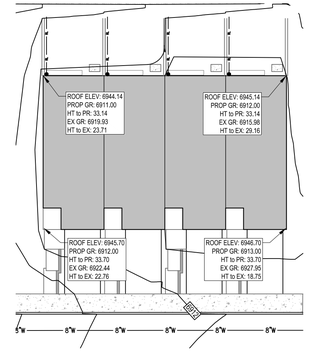
BUILDING 12 HEIGHT

SCALE: 1" = 20'



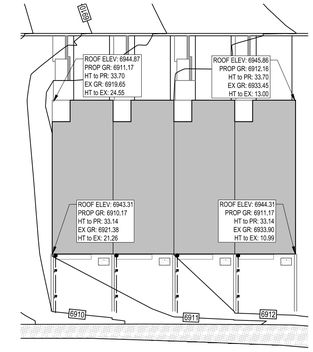
BUILDING 13 HEIGHT

SCALE: 1" = 20'



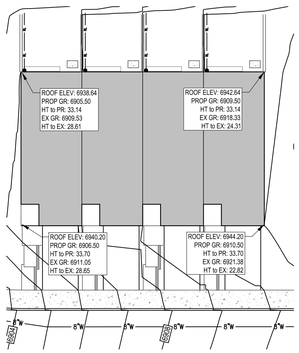
BUILDING 14 HEIGHT

SCALE: 1" = 20'



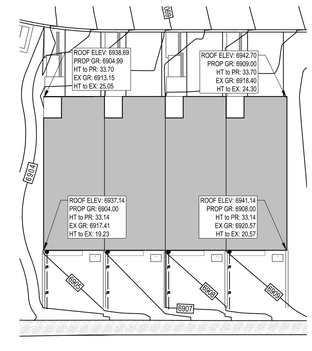
BUILDING 15 HEIGHT

SCALE: 1" = 20'



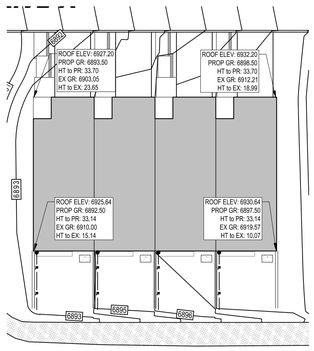
BUILDING 16 HEIGHT

SCALE: 1" = 20'



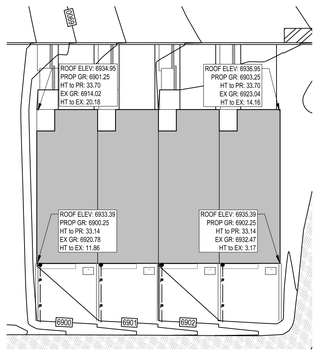
BUILDING 17 HEIGHT

SCALE: 1" = 20'



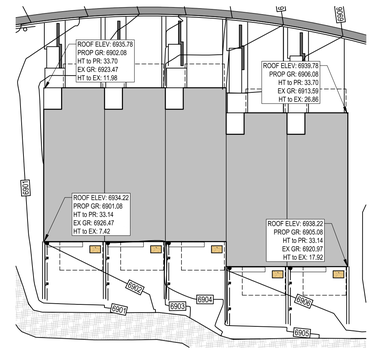
BUILDING 18 HEIGHT

SCALE: 1" = 20'



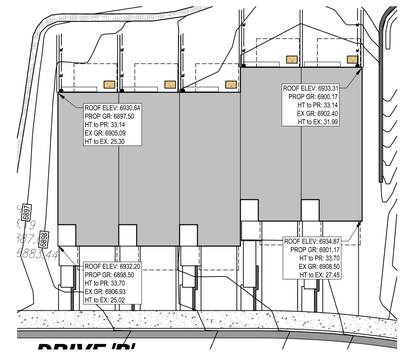
BUILDING 19 HEIGHT

SCALE: 1" = 20'



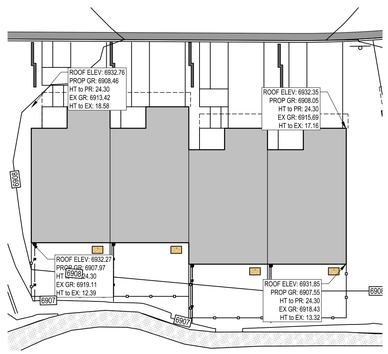
BUILDING 20 HEIGHT

SCALE: 1" = 20'



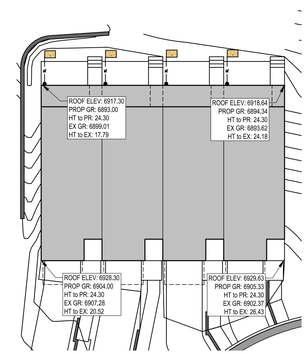
BUILDING 21 HEIGHT

SCALE: 1" = 20'



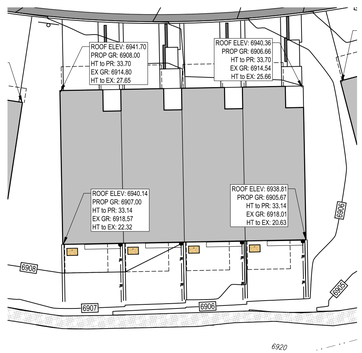
BUILDING 22 HEIGHT

SCALE: 1" = 20'



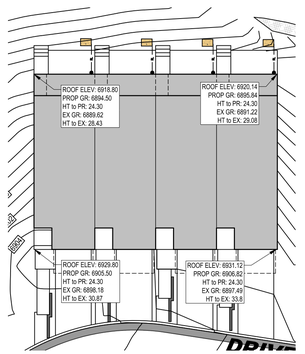
BUILDING 23 HEIGHT

SCALE: 1" = 20'



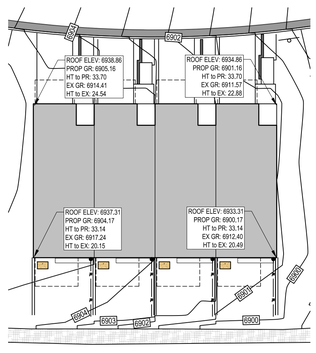
BUILDING 24 HEIGHT

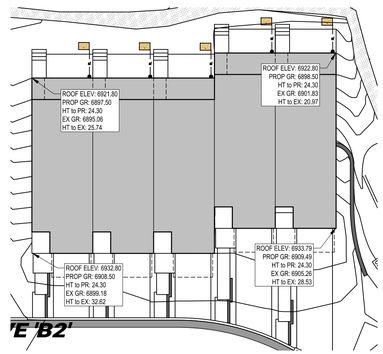
SCALE: 1" = 20'



BUILDING 25 HEIGHT

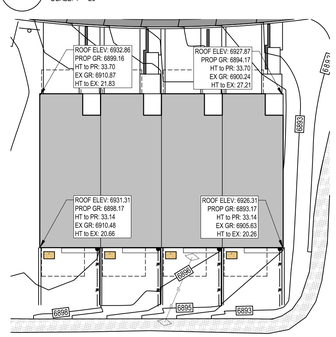
SCALE: 1" = 20'





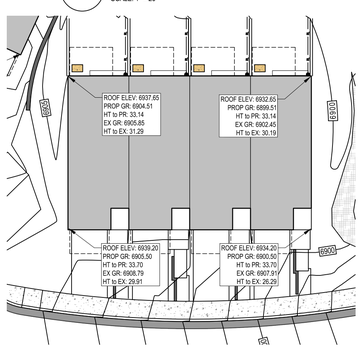
BUILDING 26 HEIGHT

SCALE: 1" = 20'



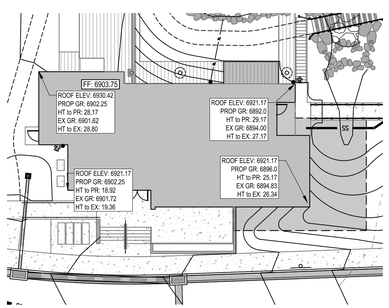
BUILDING 28 HEIGHT

SCALE: 1" = 20'



BUILDING 29 HEIGHT

SCALE: 1" = 20'



CLUBHOUSE BUILDING HEIGHT

SCALE: 1" = 20'

SCALE: 1" = 20'

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

REVISIONS

Registered Professional Engineer, Civil
CERTIFICATE NO.
77934
ERIC S. BEALS
5/02/24
REGISTERED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

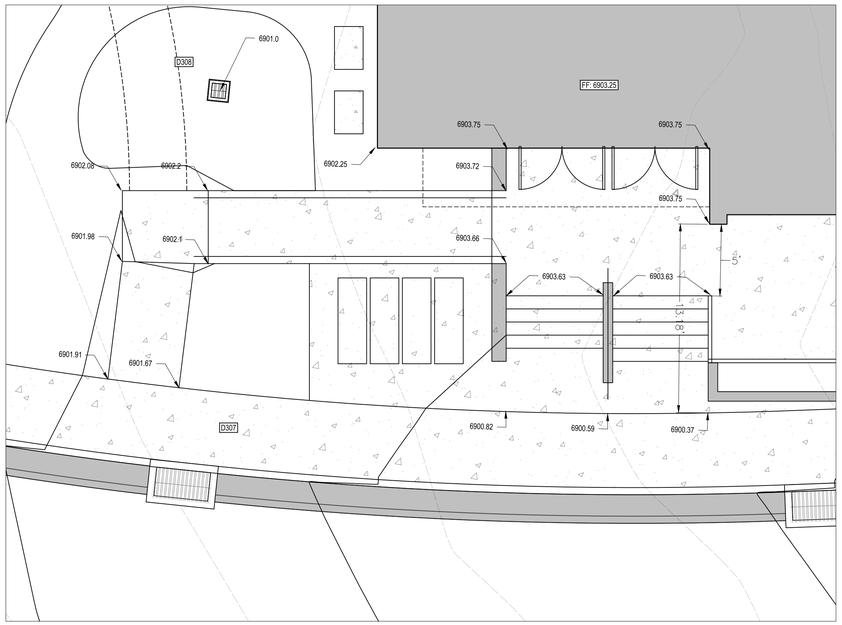
PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2621 SUNSET LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
BUILDING HEIGHT DETAILS

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C305
REV 4
SHEET 13 of 46

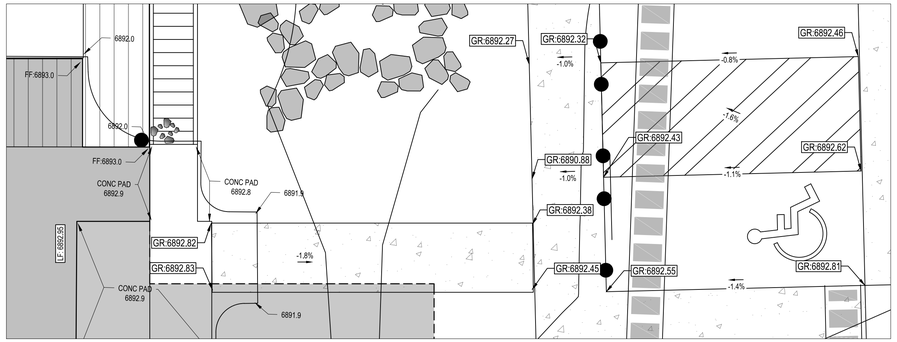
P:\PROJ\22004 FLAGSTAFF TX\DRAWINGS\CONST DWGS\22004 BRDLDNG and SRVWAGE .PLAN



C1 CLUBHOUSE MAIN ENTRANCE GRADING DETAIL

SCALE 1" = 5'

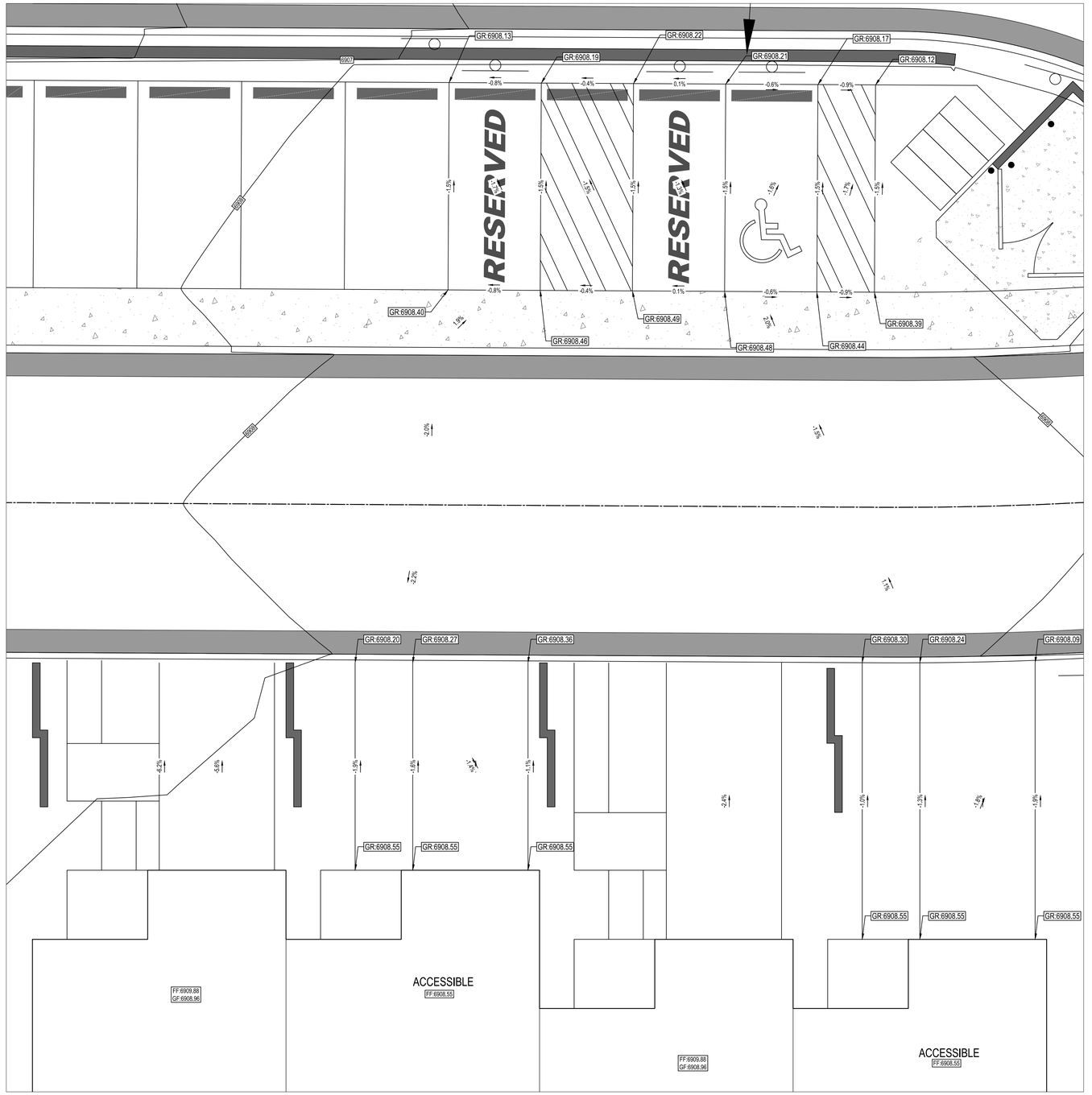
SCALE: 1" = 5'
2.5 0 5'



D1 CLUBHOUSE LOWER ENTRANCE GRADING DETAIL

SCALE 1" = 5'

SCALE: 1" = 5'
2.5 0 5'



E3 ACCESSIBLE UNIT GRADING DETAIL

SCALE 1" = 5'

SCALE: 1" = 5'
2.5 0 5'

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO.
77934
ERIC S. BEALS
DATE SIGNED
5/02/24
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2955 SOUTHLAKE LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

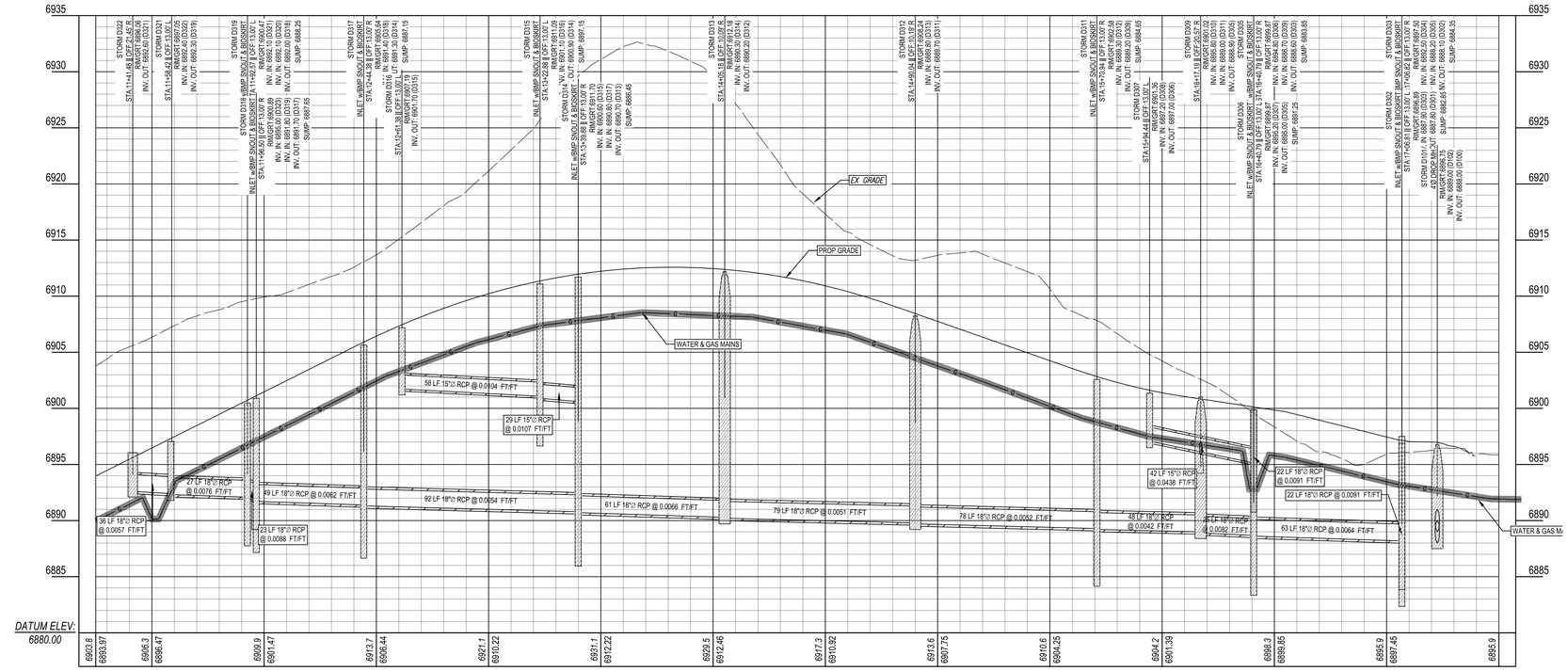
TITLE: **SITE PLAN REVIEW**
ADA GRADING PLAN

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C306
REV 4
SHEET 14 of 46

B1 PLAN VIEW: DRIVE 'A'

SCALE: 1" = 30'

SCALE: 1" = 30'



E1 PROFILE VIEW: DRIVE 'A'

SCALE: (H) 1" = 30' || (V) 1" = 6'

VERTICAL SCALE 0 3' 6'
HORIZONTAL SCALE 0 15' 30'

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-16-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 REGISTERED PROFESSIONAL ENGINEER ARIZONA, U.S.A.

Eric Beals

ViewPoint Engineering

FIRM No. F-23395
viewpointengineering.com

2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

DWN BY: M TOTH
CHK BY: E BEALS

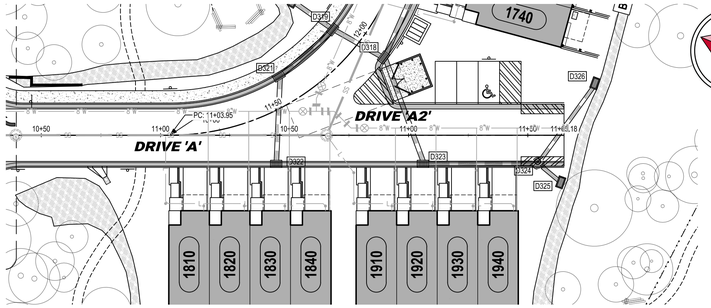
PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
STORM SEWER PLAN & PROFILE
(DRIVE 'A')

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C310
REV 4

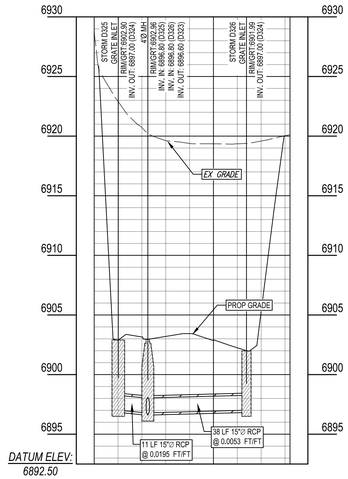
SHEET 15 of 46



B1 PLAN VIEW: DRIVE 'A2'

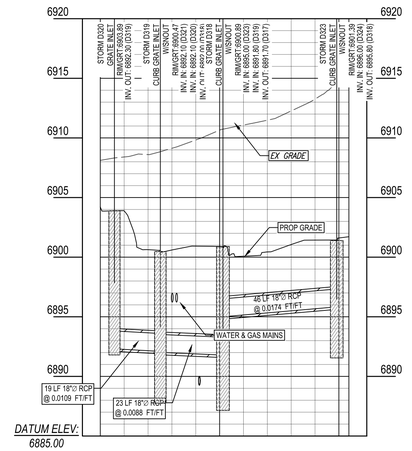
SCALE: 1" = 30'

SCALE: 1" = 30'
15 0 15 30



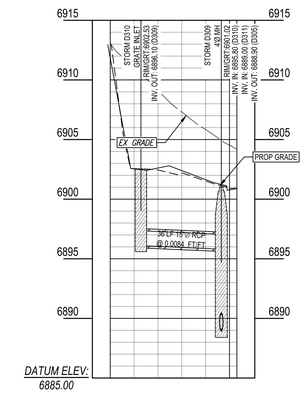
B3 STORM: D325 - D326

SCALE: (H) 1" = 30' || (V) 1" = 6'



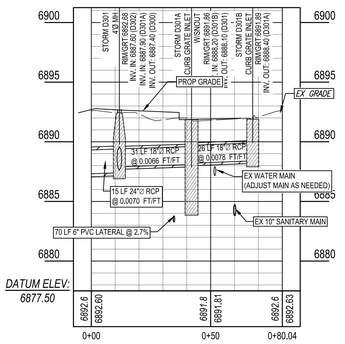
B4 STORM: D320 - D323

SCALE: (H) 1" = 30' || (V) 1" = 6'



B5 STORM: D310 - D309

SCALE: (H) 1" = 30' || (V) 1" = 6'



B5 STORM: D301 - D301B

SCALE: (H) 1" = 30' || (V) 1" = 6'

VERTICAL SCALE 0 3' 6'
HORIZONTAL SCALE 0 15' 30'

D1 PROFILE VIEW: DRIVE 'A2'

SCALE: (H) 1" = 30' || (V) 1" = 6'

VERTICAL SCALE 0 3' 6'
HORIZONTAL SCALE 0 15' 30'

D3 STORM: D304D - D300

SCALE: (H) 1" = 30' || (V) 1" = 6'

D5 STORM: D103 - D100

SCALE: (H) 1" = 30' || (V) 1" = 6'

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO.
77934
ERIC S
BEALS
5/02/24
DATE SIGNED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

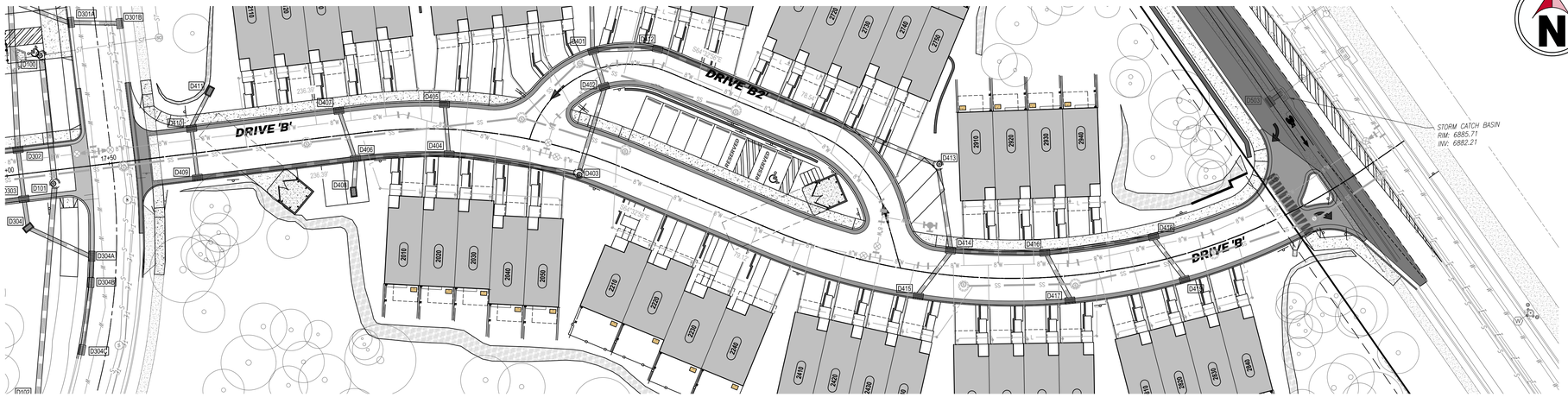
DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2655 S. MISSION LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
STORM SEWER PLAN & PROFILE
(DRIVE 'A2' & CROSS PROFILES)

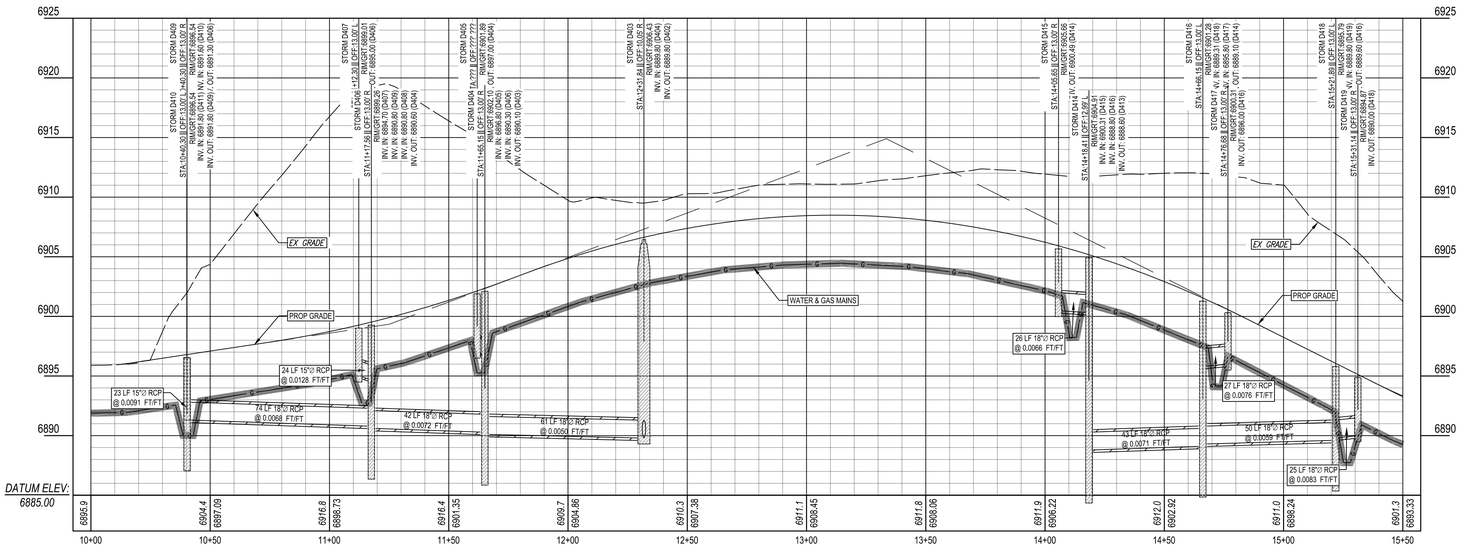
PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C311
REV 4
SHEET 16 of 46



B2 PLAN VIEW: DRIVE 'A'

SCALE: 1" = 30'

SCALE: 1" = 30'
15 0 15 30



D2 PROFILE VIEW: DRIVE 'A'

SCALE: (H) 1" = 30' ‖ (V) 1" = 6'

VERTICAL SCALE 0 3' 6'
HORIZONTAL SCALE 0 15' 30'

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer
CERTIFICATE NO.
77934
ERIC S
BEALS
5/02/24
DATE SIGNED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2951 S HIGHWAY 89A
COCONINO COUNTY, ARIZONA

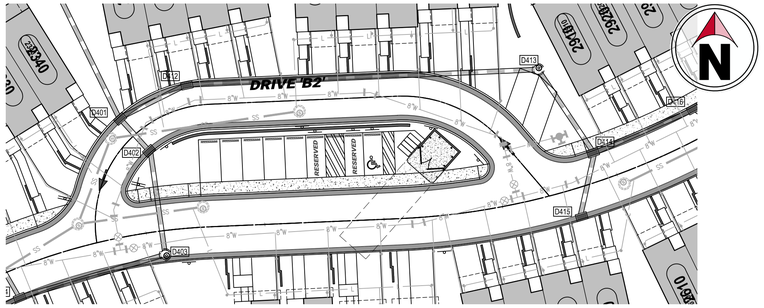
APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **SITE PLAN REVIEW**
STORM SEWER PLAN & PROFILE (DRIVE 'B')

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C312
REV 4
SHEET 17 of 46

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 BLUE STAKE, INC.
Call 811 or click Arizona811.org
LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

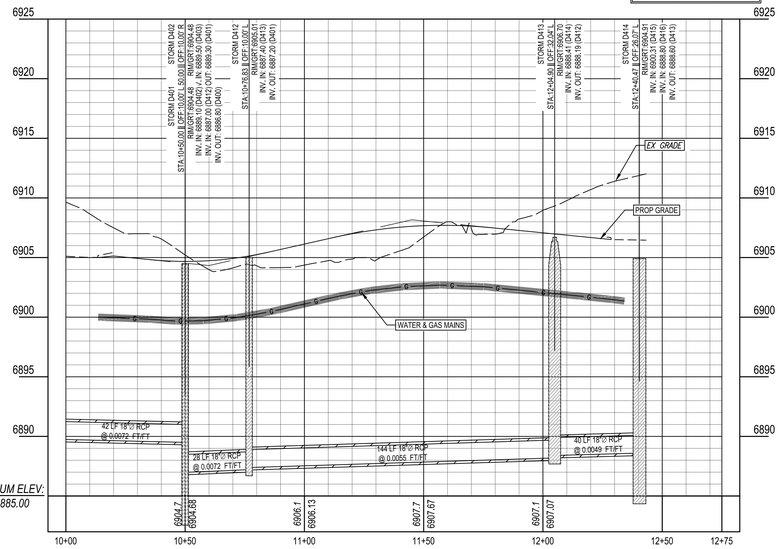
P:\PROJ\22004 FLAGSTAFF - PINEHAVEN\CONST DWGS\22004 PROFILE



B1 PLAN VIEW: DRIVE 'A'

SCALE: 1" = 30'

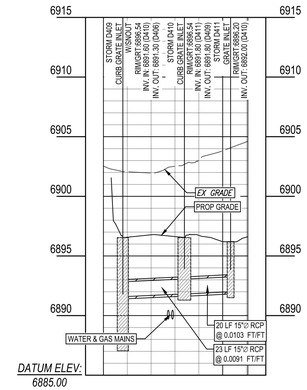
SCALE: 1" = 30'
15 0 15 30



D1 PROFILE VIEW: DRIVE 'A'

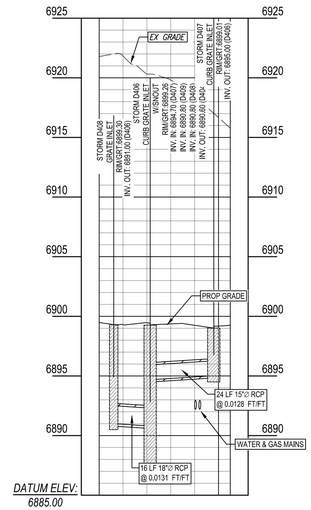
SCALE: (H) 1" = 30' || (V) 1" = 6'

VERTICAL SCALE 0 3' 6'
HORIZONTAL SCALE 0 15' 30'



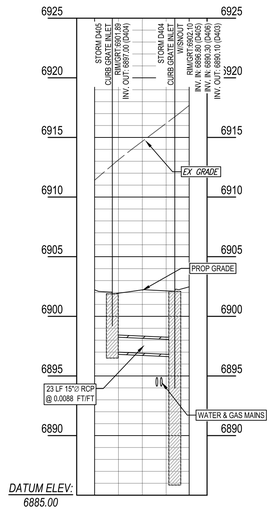
B3 STORM: D409 - D411

SCALE: (H) 1" = 30' || (V) 1" = 6'



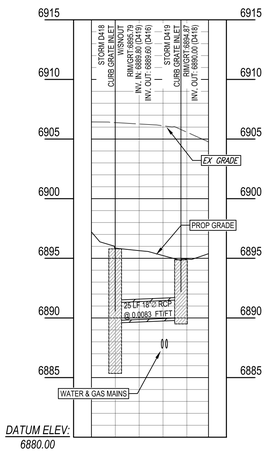
B4 STORM: D408 - D407

SCALE: (H) 1" = 30' || (V) 1" = 6'



B5 STORM: D405 - D404

SCALE: (H) 1" = 30' || (V) 1" = 6'



B6 STORM: D418 - D419

SCALE: (H) 1" = 30' || (V) 1" = 6'

D3 STORM: D403 - D400

SCALE: (H) 1" = 30' || (V) 1" = 6'

D5 STORM: D415 - D413

SCALE: (H) 1" = 30' || (V) 1" = 6'

D6 STORM: D416 - D417

SCALE: (H) 1" = 30' || (V) 1" = 6'

VERTICAL SCALE 0 3' 6'
HORIZONTAL SCALE 0 15' 30'

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer
CERTIFICATE NO.
77934
ERIC S
BEALS
DATE SIGNED
5/02/24
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2955 S HIGHWAY 89A
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

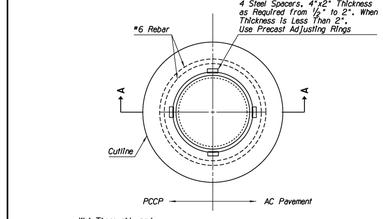
TITLE: **SITE PLAN REVIEW**
STORM SEWER PLAN & PROFILE
(DRIVE 'B2' & CROSS PROFILES)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C313
REV 4

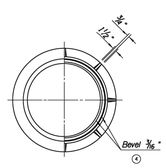
SHEET 18 of 46

R:\DWG\22004 FLAGSTAFF PROP CO\PLANS\ISSUED SHEETS\22004 PROFILE

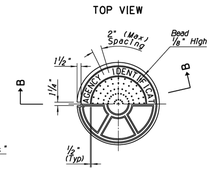
NO	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	RENAMED STD DWG FROM C-18J0 TO C-18J0, SHEET 3 OF 3	RLF	9/04
2	MODIFIED SECTION VIEWS AND ADDED DETAIL A	RLF	5/12
3	NEW GENERAL NOTE 1; REVISED GENERAL NOTE NUMBERS	RLF	5/12
4	REVISED BEVEL SIZE	RLF	5/12



PLAN



BOTTOM VIEW - TOP VIEW



TOP VIEW - BOTTOM VIEW

GENERAL NOTES

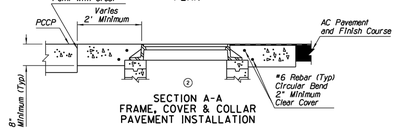
③ 1. The 30" minimum opening shall be required. Other Frame and Cover dimensions shown are nominal and vary by manufacturer.

2. All frames, grates, and covers shall support HS20 loading, minimum.

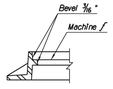
3. Casting weights shown are minimum weights and are either for cast-iron or ductile-iron castings. Casting weight shall not exceed 110% of the weights shown.

4. Covers (excluding grates) shall conform to the following:
   - A. Manhole covers to contain the agency name and utility, as directed;
   - B. Letters shall be 2 inches in height and raised ½-inch above the plane of the cover;
   - C. Letters and words to be equally spaced; and
   - D. Letter font and layout shall be as approved by the Engineer.

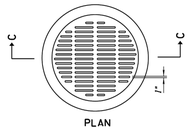
5. Details shown are typical. Alternative designs of manhole frames and covers may be used upon approval of the Engineer, as long as the minimum loading and weight criteria (see above) are met.



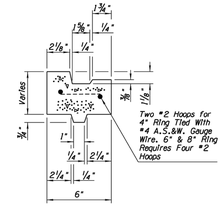
② SECTION A-A
FRAME, COVER & COLLAR
PAVEMENT INSTALLATION



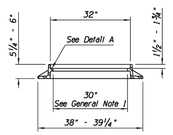
② DETAIL A



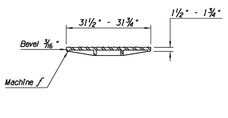
PLAN



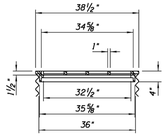
PRECAST ADJUSTING RING DETAIL



② SECTION OF FRAME



② SECTION B-B



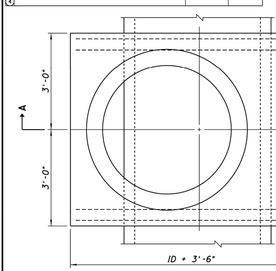
SECTION C-C
36" NOMINAL CMP FRAME & GRATE
Approximate Weight: Frame 125 Lbs
Cover 167 Lbs

30" MANHOLE FRAME & COVER
Approximate Weight: Frame 204 Lbs
Cover 209 Lbs

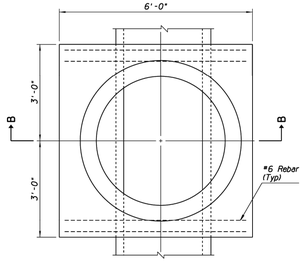
APPROVED FOR DESIGN	STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION ROADWAY STANDARD DRAWINGS	REV. 5/12
APPROVED FOR DISTRIBUTION	MANHOLE FRAME AND COVER DETAILS	DRAWING NO. C-18J0 Sheet 3 of 3

Vs/Roadway\users\cd836\ 11:33:11 AM

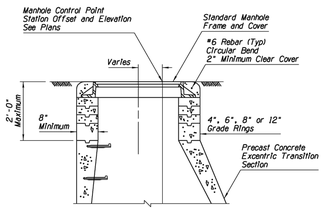
NO	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	RENAMED STD DWG TO C-18J0, SHEET 2 OF 3	RLF	9/04
2	REVISED SECTION A-A THROUGH C-C GRAPHICS	RLF	4/06
3			
4			



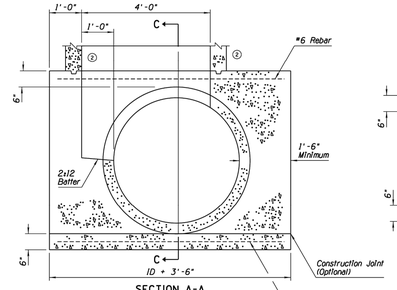
PLAN
FOR PIPES OVER 36" ID



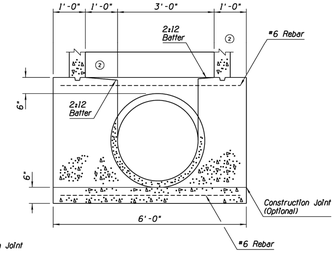
PLAN
FOR PIPES 36" ID AND SMALLER



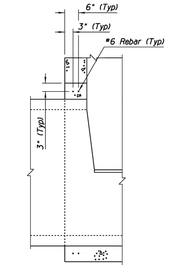
SECTION
RING, FRAME & COVER
NON-PAVEMENT INSTALLATION



SECTION A-A
STANDARD BASE STRUCTURE
FOR PIPES OVER 36" ID



SECTION B-B
STANDARD BASE STRUCTURE
FOR PIPES 24" TO 36" ID



② SECTION C-C

APPROVED FOR DESIGN	STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION ROADWAY STANDARD DRAWINGS	REV. 5/12
APPROVED FOR DISTRIBUTION	MANHOLE BASE DETAILS NORMAL INSTALLATION	DRAWING NO. C-18J0 Sheet 2 of 3

Vs/Roadway\users\cd836\ 11:33:08 AM

STRUCTURE TABLE

ID	TYPE	STRUCTURE INFO
D100	4'Ø MH	RIM/GRT: 6892.83 INV IN (D101 / 24") : 6887.60 INV OUT (X1 / 36") : 6887.53 SUMP: 6887.53
D101	4'Ø DROP MH	RIM/GRT: 6896.75 INV IN (D102 / 24") : 6889.00 INV OUT (D100 / 24") : 6888.00 SUMP: 6888.00
D102	4'Ø MH	RIM/GRT: 6902.41 INV IN (D103 / 24") : 6893.70 INV OUT (D101 / 24") : 6889.51 SUMP: 6889.51
D103	4'Ø DROP MH	RIM/GRT: 6903.48 INV IN (X104 / 24") : 6898.68 INV OUT (D102 / 24") : 6895.00 SUMP: 6895.00
D200	HEADWALL NO WING	RIM/GRT: 6883.75 INV IN (D201 / 24") : 6881.50 SUMP: 6881.50
D201	OUTLET STRUCTURE (SEE BASIN DETAIL)	RIM/GRT: 6884.75 INV OUT (D200 / 24") : 6882.00 SUMP: 6882.00
D300	HEADWALL	RIM/GRT: 6889.55 INV IN (D301 / 24") : 6887.30 SUMP: 6887.30
D301	4'Ø MH	RIM/GRT: 6892.68 INV IN (D302 / 24") : 6887.60 INV IN (D301A / 18") : 6887.90 INV OUT (D300 / 24") : 6887.40 SUMP: 6887.40
D301A	CURB GRATE INLET W/SNOUT	RIM/GRT: 6891.86 INV IN (D301B / 18") : 6888.20 INV OUT (D301 / 18") : 6888.10 SUMP: 6884.35
D301B	CURB GRATE INLET	RIM/GRT: 6891.89 INV OUT (D301A / 18") : 6888.40 SUMP: 6888.40
D302	CURB GRATE INLET W/SNOUT	RIM/GRT: 6896.89 INV IN (D303 / 18") : 6887.90 INV OUT (D301 / 24") : 6887.80 SUMP: 6882.85
D303	CURB GRATE INLET W/SNOUT	RIM/GRT: 6897.50 INV IN (D304 / 18") : 6892.50 INV IN (D305 / 18") : 6888.20 INV OUT (D302 / 18") : 6888.10 SUMP: 6884.35
D304	GRATE INLET W/SNOUT	RIM/GRT: 6896.50 INV IN (D304A / 18") : 6892.80 INV OUT (D303 / 18") : 6892.70 SUMP: 6888.95
D304A	CURB GRATE INLET	RIM/GRT: 6898.32 INV IN (D304B / 18") : 6893.20 INV OUT (D304 / 18") : 6893.10 SUMP: 6893.10
D304B	CURB GRATE INLET	RIM/GRT: 6898.99 INV IN (D304C / 18") : 6893.40 INV OUT (D304A / 18") : 6893.30 SUMP: 6893.30
D304C	CURB GRATE INLET	RIM/GRT: 6900.72 INV OUT (D304B / 18") : 6893.60 SUMP: 6893.60

STRUCTURE TABLE

ID	TYPE	STRUCTURE INFO
D305	CURB GRATE INLET W/SNOUT	RIM/GRT: 6899.87 INV IN (D306 / 18") : 6894.80 INV IN (D309 / 18") : 6888.70 INV OUT (D303 / 18") : 6888.60 SUMP: 6883.85
D306	CURB GRATE INLET W/SNOUT	RIM/GRT: 6899.87 INV IN (D307 / 15") : 6896.20 INV OUT (D305 / 18") : 6895.00 SUMP: 6891.25
D307	CURB GRATE INLET	RIM/GRT: 6901.36 INV IN (D308 / 8") : 6897.20 INV OUT (D306 / 15") : 6897.00 SUMP: 6897.00
D308	YARD DRAIN	RIM/GRT: 6898.61 INV OUT (D307 / 8") : 6897.40 SUMP: 6897.40
D309	4'Ø MH	RIM/GRT: 6901.02 INV IN (D310 / 15") : 6895.80 INV IN (D311 / 18") : 6889.00 INV OUT (D305 / 18") : 6888.90 SUMP: 6888.90
D310	GRATE INLET	RIM/GRT: 6902.53 INV OUT (D309 / 15") : 6896.10 SUMP: 6896.10
D311	CURB GRATE INLET W/SNOUT	RIM/GRT: 6902.58 INV IN (D312 / 18") : 6889.30 INV OUT (D309 / 18") : 6889.20 SUMP: 6884.65
D312	4'Ø MH	RIM/GRT: 6908.24 INV IN (D313 / 18") : 6889.80 INV OUT (D311 / 18") : 6889.70 SUMP: 6889.70
D313	4'Ø MH	RIM/GRT: 6912.18 INV IN (D314 / 18") : 6890.30 INV OUT (D312 / 18") : 6890.20 SUMP: 6890.20
D314	CURB GRATE INLET W/SNOUT	RIM/GRT: 6911.70 INV IN (D315 / 15") : 6900.60 INV IN (D317 / 18") : 6890.80 INV OUT (D313 / 18") : 6890.70 SUMP: 6886.45
D315	CURB GRATE INLET W/SNOUT	RIM/GRT: 6911.09 INV IN (D316 / 15") : 6901.10 INV OUT (D314 / 15") : 6900.90 SUMP: 6897.15
D316	CURB GRATE INLET	RIM/GRT: 6907.19 INV OUT (D315 / 15") : 6901.70 SUMP: 6901.70
D317	CURB GRATE INLET W/SNOUT	RIM/GRT: 6905.64 INV IN (D318 / 18") : 6891.40 INV OUT (D314 / 18") : 6891.30 SUMP: 6887.15
D318	CURB GRATE INLET W/SNOUT	RIM/GRT: 6900.89 INV IN (D323 / 18") : 6895.00 INV IN (D319 / 18") : 6891.80 INV OUT (D317 / 18") : 6891.70 SUMP: 6887.65
D319	CURB GRATE INLET W/SNOUT	RIM/GRT: 6900.47 INV IN (D321 / 18") : 6892.10 INV IN (D320 / 18") : 6892.10 INV OUT (D318 / 18") : 6892.00 SUMP: 6888.25
D320	GRATE INLET	RIM/GRT: 6903.89 INV OUT (D319 / 18") : 6892.30 SUMP: 6892.30

STRUCTURE TABLE

ID	TYPE	STRUCTURE INFO
D321	CURB GRATE INLET	RIM/GRT: 6897.05 INV IN (D322 / 18") : 6892.40 INV OUT (D319 / 18") : 6892.30 SUMP: 6892.30
D322	CURB GRATE INLET	RIM/GRT: 6896.06 INV OUT (D321 / 18") : 6892.60 SUMP: 6892.60
D323	CURB GRATE INLET W/SNOUT	RIM/GRT: 6901.39 INV IN (D324 / 18") : 6896.00 INV OUT (D318 / 18") : 6895.80 SUMP: 6892.05
D324	4'Ø MH	RIM/GRT: 6902.96 INV IN (D325 / 15") : 6896.80 INV IN (D326 / 15") : 6896.80 INV OUT (D323 / 18") : 6896.60 SUMP: 6896.60
D325	GRATE INLET	RIM/GRT: 6902.90 INV OUT (D324 / 15") : 6897.00 SUMP: 6897.00
D326	GRATE INLET	RIM/GRT: 6901.99 INV OUT (D324 / 15") : 6897.00 SUMP: 6897.00
D501	CURB GRATE INLET	RIM/GRT: 0.00 SUMP: -2.41
D502	HEADWALL (W/WINGS)	RIM/GRT: 6878.71 SUMP: 6877.00

PIPE TABLE

PIPE RUN	SIZE	LENGTH (FEET)	SLOPE (FT/FT)
D100 - D101	24" RCP	60	0.0067
D101 - D102	24" RCP	103	0.0050
D102 - D103	24" RCP	42	0.0315
D103 - X104	24" RCP	95	0.0093
D200 - D201	24" RCP	42	0.0120
D300 - D301	24" RCP	15	0.0070
D301 - D302	24" RCP	72	0.0028
D302 - D303	18" RCP	22	0.0091
D303 - D304	18" RCP	14	0.0152
D303 - D305	18" RCP	63	0.0064
D305 - D306	18" RCP	22	0.0091
D305 - D309	18" RCP	25	0.0082
D307 - D308	8" HDPE	27	0.0075
D311 - D312	18" RCP	78	0.0052
D312 - D313	18" RCP	79	0.0051
D313 - D314	18" RCP	61	0.0066
D314 - D315	15" RCP	29	0.0107
D314 - D317	18" RCP	92	0.0054
D315 - D316	15" RCP	58	0.0104
D317 - D318	18" RCP	49	0.0062
D318 - D319	18" RCP	23	0.0088
D318 - D323	18" RCP	46	0.0174
D319 - D320	18" RCP	19	0.0109
D319 - D321	18" RCP	27	0.0078

PIPE TABLE

PIPE RUN	SIZE	LENGTH (FEET)	SLOPE (FT/FT)
D321 - D322	18" RCP	36	0.0057
D323 - D324	18" RCP	45	0.0134
D324 - D325	15" RCP	11	0.0195
D324 - D326	15" RCP	38	0.0053
D501 - D502	18" RCP	33	0.0092

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 REGISTERED ARIZONA, U.S.A.

Eric Beals

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2955 N MAIN STREET LANE
COCONINO COUNTY, ARIZONA

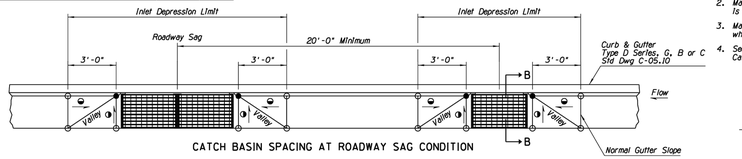
APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **SITE PLAN REVIEW**
STORMWATER DETAILS

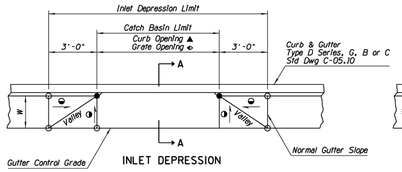
PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C321 REV 4
SHEET 19 of 46

P:\PROJ\22004 FLAGSTAFF PH\DRAWINGS\CIVIL\ 22004 DETAIL

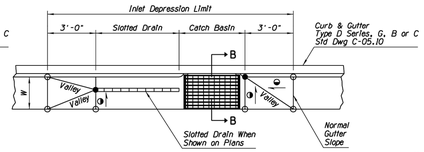
NO	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	REISSUED STANDARD DRAWING	RLF	5/04
2			
3			
4			



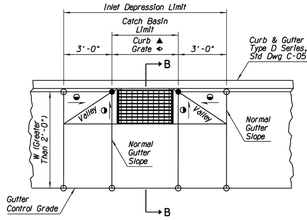
CATCH BASIN SPACING AT ROADWAY SAG CONDITION



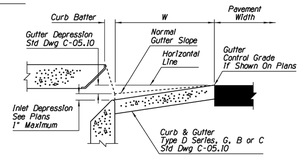
INLET DEPRESSION



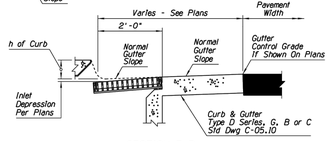
INLET DEPRESSION
CATCH BASIN WITH SLOTTED DRAIN



INLET DEPRESSION
CATCH BASIN WITH WIDE GUTTER



SECTION A-A
(Type D Curb & Gutter Shown)



SECTION B-B
(Type D Curb & Gutter Shown)

GENERAL NOTES

1. No inlet depression shall extend into a traffic lane.
2. Maximum combined inlet and gutter depression is 3". See Section A-A.
3. Maximum distance along curb between catch basins where full gutter depression is used is 10'.
4. See Std Dwg C-15.80 for aprons used with Std Dwg C-15.80 Catch Basin.

LEGEND

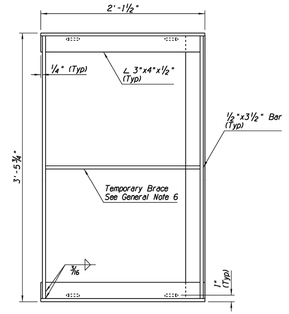
- ○ - Normal pavement or gutter flow line elevation.
- ● - Depressed elevation.
- ⊖ - Straight grade with downward slope.
- W - Normal gutter width per Std Dwg C-05.10.
- ▲ - For Types 1, 3, & 5 Catch Basin.
- ⊕ - For Type 4 Catch Basin & Std Dwg C-15.91.

APPROVED FOR DESIGN	STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION ROADWAY STANDARD DRAWINGS	REV. 5/12
APPROVED FOR DISTRIBUTION	CATCH BASIN MISCELLANEOUS DETAILS	DRAWING NO. C-15.70 Sheet 1 of 2 ①

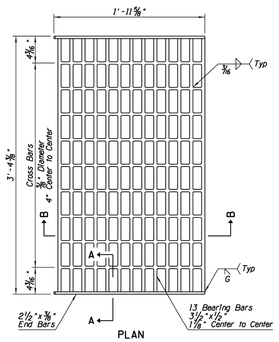
normal.dgn

V:/Roadway\users\tdB36\ 11:38:57 AM

NO	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	REVISED GRATE DIMENSIONS AND REISSUED STANDARD	RLF	7/05
2			
3			
4			



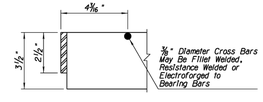
PLAN



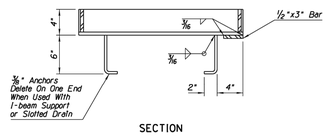
PLAN

GENERAL NOTES

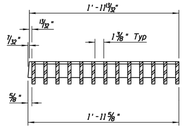
1. Grating units and frames shall be fabricated from structural steel ASTM A36 except as noted.
2. All welding shall be in accordance with Std Spec 604-3.06.
3. The completed assembly shall be given one shop coat of Number 1 paint.
4. Frames and grates shall fit to a maximum rock of 1/32" at any point.
5. Grate opening is 3.60 Sq Ft.
6. Bracing of frame is recommended for handling and placement purposes.
7. Frame and Grate to be used with Std Dwgs C-15.10, C-15.30 and C-15.40.
8. Grate may be used with Std Dwg C-15.92 Frame.



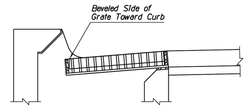
SECTION A-A



SECTION
FRAME



SECTION B-B
GRATE
①



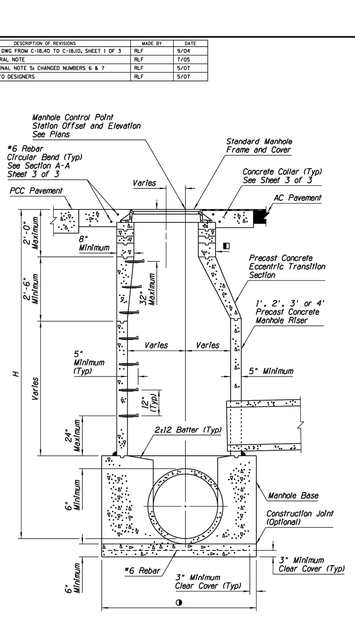
TYPICAL INSTALLATION
C-15.10 Catch Basin Shown
Similar for C-15.30 and C-15.40

APPROVED FOR DESIGN	STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION ROADWAY STANDARD DRAWINGS	REV. 5/12
APPROVED FOR DISTRIBUTION	CATCH BASIN FRAME AND GRATE	DRAWING NO. C-15.50

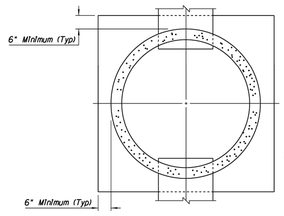
normal.dgn

V:/Roadway\users\tdB36\ 11:38:56 AM

NO	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	RENAMED STD DWG FROM C-18.40 TO C-18.10, SHEET 1 OF 3	RLF	9/04
2	REVISED GENERAL NOTE	RLF	7/05
3	DELETED ORIGINAL NOTE 5; CHANGED NUMBERS 6 & 7	RLF	5/07
4	ADDED NOTE TO DESIGNERS	RLF	5/07



SECTION
NORMAL INSTALLATION
STANDARD BASE



SECTION A-A

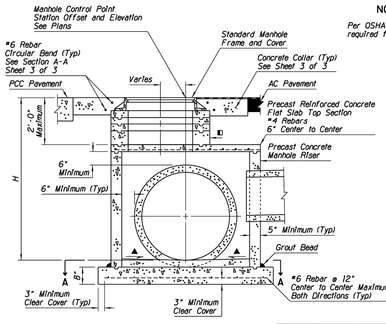
GENERAL NOTES

1. Pipe sizes and elevations are shown on plans.
2. The manhole height, H, shall be measured from the lowest invert elevation to the top of the manhole frame.
3. Concrete for cast-in-place manholes shall be Class B.
② 4. All manholes deeper than 56 inches shall have steps. Manhole steps shall be constructed in accordance with AASHTO M199. Where precast manholes are used, the steps shall be installed at the same time sections are cast.
③ 5. Precast manhole sections shall be manufactured in accordance with AASHTO M199, except that the compressive strength of each section shall be determined and accepted in accordance with Std Spec 1006-7.
③ 6. Manhole size, location and elevation shall be as shown on plans.
③② 7. Backfill material shall be compacted to at least 95 percent of the maximum density per the applicable test method of the ADOT Materials Testing Manual.
◧ 4', 6', 8' or 12' (30" Inside Diameter) Grade Rings
▲ 1/4"/ft
◑ See Sheet 2 of 3

④

NOTE TO DESIGNERS

Per OSHA requirements, special treatments are required for heights exceeding 30 ft.



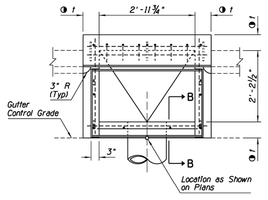
SECTION
SHALLOW INSTALLATION
SLAB BASE

APPROVED FOR DESIGN	STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION ROADWAY STANDARD DRAWINGS	REV. 5/12
APPROVED FOR DISTRIBUTION	MANHOLE RISER DETAILS	DRAWING NO. C-18.10 Sheet 1 of 3 ①

normal.dgn

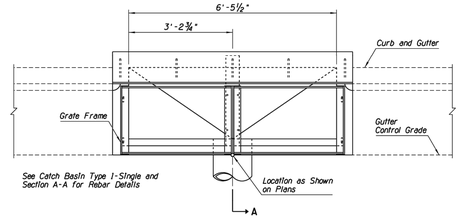
V:/Roadway\users\tdB36\ 11:30:09 AM

NO	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	REVISED NOTE * 5	RLF	7/05
2	REMOVED UNIT OF MEASURE FROM WELD SPECIFICATION	RLF	4/06
3			
4			



PLAN - CATCH BASIN TYPE 1 - SINGLE

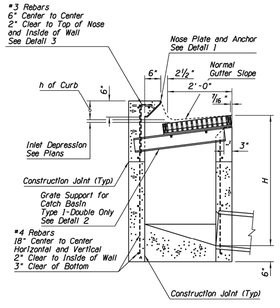
Dimensions are Common to Catch Basin Type 1-Single Except as Shown



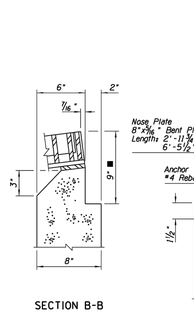
PLAN - CATCH BASIN TYPE 1 - DOUBLE

GENERAL NOTES

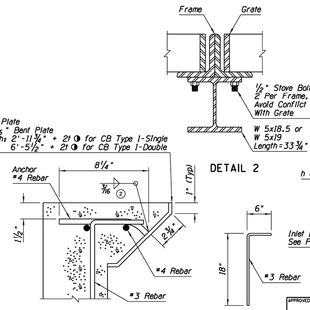
1. Catch basin used at roadway sag.
2. Pipes can be placed in any wall.
3. Sump floor shall be a wood troweled finish with a minimum 4:1 slope in all directions to outlet.
4. All rebar shall be ASTM A36.
5. All welding shall be in accordance with Std Spec 604-3.06.
6. Grate, frame, beam and nose plate shall be given one shop coat of Number 1 paint.
7. All concrete shall be Class B.
8. Construction joints and drains shall be placed to meet field conditions. See Std Dwg C-15.70.
9. Any specified inlet depression shall be warped to opening according to Std Dwg C-15.70.
10. Silicone sealant shall be placed between the grate frame and PCCP, recessed 1/4" from the pavement surface.
11. Curb opening areas, sq. ft., for Type 1-single and Type 1-double equal 0.25 and 0.54, respectively, for each inch of "h" + inlet depression - 2.35". See Std Dwg C-15.70.
12. See Std Dwg C-15.50 for grate and frame details and grate opening areas.
13. ◑ 1 = 6" when H is 8' or less
8" when H is greater than 8'
See Section B-B
■ = 9" when pavement is AC
Match pavement thickness when pavement is PCCP



SECTION A-A

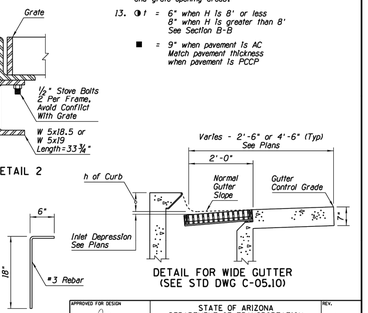


SECTION B-B
USE THIS SECTION WHEN T=8"



DETAIL 1

DETAIL 2



DETAIL 3

DETAIL FOR WIDE GUTTER
(SEE STD DWG C-05.10)

APPROVED FOR DESIGN	STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION ROADWAY STANDARD DRAWINGS	REV. 5/12
APPROVED FOR DISTRIBUTION	CATCH BASIN TYPE 1	DRAWING NO. C-15.10

normal.dgn

V:/Roadway\users\tdB36\ 11:38:58 AM

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

REVISIONS

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 REGISTERED ARIZONA, U.S.A.

Eric Beals

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

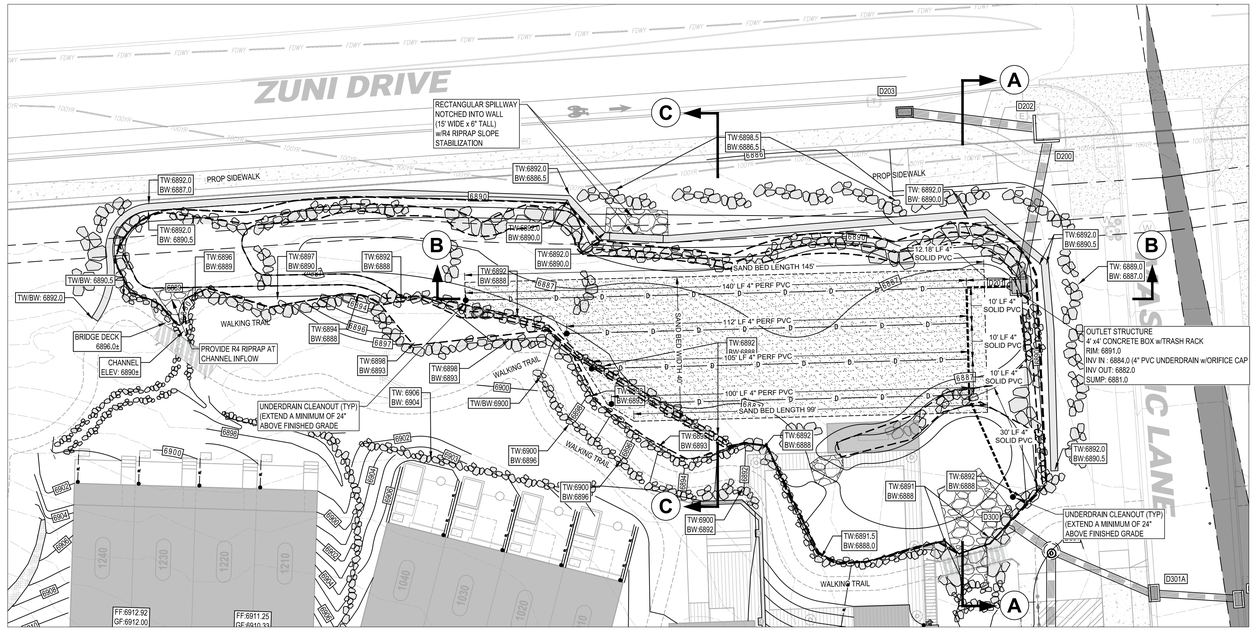
PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2655 W. KINGMAN LANE
COCONINO COUNTY, ARIZONA

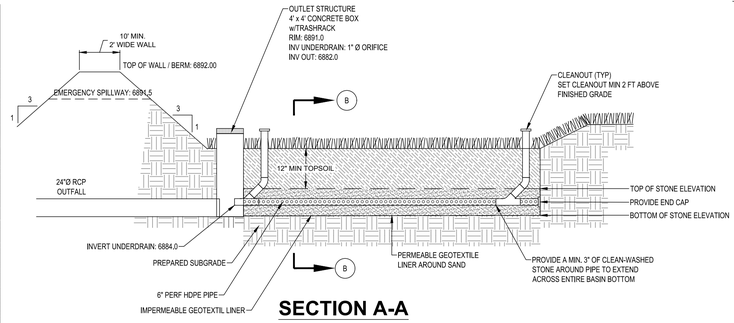
APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
STORMWATER DETAILS

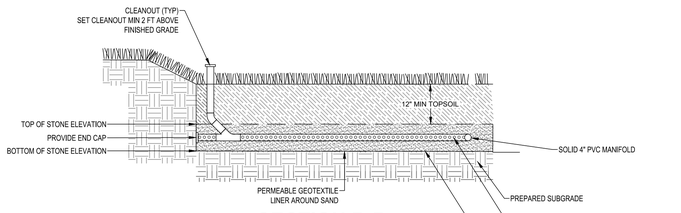
PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C322
REV 4

SHEET 20 of 46

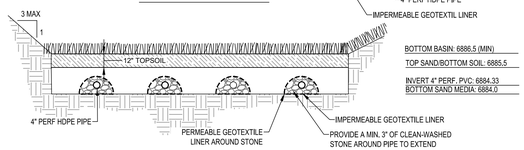




SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

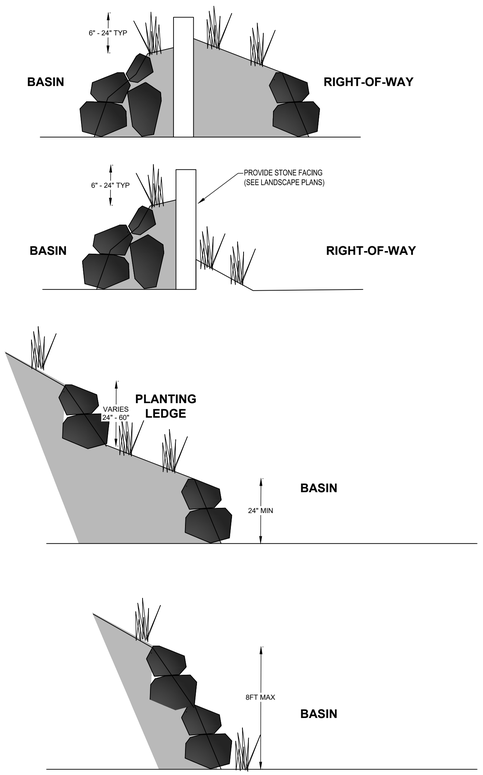
1. TEXTURE OF PLANTING SOIL SHOULD CONFORM TO THE CLASSIFICATION WITHIN THE USDA TRIANGLE FOR SANDY LOAM OR LOAMY SAND. PLANTING SOIL SHOULD BE A MIXTURE OF SAND, SILT, AND CLAY PARTICLES AS REQUIRED TO MEET THE CLASSIFICATION. RANGES OF PARTICLE SIZE DISTRIBUTION, AS DETERMINED BY PIPETTE METHOD IN COMPLIANCE WITH ASTM F-1632.
2. PLANTING SOIL SHOULD BE SCREENED AND FREE OF STONES LARGER THAN A HALF-INCH (½"; 12.7 mm) IN ANY DIMENSION. NO MORE THAN TEN PERCENT (10%) OF THE SOIL VOLUME SHOULD BE COMPOSED OF SOIL PEDS GREATER THAN ONE INCH (1").
3. CLODS, OR NATURAL CLUMPS OF SOILS, GREATER THAN THREE INCHES (3") IN ANY DIMENSION SHOULD BE ABSENT FROM THE PLANTING SOIL. SMALL CLODS RANGING FROM ONE TO THREE INCHES (1-3") AND PEDS, NATURAL SOIL CLUMPS UNDER ONE INCH (1") IN ANY DIMENSION, MAY BE PRESENT BUT SHOULD NOT MAKE UP MORE THAN TEN PERCENT (10%) OF THE SOIL BY VOLUME.
4. THE pH OF THE PLANTING SOIL SHOULD HAVE A RANGE OF 5.8-7.1.
5. SOLUBLE SALTS SHOULD BE LESS THAN 2.0 mmhos/cm (dS/m), TYPICALLY AS MEASURED BY 1:2 SOIL-WATER RATIO BASIC SOIL SALINITY TESTING. SODIC SOILS (EXCHANGEABLE SODIUM PERCENTAGE (ESP) GREATER THAN 15 AND/OR SODIUM ADSORPTION RATIO (SAR) GREATER THAN 13) SHALL NOT BE ACCEPTABLE FOR USE REGARDLESS OF AMENDMENT.
6. ORGANIC CONTENT OF PLANTING SOIL SHOULD HAVE A RANGE OF THREE TO FIFTEEN PERCENT (3-15%) BY WEIGHT AS DETERMINED BY LOSS ON IGNITION (ASTM D2974). TO ADJUST ORGANIC CONTENT, PLANTING SOIL MAY BE AMENDED, PRIOR TO PLACING AND FINAL GRADING, WITH THE ADDITION OF ORGANIC COMPOST.
7. ALL AGGREGATE WITHIN THE STONE STORAGE BED SHALL BE CLEAN-WASHED, DEFINED AS HAVING LESS THAN 0.5% WASH LOSS, BY MASS, WHEN TESTED PER THE AASHTO T-11 WASH LOST TEST.
8. THE BASIN EMBANKMENT SHALL BE PLACED IN EIGHT-INCH MINIMUM LIFTS TO A MINIMUM NINETY-FIVE (95) PERCENT DRY DENSITY. PRIOR TO PROCEEDING TO THE NEXT LIFT, COMPACTION SHALL BE CHECKED BY THE TOWNSHIP ENGINEER OR AN APPROVED SOILS ENGINEER WHO SHALL PROVIDE THE TOWNSHIP ENGINEER WITH A WRITTEN REPORT. COMPACTION TESTS SHALL BE PERFORMED USING THE MODIFIED PROCTOR METHOD IN ACCORDANCE WITH ASTM D-1577. COMPACTION TESTS SHALL BE RUN ON THE LEADING AND TRAILING EDGE AS WELL AS THE TOP OF BERM.

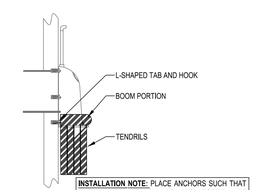
MAINTENANCE:

1. THE PERMITTED SHALL BE REQUIRED TO FOLLOW THE MAINTENANCE PROCEDURES OUTLINES BELOW AND IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE NOTES ON THE PCSM NOTES SHEET OF THIS PLAN SET.
2. MAINTENANCE IS NECESSARY TO ENSURE PROPER FUNCTIONALITY OF THE EXTENDED DETENTION BASIN AND SHOULD TAKE PLACE ON A QUARTERLY BASIS. A BASIN MAINTENANCE PLAN SHOULD BE DEVELOPED WHICH INCLUDES THE FOLLOWING MEASURES:
   - ALL BASIN STRUCTURES EXPECTED TO RECEIVE AND/OR TRAP DEBRIS AND SEDIMENT SHOULD BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION AT LEAST FOUR TIMES PER YEAR, AS WELL AS AFTER EVERY STORM GREATER THAN 1 INCH.
   - STRUCTURES INCLUDE BASIN BOTTOMS, TRASH RACKS, OUTLETS STRUCTURES, RIPRAP OR GABION STRUCTURES, AND INLETS.
   - SEDIMENT REMOVAL SHOULD BE CONDUCTED WHEN THE BASIN IS COMPLETELY DRY. SEDIMENT SHOULD BE DISPOSED OF PROPERLY AND ONCE SEDIMENT IS REMOVED, DISTURBED AREAS NEED TO BE IMMEDIATELY STABILIZED AND REVEGETATED.
   - MOWING AND/OR TRIMMING OF VEGETATION SHOULD BE PERFORMED AS NECESSARY TO SUSTAIN THE SYSTEM, BUT ALL DETRITUS SHOULD BE REMOVED FROM THE BASIN.
   - VEGETATED AREAS SHOULD BE INSPECTED ANNUALLY FOR EROSION.
   - VEGETATED AREAS SHOULD BE INSPECTED ANNUALLY FOR UNWANTED GROWTH OF EXOTIC/INVASIVE SPECIES.
   - VEGETATIVE COVER SHOULD BE MAINTAINED AT A MINIMUM OF 95 PERCENT. IF VEGETATIVE COVER HAS BEEN REDUCED BY 10%, VEGETATION SHOULD BE REESTABLISHED.

C1 BASIN DETAIL

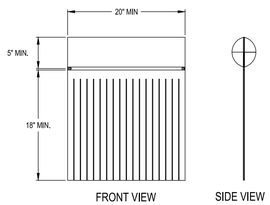
NOT TO SCALE





INSTALLATION NOTE: PLACE ANCHORS SUCH THAT POSITION OF BOTTOM OF BOOM-PORTION OF BIO-SKIRT IS AT SAME ELEVATION AS PIPE INVERT. TENDRILS TO HANG DOWNWARD

INSTALLATION DETAIL



CONFIGURATION DETAIL

L-SHAPED TAB AND HOOK

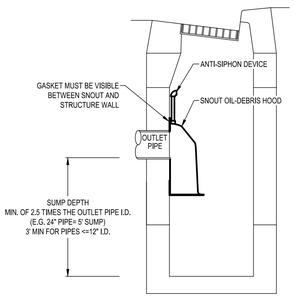
NOTES:

1. MANUFACTURER: ALL NEW CATCH BASINS OR WATER QUALITY STRUCTURES SHALL BE OUTFITTED WITH THE BIO-SKIRT(R) HYDROCARBON REDUCING SKIRTED BOOM AS MANUFACTURED BY: (OR PRE-APPROVED EQUAL)
   BEST MANAGEMENT PRODUCTS, INC.
   9 MATHEWS DRIVE, UNITS A1-A2
   EAST HADDAM, CT 06423
   TOLL FREE (800) 504-8008 OR (888) 434-0277
   WEB SITE: WWW.BMPINC.COM
2. THE SKIRTED BOOM SHALL BE COMPRISED OF AN UPPER BOOM PORTION THAT IS AN ADSORBENT FABRIC COVERED FLOATING BOOM OF 5" MINIMUM DIAMETER WITH AN INTEGRAL LOWER SKIRT PORTION COMPRISED OF FABRIC TENDRILS OF AN 18" MINIMUM LENGTH THAT HANG BENEATH THE BOOM.
3. ALL BOOMS SHALL BE MADE FROM GEO-TEXTILE QUALITY NEEDLE-WOVEN FILTRATION FABRIC MANUFACTURED FROM 100% RECYCLED SELECT FIBERS WITH A 0.125" MINIMUM THICKNESS.
4. ALL FABRIC SHALL BE PROTECTED WITH A COVALENTLY SURFACE BONDED NON-LEACHING ANTIMICROBIAL AGENT AND BOOMS SHALL DISPLAY A TAG INDICATING "ANTIMICROBIAL" WHICH PRESERVES THE SERVICE LIFE OF THE UNIT.
5. THE BIO-SKIRT SHALL BE POSITIONED IN FRONT OF THE EXIT PIPE AND SNOUT® OIL-DEBRIS SEPARATOR IF SO EQUIPPED (THE PREFERRED APPLICATION OF THE BIO-SKIRT IS TO BE DEPLOYED WITH THE SNOUT).
6. THE SKIRTED BOOM SHALL BE SECURELY ATTACHED TO THE STRUCTURE WALL ON EACH SIDE OF THE EXIT PIPE WITH 3/8" STAINLESS STEEL BOLTS, STAINLESS STEEL TABS. PLASTIC-COMPOSITE HOOKS AND ELASTOMERIC CORD AS FOUND IN MANUFACTURER SUPPLIED IN INSTALLATION KIT.
7. FOR APPLICATIONS WHERE MULTIPLE BIO-SKIRTS ARE DEPLOYED TOGETHER FOR LARGER SNOUTS (E.G. ON 24" AND LARGER SNOUTS PER SCHEDULE BELOW"), CONNECT SKIRTS GROMMET TO GROMMET WITH HOOKS AND CORD AS SUPPLIED IN THE INSTALLATION KIT.

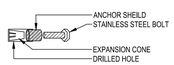
TYPICAL DEPLOYMENT SCHEDULE:
- 12-18" SNOUT- ONE BIO-SKIRT
- 24-30" SNOUT- TWO BIO-SKIRTS
- 36-52" SNOUT- THREE BIO-SKIRTS
- 72" AND UP, CALL 800-504-8008 FOR GUIDANCE.

D1 BMP INLET SNOUT - BIOSKIRT DEVICE

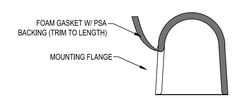
NOT TO SCALE



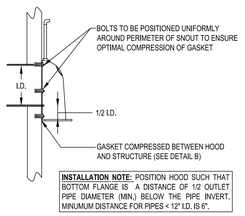
TYPICAL INSTALLATION



DETAIL A

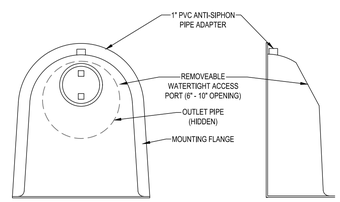


DETAIL B



INSTALLATION NOTE: POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

INSTALLATION DETAIL



CONFIGURATION DETAIL

NOTES:

1. MANUFACTURER: ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE PROVIDED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   TOLL FREE: (800) 504-8008 OR (877) 434-3197
   WEB SITE: www.bmpinc.com
2. CONFIGURATION: ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
3. PIPE COVERAGE: THE SIZE OF THE HOOD SHALL PERMIT THE O.D. OF THE OUTLET PIPE TO BE COVERED COMPLETELY.
4. HOOD POSITION: THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A MINIMUM DISTANCE EQUAL TO 1/2 THE OUTLET PIPE I.D. WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D. GREATER INSERTION DEPTH IS PERMISSIBLE.
5. ANTI-SIPHON VENT: VENT WITH ELBOW AND FEMALE ADAPTER SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
6. MOUNTING SURFACE PREPARATION: THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
7. SNOUT/STRUCTURE INTERFACE: THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS. OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER MUST BE INSTALLED TO PROVIDE PROPER SEAL. (SEE DETAIL "B")
8. ACCESSORIES: IF OIL BOOMS OR FLOW DEFLECTORS ARE SPECIFIED, THEY MUST BE INSTALLED AND PRESENT FOR INSPECTION.
9. INSTALLATION INSTRUCTIONS: INSTRUCTIONS SHALL BE FURNISHED UPON REQUEST OF INSPECTOR WITH MANUFACTURER SUPPLIED INSTALLATION KIT. INSTALLATION KIT SHALL INCLUDE:
   - INSTALLATION INSTRUCTIONS
   - PVC ANTI-SIPHON VENT PIPE, FEMALE ADAPTER WITH NUT, O-RING GASKETS
   - OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   - 3/8" STAINLESS STEEL BOLTS
   - ANCHOR SHIELDS

(SEE BELOW FOR MULTI-PART SNOUTS 36F, 48F, 54R, 96F AND SPLIT SNOUTS ONLY) STAINLESS NUTS AND BOLTS PLUS GASKET TO SECURE TOP AND BOTTOM OF SNOUT. US Patent # 6126817 CANADIAN Patent # 2285146

C1 BMP INLET SNOUT DEVICE

NOT TO SCALE

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 REGISTERED ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

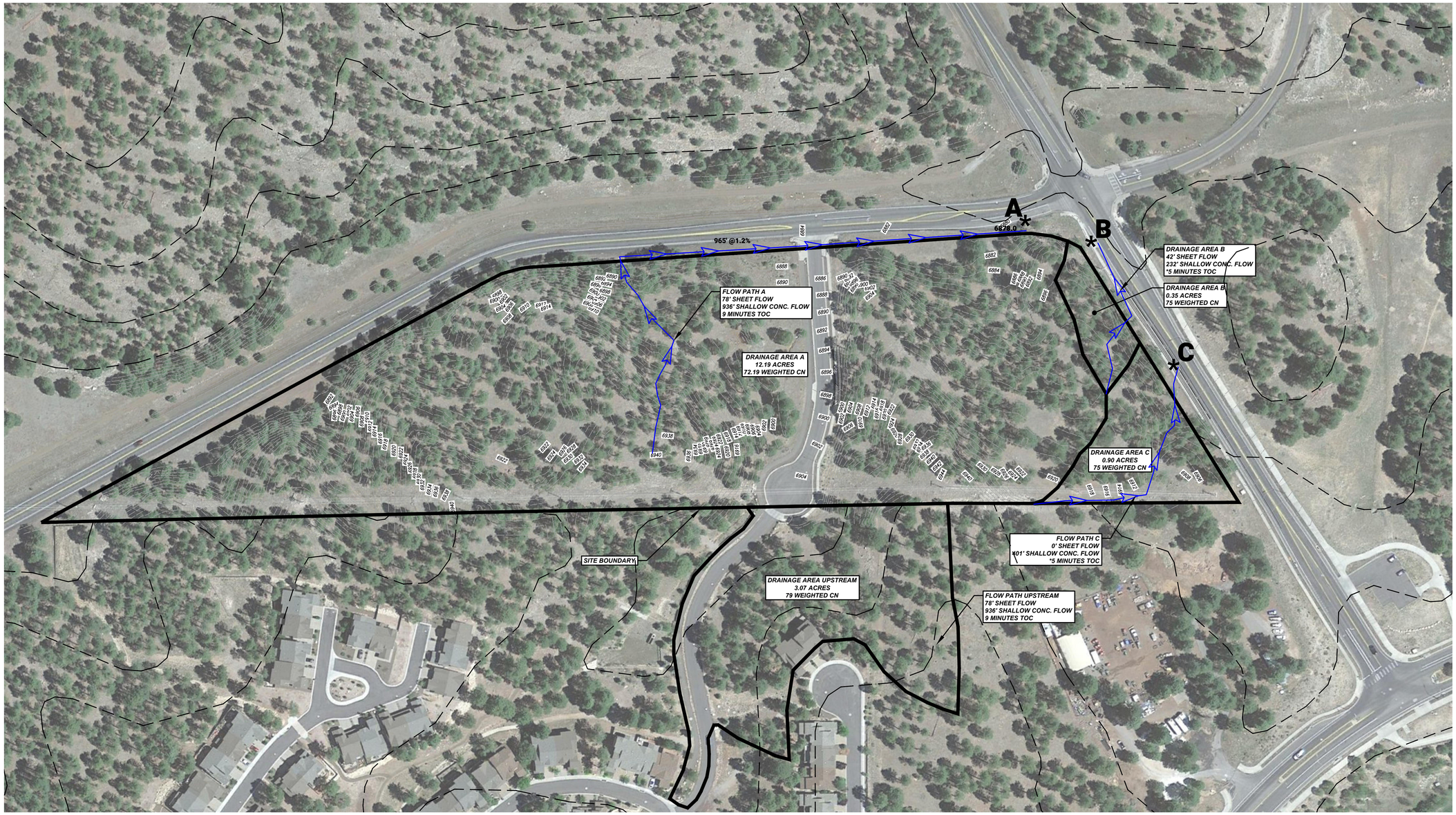
PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2655 N. MAGNOLIA LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
STORMWATER DETAILS

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C323
REV 4

SHEET 21 of 46



N

SCALE: 1" = 80'

40 0 40 80

Runoff Discharge Summary Existing Conditions				
Drainage Area ID	Area (AC)	TOC (MIN)	10-YR (CFS)	100-YR (CFS)
A	12.19	13.20	2.78	32.74
UPSTREAM	3.07	13.20	8.16	14.71
B	0.35	5.00	1.35	3.19
C	0.90	5.00	0.82	3.19

EXISTING CONDITIONS COMPOSITE CURVE NUMBER						
Drainage Area ID	Total Area (ac)	Soil Map Symbol	Hydrologic Soil Group	SCS Curve Number	Area for Individual CN	Composite SCS CN
A	12.19	15A	D	75	1.50	72.23
		15B	D	75	7.27	
		13	B	53	2.50	
		Impervious		98	0.92	
UPSTREAM CAPTURE	3.07	15A	D	75	0.58	89.82
		Impervious		98	1.05	
B	0.35	15B	D	75	0.35	75
C	0.9	15B	D	75	0.9	75

STORM FREQ.	PRECIP.
(YRS)	(IN)
2-YR	1.92
10-YR	2.88
100-YR	4.56

NOTE:
A MINIMUM TIME OF CONCENTRATION (TOC) OF 5 MINUTES WAS USED IN AREAS WITH A CALCULATED TOC LESS THAN 5 MINUTES

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-16-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO. 77934
ERIC S. BEALS
5/02/24
DATE SIGNED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

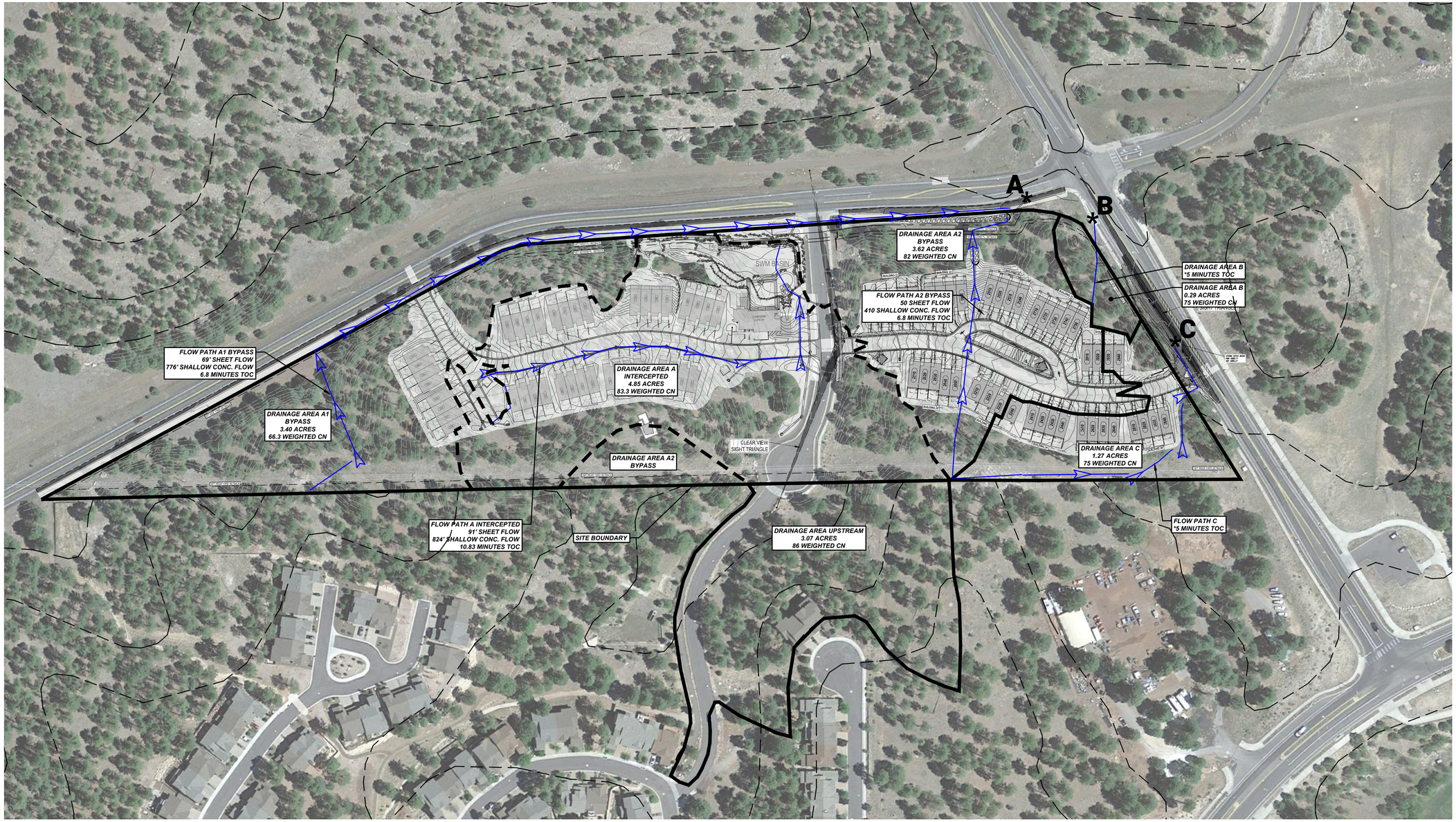
DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
PRE-DEVELOPMENT DRAINAGE MAP

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C391
REV 4



Runoff Discharge Summary Proposed Conditions

Drainage Area ID	Area (AC)	TOC (MIN)	10-YR (CFS)	100-YR (CFS)
A	4.85	13.40	6.68	16.12
UPSTREAM	3.07	13.20	8.16	14.71
A1_BYPASS	3.40	14.20	1.69	5.97
A2_BYPASS	3.62	6.10	7.87	16.26
B	0.29	5.00	0.43	1.03
C	1.27	5.00	1.90	4.50

STORMWATER SUMMARY

POND ELEV	STORAGE VOLUME (CF)	INTENT
6886.5	0	ROCV
6887	487	ROCV
6888	6,619	ROCV
6889	17,471	ROCV
6890	29,752	RETENTION
6891	42,802	RETENTION

Drainage Area ID	Total Area (ac)	Soil Map Symbol	Hydrologic Soil Group	SCS Curve Number	Area for Individual CN	Composite SCS CN
A	4.85	15B	D	75	3.81	75.0
		13	B	53	0.45	
		Townhomes		92	0.59	
A1_BYPASS	3.40	15B	D	75	1.01	66.3
		13	B	53	1.80	
		Townhomes		92	0.59	
A2_BYPASS	3.62	15A	D	75	1.50	82.0
		15B	D	75	2.45	
		13	B	53	0.25	
		Townhomes		92	3.51	
UPSTREAM CAPTURE	3.07	15A	D	75	0.58	89.8
		MASONIC LN		98	1.05	
C	0.29	15B	D	75	0.29	75.0
D	1.27	15B	D	75	1.27	75.0

STORM FREQ.	PRECIP.
(YRS)	(IN)
2-YR	1.92
10-YR	2.88
100-YR	4.56

NOTE:
A MINIMUM TIME OF CONCENTRATION (TOC) OF 5 MINUTES WAS USED IN AREAS WITH A CALCULATED TOC LESS THAN 5 MINUTES

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO.
77934
ERIC S. BEALS
5/02/24
DATE SIGNED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2621 MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
POST-DEVELOPMENT DRAINAGE MAP

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C392
REV 4
SHEET 23 of 46

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-16-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO. 77934
ERIC S. BEALS
5/02/24
DATE SIGNED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
INLET DRAINAGE AREA MAP (DRIVE 'A')

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C393
REV 4

PROJECT	**PINEHAVEN** **RESIDENTIAL LAND DEVELOPMENT** 2951 S. MASONIC LANE COCONINO COUNTY, ARIZONA	DWN BY: M TOTH CHK BY: E BEALS
APPLICANT	**RODG DT FLAGSTAFF PROP CO LLC** **2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702**	
TITLE	**SITE PLAN REVIEW** **INLET DRAINAGE AREA MAP (DRIVE 'B')**	PROJECT NO. 22004 DATE MAY 30, 2023 REV 4

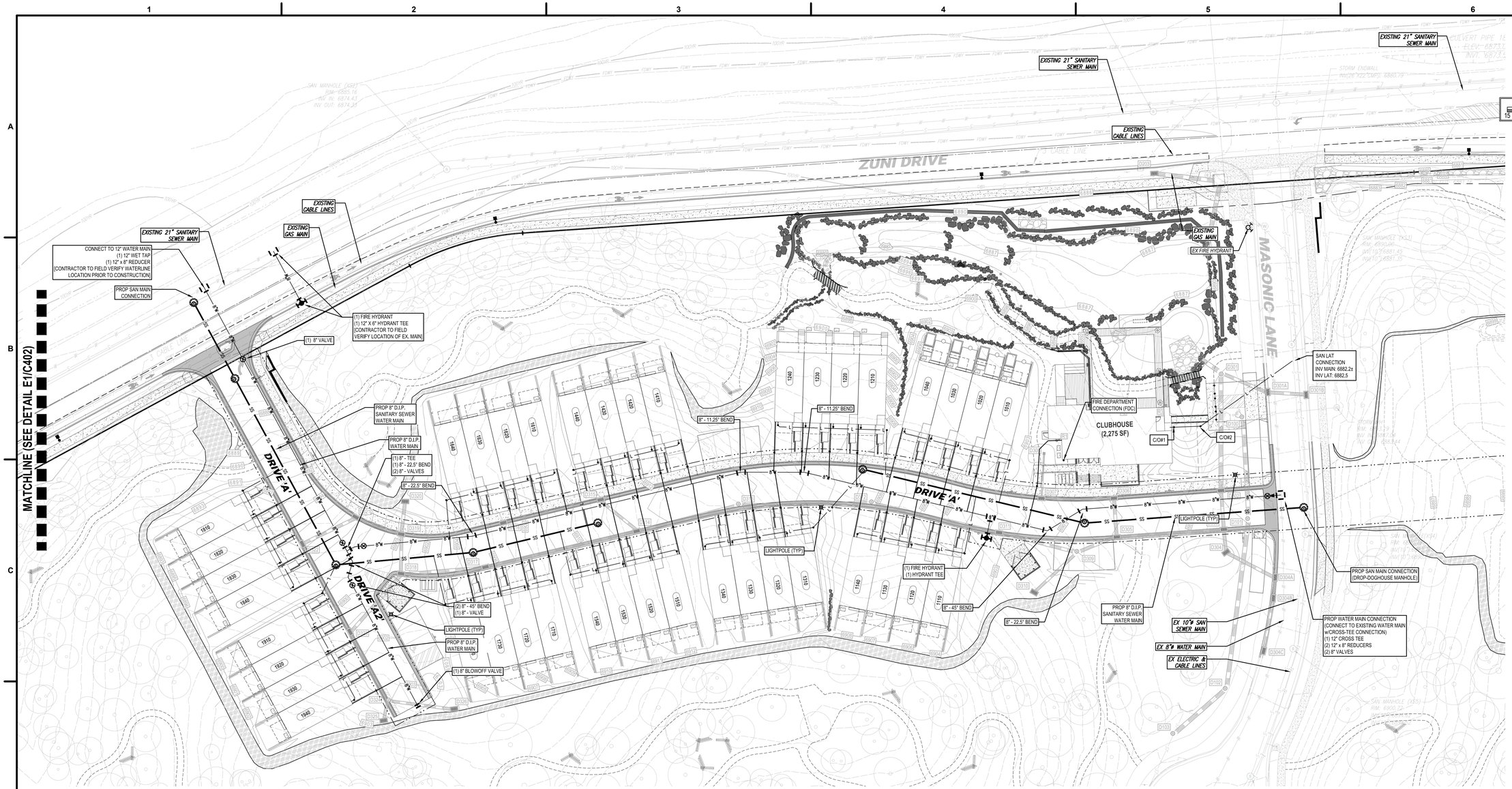
C394 4
SHEET 25 of 46

ViewPoint Engineering
FIRM No. F-23395
viewpointengineering.com
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

Registered Professional Engineer (Civil) ERIC S BEALS 50123 ARIZONA U.S.A.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-16-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT



CITY OF FLAGSTAFF - WATER & SEWER NOTES

ALL DESIGN, CONSTRUCTION, TESTING AND INSPECTION SHALL CONFORM TO THE ADEQ REQUIREMENTS: WATER DISTRIBUTION IN ACCORDANCE WITH BULLETINS 10 AND 8, AND SEWER COLLECTION IN ACCORDANCE WITH AAC TITLE 18, IN THE EVENT THE ADEQ REQUIREMENTS CONFLICT WITH THESE STANDARDS, THE MORE RESTRICTIVE SHALL APPLY.

A. ROUGH GRADING SHALL BE COMPLETED WITHIN ONE-TENTH (1/10) OF A FOOT OF PLAN GRADE AND APPROVED BY THE CITY ENGINEER'S AUTHORIZED REPRESENTATIVES PRIOR TO INSTALLATION OF UNDERGROUND UTILITIES.

B. NO TRENCH SHALL BE FILLED WITH BEDDING MATERIAL OR BACKFILL UNTIL THE EXCAVATION AND PIPE LAYING, RESPECTIVELY, HAVE BEEN APPROVED BY THE CITY ENGINEER'S AUTHORIZED REPRESENTATIVE.

C. A WATER PRESSURE TEST IS REQUIRED OF ALL WATER LINES AND A HYDROSTATIC OR AIR TEST IS REQUIRED OF ALL SEWER LINES AND MANHOLES. TESTS ARE TO BE CONDUCTED AFTER BACKFILLING IS COMPLETE AND COMPACTED ON ALL PUBLIC AND/OR PRIVATE UNDERGROUND UTILITIES.

D. WATER AND SEWER SERVICE LINES ARE TO BE MARKED AS SHOWN ON THE STANDARD SERVICE DETAILS.

E. WATER LINE DISINFECTION IS TO BE ACCOMPLISHED AS OUTLINED IN ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) "BULLETIN NO. 8."

F. WATER PIPE CLASSIFICATION SHALL BE CLASS 305 FOR A.W.W.A. C-900 PVC AND CLASS 350 FOR DUCTILE IRON UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. C-900 SHALL CONFORM TO CAST-IRON-EQUIVALENT OUTSIDE DIAMETER AND HAVE ELASTROMERIC GASKETS AND COUPLINGS. ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE ENCASED IN ACCORDANCE WITH MAG SPECIFICATIONS.

G. ALL MATERIALS THAT COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF STANDARD 61 INCLUDING, BUT NOT LIMITED TO, GASKETS, LUBRICANTS, PIPE FITTINGS, AND VALVES (NSF-PW SEAL) (R18-4-119B).

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

H. ALL PUBLIC SANITARY SEWER LINES AND PRIVATE SEWER SERVICE LINES WITHIN A PUBLIC UTILITY EASEMENT OR RIGHT-OF-WAY WILL BE INSPECTED PRIOR TO ACCEPTANCE BY THE CITY.

I. WATER AND SEWER MAINS SHALL BE SEPARATED IN ORDER TO PROTECT PUBLIC WATER SYSTEMS FROM POSSIBLE CONTAMINATION. ALL DISTANCES ARE MEASURED PERPENDICULARLY FROM THE OUTSIDE OF THE SEWER MAIN TO THE OUTSIDE OF THE WATER MAIN. SEPARATION REQUIREMENTS ARE AS FOLLOWS:

1. A WATER MAIN SHALL NOT BE PLACED:
   a. WITHIN SIX (6) FEET, HORIZONTAL DISTANCE, AND LESS THAN TWO (2) FEET, VERTICAL DISTANCE, ABOVE THE TOP OF A SEWER MAIN UNLESS EXTRA PROTECTION IS PROVIDED. EXTRA PROTECTION SHALL CONSIST OF CONSTRUCTING THE SEWER MAIN WITH MECHANICAL JOINT DUCTILE IRON PIPE OR WITH SLIP-JOINT DUCTILE IRON PIPE IF JOINT RESTRAINT IS PROVIDED. ALTERNATE EXTRA PROTECTION SHALL CONSIST OF ENCASING BOTH THE WATER AND SEWER MAINS IN AT LEAST SIX (6) INCHES OF CONCRETE FOR AT LEAST TEN (10) FEET BEYOND THE AREA COVERED BY THIS SUBSECTION.
   b. WITHIN TWO (2) FEET HORIZONTALLY AND TWO (2) FEET BELOW THE SEWER MAIN. WHEN A WATER MAIN IS PLACED BELOW A SEWER MAIN, EXTRA PROTECTION IS ALWAYS REQUIRED REGARDLESS OF THE VERTICAL SEPARATION.
2. NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF A SEWER MANHOLE. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER MAINS AND MANHOLES SHALL BE SIX (6) FEET, MEASURED FROM THE CENTER OF THE MANHOLE.
3. THE MINIMUM SEPARATION BETWEEN FORCE MAINS OR PRESSURE SEWERS AND WATER MAINS SHALL BE TWO (2) FEET VERTICALLY AND SIX (6) FEET HORIZONTALLY UNDER ALL CONDITIONS. WHERE A SEWER FORCE MAIN CROSSES ABOVE OR LESS THAN SIX (6) FEET BELOW A WATER LINE, THE SEWER MAINS SHALL BE ENCASED IN AT LEAST SIX (6) INCHES OF CONCRETE OR CONSTRUCTED USING MECHANICAL JOINT DUCTILE IRON PIPE FOR TEN (10) FEET ON EITHER SIDE OF THE WATER MAIN.
4. EVEN WHEN EXTRA PROTECTION IS UTILIZED, THE MINIMUM CLEARANCE BETWEEN WATER AND SEWER SHALL BE ONE (1) FOOT.
5. THE SEPARATION REQUIREMENTS DO NOT APPLY TO BUILDING, PLUMBING, OR INDIVIDUAL HOUSE SERVICE CONNECTIONS.

J. WHEN HYDROSTATIC TESTING IS PERFORMED, SEWER LINES SHALL BE TESTED FOR INFILTRATION/EXFILTRATION IN ACCORDANCE WITH ADEQ ENGINEERING BULLETIN NO. 11. MANHOLES SHALL BE TESTED BY FILLING THE MANHOLE WITH WATER. THE APPLICANT SHALL ENSURE THAT THE DROP IN WATER LEVEL DOES NOT EXCEED ONE-THOUSANDTH (0.001) OF THE TOTAL MANHOLE VOLUME IN ONE (1) HOUR.

WHEN AIR TESTING IS PERFORMED, SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH ASTM F1417-92. MANHOLES SHALL BE TESTED IN ACCORDANCE WITH ASTM C1244.

K. SEWER PIPE SHALL BE SDR 35, ASTM D3034 FOR PVC PIPE, OR CLASS 150 DIP LINED WITH PROTECTO 401 CERAMIC EPOXY OR HDPE ASTM F894. ALL DUCTILE IRON PIPELINES SHALL BE POLYETHYLENE ENCASED IN ACCORDANCE WITH MAG SPECIFICATIONS. SPECIAL DESIGN CONSIDERATIONS MAY REQUIRE A HIGHER CLASS RATING OF DIP.

L. NO WATER SETTLING OF TRENCH FILL MATERIAL IS ALLOWED.

M. ALL WATER AND SEWER DESIGN AND CONSTRUCTION SHALL CONFORM TO THE CURRENT ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) REQUIREMENTS. WHEN ADEQ REQUIREMENTS ARE IN CONFLICT WITH THESE STANDARDS, THE MORE RESTRICTIVE SHALL APPLY.

N. TRACER WIRES AND TAPES SHALL BE INSTALLED PRIOR TO TESTING THE WATER OR SEWER MAIN AS REQUIRED BY SECTION 13-09-001-0002. (STRIP WIRE TWO (2) INCHES AT TERMINATION OF THE SERVICE.)

O. WATER VALVES SHALL BE ADJUSTED IN ACCORDANCE WITH CITY OF FLAGSTAFF ENGINEERING DETAIL NO. 9-03-060 AND MANHOLES SHALL BE ADJUSTED IN ACCORDANCE WITH CITY OF FLAGSTAFF ENGINEERING DETAIL NO. 9-03-062.

P. ONE HUNDRED PERCENT (100%) OF THE SEWER LINE SHALL BE TESTED FOR UNIFORM SLOPE BY REMOTE CAMERA AND TESTED FOR SHORT-TERM DEFLECTION.

1. WHEN A SEWER SERVICE IS REQUIRED TO BE ABANDONED, IT SHALL BE ABANDONED AT THE PROPERTY LINE AND CAPPED USING THE APPROPRIATE MATERIALS (PVC, CLAY, OR CONCRETE),
2. WHEN AN EXISTING WATER SERVICE IS REQUIRED TO BE ABANDONED, IT SHALL BE ABANDONED AT THE MAIN, THE SADDLE AND CORP. STOP SHALL BE REMOVED AND THE MAIN CLAMPED WITH AN APPROVED FULL CIRCLE REPAIR CLAMP.

Q. THE LOCATION OF WATER SERVICES SHALL BE IDENTIFIED BY BRANDING A "W" ON THE TOP OR FACE OF CURB.

R. SEWER SERVICE LOCATIONS SHALL BE IDENTIFIED BY BRANDING AN "S" ON THE TOP OR FACE OF THE CURB. (ORD. 2017-22, REP&REEN, 07/05/2017)

WATER/SEWER DEMAND SCHEDULE

LAND USE	CRITERIA [1]	# UNITS	ESTIMATE WATER DEMAND[2]			ESTIMATE WASTEWATER DEMAND [2]	
			PEAK FLOW PER UNIT (GPCD)	MAXIMUM DAILY CONSUMPTION (GPD)	PEAK FLOW RATE (GPM)	AVERAGE DRY-WEATHER FLOW (GPCD)	ESTIMATED DAILY FLOW (GPCD)
RESIDENTIAL SINGLE-FAMILY (TH-MEDIUM DENSITY)	3.5 PERSONS / DWELLING UNIT	83	250	72,625	50.4	75	21,787.5
1) PER TABLE 13-09-003-01 AVERAGE POPULATION DENSITY							
2) PER TABLE 13-09-003-02 WATER DEMAND CRITERIA							

LEGEND

- PROPERTY BOUNDARY
- LEGAL RIGHT-OF-WAY
- ULTIMATE RIGHT-OF-WAY
- ROAD/RIGHT-OF-WAY CENTER LINE
- EASEMENT LINE
- 100YR — APPROX. 100YR FEMA/RURAL FLOODPLAIN ZONE AE BOUNDARY
- FDWY — APPROX. FEMA FLOODWAY BOUNDARY
- FENCE LINE
- EDGE OF ASPHALT
- EDGE OF DIRT/GRAVEL
- S — S — EX. SANITARY SEWER MAIN
- ST — ST — EX STORM PIPE
- E — E — EX. UNDERGROUND ELECTRIC SERVICE LINE
- OH — OH — EX. OVERHEAD WIRE
- G — G — EX. GAS SERVICE MAIN
- T — T — EX TELEPHONE/COMMUNICATIONS LINE
- W — W — EX WATER MAIN
- 6985 — EX CONTOUR ELEVATION LINE
- 8"W — PROP 8" WATER MAIN
- 8"W — PROP 8" WATER MAIN
- L — PROP SAN LATERAL
- SS — PROP SAN SEWER MAIN
- 8"W — PROPERTY MONUMENT FOUND

SYMBOL LEGEND

- EX. STORM CATCH BASIN / MANHOLE
- EX. WATER VALVE
- EX. FIRE HYDRANT
- EX TELECOMM BOX
- EX. SANITARY MANHOLE
- EX UTILITY POLE w/GUY ANCHOR
- EX. ELECTRIC BOX
- EX. LIGHT POLE
- EX. BOLLARD
- EX. GAS VALVE / LINE MARKER
- EX. SIGN
- EX. CONCRETE PAVEMENT
- CP9 — SURVEY CONTROL POINT
- PROPERTY CORNER
- PROPERTY MONUMENT FOUND
- EX. TREES (PINE, OAK, DECID.)
- PROP FIRE HYDRANT
- PROP WATER VALVE
- PROP LIGHT POLE

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO.
77934
ERIC S. BEALS
DATE SIGNED
5/02/24
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

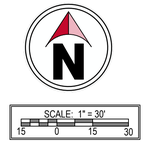
DWN BY: M TOTH
CHK BY: E BEALS

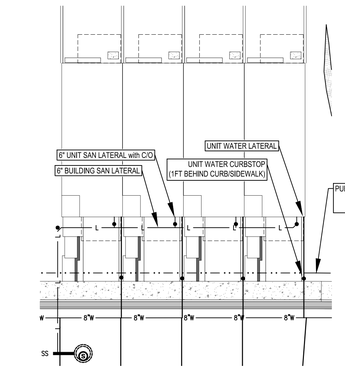
PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2121 MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E 6TH STREET, SUITE 205, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
PHASE 1 UTILITY PLAN (1 OF 2)

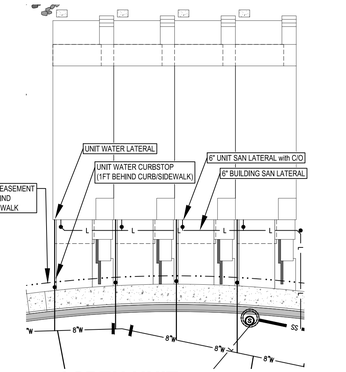
PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C401
REV 4
SHEET 26 of 46





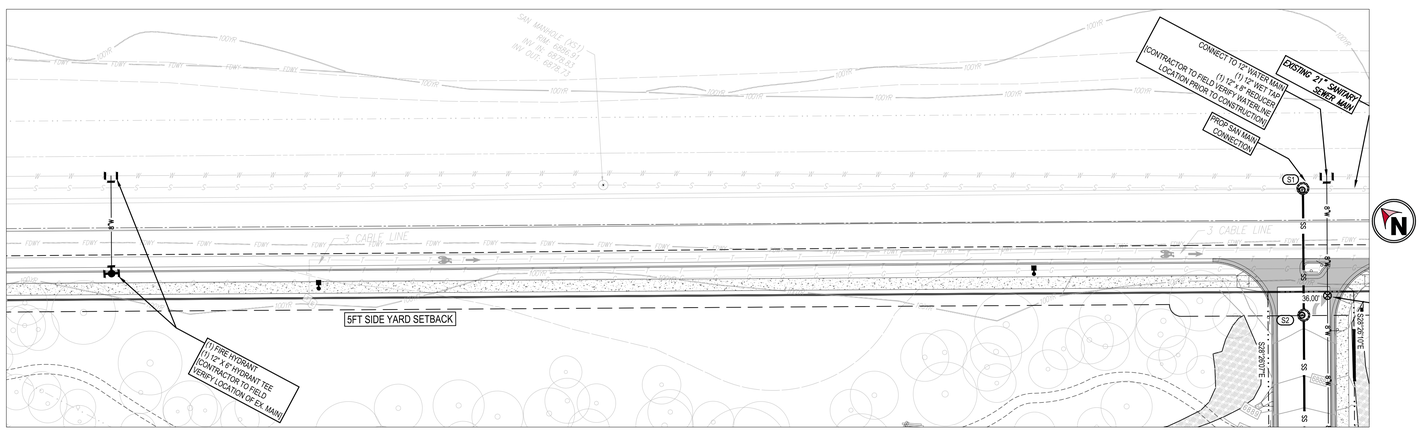
PONDEROSA UNIT
(TYP UTILITY CONNECTIONS)

B5 NOT TO SCALE



ASPEN UNIT
(TYP UTILITY CONNECTIONS)

B6 NOT TO SCALE



E1 **ZUNI DRIVE WATER MAIN / FIRE HYDRANT LOCATION**

NOT TO SCALE

LEGEND

	PROPERTY BOUNDARY
	LEGAL RIGHT-OF-WAY
	ULTIMATE RIGHT-OF-WAY
	ROAD/RIGHT-OF-WAY CENTER LINE
	EASEMENT LINE
100YR	APPROX. 100YR FEMA/RURAL FLOODPLAIN ZONE AE BOUNDARY
FDWY	APPROX. FEMA FLOODWAY BOUNDARY
	FENCE LINE
	EDGE OF ASPHALT
	EDGE OF DIRT/GRAVEL
S S	EX. SANITARY SEWER MAIN
ST ST	EX STORM PIPE
E E	EX. UNDERGROUND ELECTRIC SERVICE LINE
OH OH	EX. OVERHEAD WIRE
G G	EX. GAS SERVICE MAIN
T T	EX TELEPHONE/COMMUNICATIONS LINE
W W	EX. WATER MAIN
6985	EX CONTOUR ELEVATION LINE
8"W	PROP 8" WATER MAIN
8"W	PROP 8" WATER MAIN
L	PROP SAN LATERAL
SS	PROP SAN SEWER MAIN
8"W	PROPERTY MONUMENT FOUND

SYMBOL LEGEND

SCB	EX. STORM CATCH BASIN / MANHOLE
W	EX. WATER VALVE
	EX. FIRE HYDRANT
T	EX TELECOMM BOX
S	EX. SANITARY MANHOLE
	EX. UTILITY POLE w/GUY ANCHOR
E	EX. ELECTRIC BOX
	EX. LIGHT POLE
	EX. BOLLARD
GMH	EX. GAS VALVE / LINE MARKER
	EX. SIGN
	EX. CONCRETE PAVEMENT
CP9	SURVEY CONTROL POINT
	PROPERTY CORNER
	PROPERTY MONUMENT FOUND
PINE OAK DECID.	EX. TREES
	PROP FIRE HYDRANT
	PROP WATER VALVE
	PROP LIGHT POLE

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO.
77934
ERIC S. BEALS
5/02/24
DATE SIGNED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

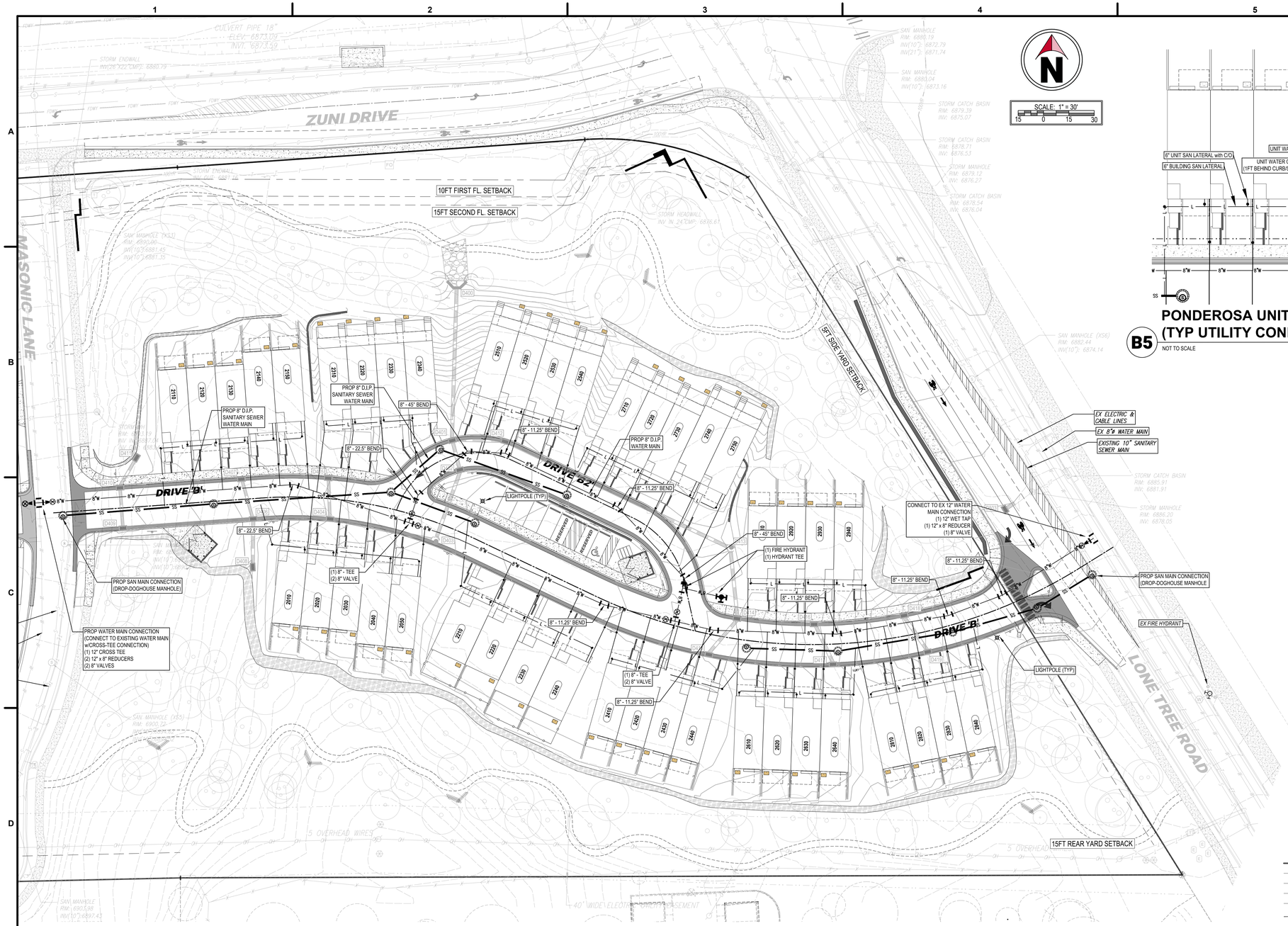
PROJECT: **PINEHAVEN**
RESIDENTIAL AND DEVELOPMENT
2655 S PERSONAL LAND
COCONINO COUNTY, ARIZONA

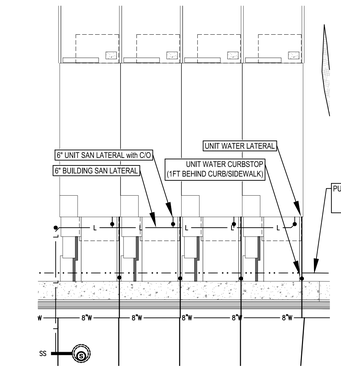
APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **SITE PLAN REVIEW**
PHASE 1 UTILITY PLAN (2 OF 2)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C402
REV 4

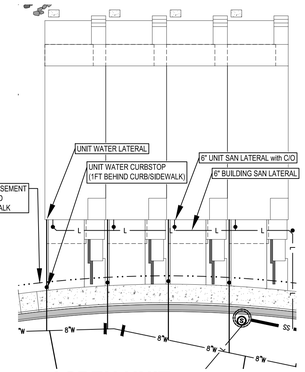
V:\PDRC\22004 FLAGSTAFF - PINEHAVEN\CIVIL\SHEETS\22004 UTILITY PLAN





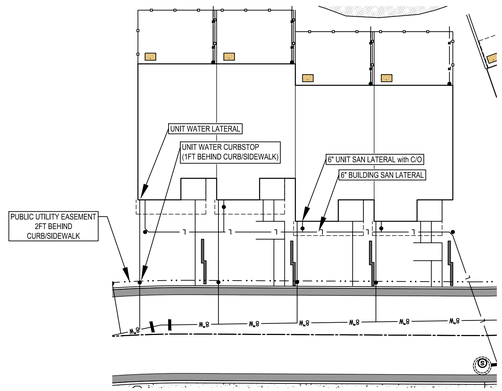
PONDEROSA UNIT (TYP UTILITY CONNECTIONS)

B5 NOT TO SCALE



ASPEN UNIT (TYP UTILITY CONNECTIONS)

B6 NOT TO SCALE



JUNIPER UNIT (TYP UTILITY CONNECTIONS)

C5 NOT TO SCALE

LEGEND

- PROPERTY BOUNDARY
- LEGAL RIGHT-OF-WAY
- ULTIMATE RIGHT-OF-WAY
- ROAD/RIGHT-OF-WAY CENTER LINE
- EASEMENT LINE
- 100YR — APPROX. 100YR FEMA/RURAL FLOODPLAIN ZONE AE BOUNDARY
- FDWY — APPROX. FEMA FLOODWAY BOUNDARY
- FENCE LINE
- EDGE OF ASPHALT
- EDGE OF DIRT/GRAVEL
- S — S — EX. SANITARY SEWER MAIN
- ST — ST — EX STORM PIPE
- E — E — EX. UNDERGROUND ELECTRIC SERVICE LINE
- OH — OH — EX. OVERHEAD WIRE
- G — G — EX. GAS SERVICE MAIN
- T — T — EX. TELEPHONE/COMMUNICATIONS LINE
- W — W — EX. WATER MAIN
- 6985 — EX CONTOUR ELEVATION LINE
- 8"w — PROP 8" WATER MAIN
- 8"w — PROP 8" WATER MAIN
- L — PROP SAN LATERAL
- SS — PROP SAN SEWER MAIN
- 8"w — PROPERTY MONUMENT FOUND

SYMBOL LEGEND

- EX. STORM CATCH BASIN / MANHOLE
- EX. WATER VALVE
- EX. FIRE HYDRANT
- EX TELECOMM BOX
- EX. SANITARY MANHOLE
- EX UTILITY POLE w/GUY ANCHOR
- EX. ELECTRIC BOX
- EX. LIGHT POLE
- EX. BOLLARD
- EX. GAS VALVE / LINE MARKER
- EX. SIGN
- EX. CONCRETE PAVEMENT
- CP9 — SURVEY CONTROL POINT
- PROPERTY CORNER
- PROPERTY MONUMENT FOUND
- EX. TREES (PINE, OAK, DECID.)
- PROP FIRE HYDRANT
- PROP WATER VALVE
- PROP LIGHT POLE

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

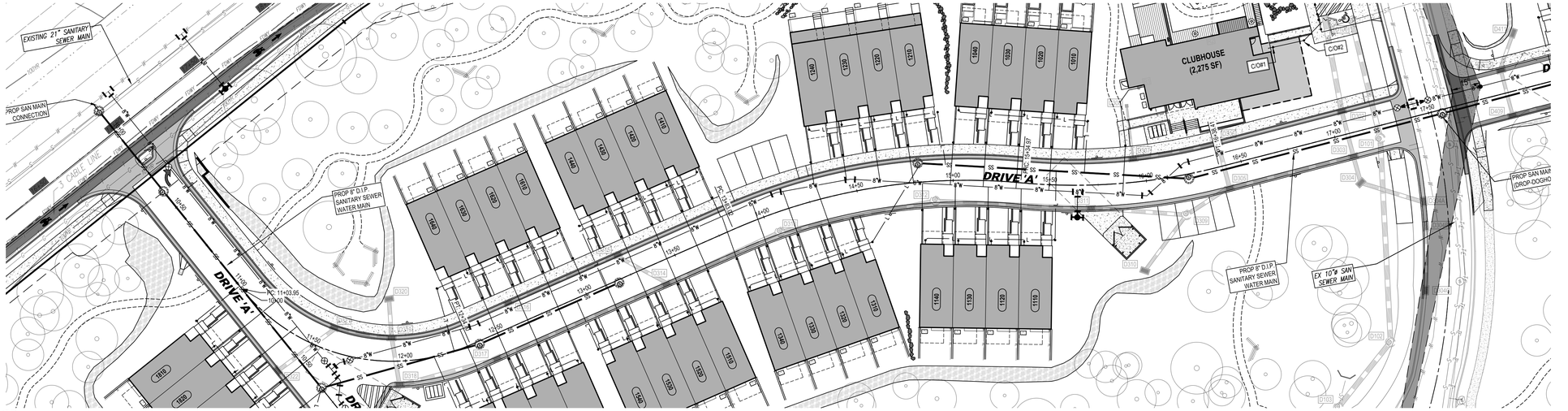
PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2955 S MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
PHASE 2 UTILITY PLAN

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C403
REV 4

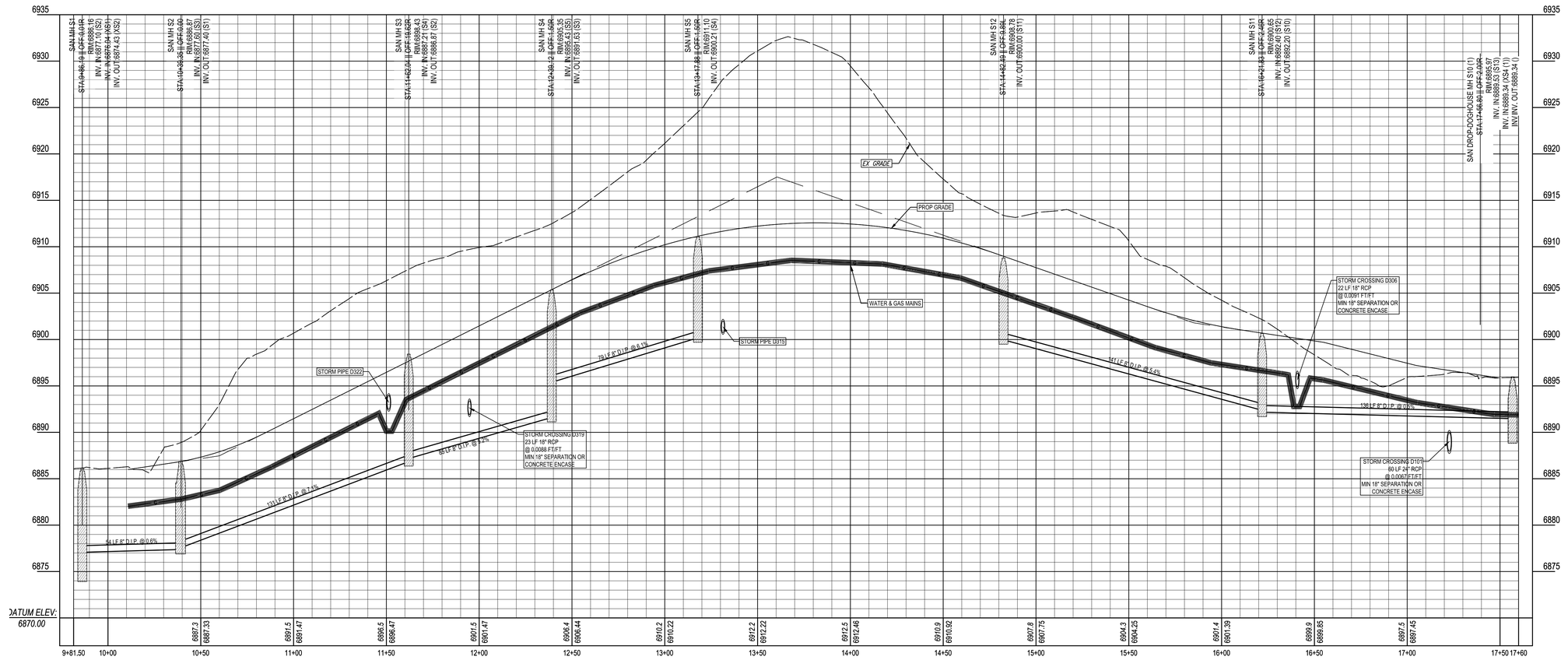
SHEET 27 of 46



B1 PLAN VIEW: DRIVE 'A'

SCALE: 1" = 30'

SCALE: 1" = 30'



E1 PROFILE VIEW: DRIVE 'A'

SCALE: (H) 1" = 30' || (V) 1" = 6'

VERTICAL SCALE 0 3' 6'
HORIZONTAL SCALE 0 15' 30'

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-16-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 DATE SIGNED ARIZONA, U.S.A.

Eric Beals

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

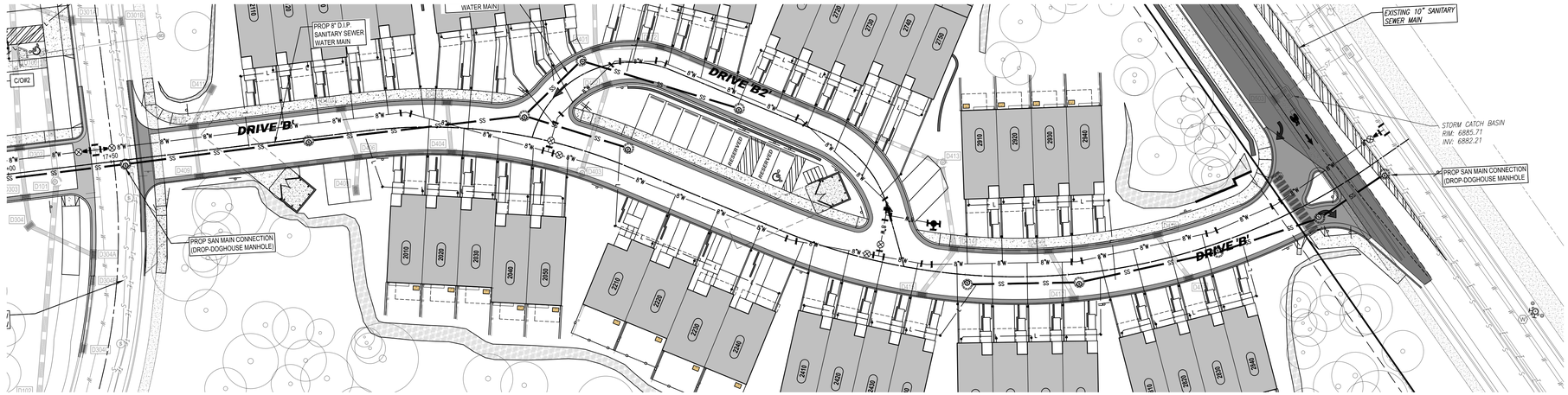
DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
UTILITY PLAN & PROFILE
(DRIVE 'A')

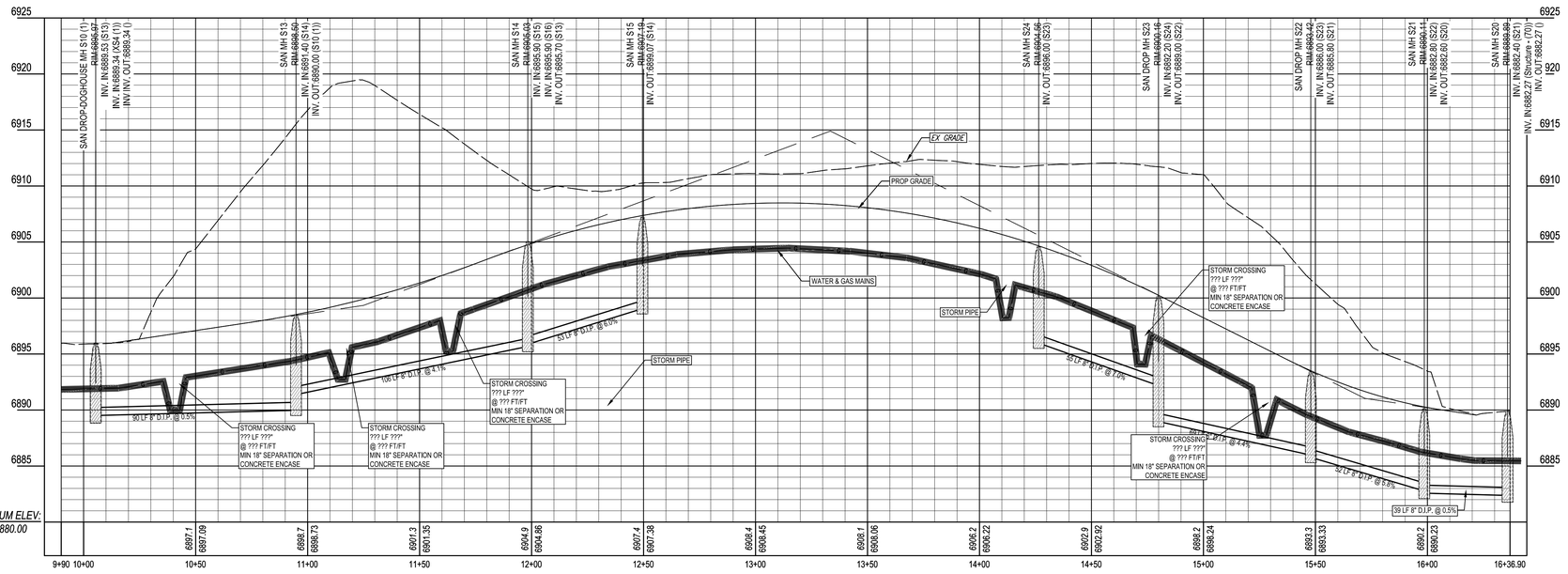
PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C410
REV 4



B1 PLAN VIEW: DRIVE 'A'

SCALE: 1" - 30'

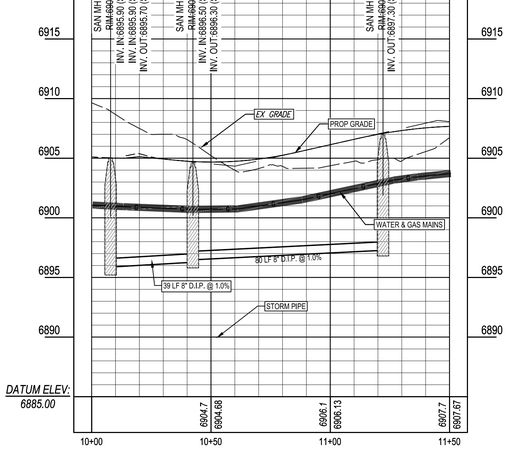
SCALE: 1" = 30'
15 0 15 30



D1 PROFILE VIEW: DRIVE 'A'

SCALE: (H) 1" = 30' || (V) 1" = 6'

VERTICAL SCALE 0 3' 6'
HORIZONTAL SCALE 0 15' 30'



D5 PROFILE VIEW: DRIVE 'A'

SCALE: (H) 1" = 30' || (V) 1" = 6'

VERTICAL SCALE 0 3' 6'
HORIZONTAL SCALE 0 15' 30'

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-16-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-16-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO.
77934
ERIC S
BEALS
5/02/24
REGISTERED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

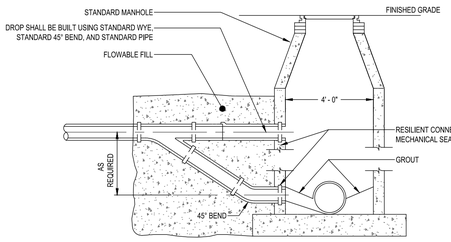
DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2935 S. HUMPHREYS LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

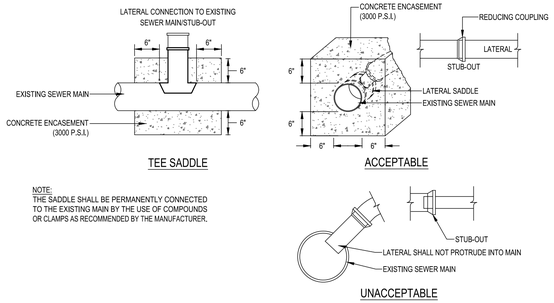
TITLE: SITE PLAN REVIEW
UTILITY PLAN & PROFILE (DRIVE 'B')

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C411
REV 4
SHEET 30 of 46



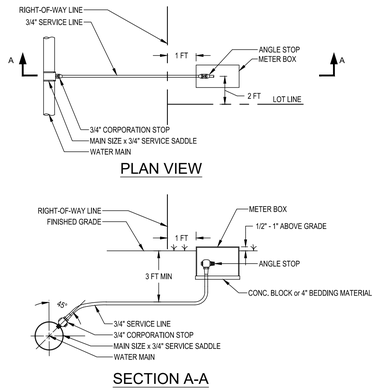
B1 SANITARY DROP MANHOLE CONNECTION

NOT TO SCALE



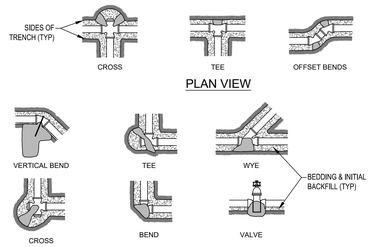
B2 SANITARY LATERAL CONNECTION

NOT TO SCALE



C1 3/4" WATER SERVICE CONNECTION

NOT TO SCALE

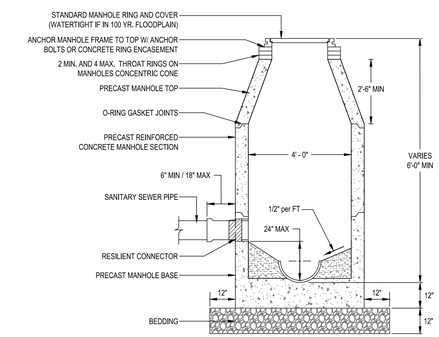


BLOCKING AREA IN SQUARE FEET				
IN ROCK WALL TRENCH				
PIPE SIZE	TEES & DEAD ENDS	90° BENDS	45° BENDS	22-1/2° BENDS
6"	2	2	1	1
8"	3	4	2	1
12"	6	9	5	2
16"	11	15	8	4
IN OTHER THAN ROCK WALL TRENCH				
PIPE SIZE	TEES & DEAD ENDS	90° BENDS	45° BENDS	22-1/2° BENDS
6"	3	4	2	1
8"	4	6	4	2
12"	10	14	8	4
16"	18	25	14	7

- BLOCKING AREA FOR 200 PSI TEST AND 175 PSI WORKING PRESSURES.
- THRUST BLOCKING SHALL BE CONCRETE FILL.

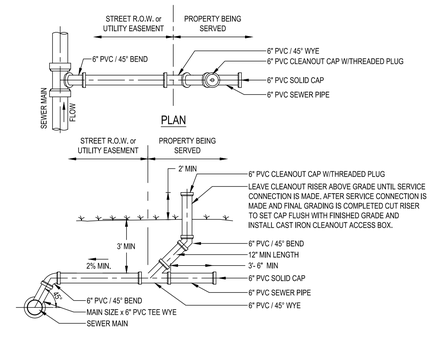
C2 THRUST BLOCKING

NOT TO SCALE



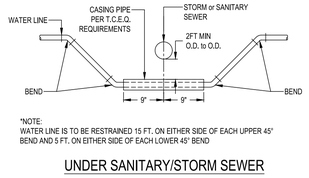
B4 SANITARY MANHOLE (4' DIA.)

NOT TO SCALE



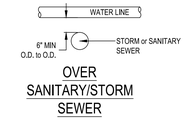
B5 SANITARY SERVICE LATERAL

NOT TO SCALE



*NOTE:
WATER LINE IS TO BE RESTRAINED 15 FT. ON EITHER SIDE OF EACH UPPER 45° BEND AND 5 FT. ON EITHER SIDE OF EACH LOWER 45° BEND

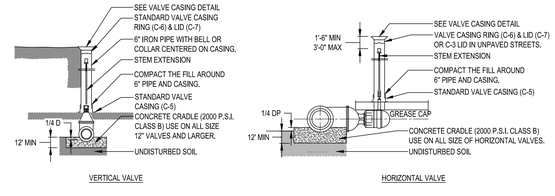
UNDER SANITARY/STORM SEWER



OVER SANITARY/STORM SEWER

C4 WATER CROSSING DETAIL

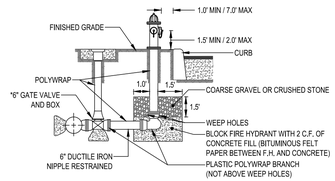
NOT TO SCALE

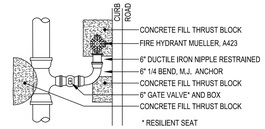


NOTES:
1. WELD SOCKET 2 5/8" X 1 1/4" DEEP TO 1 1/8" SOLID ROUND STEM EXTENSION FITTED ON OPERATION NUT.
2. STANDARD VALVE CASING RING C-6 & LID C-7 OR C-3 LID IN UNPAVED AREAS. SEE VALVE CASING DETAIL.
3. NUT AT TOP OF VALVE EXTENSION ROD SHALL BE 2" SQUARE 1 1/2" LONG WELDED TO TOP OF ROD.

C5 GATE VALVE DETAIL

NOT TO SCALE

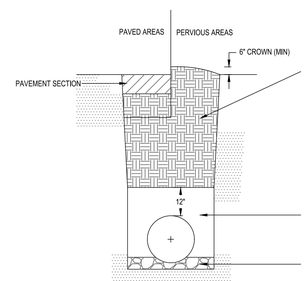




NOTE:
1. POLYWRAP BELOW GROUND
2. USE:
   2.1. ANCHORING TEE WITH M.J. FITTING OR M.J. VALVE
   2.2. STANDARD M.J. TEE WITH ANCHORING COUPLING OR ANCHORING FITTING

D5 FIRE HYDRANT INSTALLATION

NOT TO SCALE



*NOTE: ALL COMPACTION TESTING SHALL BE PERFORMED AS PER TEX-113-E. ALL BACKFILL MATERIAL SHALL BE FREE OF ROCKS IN EXCESS OF 3 INCHES IN ANY DIRECTION.

SECONDARY ZONE:
COMPACTION
- WITHIN PAVED AREAS: TO BE COMPACTED IN 10" LIFTS TO 95%* COMPACTION AT OPTIMUM MOISTURE (TOLERANCE = ±2). **TOP 12" TO BE COMPACTED TO 95% IN 2" LIFTS**
- WITHIN R.O.W. PERVIOUS AREAS: TO BE COMPACTED IN 10" LIFTS TO 95%* COMPACTION AT OPTIMUM MOISTURE (TOLERANCE = ±2).
- OUTSIDE OF R.O.W.: TO BE COMPACTED IN 18" LIFTS TO 85%* COMPACTION AT OPTIMUM MOISTURE (TOLERANCE = ±3).

MAXIMUM PLASTICITY INDEX
- WITHIN PAVED AREAS: MAX PI = 22
- WITHIN R.O.W. PERVIOUS AREAS: MAX PI = 26
- OUTSIDE R.O.W.: NO LIMIT

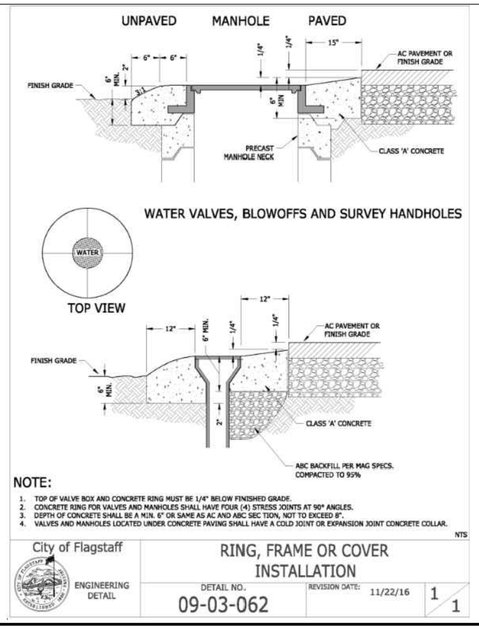
NATIVE SOIL
IS ALLOWED IF STABILIZED IN AN ACCEPTABLE MANNER, NO ZERO P.I. SAND IS ALLOWED.

PRIMARY ZONE
TO BE COMPACTED IN 6" LIFTS TO 95%* COMPACTION AT OPTIMUM MOISTURE (TOLERANCE = ±2). MAXIMUM P.I. = 18.
NO ZERO P.I. SAND IS ALLOWED.

BEDDING ZONE
THICKNESS = PIPE O.D./8. (4" MIN.) AND SHALL CONSIST OF SAND OR PEA GRAVEL.

E5 UTILITY TRENCH BACKFILL METHODS

NOT TO SCALE



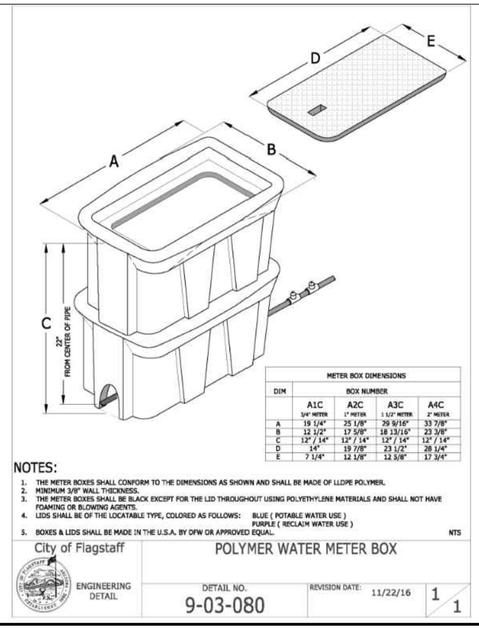
NOTE:
1. TOP OF VALVE BOX AND CONCRETE RING MUST BE 1/4" BELOW FINISHED GRADE.
2. CONCRETE RING FOR VALVES AND MANHOLES SHALL HAVE FOUR (4) STRESS JOINTS AT 90° ANGLES.
3. DEPTH OF CONCRETE SHALL BE A MIN. 6" OR SAME AS AC AND ABC SEC TION, NOT TO EXCEED 8".
4. VALVES AND MANHOLES LOCATED UNDER CONCRETE PAVING SHALL HAVE A COLD JOINT OR EXPANSION JOINT CONCRETE COLLAR.

NTS

City of Flagstaff — ENGINEERING DETAIL

RING, FRAME OR COVER INSTALLATION

DETAIL NO. 09-03-062 | REVISION DATE: 11/22/16 | 1 / 1



METER BOX DIMENSIONS				
DIM	BOX NUMBER			
	A1C 3/4" METER	A2C 1" METER	A3C 1 1/2" METER	A4C 2" METER
A	19 1/4"	25 1/8"	29 9/16"	33 7/8"
B	12 1/2"	17 5/8"	18 13/16"	23 3/8"
C	12" / 14"	12" / 14"	12" / 14"	12" / 14"
D	14"	19 7/8"	23 1/2"	28 1/4"
E	7 1/4"	12 1/8"	12 5/8"	17 3/4"

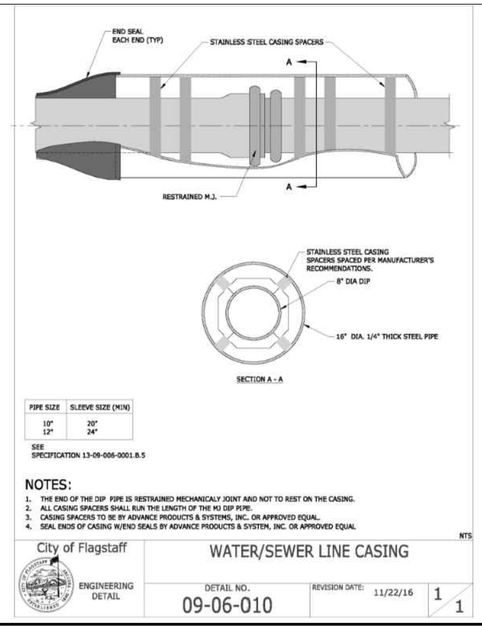
NOTES:
1. THE METER BOXES SHALL CONFORM TO THE DIMENSIONS AS SHOWN AND SHALL BE MADE OF LLDPE POLYMER.
2. MINIMUM 3/8" WALL THICKNESS.
3. THE METER BOXES SHALL BE BLACK EXCEPT FOR THE LID THROUGHOUT USING POLYETHYLENE MATERIALS AND SHALL NOT HAVE FOAMING OR BLOWING AGENTS.
4. LIDS SHALL BE OF THE LOCATABLE TYPE, COLORED AS FOLLOWS: BLUE (POTABLE WATER USE) PURPLE (RECLAIM WATER USE)
5. BOXES & LIDS SHALL BE MADE IN THE U.S.A. BY DFW OR APPROVED EQUAL.

NTS

City of Flagstaff — ENGINEERING DETAIL

POLYMER WATER METER BOX

DETAIL NO. 9-03-080 | REVISION DATE: 11/22/16 | 1 / 1



PIPE SIZE	SLEEVE SIZE (MIN)
10"	20"
12"	24"

SEE SPECIFICATION 13-09-006-0001.B.5

NOTES:
1. THE END OF THE DIP PIPE IS RESTRAINED MECHANICALY JOINT AND NOT TO REST ON THE CASING.
2. ALL CASING SPACERS SHALL RUN THE LENGTH OF THE M.J DIP PIPE.
3. CASING SPACERS TO BE BY ADVANCE PRODUCTS & SYSTEMS, INC. OR APPROVED EQUAL.
4. SEAL ENDS OF CASING W/END SEALS BY ADVANCE PRODUCTS & SYSTEM, INC. OR APPROVED EQUAL

NTS

City of Flagstaff — ENGINEERING DETAIL

WATER/SEWER LINE CASING

DETAIL NO. 09-06-010 | REVISION DATE: 11/22/16 | 1 / 1

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 REGISTERED ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

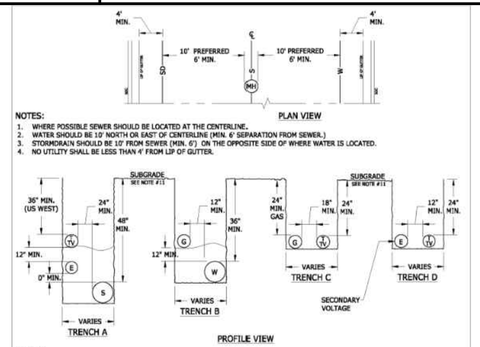
DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT 2651 E. BUTLER AVE. COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC 2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW UTILITY DETAILS

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C421 REV 4
SHEET 31 of 46



NOTES:

1. WHERE POSSIBLE SEWER SHOULD BE LOCATED AT THE CENTERLINE.
2. WATER SHOULD BE 10' NORTH OR EAST OF CENTERLINE (MIN. 6' SEPARATION FROM SEWER.)
3. STORMDRAIN SHOULD BE 10' FROM SEWER (MIN. 6') ON THE OPPOSITE SIDE OF WHERE WATER IS LOCATED.
4. NO UTILITY SHALL BE LESS THAN 4' FROM LIP OF GUTTER.

NOTES:

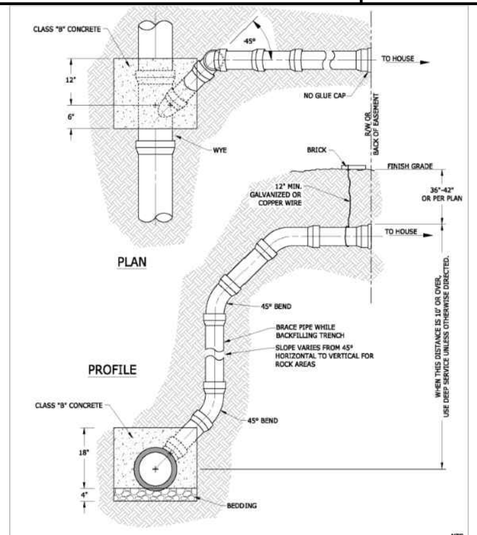
1. THE DIMENSIONS GIVEN IN THESE TRENCH DETAILS ARE MINIMUM. DEPENDING ON THE NUMBER AND SIZE OF UTILITIES IN A TRENCH, ADDITIONAL COVER AND/OR CLEARANCES MAY BE REQUIRED.
2. MINIMUM COVER SHALL BE MEASURED FROM THE TOP OF THE PIPE TO THE SUBGRADE UNDER EXISTING OR PROPOSED PAVEMENT. IN AREAS THAT ARE NOT TO BE PAVED, MINIMUM COVER SHALL BE MEASURED FROM FINISHED GRADE.
3. MINIMUM HORIZONTAL DISTANCE BETWEEN WATER AND SEWER PIPS IS 6 FEET.
4. WHEN SEWER AND WATER LINES CROSS, REFER TO ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (A.D.E.Q.) GUIDELINES, AND OTHER CITY STANDARDS.
5. WHILE POWER AND COMMUNICATION CABLES MAY BE INSTALLED IN SANITARY SEWER TRENCHES, A SEPARATE TRENCH MAY BE REQUIRED WHEN DEEMED NECESSARY BY UTILITY COMPANIES.
6. WATER AND ELECTRIC POWER LINES ARE NOT ALLOWED IN THE SAME TRENCH.
7. GAS AND SEWER LINES ARE NOT ALLOWED IN THE SAME TRENCH
8. TWO WORKING DAYS BEFORE YOU DIG, CALL FOR THE BLUE STAKES 1-800-STAKE-IT
9. TRACER WIRES SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD 9-01-020.
10. WHEN POWER AND COMMUNICATION CABLES ARE NOT IN THE SAME TRENCH, THEY SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF 36" FROM WATER LINES AND 24" FROM SEWER LINES, AND SHALL MAINTAIN A MINIMUM OF 24" ABOVE SEWER LINES. WHEN GAS LINES ARE NOT IN THE SAME TRENCH, A MINIMUM HORIZONTAL SEPARATION OF 36" FROM SEWER LINES AND 18" FROM WATER LINES SHALL BE MAINTAINED; GAS LINES SHALL ALSO BE A MINIMUM OF 18" ABOVE WATER LINES. ALL MEASUREMENTS SHALL BE MADE FROM THE OUTSIDE EDGE OF PIPE OR CABLE.
11. MINIMUM DEPTHS FOR POWER, GAS, TELEVISION, AND COMMUNICATION ARE MEASURED FROM FINISHED GRADE.
12. ALL WATERLINE (FIRE HYDRANT LEAD LINES, FIRE LINES AND SERVICE LINES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF 3')

NTS

City of Flagstaff — ENGINEERING DETAIL

UNDERGROUND UTILITES IN STREETS
TYPICAL LOCATION AND TRENCH DETAIL

DETAIL NO. 9-01-010 | REVISION DATE: 11/22/16 | 1/1



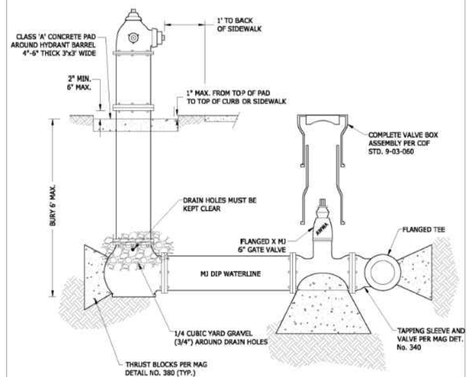
NTS

City of Flagstaff — ENGINEERING DETAIL

DEEP SEWER SERVICE

DETAIL NO. 9-02-080 | REVISION DATE: 11/22/16 | 1/1

SEE DETAIL NO. 13-03-012 FOR PROTECTION POST INSTALLATION
NOTE: MIN. 3' CLEAR LEVEL AREA AROUND HYDRANT



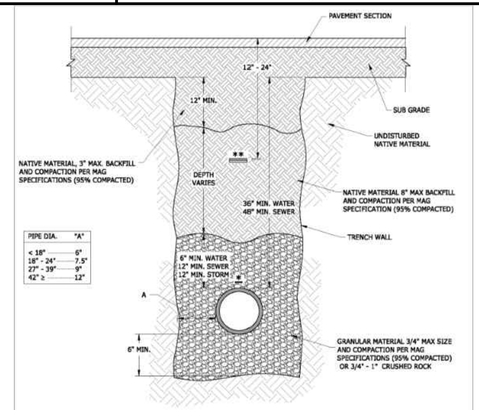
FOR SPECIFICATIONS, INSTALLATION, AND TESTING REFER TO SECTION 13-09-006-0006 (FIRE HYDRANTS).

NTS

City of Flagstaff — ENGINEERING DETAIL

FIRE HYDRANT ASSEMBLY

DETAIL NO. 13-03-011 | REVISION DATE: 9/28/17 | 1/1



NOTES:

1. NATIVE BACKFILL SHALL BE PER MAG SPECS AND MAY BE SELECTED FROM THE EXCAVATION MATERIAL OR FROM A SOURCE SELECTED BY THE CONTRACTOR AND APPROVED BY THE CITY ENGINEER.
2. NON-SHRINK BACKFILL IN ACCORDANCE WITH COF STD. 9-6-030 AND MAY BE USED FOR BACKFILL UP TO EXISTING SUBGRADE. THE NON-SHRINK BACKFILL SHALL BE PROPORTIONED AS FOLLOWS: 3500 LBS OF 3/8" MINUS AGGREGATE, 800 LBS SAND, 94 LBS CEMENT AND 11 GALLONS WATER

* TRACER WIRE TAPED TO TOP CENTER OF MAIN WITH 10MIL PVC TAPE ON 4' CENTERS, SEE COF STD 9-01-020.

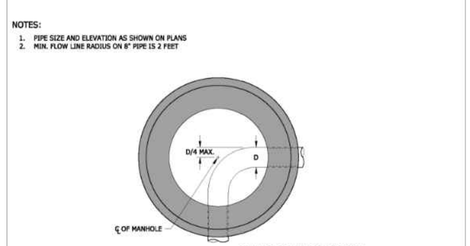
** WARNING TAPE

NTS

City of Flagstaff — ENGINEERING DETAIL

TRENCHING AND BACKFILL
NEW PAVED STREET

DETAIL NO. 9-01-031 | REVISION DATE: 11/22/16 | 1/1



NOTES:

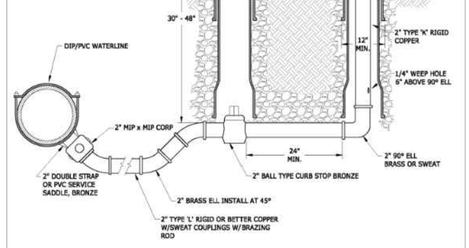
1. PIPE SIZE AND ELEVATION AS SHOWN ON PLANS
2. MIN. FLOW LINE RADIUS ON 8" PIPE IS 2 FEET

NTS

City of Flagstaff — ENGINEERING DETAIL

MANHOLE BASE GEOMETRY

DETAIL NO. 9-02-092 | REVISION DATE: 11/22/16 | 1/1



NOTES:

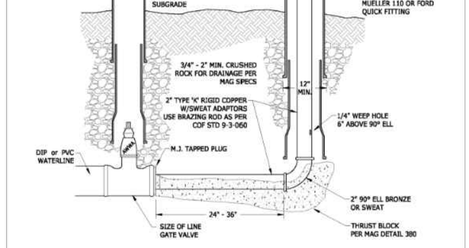
1. ALL SWEAT FITTINGS PER COF DETAIL 9-3-070
2. PIPE FITTINGS BEDDED IN GRANULAR MATERIAL 3/4" MAX AND COMPACTION PER MAG SPECS. (95% COMPACTION) WHERE DRAINAGE GRAVEL NOT REQUIRED
3. ALL MATERIALS COMPACTED TO 95% UNDER VALVE BOXES.

NTS

City of Flagstaff — ENGINEERING DETAIL

IN-LINE BLOW-OFF
ON WATER LINE 12" and SMALLER

DETAIL NO. 9-03-055 | REVISION DATE: 11/22/16 | 1/1



NOTES:

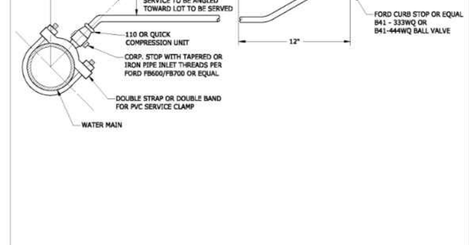
1. PIPE FITTINGS BEDDED IN GRANULAR MATERIAL 3/4" MAX. AND COMPACTION PER MAG SPEC (95% COMPACTION) WHERE DRAINAGE GRAVEL NOT REQUIRED.
2. ALL MATERIAL COMPACTED TO 95% UNDER VALVE BOXES.

NTS

City of Flagstaff — ENGINEERING DETAIL

END-OF-LINE PERMANENT BLOW-OFF

DETAIL NO. 9-03-054 | REVISION DATE: 11/22/16 | 1/1



SEE SECTION 13-09-003-0007 FOR NOTES RELATING TO THIS DETAIL.

NTS

City of Flagstaff — ENGINEERING DETAIL

WATER SERVICE CONNECTION
3/4" AND 1"

DETAIL NO. 09-03-070 | REVISION DATE: 11/22/16 | 1/2

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-26-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) — CERTIFICATE NO. 77934 — ERIC S BEALS — 5/02/24 — DATE SIGNED — ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2955 S. MALIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
UTILITY DETAILS

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C422
REV 4

SHEET 32 of 46

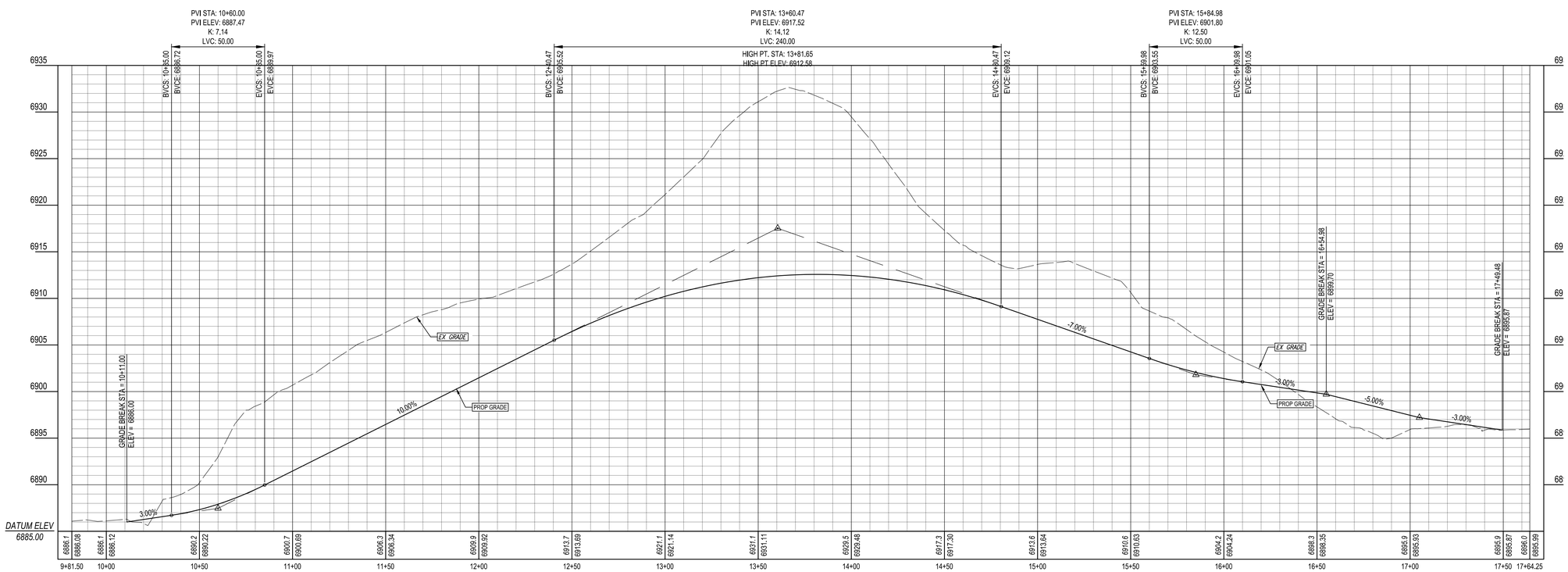
K:\FLMS\22004 FLAGSTAFF PH\DRAWINGS\CIVIL\ 5/02/2024 10:06:

B1 PLAN VIEW: DRIVE 'A'

SCALE: 1" - 30'

SCALE: 1" = 30'

15 0 15 30



E1 PROFILE VIEW: DRIVE 'A'

SCALE: (H) 1" = 30' || (V) 1" = 6'

VERTICAL SCALE 0 3' 6'

HORIZONTAL SCALE 0 15' 30'

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-16-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-20-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO. 77934
ERIC S. BEALS
5/02/24
DATE SIGNED
ARIZONA, U.S.A.

Eric Beals

ViewPoint Engineering

FIRM No. F-23395
viewpointengineering.com

2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

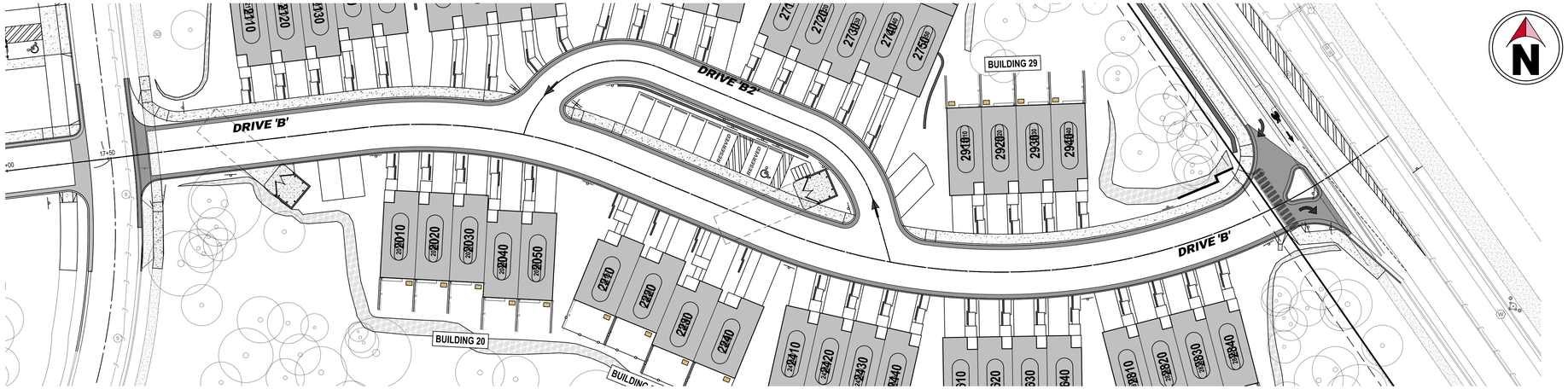
DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
ROAD GEOMETRY PLAN & PROFILE
(DRIVE 'A')

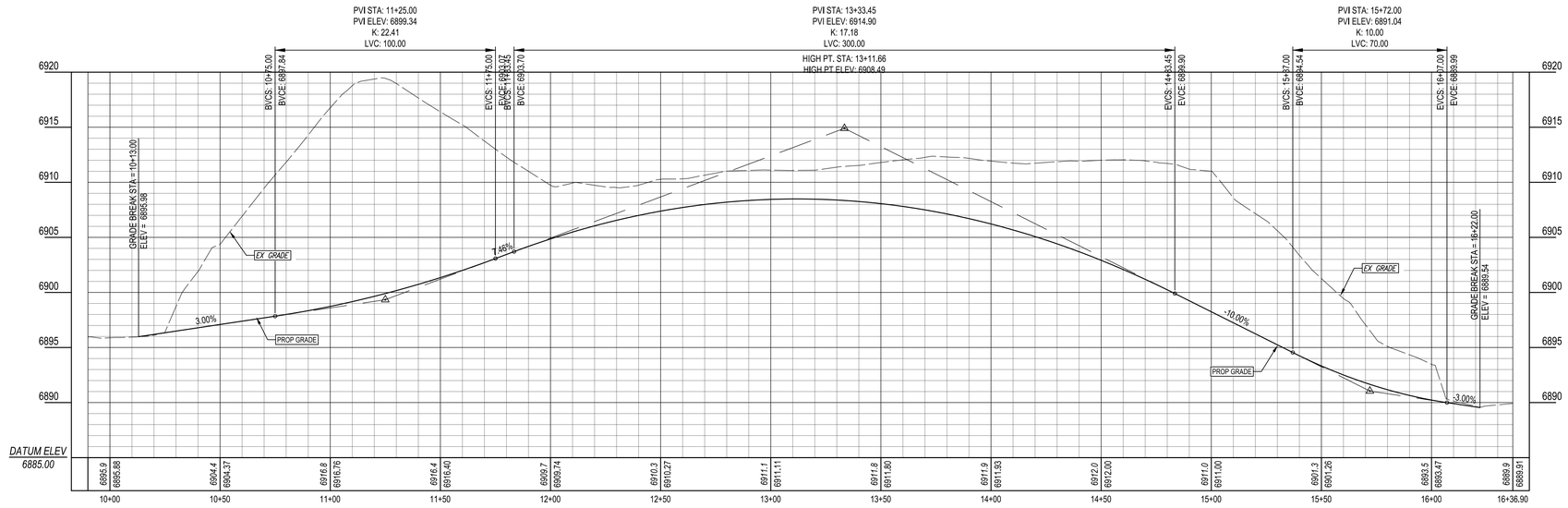
PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C501
REV 4



B2 PLAN VIEW: DRIVE 'A'

SCALE: 1" = 30'

SCALE: 1" = 30'
15 0 15 30



D2 PROFILE VIEW: DRIVE 'A'

SCALE: (H) 1" = 30' || (V) 1" = 6'

VERTICAL SCALE 0 3' 6'
HORIZONTAL SCALE 0 15' 30'

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-16-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-16-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer - Civil
CERTIFICATE NO.
77934
ERIC S
BEALS
DATE SIGNED
5/02/24
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

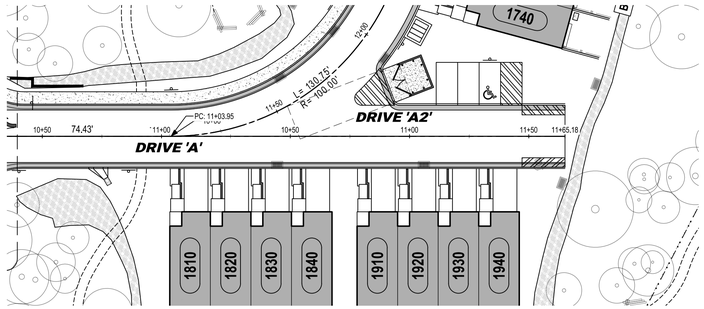
DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2655 S. HISTORIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **SITE PLAN REVIEW**
ROAD GEOMETRY PLAN & PROFILE (DRIVE 'B')

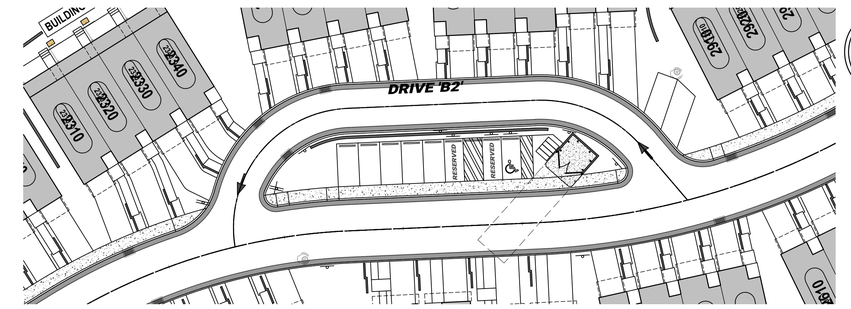
PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C502
REV 4
SHEET 34 of 46



B2 PLAN VIEW: DRIVE 'A2'

SCALE: 1" = 30'

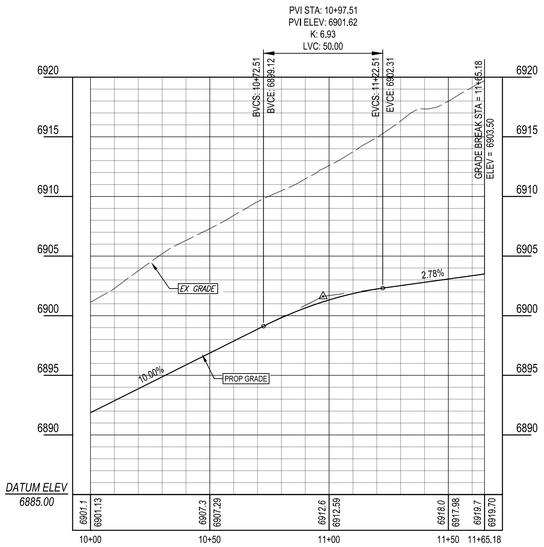
SCALE: 1" = 30'
15 0 15 30



B4 PLAN VIEW: DRIVE 'B2'

SCALE: 1" = 30'

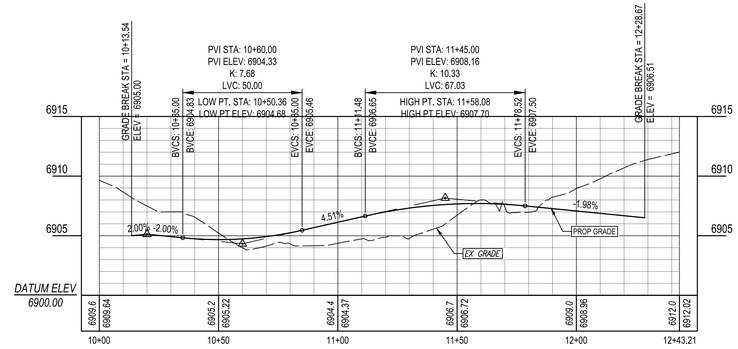
SCALE: 1" = 30'
15 0 15 30



C2 PROFILE VIEW: DRIVE 'A2'

SCALE: (H) 1" = 30' || (V) 1" = 6'

VERTICAL SCALE 0 3' 6'
HORIZONTAL SCALE 0 15' 30'



C4 PROFILE VIEW: DRIVE 'B2'

SCALE: (H) 1" = 30' || (V) 1" = 6'

VERTICAL SCALE 0 3' 6'
HORIZONTAL SCALE 0 15' 30'

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.org

LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON OBSERVABLE SURFACE FEATURES ONLY. THE CONTRACTOR SHALL CONTACT THE ONECALL SYSTEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. CONTRACTOR RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY FAILURE TO LOCATE UTILITIES.

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-16-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO. 77934
ERIC S. BEALS
5/02/24
DATE SIGNED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

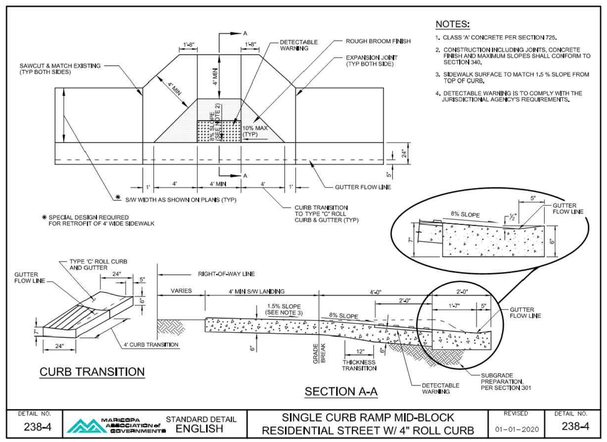
DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
ROAD GEOMETRY PLAN & PROFILE
(DRIVE 'A2' & 'B2')

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C503
REV 4



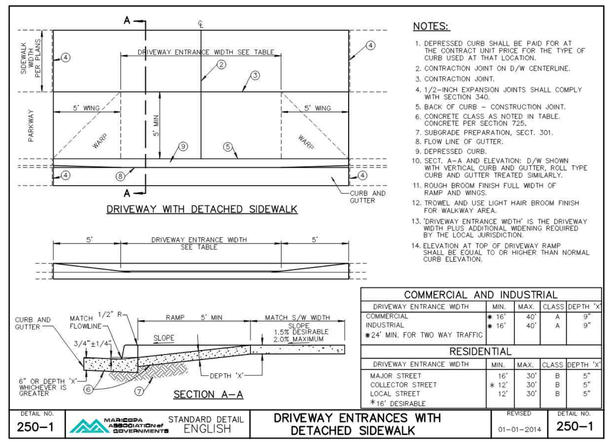
CURB TRANSITION

SECTION A-A

NOTES:

1. CLASS 'A' CONCRETE PER SECTION 725.
2. CONSTRUCTION INCLUDING JOINTS, CONCRETE FINISH AND MAXIMUM SLOPES SHALL CONFORM TO SECTION 340.
3. SIDEWALK SURFACE TO MATCH 1.5 % SLOPE FROM TOP OF CURB.
4. DETECTABLE WARNING IS TO COMPLY WITH THE JURISDICTIONAL AGENCY'S REQUIREMENTS.

DETAIL NO.	STANDARD DETAIL		REVISED	DETAIL NO.
238-4	MARICOPA ASSOCIATION of GOVERNMENTS ENGLISH	SINGLE CURB RAMP MID-BLOCK RESIDENTIAL STREET W/ 4" ROLL CURB	01-01-2020	238-4



DRIVEWAY WITH DETACHED SIDEWALK

SECTION A-A

NOTES:

1. DEPRESSED CURB SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE TYPE OF CURB USED AT THAT LOCATION.
2. CONTRACTION JOINT ON D/W CENTERLINE.
3. CONTRACTION JOINT.
4. 1/2-INCH EXPANSION JOINTS SHALL COMPLY WITH SECTION 340.
5. BACK OF CURB – CONSTRUCTION JOINT.
6. CONCRETE CLASS AS NOTED IN TABLE. CONCRETE PER SECTION 725.
7. SUBGRADE PREPARATION, SECT. 301.
8. FLOW LINE OF GUTTER.
9. DEPRESSED CURB.
10. SECT. A–A AND ELEVATION: D/W SHOWN WITH VERTICAL CURB AND GUTTER; ROLL TYPE CURB AND GUTTER TREATED SIMILARLY.
11. ROUGH BROOM FINISH FULL WIDTH OF RAMP AND WINGS.
12. TROWEL AND USE LIGHT HAIR BROOM FINISH FOR WALKWAY AREA.
13. 'DRIVEWAY ENTRANCE WIDTH' IS THE DRIVEWAY WIDTH PLUS ADDITIONAL WIDENING REQUIRED BY THE LOCAL JURISDICTION.
14. ELEVATION AT TOP OF DRIVEWAY RAMP SHALL BE EQUAL TO OR HIGHER THAN NORMAL CURB ELEVATION.

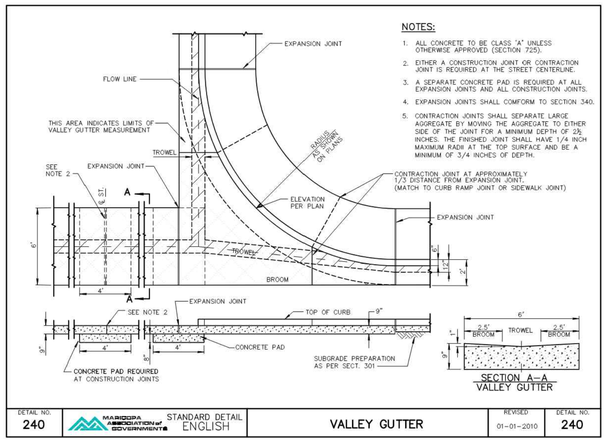
COMMERCIAL AND INDUSTRIAL

DRIVEWAY ENTRANCE WIDTH	MIN.	MAX.	CLASS	DEPTH 'X'
COMMERCIAL	● 16'	40'	A	9"
INDUSTRIAL	● 16'	40'	A	9"
●24' MIN. FOR TWO WAY TRAFFIC				

RESIDENTIAL

DRIVEWAY ENTRANCE WIDTH	MIN.	MAX.	CLASS	DEPTH 'X'
MAJOR STREET	16'	30'	B	5"
COLLECTOR STREET	✱ 12'	30'	B	5"
LOCAL STREET	12'	30'	B	5"
✱16' DESIRABLE				

DETAIL NO.	STANDARD DETAIL		REVISED	DETAIL NO.
250-1	MARICOPA ASSOCIATION of GOVERNMENTS ENGLISH	DRIVEWAY ENTRANCES WITH DETACHED SIDEWALK	01-01-2014	250-1

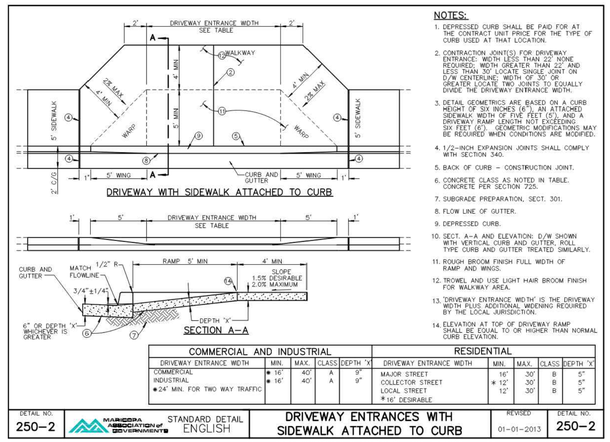


SECTION A–A
VALLEY GUTTER

NOTES:

1. ALL CONCRETE TO BE CLASS "A" UNLESS OTHERWISE APPROVED (SECTION 725).
2. EITHER A CONSTRUCTION JOINT OR CONTRACTION JOINT IS REQUIRED AT THE STREET CENTERLINE.
3. A SEPARATE CONCRETE PAD IS REQUIRED AT ALL EXPANSION JOINTS AND ALL CONSTRUCTION JOINTS.
4. EXPANSION JOINTS SHALL COMFORM TO SECTION 340.
5. CONTRACTION JOINTS SHALL SEPARATE LARGE AGGREGATE BY MOVING THE AGGREGATE TO EITHER SIDE OF THE JOINT FOR A MINIMUM DEPTH OF 2½ INCHES. THE FINISHED JOINT SHALL HAVE 1/4 INCH MAXIMUM RADII AT THE TOP SURFACE AND BE A MINIMUM OF 3/4 INCHES OF DEPTH.

DETAIL NO.	STANDARD DETAIL		REVISED	DETAIL NO.
240	MARICOPA ASSOCIATION of GOVERNMENTS ENGLISH	VALLEY GUTTER	01-01-2010	240



DRIVEWAY WITH SIDEWALK ATTACHED TO CURB

SECTION A–A

NOTES:

1. DEPRESSED CURB SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE TYPE OF CURB USED AT THAT LOCATION.
2. CONTRACTION JOINT(S) FOR DRIVEWAY ENTRANCE WIDTH OF 30' OR LESS: NONE REQUIRED. WIDTH GREATER THAN 30' TO 60' AND LESS THAN 70' LOCATE SINGLE JOINT ON D/W CENTERLINE. WIDTH OF 70' OR GREATER LOCATE TWO JOINTS TO EQUALLY DIVIDE THE DRIVEWAY ENTRANCE WIDTH.
3. DETAIL GEOMETRICS ARE BASED ON A CURB HEIGHT OF SIX INCHES (6") AT ATTACHED SIDEWALK AND A SIDEWALK SLOPE OF TWO PERCENT (2%) AND A DRIVEWAY RAMP LENGTH NOT EXCEEDING SIX FEET (6'). GEOMETRIC MODIFICATIONS MAY BE REQUIRED WHEN CONDITIONS ARE MODIFIED.
4. 1/2-INCH EXPANSION JOINTS SHALL COMPLY WITH SECTION 340.
5. BACK OF CURB – CONSTRUCTION JOINT.
6. CONCRETE CLASS AS NOTED IN TABLE. CONCRETE PER SECTION 725.
7. SUBGRADE PREPARATION, SECT. 301.
8. FLOW LINE OF GUTTER.
9. DEPRESSED CURB.
10. SECT. A–A AND ELEVATION: D/W SHOWN WITH VERTICAL CURB AND GUTTER; ROLL TYPE CURB AND GUTTER TREATED SIMILARLY.
11. ROUGH BROOM FINISH FULL WIDTH OF RAMP AND WINGS.
12. TROWEL AND USE LIGHT HAIR BROOM FINISH FOR WALKWAY AREA.
13. 'DRIVEWAY ENTRANCE WIDTH' IS THE DRIVEWAY WIDTH PLUS ADDITIONAL WIDENING REQUIRED BY THE LOCAL JURISDICTION.
14. ELEVATION AT TOP OF DRIVEWAY RAMP SHALL BE EQUAL TO OR HIGHER THAN NORMAL CURB ELEVATION.

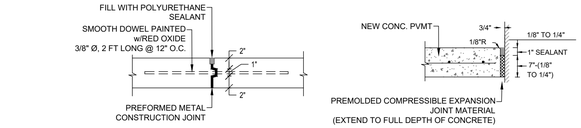
COMMERCIAL AND INDUSTRIAL

DRIVEWAY ENTRANCE WIDTH	MIN.	MAX.	CLASS	DEPTH 'X'
COMMERCIAL	● 16'	40'	A	9"
INDUSTRIAL	● 16'	40'	A	9"
●24' MIN. FOR TWO WAY TRAFFIC				

RESIDENTIAL

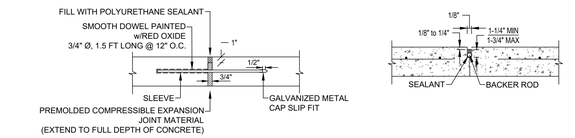
DRIVEWAY ENTRANCE WIDTH	MIN.	MAX.	CLASS	DEPTH 'X'
MAJOR STREET	16'	30'	B	5"
COLLECTOR STREET	✱ 12'	30'	B	5"
LOCAL STREET	12'	30'	B	5"
✱16' DESIRABLE				

DETAIL NO.	STANDARD DETAIL		REVISED	DETAIL NO.
250-2	MARICOPA ASSOCIATION of GOVERNMENTS ENGLISH	DRIVEWAY ENTRANCES WITH SIDEWALK ATTACHED TO CURB	01-01-2013	250-2



CONSTRUCTION JOINT

EXPANSION JOINT at BUILDING

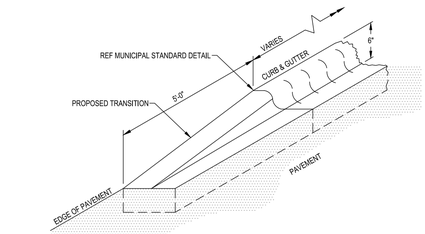


DOWELED EXPANSION JOINT (EJ)

CONTRACTION (SAW) JOINT (CJ)

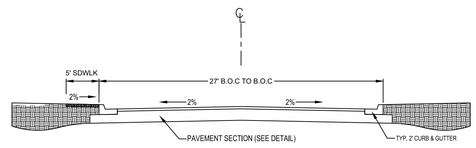
B5 PAVEMENT JOINTS

NOT TO SCALE



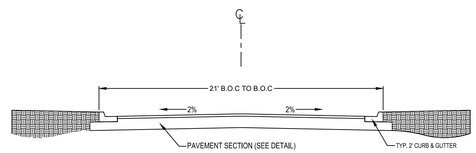
C5 CURB TRANSITION

NOT TO SCALE



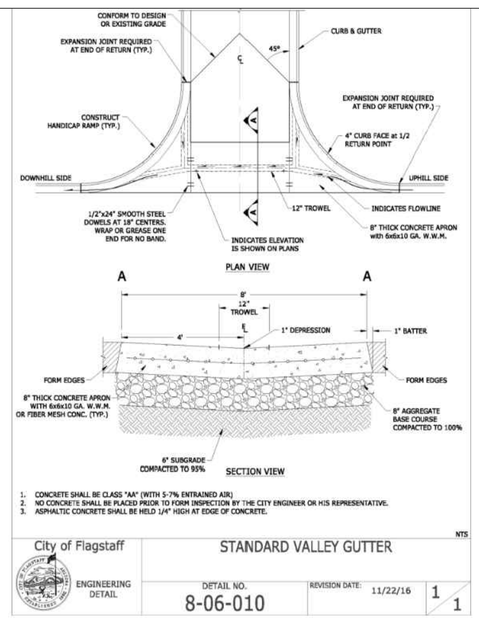
D5 DRIVE 'A', 'A2' & 'B' SECTION TYPICAL

NOT TO SCALE



E5 DRIVE 'B2' SECTION TYPICAL

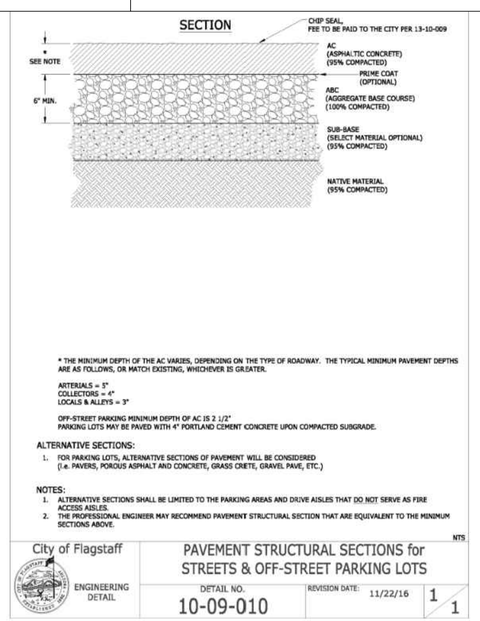
NOT TO SCALE



1. CONCRETE SHALL BE CLASS "AA" (WITH 5-7% ENTRAINED AIR)
2. NO CONCRETE SHALL BE PLACED PRIOR TO FORM INSPECTION BY THE CITY ENGINEER OR HIS REPRESENTATIVE.
3. ASPHALTIC CONCRETE SHALL BE HELD 1/4" HIGH AT EDGE OF CONCRETE.

NTS

City of Flagstaff	STANDARD VALLEY GUTTER		
ENGINEERING DETAIL	DETAIL NO. 8-06-010	REVISION DATE: 11/22/16	1 / 1



* THE MINIMUM DEPTH OF THE AC VARIES, DEPENDING ON THE TYPE OF ROADWAY. THE TYPICAL MINIMUM PAVEMENT DEPTHS ARE AS FOLLOWS, OR MATCH EXISTING, WHICHEVER IS GREATER.

ARTERIALS = 5"
COLLECTORS = 4"
LOCALS & ALLEYS = 3"

OFF-STREET PARKING MINIMUM DEPTH OF AC IS 2 1/2"
PARKING LOTS MAY BE PAVED WITH 4" PORTLAND CEMENT CONCRETE UPON COMPACTED SUBGRADE.

ALTERNATIVE SECTIONS:

1. FOR PARKING LOTS, ALTERNATIVE SECTIONS OF PAVEMENT WILL BE CONSIDERED (i.e. PAVERS, POROUS ASPHALT AND CONCRETE, GRASS CRETE, GRAVEL PAVE, ETC.)

NOTES:

1. ALTERNATIVE SECTIONS SHALL BE LIMITED TO THE PARKING AREAS AND DRIVE AISLES THAT DO NOT SERVE AS FIRE ACCESS AISLES.
2. THE PROFESSIONAL ENGINEER MAY RECOMMEND PAVEMENT STRUCTURAL SECTION THAT ARE EQUIVALENT TO THE MINIMUM SECTIONS ABOVE.

NTS

City of Flagstaff	PAVEMENT STRUCTURAL SECTIONS for STREETS & OFF-STREET PARKING LOTS		
ENGINEERING DETAIL	DETAIL NO. 10-09-010	REVISION DATE: 11/22/16	1 / 1

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 DATE SIGNED ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN
2955 N. PINEHAVEN LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
CONSTRUCTION DETAILS

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C510
REV 4

SHEET 36 of 46

K:\FLAG\22004 FLAG\CONST FP\DRAWINGS\CIVIL\ 2023\22004 DETAIL

NO	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	REVISED GENERAL NOTE 3; SLOPES & LENGTHS	RLF	11/06
2	DELETED GENERAL NOTE 8	RLF	5/07
3	ADDED NOTE & REVISED VIEW	RLF	5/12
4			

◧ Ramp Shall Be Laid Out Radially from the Back of the 5' Wide Detectable Warning Strip, Except That In No Case Shall It Be Less Than 4' Wide at the Back of the Sidewalk

PLAN

SECTION A-A

PERSPECTIVE

ELEVATION
DEPRESSED CURB AT SIDEWALK RAMP

GENERAL NOTES

1. For use where sidewalk is not continuous.
2. Ramp centerline shall be radial from the face of the curb at the Sidewalk Ramp Control Point.
3. ① For ramps 15-ft long or less, the 15:1 slope governs. If a 15:1 slope results in a ramp length longer than 15-ft, the 15:1 slope may be waived and the ramp length held at 15-ft, regardless of the slope.
4. The top of the Ramp Curb along the back of the Sidewalk Ramp shall match the elevation of the adjacent back of sidewalk and run parallel to the Sidewalk Ramp. The Ramp Curb along the side of the Sidewalk Ramp shall match the elevation at the back of the Curb & Gutter and the back of Ramp Curb.
5. Drainage inlets should not be located within the marked crosswalks, or if crosswalks aren't marked, within the area a standard marked crosswalk would enclose.
6. Concrete shall receive a rough broom finish as shown.
7. See Std Dwgs C-05.10 and C-05.20 for joint details.
8. ② ■ Pedestrian Push Button Pole When Shown on Traffic Plans. See Traffic Signal Plans for Additional Information
9. ◑ 10" Maximum to Face of Pedestrian Push Button

LEGEND

▲ Minimum Slope = 100:1 (0.01 'm)

Maximum Slope = 50:1 (0.02 'm)

◪ Maximum Slope = 20:1 (0.05 'm) ③

SIDEWALK RAMP AT SIDEWALK TERMINUS

APPROVED FOR DESIGN	STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION ROADWAY STANDARD DRAWINGS	REV. 5/12
APPROVED FOR DISTRIBUTION	SIDEWALK RAMP TYPE C	DRAWING NO. C-05.30 Sheet 3 of 7

normal.dot1

V:\Roadway\users\tdt836\

11:24:22 AM

NO	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	REISSUED STD DWG	RLF	5/07
2	ADDED NOTE & REVISED VIEW	RLF	5/12
3	REVISED DIMENSION LOCATION	RLF	5/12
4			

◧ Ramp Shall Be Laid Out Radially from the Back of the 5' Wide Detectable Warning Strip, Except That In No Case Shall It Be Less Than 4' Wide at the Back of the Sidewalk

TWO CROSSING DIRECTIONS AT CORNER

ONE CROSSING DIRECTION AT CORNER

SECTION A-A

SECTION B-B

SECTION C-C

RAMP CURB DETAIL

PARALLEL SIDEWALK RAMP

GENERAL NOTES

1. Ramp centerline shall be radial from the face of the curb at the Sidewalk Ramp Control Point.
2. For ramps 15-ft long or less, the 15:1 slope governs. If a 15:1 slope results in a ramp length longer than 15-ft, the 15:1 slope may be waived and the ramp length held at 15-ft, regardless of the slope.
3. Drainage inlets should not be located within the marked crosswalks, or if crosswalks aren't marked, within the area a standard marked crosswalk would enclose.
4. Concrete shall receive a rough broom finish as shown.
5. See Std Dwgs C-05.10 and C-05.20 for joint details.
- ● See Note 2
- ◑ 10" Maximum to Face of Pedestrian Push Button
- ■ Pedestrian Push Button Pole When Shown on Traffic Plans. See Traffic Signal Plans for Additional Information

LEGEND

▲ Minimum Slope = 100:1 (0.01 'm)

Maximum Slope = 50:1 (0.02 'm)

② ◪ Maximum Slope = 20:1 (0.05 'm)

APPROVED FOR DESIGN	STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION ROADWAY STANDARD DRAWINGS	REV. ① 5/12
APPROVED FOR DISTRIBUTION	SIDEWALK RAMP TYPE A	DRAWING NO. C-05.30 Sheet 1 of 7

normal.dot1

V:\Roadway\users\tdt836\

11:24:28 AM

PROVIDE TAPERED CONCRETE
CONCRETE PAD SLOPE TO GUTTERLINE AT 2% MIN
ROAD 'A'
ROAD 'B'

D2 CURB CUT DETAIL

NOT TO SCALE

NO	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	REISSUED STANDARD DRAWING	RLF	5/07
2	ADDED TYPE E & E-1 CURBS, REVISED TABLES & NOTE	RLF	5/12
3	REARRANGED STANDARD DRAWING GRAPHICS	RLF	5/12
4	ADDED NOTE AND REVISED VIEW	RLF	5/12

SINGLE CURB TYPE A & A1

CURB & GUTTER TYPE G

SINGLE CURB TYPE G

CURB & GUTTER TYPE B, C, C-1, E & E-1

VALLEY GUTTER

EMBANKMENT CURB

CURB & GUTTER TYPE D, D-1, D-2 & D-3

DEPRESSED CURB & GUTTER

CURB TERMINAL SECTION

EXPANSION JOINT DETAIL

GENERAL NOTES
SINGLE CURB AND CURB & GUTTER

1. Single curb and curb & gutter may be constructed by the use of forms or the concrete may be extruded.
2. When the pavement section slopes away from the gutter, the slope of the gutter shall match the pavement cross slope. Therefore, the gutter depression is not applicable.
3. Two-inch deep contraction joints shall be placed in the curb and the gutter at locations which match the joints in adjacent PCCP and at approximate 15' centers when adjacent to AC pavement. Joints shall be either hand-tooled or sawn.
4. Expansion joints shall be located at tangent points in curb returns, at structures and at maximum 60' intervals. The ½" joint filler shall extend the full depth of the concrete.
5. Concrete shall be finished with a steel trowel followed by brushing with a fine brush along the length of the curb and gutter.
6. All exposed edges and hand-tooled joints shall be finished with a tool having a ¼" radius, or as noted on the plans.
7. Place AB under single curb, valley gutter, and curb & gutter when shown on plans

④ ◪ Gutter Depression shall be reduced at sidewalk ramps (C-05.30) to achieve a maximum gutter cross-slope of 5%.

② ◑ See Plans (6 inch typical)

◧ Curb Radius when shown on plans

EMBANKMENT CURB

1. No additional finishing will be required after extrusion or removal of the forms when the curb presents a neat appearance and the surface is uniform in texture and color.
2. The curb shall conform to the cross section as shown except that the horizontal dimensions shall not vary more than ½".

Curb & Gutter Type	Curb Height h	Gutter Width w	Gutter Depression d ◪ ④
D	◑	2'-0"	1⅝"
D-1	◑	2'-6"	1¾"
D-2	◑	4'-6"	1¾"
D-3	◑	2'-0"	N/A
G	◑	2'-0"	1⅝"

URBAN FREEWAY CURB & GUTTER

Curb & Gutter Type	Curb Height h	Curb Width c	Slope	Gutter Depression d
B	6"	1'-6"	3:1	2"
C	3"	1'-6"	6:1	5/8"
C-1	3"	1'-6"	6:1	N/A
② E	4"	2'-0"	6:1	5/8"
E-1	4"	2'-0"	6:1	N/A

① Type D-3 See General Note 2

APPROVED FOR DESIGN	STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION ROADWAY STANDARD DRAWINGS	REV. ① 5/12
APPROVED FOR DISTRIBUTION	CURB & GUTTER CURB GUTTER ③	DRAWING NO. C-05.10

normal.dot1

V:\Roadway\users\tdt836\

11:29:15 AM

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-26-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 REGISTERED ARIZONA, U.S.A.

Eric Beals

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN
RESIDENTIAL SUBDIVISION AND DEVELOPMENT
2951 SUNSET LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E 6th STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
CONSTRUCTION DETAILS

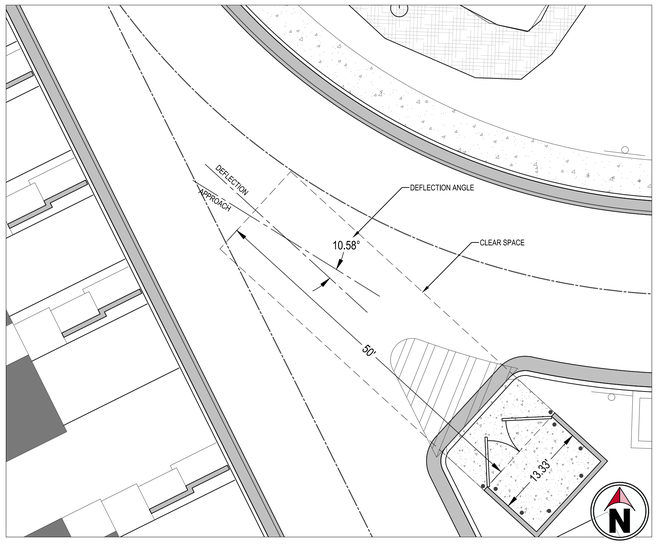
PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C511
REV. 4
SHEET 37 of 46

V:\WORK\22004 FLAGSTAFF TH\DRAWINGS\CIVIL\ SWCS\22004 DETAIL

B1 TRASH ENCLOSURE - CLUBHOUSE

SCALE 1" = 5'

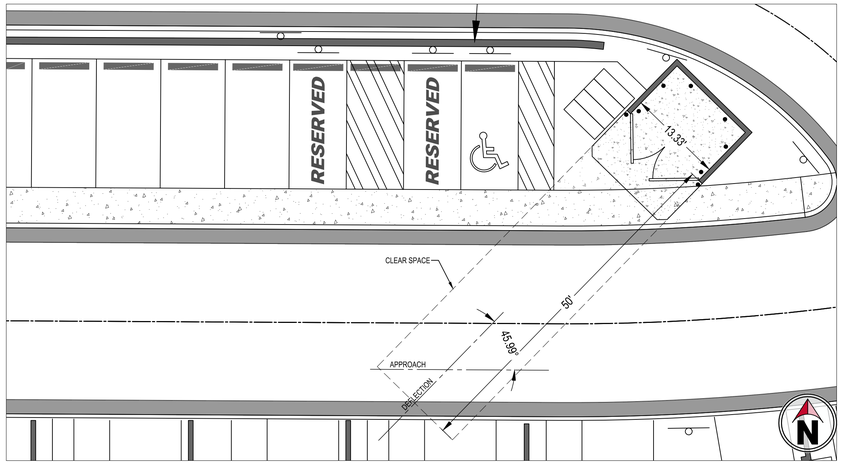
SCALE: 1" = 10'



D1 TRASH ENCLOSURE - ROAD A

SCALE 1" = 5'

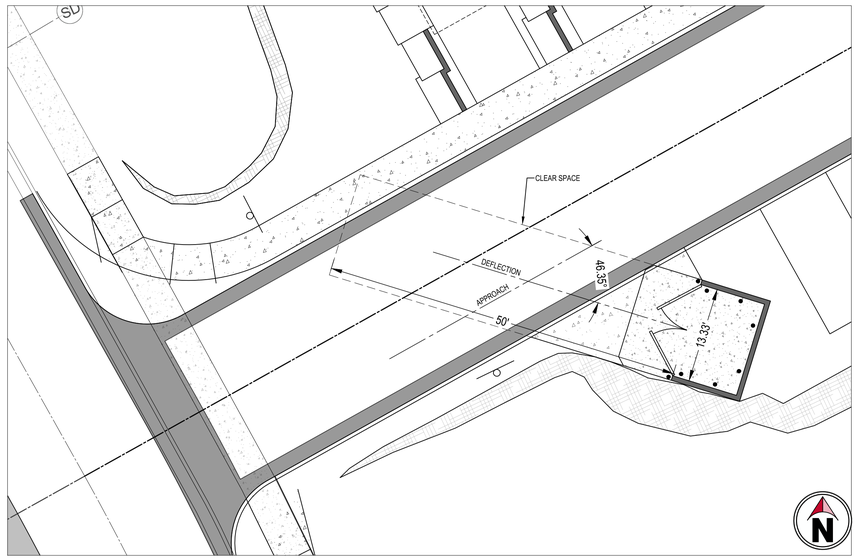
SCALE: 1" = 10'



B4 TRASH ENCLOSURE - ROAD B PARKING AREA

SCALE 1" = 5'

SCALE: 1" = 10'



D4 TRASH ENCLOSURE ROAD B

SCALE 1" = 5'

SCALE: 1" = 10'

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-16-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO. 77934
ERIC S. BEALS
5/02/24
DATE SIGNED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

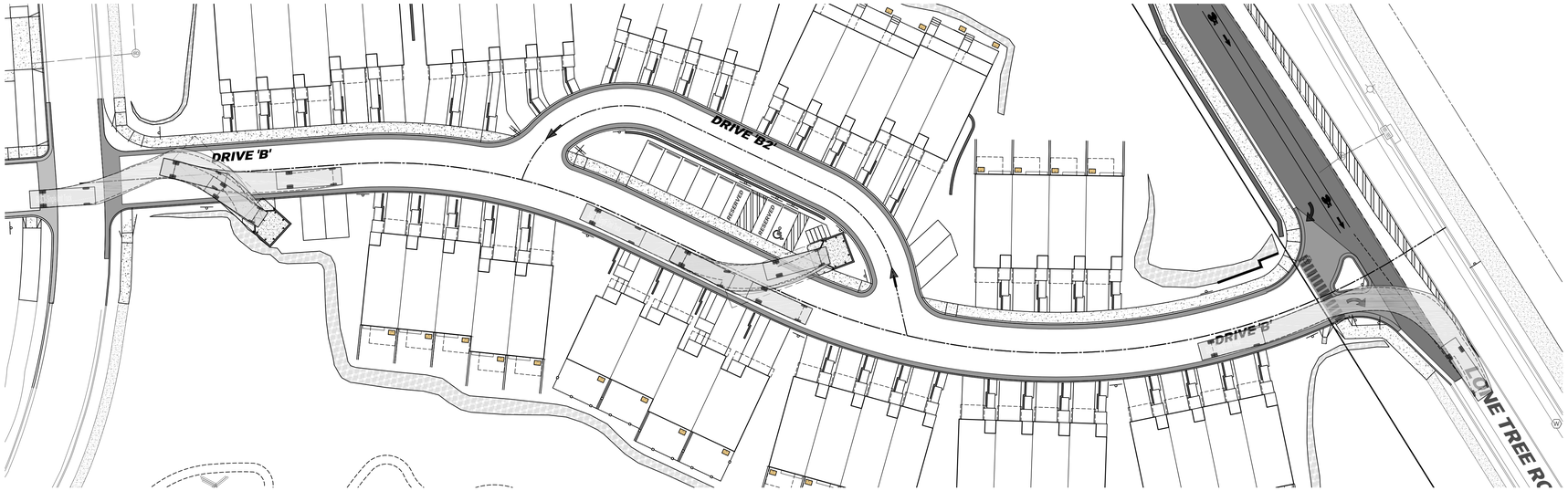
PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

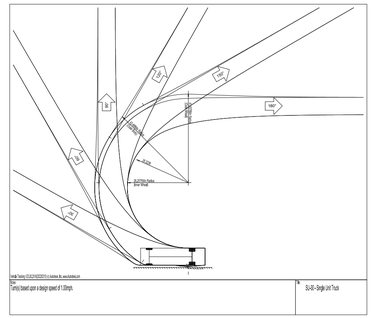
TITLE: SITE PLAN REVIEW
TRASH ENCLOSURE DETAILS

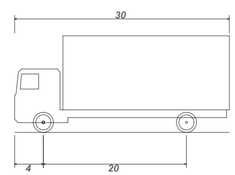
PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C512
REV 4

B1 TRASH TRUCK MOVEMENT - ROAD 'A'
SCALE 1" = 30'



D1 TRASH TRUCK MOVEMENT - ROAD 'B'
SCALE 1" = 30'





SU-30 - Single Unit Truck	
Overall Length	*30.000ft*
Overall Width	*8.000ft*
Overall Body Height	*13.500ft*
Min Body Ground Clearance	*1.367ft*
Track Width	*8.000ft*
Lock-to-lock time	*5.00s*
Max Steering Angle (Virtual)	*31.80°*

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO.
77934
ERIC S. BEALS
REGISTERED
ARIZONA, U.S.A.
5/02/24

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

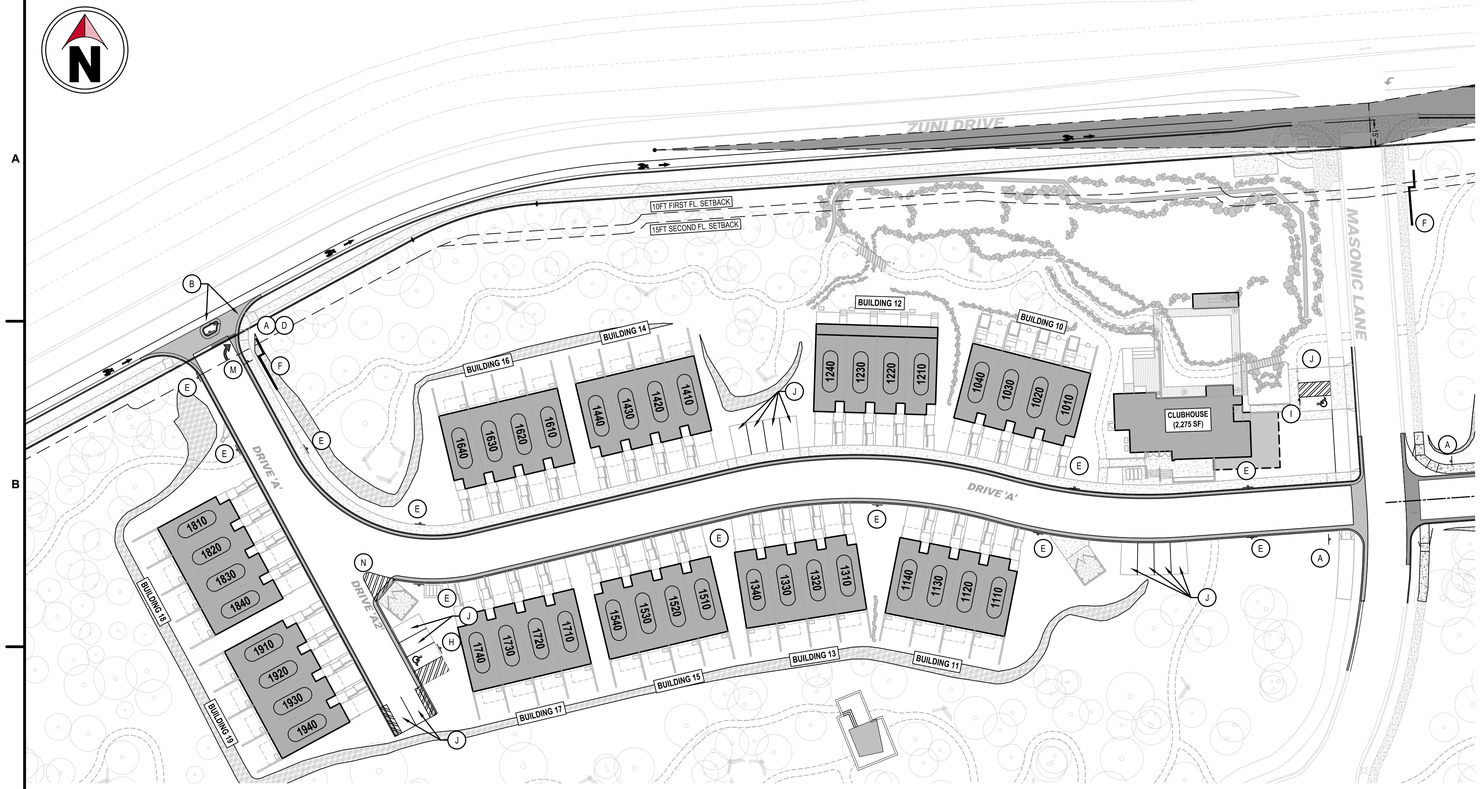
DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2655 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

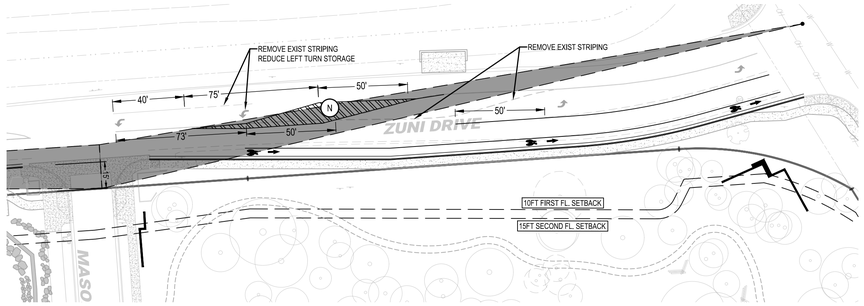
TITLE: **SITE PLAN REVIEW**
TRASH VEHICLE MOVEMENT PLAN

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C513
REV 4
SHEET 39 of 46



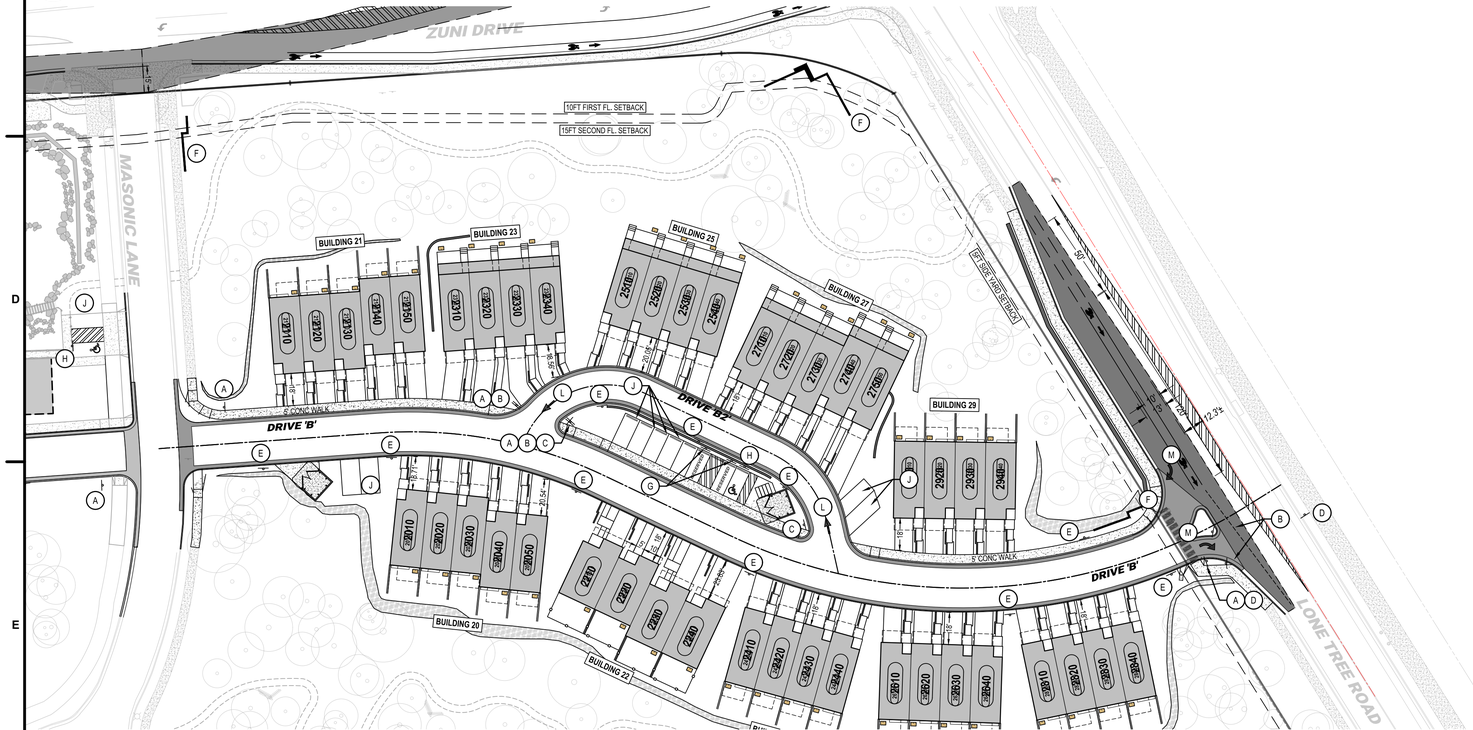
C1 PLAN VIEW (DRIVE 'A' / 'A2')

SCALE: 1" = 40'



A4 PLAN VIEW: ZUNI DRIVE RESTRIPING

SCALE: 1" = 40'



E1 PLAN VIEW (DRIVE 'B' / 'B2')

SCALE: 1" = 40'

NOTE: SIGNAGE AND STRIPING PROVIDED IS FOR CONCEPTUAL PURPOSES ONLY TO DEMONSTRATE GENERAL COMPLIANCE WITH CITY CODE. APPROVAL OF THIS PLAN DOES NOT CONSTITUTE APPROVAL OF SIGNAGE AND STRIPING.

THE APPLICANT IS REQUIRED TO SUBMIT A SEPARATE SIGN PERMIT WITH THE CITY FOR REVIEW AND APPROVAL..

SCALE: 1" = 40'
20 0 20 40

SIGNAGE & STRIPING TABLE

ID	DESCRIPTION
A	STOP SIGN
B	DO NOT ENTER
C	ONE WAY
D	NO LEFT TURN
E	NO PARKING FIRE LANE
F	MONUMENT SIGN (SEE ARCH PLANS)
G	RESERVED PARKING (WITH UNIT NUMBER)
H	ADA PARKING SPACE w/SIGN
I	ADA PARKING SPACE w/BOLLARD MOUNTED SIGN
J	9' x 18' PARKING
K	PAINTED CROSSWALK
L	PAINTED ARROW (STRAIGHT)
M	PAINTED ARROW (RIGHT)
N	GORE STRIPING

NOTE: ALL SIGNAGE, PAVEMENT MARKINGS, AND TRAFFIC CONTROL DEVICES USED DURING CONSTRUCTION ARE TO BE IN CONFORMANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD)

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO.
77934
ERIC S. BEALS
5/02/24
DATE SIGNED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

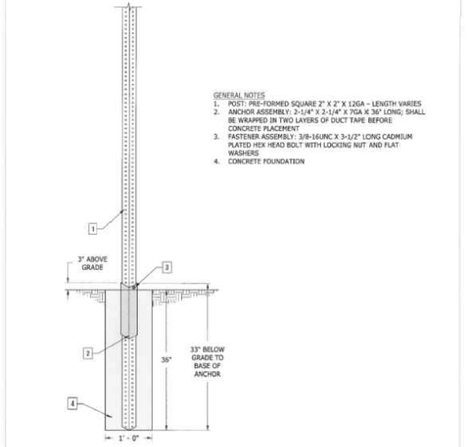
PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2500 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **SITE PLAN REVIEW**
CONCEPTUAL SIGNAGE & STRIPING PLAN

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C601
REV 4
SHEET 40 of 46

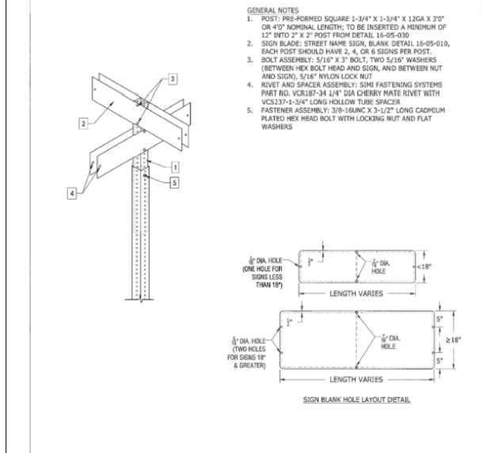
K:\DWG\22004 FLAGSTAFF PI\DWG\CONST DWG\22004 SIGNS



City of Flagstaff — ENGINEERING DETAIL

SIGN POST DETAIL

DETAIL NO. 16-05-030 | REVISION DATE: 01/22/2020 | 1/1



City of Flagstaff — ENGINEERING DETAIL

STREET NAME SIGN INSTALL DETAIL

DETAIL NO. 16-05-040 | REVISION DATE: 01/22/2020 | 1/1

NOTES:
1. FOR PUBLIC ROADWAYS SIGNS ARE TO BE A GREEN BACKGROUND WITH WHITE RETRO-REFLECTIVE (TYPE XI SHEETING) LETTERS.
2. FOR PRIVATE ROADWAYS SIGNS ARE TO BE A BLUE BACKGROUND WITH WHITE RETRO-REFLECTIVE (TYPE XI SHEETING) LETTERS.
3. THE ARROW SHALL POINT IN THE DIRECTION OF INCREASING ADDRESSES FOR A GIVEN STREET.
4. SIGNS SHALL MEET 2009 MUTCD SECTION 2D.43.
5. LETTER FONT SHALL BE HIGHWAY C.
6. FOR POST DESIGN, REFER TO SECTION 13-16-005-0002.

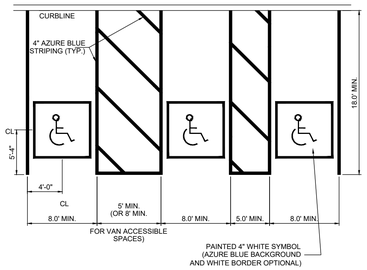
NTS

City of Flagstaff — ENGINEERING DETAIL

STREET NAME SIGNS

DETAIL NO. 16-05-010 | REVISION DATE: 11/22/16 | 1/1

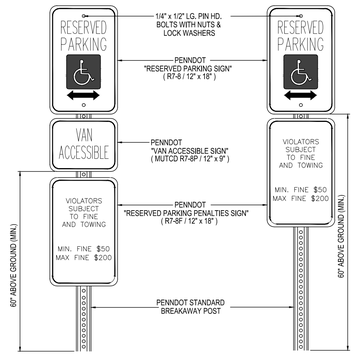
REV	DATE	DESCRIPTION	INIT
1	11-16-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-26-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT



NOTES:
1. CURB RAMPS, PAVEMENT MARKINGS, & APPLICABLE SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST A.D.A. ACCESSIBILITY GUIDELINES.
2. CURB RAMPS MAY NOT EXTEND INTO ANY PORTION OF THE PARKING SPACE OR ASSOCIATED STRIPED ISLAND.
3. SLOPE, CROSS SLOPE OF ACCESSIBLE SPACES NOT TO EXCEED 2% IN ANY DIRECTION
4. ACCESSIBLE PARKING SPACES, SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTES OF TRAVEL FROM ADJACENT PARKING TO AN ACCESSIBLE BUILDING ENTRANCE.
5. ACCESSIBLE PARKING SPACES SHALL BE AT LEAST NINETY-SIX (96) INCHES WIDE. ACCESS AISLES SHALL BE 60 INCHES WIDE. ONE OF SIX ACCESSIBLE SPACES SHOULD PROVIDE A VAN ACCESSIBLE AISLE. THE AISLE SHOULD BE 96 INCHES WIDE (OR ACCESSIBLE SPACE IS 11 FEET AND ACCESS AISLE IS FIVE FEET), WHERE PARKING SPACES AND ACCESS AISLES ARE MARKED WITH LINES. THE WIDTH MEASUREMENTS SHALL BE MADE FROM CENTERLINE OF THE MARKINGS. WHERE PARKING SPACES OR ACCESS AISLES ARE NOT ADJACENT TO ANOTHER PARKING SPACE OR ACCESS AISLES, MEASUREMENTS SHALL BE PERMITTED TO INCLUDE THE FULL WIDTH OF THE LINE DEFINING THE PARKING SPACE OR ACCESS AISLE.
6. PARKING ACCESS AISLES SHALL BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE AND SHALL COMPLY WITH PROVISIONS FOR ACCESSIBLE ROUTES. MARKED CROSSINGS SHALL BE PROVIDED WHERE THE ACCESSIBLE ROUTE MUST CROSS VEHICULAR TRAFFIC LANES. WHERE POSSIBLE, IT IS PREFERABLE THAT THE ACCESSIBLE ROUTE NOT PASS BEHIND PARKED VEHICLES.
7. TWO (2) ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS AISLE.
8. ACCESS AISLES SHALL EXTEND THE FULL LENGTH OF THE PARKING SPACE THEY SERVE.
9. ACCESS AISLES SHALL BE MARKED SO AS TO DISCOURAGE PARKING IN THEM.
10. ACCESS AISLES SHALL NOT OVERLAP THE VEHICULAR WAY. ACCESS AISLES SHALL BE PERMITTED TO BE PLACED ON EITHER SIDE OF THE PARKING SPACE EXCEPT FOR ANGLED VAN PARKING SPACES WHICH SHALL HAVE ACCESS AISLES LOCATED ON THE PASSENGER SIDE OF THE PARKING SPACES.
11. FLOOR SURFACES OF PARKING SPACES AND ACCESS AISLES SERVING THEM SHALL BE STABLE, FIRM AND SLIP RESISTANT. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE PARKING SPACES THEY SERVE. CHANGES IN LEVEL ARE NOT PERMITTED.
12. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 2.0% IN ALL DIRECTIONS.
13. PARKED VEHICLE OVERHANGS SHALL NOT REDUCE THE REQUIRED CLEAR WIDTH OF AN ACCESSIBLE ROUTE.
14. PARKING SPACES FOR VANS AND ACCESS AISLES AND VEHICULAR ROUTES SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF NINETY-EIGHT (98) INCHES MINIMUM. SIGNS SHALL BE PROVIDED AT ENTRANCES TO PARKING FACILITIES INFORMING DRIVERS OF CLEARANCES AND THE LOCATION OF VAN ACCESSIBLE PARKING SPACES.
15. EACH ACCESSIBLE PARKING SPACE SHALL BE PROVIDED WITH THE APPROPRIATE SIGNAGE DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. THE PENNSYLVANIA PARKING PENALTY SIGN AND VAN ACCESSIBLE SPACES SHALL HAVE SIGNAGE STATING "VAN ACCESSIBLE". SIGNS SHALL BE INSTALLED SO THAT THE BOTTOM OF SIGNS ARE MOUNTED NO LOWER THAN 60 INCHES ABOVE GRADE AND SHALL NOT INTERFERE WITH AN ACCESSIBLE ROUTE FROM AN ACCESS AISLE

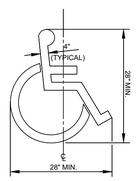
RESERVED ADA PARKING STALL

NOT TO SCALE



RESERVED ADA PARKING SIGN

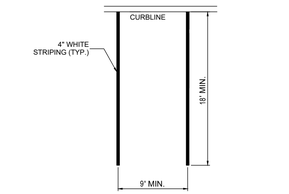
NOT TO SCALE



REFER TO RESERVED PARKING STALL DETAIL FOR SYMBOL LOCATION

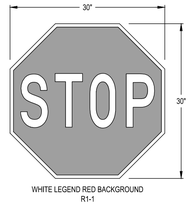
ADA PARKING SYMBOL

NOT TO SCALE



PARKING STALL DETAIL

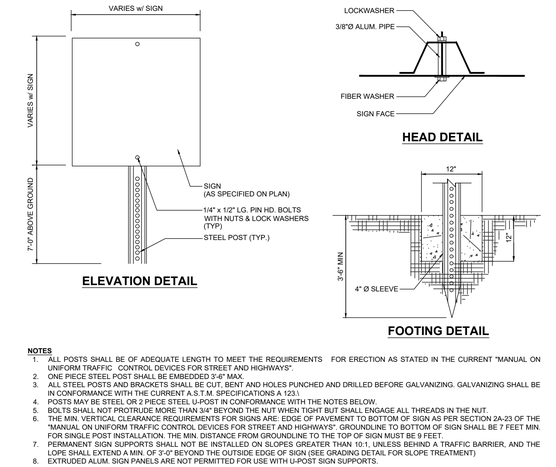
NOT TO SCALE



WHITE LEGEND RED BACKGROUND
R1-1

STOP SIGN

NOT TO SCALE



NOTES
1. ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS".
2. ONE PIECE STEEL POST SHALL BE EMBEDDED 3'-6" MAX.
3. ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH THE CURRENT A.S.T.M. SPECIFICATIONS A 123.\
4. POSTS MAY BE STEEL OR 2 PIECE STEEL U-POST IN CONFORMANCE WITH THE NOTES BELOW.
5. BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.
6. THE MIN. VERTICAL CLEARANCE REQUIREMENTS FOR SIGNS ARE: EDGE OF PAVEMENT TO BOTTOM OF SIGN AS PER SECTION 2A-23 OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS". GROUNDLINE TO BOTTOM OF SIGN SHALL BE 7 FEET MIN. FOR SINGLE POST INSTALLATION. THE MIN. DISTANCE FROM GROUNDLINE TO THE TOP OF SIGN MUST BE 9 FEET.
7. PERMANENT SIGN SUPPORTS SHALL NOT BE INSTALLED ON SLOPES GREATER THAN 10:1, UNLESS BEHIND A TRAFFIC BARRIER, AND THE LOPE SHALL EXTEND A MIN. OF 3'-0" BEYOND THE OUTSIDE EDGE OF SIGN (SEE GRADING DETAIL FOR SLOPE TREATMENT)
8. EXTRUDED ALUM. SIGN PANELS ARE NOT PERMITTED FOR USE WITH U-POST SIGN SUPPORTS.

TYPICAL SIGN POST

NOT TO SCALE

NOTE: SIGNAGE AND STRIPING PROVIDED IS FOR CONCEPTUAL PURPOSES ONLY TO DEMONSTRATE GENERAL COMPLIANCE WITH CITY CODE. APPROVAL OF THIS PLAN DOES NOT CONSTITUTE APPROVAL OF SIGNAGE AND STRIPING.

THE APPLICANT IS REQUIRED TO SUBMIT A SEPARATE SIGN PERMIT WITH THE CITY FOR REVIEW AND APPROVAL..

Registered Professional Engineer (Civil) — CERTIFICATE NO. 77934 — ERIC S. BEALS — DATE SIGNED 5/02/24 — ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN
PRESIDENTIAL LAND DEVELOPMENT
2955 SOUTH MILO LANE
COCONINO COUNTY, ARIZONA

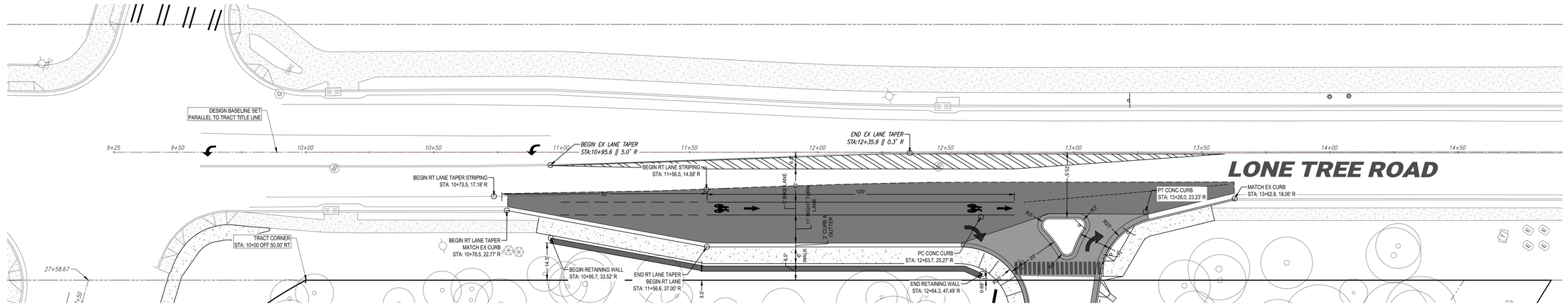
APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
CONCEPTUAL SIGNAGE & STRIPING DETAILS

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C602 REV 4

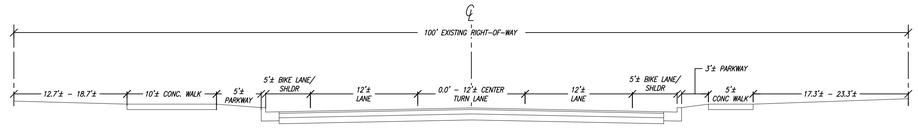
SHEET 41 of 46

V:\HOME\22004 FLAGSTAFF PH\DRAWINGS\CONST DWGS\22004 SIGNAGE



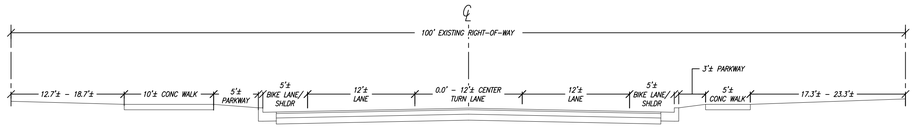
B1 PLAN VIEW: LONE TREE ROAD (STA 9+90 to STA 17+75)

SCALE: 1" - 20'

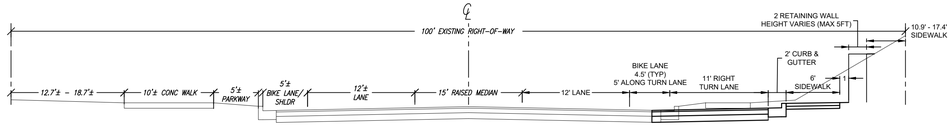


C1 CROSS-SECTION LONE TREE ROAD / MAJOR COLLECTOR (EXISTING SECTION)

NOT TO SCALE



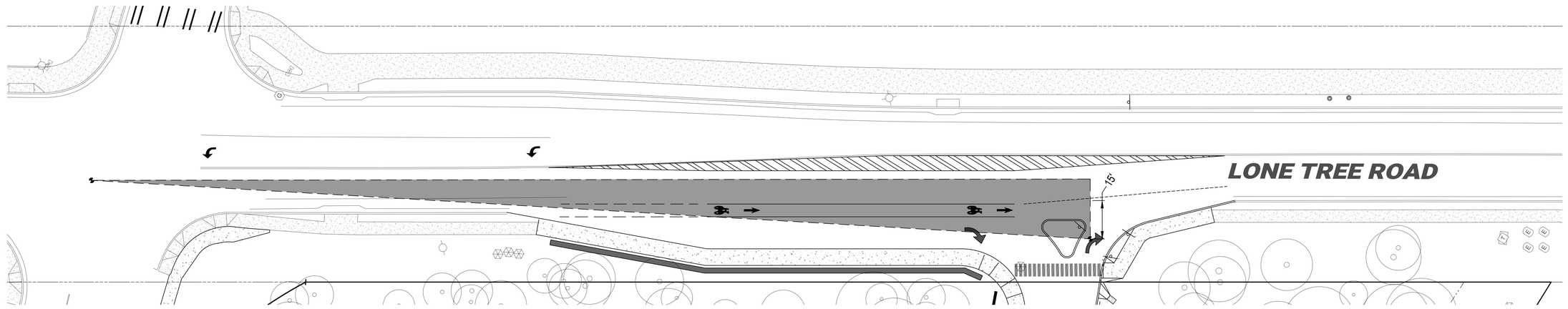
EXISTING SECTION



PROPOSED SECTION

C4 CROSS-SECTION LONE TREE ROAD / MAJOR COLLECTOR (STA 11+04.6 to 12+75)

NOT TO SCALE



E1 CLEAR VIEW ZONE - ROAD 'B' & LONETREE ROAD (LEFT)

SCALE: 1" - 20'

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS DATE SIGNED 5/02/24 ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

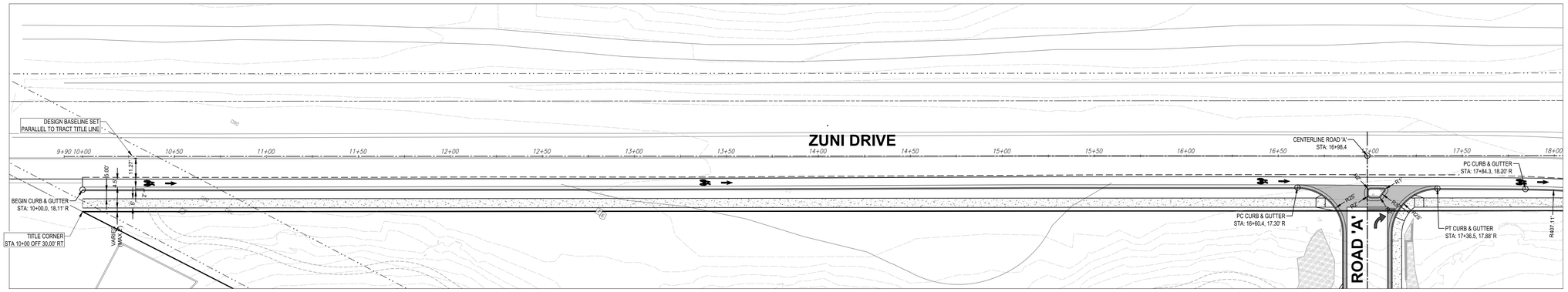
PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2955 MAGNOLIA LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **SITE PLAN REVIEW**
LONETREE ROAD IMPROVEMENT PLAN

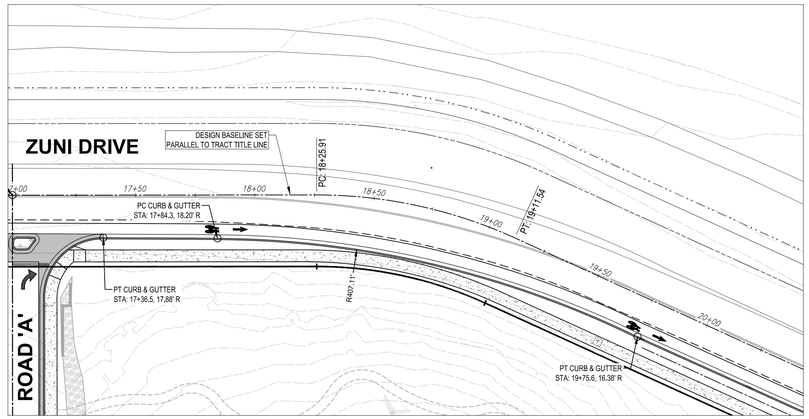
PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C701 REV. 4

V:\PROJ\22004 FLAGSTAFF 1\PLANNING\CIVIL\DWGS\22004 ROAD IMPROVMENT



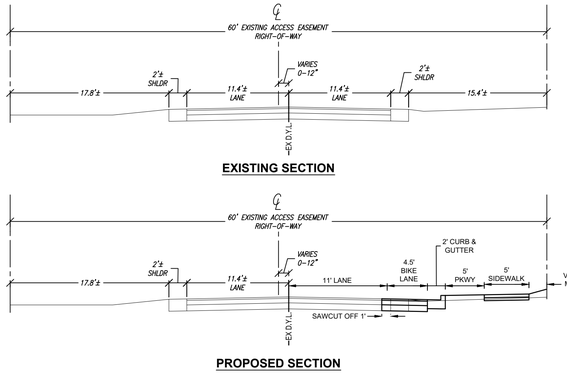
B1 PLAN VIEW: MASONIC LANE (STA 9+90 to STA 17+75)

SCALE: 1" - 30'



D1 PLAN VIEW: MASONIC LANE (STA 17+75 to STA 19+75)

SCALE: 1" = 30'

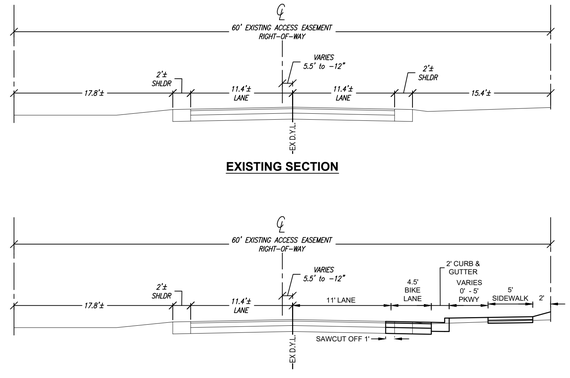


EXISTING SECTION

PROPOSED SECTION

D3 CROSS-SECTION ZUNI DRIVE / MINOR COLLECTOR (STA 10+00 to 17+75)

NOT TO SCALE

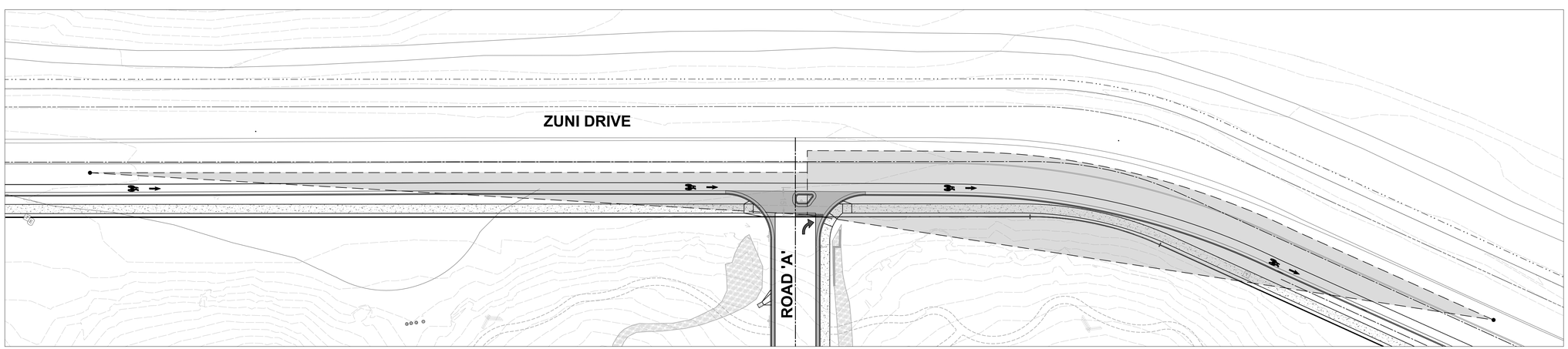


EXISTING SECTION

PROPOSED SECTION

D5 CROSS-SECTION ZUNI DRIVE / MINOR COLLECTOR (STA 17+75 to 19+75)

NOT TO SCALE



E1 CLEAR VIEW ZONE - ROAD 'A' & ZUNI DRIVE (RIGHT/LEFT)

SCALE: 1" - 30'

REV	DATE	DESCRIPTION	INIT
1	11-16-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO.
77934
ERIC S. BEALS
DATE SIGNED
5/02/24
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2955 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

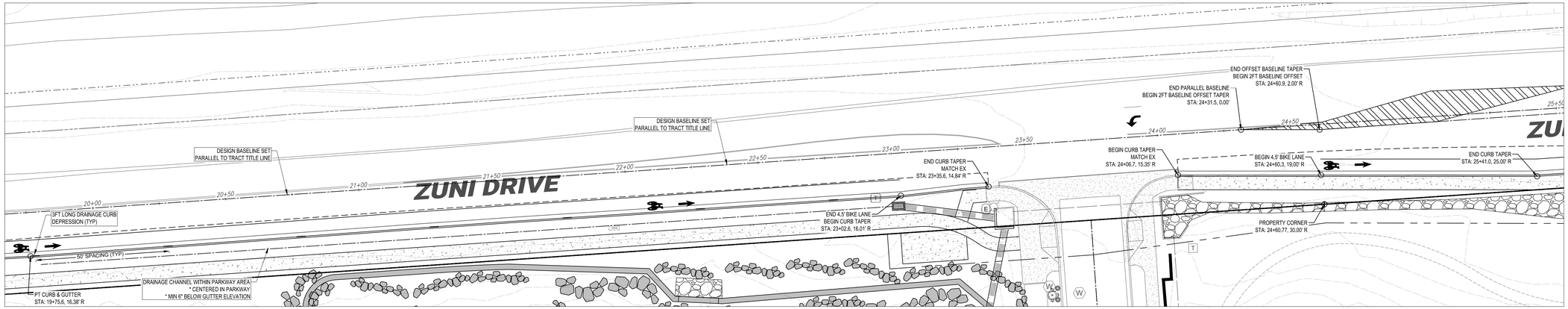
APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: SITE PLAN REVIEW
ZUNI ROAD IMPROVEMENT PLAN (1 OF 2)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C702
REV 4

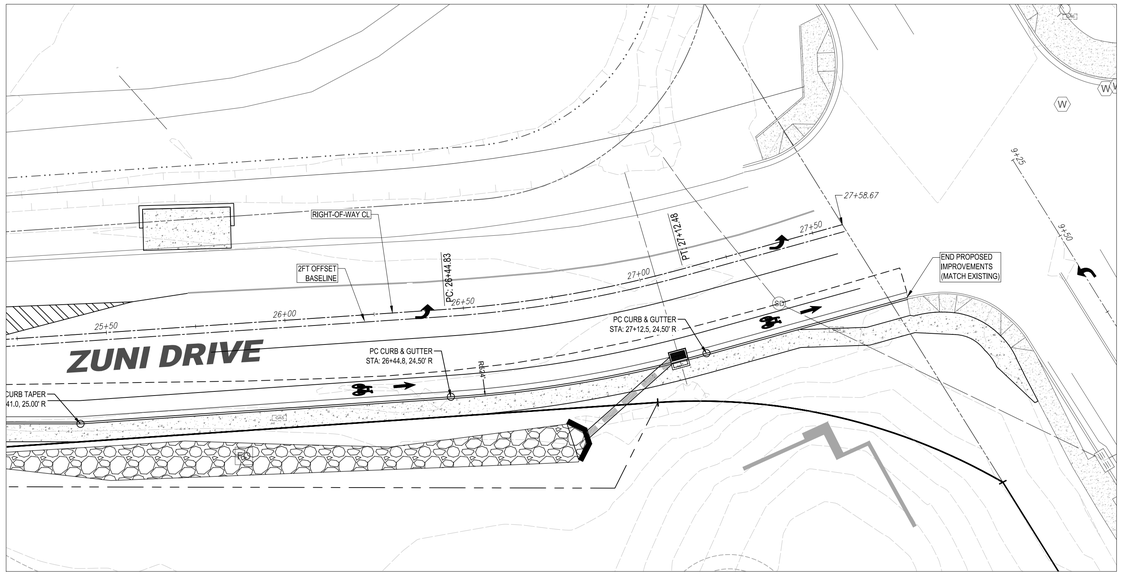
SHEET 43 of 46

W:\WORK\22004 FLAGSTAFF 1\PLANNING\CIVIL\ DWG\ [22004 ROAD IMPROVE]



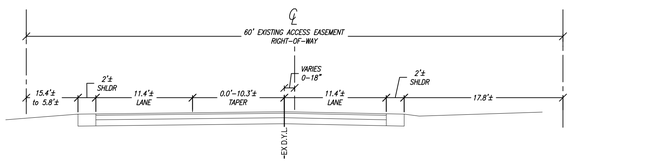
B1 PLAN VIEW: MASONIC LANE (STA 19+75 to STA 24+00)

SCALE: 1" = 30'

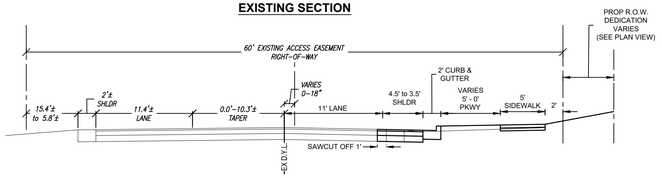


B1 PLAN VIEW: MASONIC LANE (STA 19+75 to STA 24+00)

SCALE: 1" = 30'



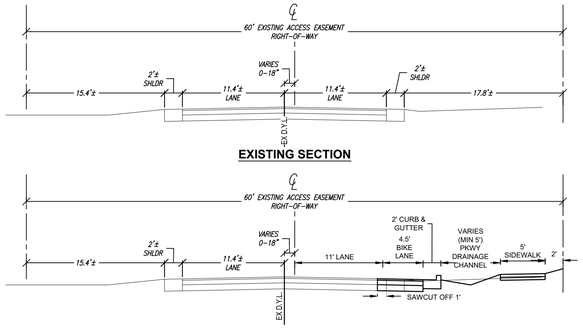
EXISTING SECTION



PROPOSED SECTION

E1 CROSS-SECTION ZUNI DRIVE / MINOR COLLECTOR (STA 23+02.6 to STA 24+60.9)

NOT TO SCALE

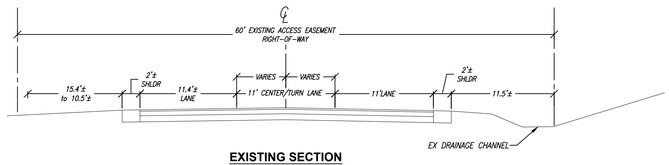


EXISTING SECTION

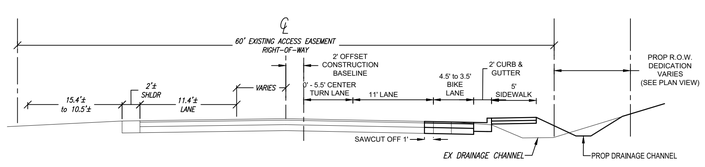
PROPOSED SECTION

C4 CROSS-SECTION ZUNI DRIVE / MINOR COLLECTOR (STA 19+75 to STA 23+02.6)

NOT TO SCALE



EXISTING SECTION



PROPOSED SECTION

E4 CROSS-SECTION ZUNI DRIVE / MINOR COLLECTOR (STA 24+60.9 to STA 27+50)

NOT TO SCALE

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil) CERTIFICATE NO. 77934 ERIC S. BEALS 5/02/24 DATE SIGNED ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

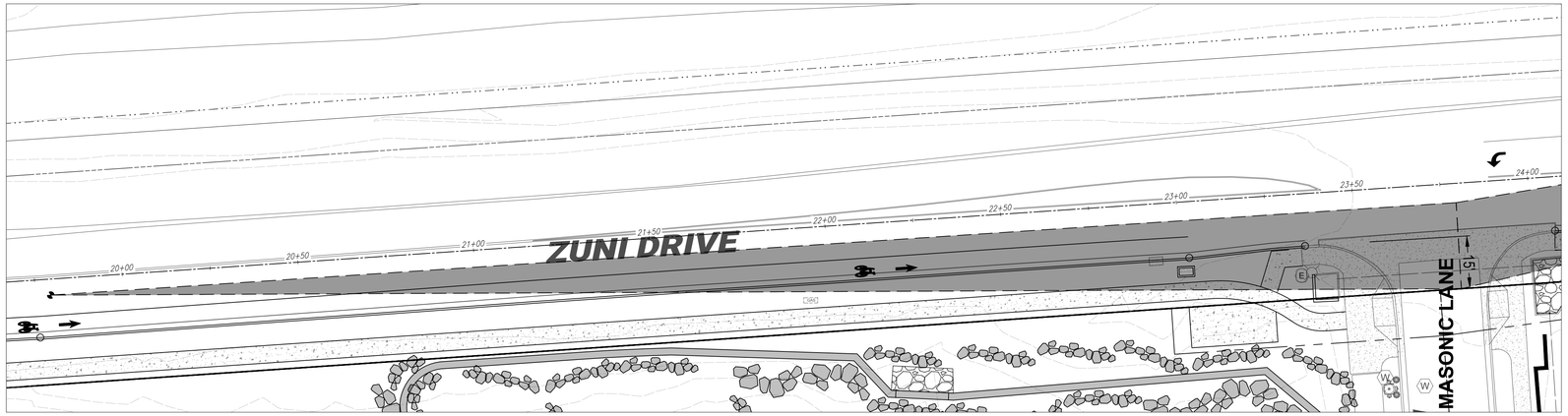
DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2555 MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

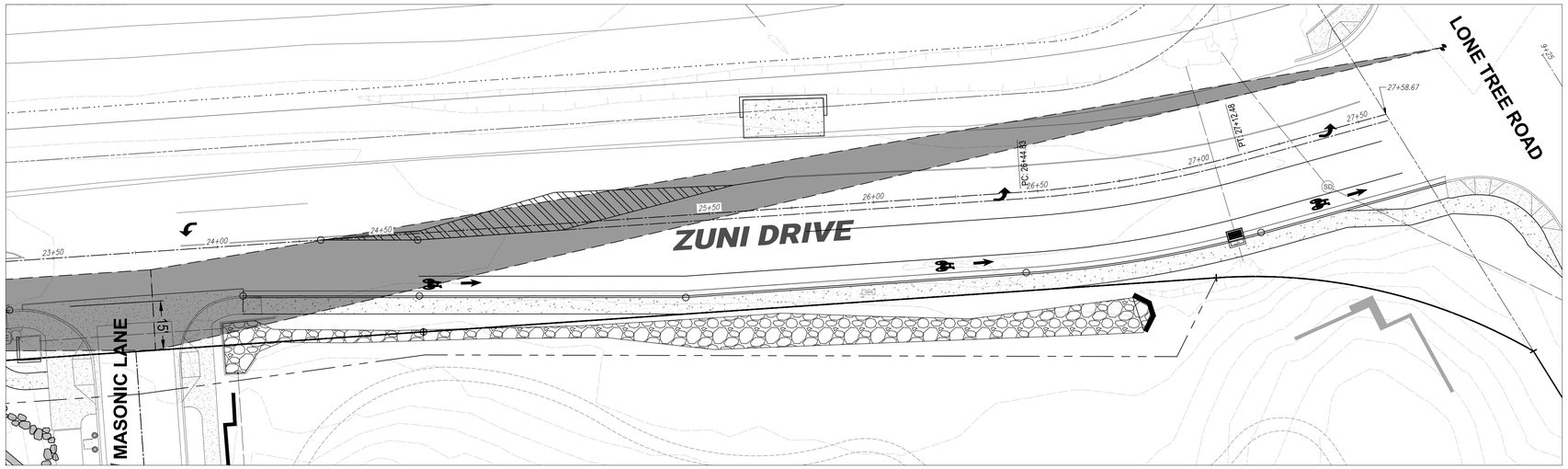
TITLE: **SITE PLAN REVIEW**
ZUNI ROAD IMPROVEMENT PLAN (2 OF 2)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C703
REV 4
SHEET 44 of 46



B1 CLEAR VIEW ZONE - MASONIC LANE & ZUNI DRIVE (LEFT)

SCALE: 1" = 30'



D1 CLEAR VIEW ZONE - MASONIC LANE & ZUNI DRIVE (RIGHT)

SCALE: 1" = 30'

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-15-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-15-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-20-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO.
77934
ERIC S. BEALS
5/02/24
DATE SIGNED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2955 S MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **SITE PLAN REVIEW**
ROAD IMPROVEMENT DETAILS

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID **C704** REV 4

CLEAR VIEW ZONE
ROAD 'A' & MASONIC LANE (LEFT)
ROAD 'S' & MASONIC LANE (RIGHT)

B1 SCALE: 1" = 30'

CLEAR VIEW ZONE
ROAD 'A' & MASONIC LANE (RIGHT)
ROAD 'S' & MASONIC LANE (LEFT)

B1 SCALE: 1" = 30'

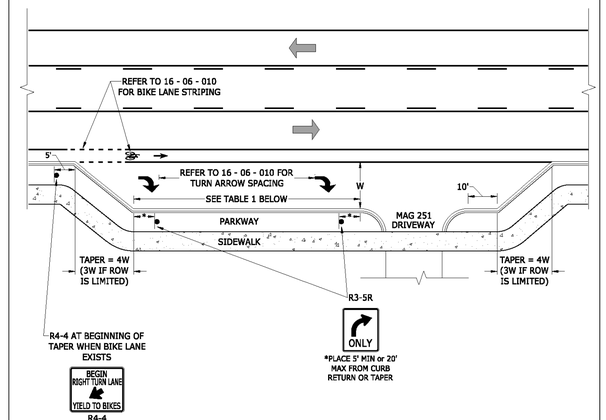


TABLE 1

DESIGN SPEED (MPH)	DECELERATION LANE LENGTH, L (ft)
30	90
35	120

Per 2010 AASHTO:
Stopping Sight Distance on Level Roadways

NOTES:

1. REFER TO 16-06-010 FOR PAVEMENT MARKING DETAILS.
2. THIS DETAIL APPLIES ONLY WITH SPEEDS OF 35 MPH OR LESS.
3. WHERE THE SPEED LIMIT EXCEEDS 35 MPH, REFER TO ADOT STANDARDS FOR TURN LANE DETAIL (THE DESIGN SPEED IS THE GREATER OF THE POSTED SPEED OR THE 85TH PERCENTILE SPEED).

NTS

City of Flagstaff
ENGINEERING DETAIL

RIGHT TURN LANE FOR
URBAN DRIVEWAY

DETAIL NO. 10-10-020 | REVISION DATE: 11/22/16 | 1 / 1

REVISIONS

REV	DATE	DESCRIPTION	INIT
1	11-16-2023	REVISED PER CITY REVIEW LETTER DATED 9-20-2023	MDT
2	01-18-2024	REVISED PER CITY REVIEW LETTER DATED 12-18-2023	MDT
3	03-26-2024	REVISED PER CITY REVIEW LETTER DATED 2-8-2024	MDT
4	05-02-2024	REVISED PER CITY REVIEW LETTER DATED 4-9-2024	MDT

Registered Professional Engineer (Civil)
CERTIFICATE NO.
77934
ERIC S. BEALS
5/02/24
REGISTERED
ARIZONA, U.S.A.

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

DWN BY: M TOTH
CHK BY: E BEALS

PROJECT: **PINEHAVEN**
RESIDENTIAL LAND DEVELOPMENT
2955 S MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **SITE PLAN REVIEW**
ROAD IMPROVEMENT DETAILS

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID C705 REV 4

LANDSCAPE CALCULATIONS

Street Buffer (Lone Tree Rd.)	Reqd.	Prov.
455 LF @ 1 trees per 25 LF	18	–
Credit for Ex. Trees to Remain	−59	–
Net Trees Required	0	0
Shrubs @ 2 per tree	0	0
Groundcovers @ 2 per tree	0	0

Street Buffer (Zuni Drive)		
1,704 LF @ 1 trees per 25 LF	68	–
Credit for Ex. Trees to Remain	−149	–
Net Trees Required	0	0
Shrubs @ 2 per tree	0	0
Groundcovers @ 2 per tree	0	0

Peripheral Buffer (South Property Line)		
1,864 LF @ 1 trees per 25 LF	75	–
Credit for Ex. Trees to Remain	−135	–
Net Trees Required	0	–
Shrubs @ 2 per tree	0	0
Groundcovers @ 2 per tree	0	0

Parking Spaces		
30s.f. times 8 parking spaces	240s.f.	
2 trees per 8 spaces	2	–
Net Trees Required	2	2
Shrubs @ 2 per tree	4	0
Groundcovers @ 2 per tree	4	0

Building Foundation (Bldg. 1)		
227 LF @ 1 tree per 25 LF	9	–
Credit for Ex. Trees to Remain	−8	–
Net Trees Required	1	1
Shrubs @ 2 per tree	2	–
Groundcovers @ 2 per tree	2	–

Reduction for Overlap with Bldg. 2 Foundation

Building Foundation (Bldg. 2)		
185 LF @ 1 tree per 25 LF	7	–
Credit for Ex. Trees to Remain	−6	–
Net Trees Required	1	1
Shrubs @ 2 per tree	2	–
Groundcovers @ 2 per tree	2	–

Reduction for Overlap with Bldg. 3 Foundation

Building Foundation (Bldg. 3)		
185 LF @ 1 tree per 25 LF	7	–
Credit for Ex. Trees to Remain	−2	–
Net Trees Required	5	5
Shrubs @ 2 per tree	10	–
Groundcovers @ 2 per tree	10	–

Reduction for Overlap with Bldg. 4 Foundation

Building Foundation (Bldg. 4)		
233 LF @ 1 tree per 25 LF	9	–
Credit for Ex. Trees to Remain	−10	–
Net Trees Required	0	–
Shrubs @ 2 per tree	0	–
Groundcovers @ 2 per tree	0	–

Reduction for Overlap with Bldg. 5 Foundation

Building Foundation (Bldg. 5)		
222 LF @ 1 tree per 25 LF	9	–
Credit for Ex. Trees to Remain	−10	–
Net Trees Required	0	–
Shrubs @ 2 per tree	0	–
Groundcovers @ 2 per tree	0	–

–

Building Foundation (Bldg. 6)		
180 LF @ 1 tree per 25 LF	7	–
Credit for Ex. Trees to Remain	−11	–
Net Trees Required	0	–
Shrubs @ 2 per tree	0	–
Groundcovers @ 2 per tree	0	–

Reduction for Overlap with Bldg. 7 Foundation

Building Foundation (Bldg. 7)	Reqd.	Prov.
180 LF @ 1 tree per 25 LF	7	–
Credit for Ex. Trees to Remain	−2	–
Net Trees Required	5	5
Shrubs @ 2 per tree	10	–
Groundcovers @ 2 per tree	10	–

Reduction for Overlap with Bldg. 8 Foundation

Building Foundation (Bldg. 8)		
180 LF @ 1 tree per 25 LF	7	–
Credit for Ex. Trees to Remain	0	–
Net Trees Required	7	7
Shrubs @ 2 per tree	14	–
Groundcovers @ 2 per tree	14	–

Reduction for Overlap with Bldg. 9 Foundation

Building Foundation (Bldg. 9)		
225 LF @ 1 tree per 25 LF	9	–
Credit for Ex. Trees to Remain	0	–
Net Trees Required	9	9
Shrubs @ 2 per tree	18	–
Groundcovers @ 2 per tree	18	–

Reduction for Overlap with Bldg. 10 Foundation

Building Foundation (Bldg. 10)		
270 LF @ 1 tree per 25 LF	11	–
Credit for Ex. Trees to Remain	0	–
Net Trees Required	11	11
Shrubs @ 2 per tree	22	–
Groundcovers @ 2 per tree	22	–

Building Foundation (Bldgs. 11,12,13,14 & 17 each)		
179 LF @ 1 tree per 25 LF	7	–
Credit for Ex. Trees to Remain	0	–
Net Trees Required	7	–
Shrubs @ 2 per tree	14	–
Groundcovers @ 2 per tree	14	–

Reduction for Overlap with Bldg. Foundations

Building Foundation (Bldg. 15 & 16 each)		
179 LF @ 1 tree per 25 LF	7	–
Credit for Ex. Trees to Remain	−2	–
Net Trees Required	5	5
Shrubs @ 2 per tree	10	–
Groundcovers @ 2 per tree	10	–

Reduction for Overlap with Bldg. Foundation

Building Foundation (Bldg. 18)		
179 LF @ 1 tree per 25 LF	7	–
Credit for Ex. Trees to Remain	−4	–
Net Trees Required	3	5
Shrubs @ 2 per tree	6	–
Groundcovers @ 2 per tree	6	–

Reduction for Overlap with Bldg. Foundation

Building Foundation (Bldg. 19)		
185 LF @ 1 tree per 25 LF	7	–
Credit for Ex. Trees to Remain	−6	–
Net Trees Required	1	3
Shrubs @ 2 per tree	2	–
Groundcovers @ 2 per tree	2	–

Reduction for Overlap with Bldg. Foundation

Building Foundation (Bldg. 20)		
179 LF @ 1 tree per 25 LF	7	–
Credit for Ex. Trees to Remain	−2	–
Net Trees Required	5	–
Shrubs @ 2 per tree	10	–
Groundcovers @ 2 per tree	10	–

Reduction for Overlap with Bldg. Foundation

Building Foundation (Amenity Bldg.)		
185 LF @ 1 tree per 25 LF	7	–
Credit for Ex. Trees to Remain	0	–
Net Trees Required	7	8
Shrubs @ 2 per tree	14	–
Groundcovers @ 2 per tree	14	–

Reduction for Overlap with Bldg. 20 Foundation

CITY OF FLAGSTAFF LANDSCAPE NOTES

1. *ADJACENT SITE IMPROVEMENTS, PAVEMENT CONSTRUCTION, IRRIGATION INSTALLATION AND FINISH GRADING SHALL BE COMPLETED PRIOR TO INSTALLATION OF PLANT MATERIAL. DO NOT PLANT WHEN CONDITIONS ARE NOT SUITABLE FOR DIGGING, MIXING, RAKING AND/OR GRADING. PLANTING SHALL OCCUR DURING THE MONTHS THAT IRRIGATION SYSTEMS ARE IN OPERATION. THEREFORE, PLANTING MAY OCCUR BETWEEN APRIL 1st AND SEPTEMBER 30th.*
2. *SOIL EXCAVATED FROM THE PLANTING PIT SHALL BE TYPICALLY CONSIDERED ACCEPTABLE AS BACKFILL MATERIAL: BACKFILL MIXTURE TO BE COMPRISED OF 75% NATIVE SOIL, 25% GRANULAR BARK MULCH, AND 2 LBS. DISPERSAL PER CUBIC YARD OF BACKFILL.*
3. *ALL CONTAINERS SHALL BE REMOVED PRIOR TO PLANT INSTALLATION IN A MANNER THAT DOES NOT DISTURB THE POTTED SOIL OR ROOT BALL.*
4. *SET THE ROOT BALL ON SIX-INCHES OF FIRM PLANTING SOIL, PLUMB AND IN THE CENTER OF THE PIT WITH THE ROOT BALL CROWN SLIGHTLY ABOVE THE SAME ELEVATION AS ADJACENT FINISHED LANDSCAPE GRADES. REMOVE ANY WIRE, TWINE, BURLAP, OR OTHER MATERIAL FROM THE UPPER ONE-THIRD OF THE ROOT BALL OF BALLED AND BURLAPPED STOCK. WIRE BASKETS AND SYNTHETIC BURLAP SHALL BE COMPLETELY REMOVED AFTER THE ROOT BALL HAS BEEN PLACED IN ITS FINAL LOCATION.*
5. *ONCE PLANT IS SET, PLACE BACKFILL MATERIAL AROUND BASE AND SIDES OF ROOT BALL AND WORK EACH LAYER TO SETTLE BACKFILL AND ELIMINATE VOIDS. WHEN BACKFILLING IS TWO-THIRDS COMPLETE, WATER THOROUGHLY. PLACE THE REMAINDER OF THE BACKFILL AND REPEAT WATERING UNTIL NO MORE IS ABSORBED. PLACE THE FINAL LAYER OF BACKFILL AND WATER.*
6. *ALL DECIDUOUS TREES SHALL BE WRAPPED FROM THE GROUND LINE UP TO AND INCLUDING THE FIRST PRIMARY CROTCH FORMED BY THE FIRST MAJOR BRANCH. WRAPPING SHALL BE DONE AFTER THE PLANT HAS BEEN INSTALLED.*
7. *TWO TO THREE INCHES OF SPECIFIED MULCH SHALL BE PLACED IN THE AREA DISTURBED BY EXCAVATION OF THE PLANTING WELL.*
8. *PRIOR TO PLANTING ACTIVITIES, COMPLETELY REMOVE EXISTING WEEDS, INCLUDING ROOTS. IMMEDIATELY PRIOR TO INSTALLATION, CULTIVATE GROUND COVER AREAS TO A DEPTH OF SIX-INCHES AND GRADE SMOOTHLY AND UNIFORMLY. PLANT GROUND COVER SO THE ROOT CROWN IS AT OR SLIGHTLY ABOVE THE BED'S FINISH GRADE. AFTER PLANTING OF GROUND COVER AND PRIOR TO MULCHING, APPLY PRE-EMERGENT WEED CONTROL OVER PLANTING BED SOIL SURFACE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN DIRECTIONS. INSTALL THE SPECIFIED MULCH TO A DEPTH OF THREE-INCHES OVER THE ENTIRE GROUND COVER BED.*
9. *PRUNE DEAD OR DAMAGED BRANCHES, MAKING ALL CUTS AT BRANCH COLLAR. MAINTAIN THE NATURAL HABIT, SHAPE AND SPECIFIED SIZE. REMOVE ALL TAGS, LABELS, AND OTHER MATERIAL.*

GENERAL LANDSCAPE NOTES

1. *CONTRACTOR TO OBTAIN PERMITS FROM LOCAL AGENCIES AND UTILITIES HAVING JURISDICTION OVER THIS SITE.*
2. *CONTRACTOR TO VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO ANY INSTALLATION.*
3. *CONTRACTOR TO PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO INSTALL THE WORK INDICATED ON THE LANDSCAPE DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR CAREFUL SITE INSPECTION, DETAILED REVIEW OF THE PLANS, AND COORDINATION WITH SUB-CONTRACTORS ON-SITE PRIOR TO ANY INSTALLATION. ANY DISCREPANCIES SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE OWNER'S AGENT.*
4. *PRIOR TO INITIATING THESE LANDSCAPE IMPROVEMENTS, THE LANDSCAPE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING ON SITE WITH THE OWNER'S REPRESENTATIVE, THE GENERAL CONTRACTOR, AND THE PROJECT LANDSCAPE ARCHITECT TO REVIEW AND RESOLVE ANY EXISTING SITE CONDITIONS THAT MAY BE IN CONFLICT WITH THE LANDSCAPE CONSTRUCTION DOCUMENTS AND THAT IMPACT THE INSTALLATION OF ANY OF THE PROPOSED SITE IMPROVEMENTS. THIS FIRST MEETING SHOULD BE SCHEDULED TO OCCUR AT THE COMPLETION OF ON-SITE AND OFF-SITE IMPROVEMENTS INCLUDING; ALL UNDERGROUND UTILITIES, MASS GRADING, AND STREET IMPROVEMENTS.*
5. *DAMAGE TO EXISTING LANDSCAPING, UNDERGROUND UTILITIES, IRRIGATION LINES, ELECTRICAL LINES, ETC. SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.*
6. *ANY DISCREPANCIES FOUND BETWEEN THE PLANS AND THE SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT LANDSCAPE ARCHITECT.*
7. *ALL QUANTITIES PROVIDED ARE FOR BIDDING PURPOSES ONLY; LANDSCAPE CONTRACTOR SHALL VERIFY ALL QUANTITIES PRIOR TO INSTALLATION.*
8. *THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINISH GRADES IN THE LANDSCAPE AREAS. CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THE EXTENT OF ROUGH GRADING AND/OR FINE GRADING TO BE ESTABLISHED BY OTHERS.*
9. *ALL GRADING AND DRAINAGE SHALL BE IN ACCORDANCE WITH THE PLANS PREPARED BY THE PROJECT CIVIL ENGINEER. PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING(S) IN ALL CONDITIONS. CONTRACTOR TO MEET ALL EXISTING GRADES AT PROJECT BOUNDARIES. FINISH GRADE SHALL BE THREE INCHES (3") BELOW THE TOP OF ADJACENT WALKS AND CURBS PRIOR TO RECEIVING MULCH OR DECOMPOSED GRANITE.*
10. *ALL AREAS DISTURBED DURING CONSTRUCTION TO BE FINE GRADED. ADJACENT UNDISTURBED AREAS THAT ARE DAMAGED OR DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.*
11. *CONTRACTOR SHALL FINE GRADE ENTIRE LANDSCAPE AREA AS REQUIRED FOR INSTALLATION OF PLANT MATERIALS. ALL GRADES SHALL BE NEAT, RAKED SMOOTH AND BE FREE OF DEBRIS PRIOR TO SUBSTANTIAL COMPLETION.*
12. *PRIOR TO SPREADING MATERIAL GROUNDCOVERS (MULCH OR DECOMPOSED GRANITE), ADJUST AND COMPACT FINISH GRADES, APPLY WEED PRE-EMERGENT SURFLAN OR EQUAL PER MANUFACTURER'S SPECIFICATIONS; THEN SPREAD DECOMPOSED GRANITE OR MULCH AS INDICATED ON THE PLANS. DECOMPOSED GRANITE SHALL BE RAKED AND WATERED TO SETTLE FINES WITH A MINIMUM FINAL DEPTH OF TWO INCHES (2"). PROVIDE A SECOND APPLICATION OF THE PRE-EMERGENT AT THE END OF THE MAINTENANCE PERIOD.*
13. *ALL LANDSCAPE AREAS SHALL RECEIVE A TWO INCH (2") TOP DRESSING OF DECOMPOSED GRANITE MULCH AS SPECIFIED ON THE LANDSCAPE PLANS. CONTRACTOR SHALL PROVIDE A SAMPLE TO OWNER'S AGENT FOR APPROVAL PRIOR TO DELIVERY.*
14. *STAKE LOCATIONS OF ALL TREES FOR APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT AND OWNER'S AGENT PRIOR TO INSTALLATION OF ANY PLANT MATERIAL.*
15. *ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED (IN-LEAF) AS IS TYPICAL FOR THE SPECIES. THEY SHALL HAVE HEALTHY, WELL DEVELOPED ROOT SYSTEMS (NOT POT BOUND), A NORMAL HABIT OF GROWTH CONSISTENT WITH INDUSTRY STANDARDS, AND FREE OF BRUISES, CUTS, OR OTHER ABNORMALITIES. PLANT MATERIAL SHALL BE SIZED IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMAN AND THE ARIZONA NURSERYMAN ASSOCIATION.*
16. *BACKFILL MIXTURES, EXCEPT AS NOTED, TO BE COMPRISED OF 75% NATIVE SOIL, 25% GRANULAR BARK MULCH, AND 2 LBS. DISPERSAL PER CUBIC YARD OF BACKFILL.*
17. *ADD AGRI-FORM FERTILIZER TABLETS AT THE FOLLOWING RATES:*
    1 GALLON PLANT – 1 TABLET — 15 GALLON TREE – 4 TABLETS
    5 GALLON PLANT – 2 TABLETS — BOXED TREE – 6 TABLETS
    TABLETS TO BE PLACED NO DEEPER THAN 6 FEET BELOW THE SOIL SURFACE.
18. *THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL PLANTS SHOWN ON THE LANDSCAPE PLAN. DO NOT SUBSTITUTE PLANTS BY TYPE OR QUANTITY WITHOUT WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT OR OWNER'S AGENT.*
19. *THE OWNER'S AGENT RESERVES THE RIGHT TO REJECT ANY SELECTION OF PLANT MATERIAL THAT DOES NOT SATISFY THE INTENT OF THE LANDSCAPE DESIGN BASED ON; SIZE, SHAPE, EVIDENCE OF STRESS OR IMPROPER CARE.*
20. *PRIOR TO INITIATING THE AGREED UPON MAINTENANCE PERIOD, COMPLETE ALL PUNCH LIST ITEMS FROM THE SITE INSPECTION AND THEN OBTAIN A WRITTEN APPROVAL FROM THE OWNER'S AGENT ACKNOWLEDGING SUBSTANTIAL COMPLETION. DETERMINE WITH THE OWNER'S AGENT THE START DATE FOR THE MAINTENANCE PERIOD: CONTRACTOR SHALL THEN MAINTAIN THE LANDSCAPE INCLUDING IRRIGATING, WEEDING, PRUNING, MOWING, AND REPLACEMENT OF ANY MATERIAL THAT HAS DIED OR IS SHOWING EVIDENCE OF STRESS. SUBMIT A REQUEST FOR FINAL INSPECTION ONE WEEK PRIOR TO THE END OF THE MAINTENANCE PERIOD.*
21. *CONTRACTOR TO PROVIDE THE OWNER WITH A WRITTEN GUARANTEE OF ONE YEAR FOR ALL TREES AND SIX MONTHS FOR ALL OTHER PLANT MATERIAL DATED FROM THE START OF THE MAINTENANCE PERIOD AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH.*
22. *PROVIDE THE OWNER A SPECIFIC MAINTENANCE MANUAL OUTLINING THE RECOMMENDED MAINTENANCE REQUIREMENTS FOR THE LANDSCAPE AND IRRIGATION SYSTEM. PROVIDE RECOMMENDED CARE, PRUNING TECHNIQUES AND FREQUENCY FOR ALL PLANTS. INCLUDE A FERTILIZATION SCHEDULE. PROVIDE A SEASONAL IRRIGATION SCHEDULE AND WINTERIZATION METHODS.*

PLANT SCHEDULE

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY.	MAT. SIZE	REMARKS
TREES					
	ACER GINNALA 'FLAME' AMUR MAPLE	2" CAL.	28	15x15	STANDARD
	CRATAEGUS LAEVIGATA 'CRIMSON CLOUD' CRIMSON CLOUD HAWTHORN	2" CAL.	12	20x15	STANDARD
	POPULUS TREMULOIDES QUAKING ASPEN	2" CAL.	47	50x15	STANDARD
	QUERCUS GAMBELII GAMBEL OAK	15-GAL.	40	25x15	STANDARD
SHRUBS / GRASSES					
	CALAMAGROSTIS x ACUTIFLORA 'K.F.' FOERSTER'S FEATHER REED GRASS	5 GAL.	97	4x2.5	2 GPH EMITTER
	CORNUS SERICEA 'ARCTIC FIRE' ARCTIC FIRE DOGWOOD	5 GAL.	33	4x4	2 GPH EMITTER
	FESTUCA GLAUCA 'ELIJAH BLUE' ELIJAH BLUE FESCUE	5 GAL.	764	1x1	2 GPH EMITTER
	MUHLENBERGIA REVERCHONII 'UNDAUNTED' SEEP MUHLY	5 GAL.	78	2x2	2 GPH EMITTER
	PEROVSKIA ATRIPLICIFOLIA RUSSIAN SAGE	5 GAL.	104	4x4	2 GPH EMITTER
	PHYSOCARPUS OPULIFOIUS 'DART'S GOLD' DART'S GOLD NINEBARK	5 GAL.	44	4x4	2 GPH EMITTER
	POTENTILLA FRUTICOSA 'GOLDFINGER' GOLDFINGER POTENTILLA	5 GAL.	105	3x3	2 GPH EMITTER
GROUNDCOVER					
	COTONEASTER DAMMERI 'CORAL BEAUTY' CORAL BEAUTY COTONEASTER	3 GAL.	16	1x6	2 GPH EMITTER
	JUNIPERUS HORIZONTALIS 'WILTONII' BLUE RUG JUNIPER	5 GAL.	56	6"x6	2 GPH EMITTER
	MAHONIA REPENS CREEPING OREGON GRAPE	1 GAL.	706	1x3	2 GPH EMITTER
	PRUNUS BESSEYI 'PAWNEE BUTTES' CREEPING SAND CHERRY	5 GAL.	46	1.5x5	2 GPH EMITTER
MATERIALS					
	MAHOGANY (ROCK PROS) DECOMPOSED GRANITE	1/2" SCREENED	–		3" DEPTH IN PLANTING AREAS
	NATIVE BARK MULCH DARK BROWN COLOR	STANDARD SIZE	–		2" TOP DRESSING HYDROSEED AREAS
	BASALT BOULDERS SALVAGED FROM SITE	VARIOUS SIZES	–		INSTALL PER DETAIL

HYDROSEED MIX

	NATIVE SEED MIX	30,020 S.F.+/-	HYDROSEED PER CITY OF FLAGSTAFF ENGINEERING DESIGN STANDARDS DIVISION 13-17-002

GRASSES	BOTANICAL/COMMON NAME	
	BOUTELOUA GRACILIS / BLUE GRAMA	5.0
	FESTUCA ARIZONICA / ARIZONA FESCUE	4.0
	SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM	4.0
FLOWERS / PERENNIALS		
	ACHILLEA LANULOSA / WESTERN YARROW	2.0
	LINUM LEWISII / BLUE FLAX	1.0
	LUPINUS ARGENTEUS / SILVER LUPINE	2.0
	PENSTEMON BARBATUS / SCARLET BUGLER	1.5
	RATIBIDA COLUMNARIS / MEXICAN HAT	1.5

GENERAL SEEDING NOTES

1. REMOVE AND DISPOSE OF ALL ROCKS, DEBRIS, WEEDS, AND ALL OTHER OBJECTIONABLE MATERIAL THAT MAY INTERFERE WITH SEEDING OPERATIONS.
2. SEEDBED PREPARATION TO BE DONE PER SECTION 13-17-002-0004 OF THE CITY OF FLAGSTAFF ENGINEERING DESIGN STANDARDS. IMPORT TOPSOIL AS NECESSARY TO ACHIEVE THE PROPER SEEDBED CONDITION. ADD SOIL AMENDMENTS AS NECESSARY.
3. ALL SEEDING OPERATIONS ARE TO FOLLOW THE STANDARDS PER DIVISION 13-17-002 OF THE CITY OF FLAGSTAFF ENGINEERING DESIGN STANDARDS.

PLANT SCHEDULE (PARKWAY - OFFSITE)

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY.	MAT. SIZE	REMARKS
	ACER GINNALA 'FLAME' AMUR MAPLE	2" CAL.	5	15x15	STANDARD
	NATIVE BLACK CINDERS	STANDARD SIZE	–		2" DEPTH IN PARKWAY

IRRIGATION LEGEND:

SYMBOL	DESCRIPTION	MANUFACTURER/MODEL	COMMENTS
M	WATER METER	N/A	WATER METER TO BE INSTALLED PER CIVIL PLANS
	BACKFLOW PREVENTER	FEBCO 825YA	1" BFP TO BE INSTALLED PER CIVIL PLANS. INSTALL IN A SECURABLE BACKFLOW PREVENTER CAGE.
	FLOW SENSOR	IRRITROL FS-400	INSTALL AFTER MASTER VALVE AT P.O.C.
A	CONTROLLER	IRRITROL TC-18EXM-R 18-STATION WALL MOUNTED CONTROLLER IN METAL CABINET	INSTALL PER MANUFACTURER'S SPECIFICATIONS PROVIDE KEYS AND OPERATING INSTRUCTIONS TO OWNER
	GATE VALVE	WATTS WGV THD BRASS GATE VALVE	INSTALL IN 10" ROUND VALVE BOX.
	1" QUICK COUPLER	TORO 100-SLSC W/ 100-SLK KEY	INSTALL IN 10" ROUND VALVE BOX. PROVIDE 3 KEYS
	REMOTE CONTROL DRIP VALVE ASSEMBLY	TORO DZK-700, 1" DRIP VALVE ASSEMBLY INCLUDES Y-FILTER AND PRESSURE REGULATOR	INSTALL IN VALVE BOX
	MAIN LINE	SCH 40 PVC, SCH 80 FITTINGS	SIZE PER PIPE SCHEDULE (1" MIN.); SOLVENT WELD.
	SHRUB/G.C. LATERAL	CLASS 200 PVC	3/4" UNLESS OTHERWISE NOTED.
	TREE LATERAL	CLASS 200 PVC	3/4" UNLESS OTHERWISE NOTED.
	MULTI-OUTLET DRIP EMITTER	TORO T-PR25-9 PRESSURE REGULATING MANIFOLD OR APPROVED EQUAL	NOT SHOWN ON PLAN. SEE EMITTER DETAILS..
	SINGLE-OUTLET DRIP EMITTER	TORO T-DPJ08-A, 2-GPH EMITTER OR APPROVED EQUAL	NOT SHOWN ON PLAN. SEE EMITTER DETAILS.
	DISTRIBUTION TUBE	1/4" POLYETHYLENE	MAXIMUM LENGTH 6-FEET. SEE EMITTER DETAILS.
	END FLUSH CAP	TORO T-FCH-H-FIPT, OR APPROVED EQUAL	LOCATE IN 10" ROUND VALVE BOX
	SLEEVE	SCH. 40 PVC PIPE	SIZE TO BE 2X DIAMETER OF PIPE BEING SLEEVED
	ELECTRICAL SLEEVE	SCH. 40 PVC PIPE (1.5" MINIMUM)	SLEEVE UNDER ALL PAVING TYP.

PIPE SIZING SCHEDULE			
SIZE	GPM	SIZE	GPM
3/4"	6-10	1 1/2"	26-35
1"	11-15	2"	36-55
1 1/4"	16-25	2 1/2"	56-80

SLEEVE SIZING SCHEDULE (MIN.)			
PIPE	SLEEVE	PIPE	SLEEVE
3/4"	1 1/2"	1 1/2"	3"
1"	2"	2"	4"
1 1/4"	2.5"	2 1/2"	5"

A1 / 1" S — *STATION NUMBER / VALVE SIZE / ZONE TYPE*

EMITTER NOTES

1. INSTALL ONE (1.0 GPH) OR (2.0 GPH) SINGLE OUTLET EMITTER PER SHRUB OR GROUNDCOVER AS REQUIRED. SEE PLANT SCHEDULE FOR EMITTER SPECIFICATION.
2. INSTALL EMITTERS AROUND EACH TREE; SEE THE EMITTER DETAIL FOR EMITTER QUANTITY AND SPACING.
3. MULTI-OUTLET EMITTERS MAY BE USED INSTEAD OF SINGLE EMITTERS WHERE ↓" TUBING DOES NOT EXCEED 6' IN LENGTH.
4. INSTALL EMITTERS AT EDGE OF ROOTBALL AND UPGRADE FROM PLANTS.
5. INSTALL ALL EMITTERS AND EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.

IRRIGATION NOTES:

1. ALL EXACT QUANTITIES OF EQUIPMENT REMAIN THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR AND NO ADDITIONAL COSTS TO OWNER WILL BE ACCEPTED AFTER BIDDING THIS PROJECT EXCEPT FOR CHANGE ORDERS APPROVED BY THE OWNER.
2. PLANS ARE DIAGRAMMATIC AND APPROXIMATE. ALL IRRIGATION EQUIPMENT SHALL BE LOCATED IN LANDSCAPE AREAS; ALL SLEEVES SHALL BE INSTALLED PRIOR TO PAVING WORK. NO TEES, ELLS OR OTHER TURNS IN PIPING SHALL BE LOCATED UNDER PAVING EXCEPT WHERE SHOWN ON THE PLANS.
3. THE IRRIGATION SYSTEM IS DESIGNED FOR 90 STATIC PSI. CONTRACTOR SHALL VERIFY WATER PRESSURE IN THE FIELD PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALERTING THE LANDSCAPE ARCHITECT AND OWNER OF ANY DISCREPANCIES BETWEEN DESIGN PRESSURE AND FIELD PRESSURE.
4. CONTRACTOR SHALL CONFORM TO ALL STATE AND LOCAL CODES AND IS RESPONSIBLE FOR OBTAINING PERMITS FROM LOCAL AGENCIES AND UTILITY COMPANIES HAVING JURISDICTION OVER THE PROJECT SITE.
5. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO ANY INSTALLATION. CONTACT BLUE STAKES CENTER (263-1100) FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO INSTALL THE IMPROVEMENTS INDICATED ON THE IRRIGATION PLANS. CONTRACTOR IS RESPONSIBLE FOR CAREFUL SITE INSPECTION, REVIEW OF ALL LANDSCAPE DOCUMENTS, AND COORDINATION WITH OTHER CONTRACTORS ON-SITE PRIOR TO ANY INSTALLATION. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE SITE SUPERINTENDENT AND THE OWNER.
7. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATING THE INSTALLATION OF SLEEVES UNDER PAVED SURFACES WITH THE GENERAL CONTRACTOR.
8. PROVIDE PVC VALVE BOXES FOR ALL UNDERGROUND VALVES, PRESET PRESSURE REGULATORS AND FLUSH PLUGS.
9. USE ONLY #14 DIRECT BURIAL COPPER WIRE FOR ALL UNDERGROUND WIRING. ALL WIRE RUNS TO BE CONTINUOUS FROM CONTROLLER TO CONTROL VALVE. USE ONLY EPOXY FILLED WATERPROOF WIRE ASSEMBLIES BY SPEARS (OR EQUAL) FOR ALL WIRE SPLICES.
10. OBTAIN APPROVAL FROM THE OWNER'S AGENT OF STAKED LOCATIONS FOR ALL VALVES, MAINLINE, AND THE AUTOMATIC CONTROLLER PRIOR TO INSTALLATION.
11. TEST MAINLINE UNDER PRESSURE FROM THE WATER SOURCE (POINT OF CONNECTION) TO CONTROL VALVES AND QUICK COUPLERS FOR A MINIMUM OF 12-HOURS. OBTAIN APPROVAL FROM OWNER'S AGENT PRIOR TO BACKFILLING.
12. ALL PVC SLEEVEING PASSING UNDER PAVED SURFACES AND THROUGH FOOTINGS SHALL BE SCHEDULE-40 PVC PIPE TWICE THE SIZE OF THE PIPE PASSING THROUGH. PROVIDE A SEPARATE SLEEVE FOR ELECTRICAL WIRING (1.5" MINIMUM).
13. EXACT PIPE SIZING AND FOOTAGE ARE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR.
14. USE TEFLON TAPE OR PIPE JOINT COMPOUND ON ALL THREADED JOINTS.
15. ALL DRIP SYSTEM LATERAL PIPING SHALL BE 3/4-INCH CLASS 200 PVC. ALL FITTINGS SHALL BE SCHEDULE 40 PVC.
16. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE IRRIGATION WORK WITH THE LANDSCAPE PLANS TO AVOID CONFLICT BETWEEN IRRIGATION EQUIPMENT AND PLANTING PITS.
17. WHERE TREES, LIGHT STANDARDS, ETC. ARE AN OBSTRUCTION OF SPRAYS, PIPING AND SPRINKLER HEADS SHALL BE ADJUSTED AND/OR RELOCATED AS REQUIRED TO ACHIEVE FULL HEAD TO HEAD COVERAGE.
18. PROVIDE A TYPED WATERING SCHEDULE ENCASED IN PLASTIC AND ATTACHED TO THE INSIDE OF THE CONTROLLER ENCLOSURE.
19. PRIOR TO INITIATING THE 90-DAY MAINTENANCE PERIOD, TEST THE SYSTEM WITH THE OWNER'S AGENT TO VERIFY THAT THE SYSTEM IS FULLY OPERATIONAL. PROVIDE WRITTEN RECOMMENDATIONS OF SUGGESTED SEASONAL WATERING SCHEDULES.
20. PROVIDE A WRITTEN 18-MONTH GUARANTEE FOR ALL IRRIGATION EQUIPMENT DATED FROM THE START OF THE 90-DAY MAINTENANCE PERIOD. CONTRACTOR SHALL PROVIDE LABOR, MATERIALS AND EQUIPMENT AS NECESSARY TO RESTORE THE FULL OPERATION OF THE SYSTEM AND REPLACE ANY PLANT MATERIAL THAT DIED AS A DIRECT RESULT OF THE FAILURE.

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 Call 811 or click Arizona811.com

NO.	DATE:	ITEM:
-	-	-

REVISIONS

The WLB Group, INC.
Engineering • Planning • Surveying
Landscape Architecture
Offices located in: Tucson, Phoenix, Flagstaff, and Las Vegas, NV.
500 N. Beaver Street, Flagstaff, AZ 86001
PH:(928) 779-1500

PINEHAVEN

LANDSCAPE COVER SHEET

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
34188
STEPHEN C. PARSONS
Date Signed 5/1/24
ARIZONA,

PLANT SCHEDULE

SYMBOL | BOTANICAL/COMMON NAME

TREES

- ACER GINNALA 'FLAME' — AMUR MAPLE
- CRATAEGUS LAEVIGATA 'CRIMSON CLOUD' — CRIMSON CLOUD HAWTHORN
- POPULUS TREMULOIDES — QUAKING ASPEN
- QUERCUS GAMBELII — GAMBEL OAK

SHRUBS / GRASSES

- CALAMAGROSTIS x ACUTIFLORA 'K.F.' — FOERSTER'S FEATHER REED GRASS
- CORNUS SERICEA 'ARCTIC FIRE' — ARCTIC FIRE DOGWOOD
- FESTUCA GLAUCA 'ELIJAH BLUE' — ELIJAH BLUE FESCUE
- MUHLENBERGIA REVERCHONII 'UNDAUNTED' — SEEP MUHLY
- PEROVSKIA ATRIPLICIFOLIA — RUSSIAN SAGE
- PHYSOCARPUS OPULIFOIUS 'DART'S GOLD' — DART'S GOLD NINEBARK
- POTENTILLA FRUTICOSA 'GOLDFINGER' — GOLDFINGER POTENTILLA

GROUNDCOVER

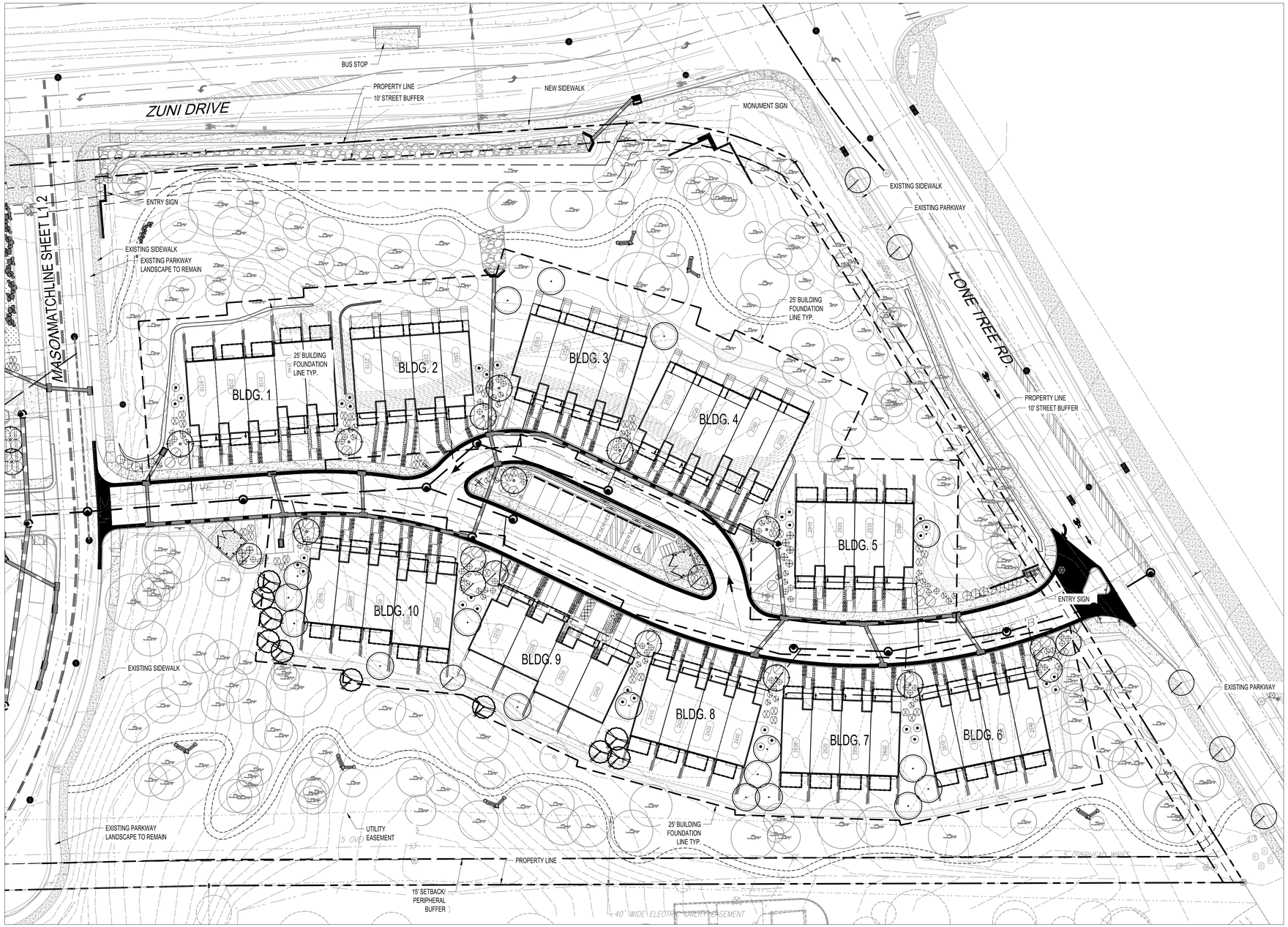
- COTONEASTER DAMMERI 'CORAL BEAUTY' — CORAL BEAUTY COTONEASTER
- JUNIPERUS HORIZONTALIS 'WILTONII' — BLUE RUG JUNIPER
- MAHONIA REPENS — CREEPING OREGON GRAPE
- PRUNUS BESSEYI 'PAWNEE BUTTES' — CREEPING SAND CHERRY

MATERIALS

- MAHOGANY (ROCK PROS) — DECOMPOSED GRANITE
- NATIVE BARK MULCH — DARK BROWN COLOR
- BASALT BOULDERS — SALVAGED FROM SITE

HYDROSEED MIX

- NATIVE SEED MIX



GRAPHIC SCALE
30 0 15 30 60
HORIZONTAL SCALE 1" = 30'

NORTH

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

NO.	DATE:	ITEM:
-	-	-

REVISIONS

The WLB Group, INC.

Engineering • Planning • Surveying
Landscape Architecture • Urban Design
Offices located in: Tucson, Phoenix, Flagstaff, and Las Vegas, NV.
500 N. Beaver Street, Flagstaff, AZ 86001
PH:(928) 779-1300

PINEHAVEN

LANDSCAPE SITE PLAN

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
34188
STEPHEN C. PARSONS
Date Signed 5/17/24
ARIZONA, U.S.A.

DESIGNED BY:	SP
DRAWN BY:	SP
CHECK BY:	SP
DATE:	MAY 2024

PROJECT NO.
322021A001

SHEET
L1.1

N:\322021A001_Pinehaven\dwg\Cur-Shts\Improvement\LS-SITE PLAN.dwg, 5/17/2024 3:41:46 PM

PLANT SCHEDULE

SYMBOL BOTANICAL/COMMON NAME

TREES

- ACER GINNALA 'FLAME' — AMUR MAPLE
- CRATAEGUS LAEVIGATA 'CRIMSON CLOUD' — CRIMSON CLOUD HAWTHORN
- POPULUS TREMULOIDES — QUAKING ASPEN
- QUERCUS GAMBELII — GAMBEL OAK

SHRUBS / GRASSES

- CALAMAGROSTIS x ACUTIFLORA 'K.F.' — FOERSTER'S FEATHER REED GRASS
- CORNUS SERICEA 'ARCTIC FIRE' — ARCTIC FIRE DOGWOOD
- FESTUCA GLAUCA 'ELIJAH BLUE' — ELIJAH BLUE FESCUE
- MUHLENBERGIA REVERCHONII 'UNDAUNTED' — SEEP MUHLY
- PEROVSKIA ATRIPLICIFOLIA — RUSSIAN SAGE
- PHYSOCARPUS OPULIFOIUS 'DART'S GOLD' — DART'S GOLD NINEBARK
- POTENTILLA FRUTICOSA 'GOLDFINGER' — GOLDFINGER POTENTILLA

GROUNDCOVER

- COTONEASTER DAMMERI 'CORAL BEAUTY' — CORAL BEAUTY COTONEASTER
- JUNIPERUS HORIZONTALIS 'WILTONII' — BLUE RUG JUNIPER
- MAHONIA REPENS — CREEPING OREGON GRAPE
- PRUNUS BESSEYI 'PAWNEE BUTTES' — CREEPING SAND CHERRY

MATERIALS

- MAHOGANY (ROCK PROS) — DECOMPOSED GRANITE
- NATIVE BARK MULCH — DARK BROWN COLOR
- BASALT BOULDERS — SALVAGED FROM SITE

HYDROSEED MIX

- NATIVE SEED MIX

PROJECT CONSTRUCTION LIMIT

ZUNI DRIVE
NEW SIDEWALK
GAS LINE
PROPERTY LINE
10' STREET BUFFER
NEW PARKWAY
5' CABLE LINE
BUS STOP
MASONIC LANE
MONUMENT SIGN
25' BUILDING FOUNDATION LINE TYP.
BLDG. 16
BLDG. 17
BLDG. 18
BLDG. 19
BLDG. 20
AMENITY BUILDING
BLDG. 15
BLDG. 14
BLDG. 13
BLDG. 12
BLDG. 11
DRIVE AISLE
OBSERVATION TOWER
TRAIL
UTILITY EASEMENT
15' SETBACK/ PERIPHERAL BUFFER
5' OVERHEAD WIRES
PINNACLE PINES UNIT 1 CASE 9 MAP 78 INSTRUMENT 3331864
MATCHLINE SHEET L1.1

GRAPHIC SCALE
30 0 15 30 60
HORIZONTAL SCALE 1" = 30'

NORTH

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 BLUE STAKE, INC.
Call 811 or click Arizona811.com

NO.	DATE:	ITEM:
.	.	.

REVISIONS

The WLB Group, INC.
Engineering • Planning • Surveying
Landscape Architecture • Urban Design
Offices located in: Tucson, Phoenix, Flagstaff, and Las Vegas, NV.
500 N. Beaver Street, Flagstaff, AZ 86001
PH:(928) 779-1500

PINEHAVEN

LANDSCAPE SITE PLAN

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO
34188
STEPHEN C. PARSONS
Date Signed 6/4/24
ARIZONA, U.S.A.

DESIGNED BY:	SP		
DRAWN BY:	SP		
CHECK BY:	SP	DATE:	MAY 2024

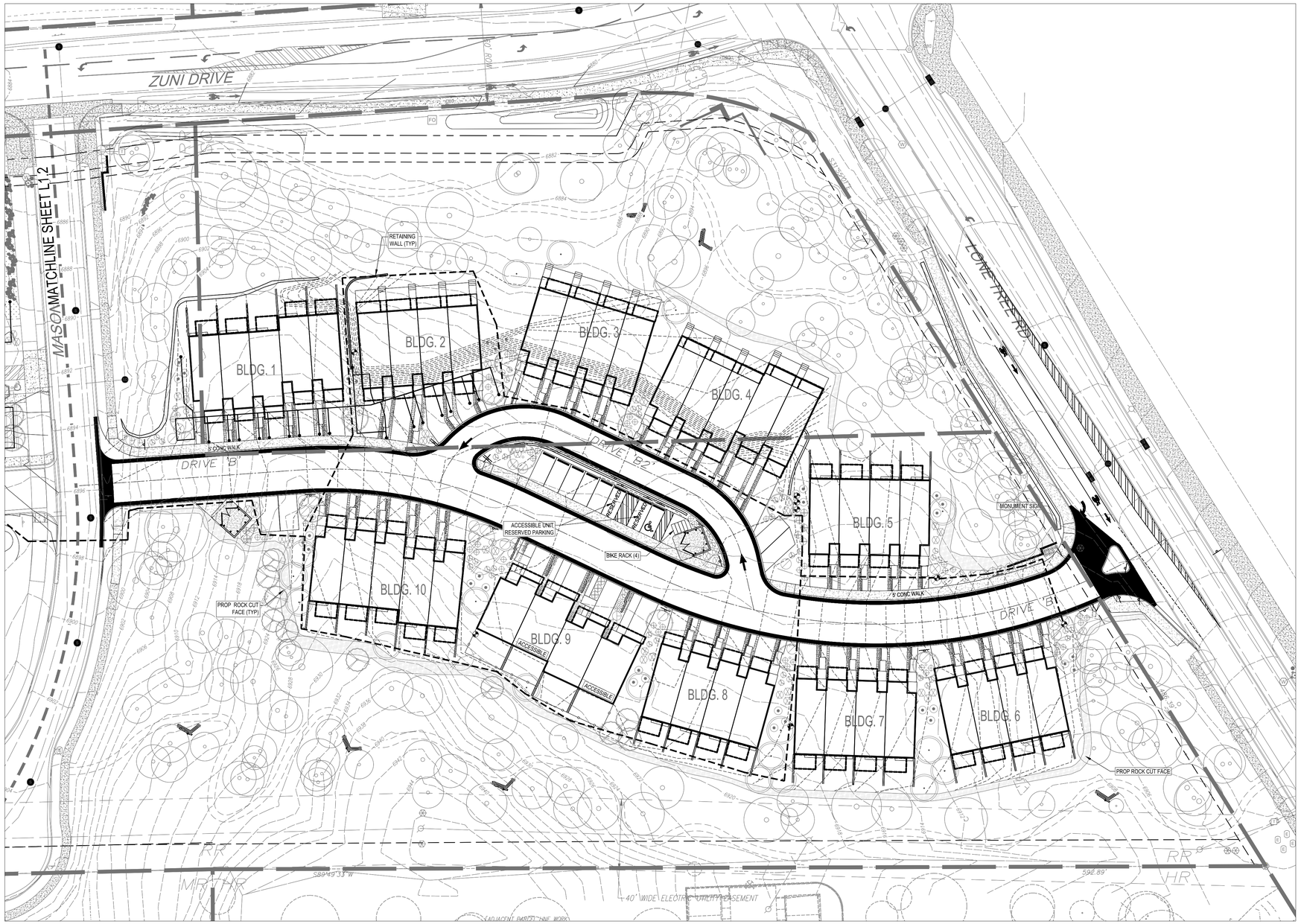
PROJECT NO.
322021A001

SHEET
L1.2

N:\322021A001_Pinehaven\dwg\Cut-Sits\Improvement\LS SITE PLAN.dwg, 5/1/2024 3:42:37 PM

IRRIGATION LEGEND:

SYMBOL	DESCRIPTION
M	WATER METER
	BACKFLOW PREVENTER
	FLOW SENSOR
A	CONTROLLER
	GATE VALVE
	1" QUICK COUPLER
	REMOTE CONTROL DRIP VALVE ASSEMBLY
	MAIN LINE
	SHRUB/G.C. LATERAL
	TREE LATERAL
	MULTI-OUTLET DRIP EMITTER
	SINGLE-OUTLET DRIP EMITTER
	DISTRIBUTION TUBE
	END FLUSH CAP
	SLEEVE
	ELECTRICAL SLEEVE



GRAPHIC SCALE
30 0 15 30 60
HORIZONTAL SCALE 1" = 30'

NORTH

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

NO.	DATE:	ITEM:
-	-	-

REVISIONS

Engineering • Planning • Surveying
Landscape Architecture • Urban Design
Offices located in: Tucson, Phoenix, Flagstaff, and Las Vegas, NV.
500 N. Beaver Street, Flagstaff, AZ 86001
PH:(928) 779-1500

The WLB Group INC.

PINEHAVEN
LANDSCAPE IRRIGATION

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
34188
STEPHEN C. PARSONS
Date Signed 6/7/24
ARIZONA, U.S.A.

DESIGNED BY:	SP
DRAWN BY:	SP
CHECK BY:	SP
DATE:	MAY 2024

PROJECT NO.
322021A001

SHEET
L2.1

N:\322021A001_Pinehaven\Dwg\Cur-Shts\Improvement\LS-IR.dwg, 5/1/2024 3:36:03 PM

IRRIGATION LEGEND:

SYMBOL	DESCRIPTION
M	WATER METER
	BACKFLOW PREVENTER
	FLOW SENSOR
A	CONTROLLER
	GATE VALVE
	1" QUICK COUPLER
	REMOTE CONTROL DRIP VALVE ASSEMBLY
	MAIN LINE
	SHRUB/G.C. LATERAL
	TREE LATERAL
	MULTI-OUTLET DRIP EMITTER
	SINGLE-OUTLET DRIP EMITTER
	DISTRIBUTION TUBE
	END FLUSH CAP
	SLEEVE
	ELECTRICAL SLEEVE

GRAPHIC SCALE

30 0 15 30 60

HORIZONTAL SCALE 1" = 30'

NORTH

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.com

NO.	DATE:	ITEM:
-	-	-

REVISIONS

The WLB Group INC.

Engineering • Planning • Surveying
Landscape Architecture • Urban Design
Offices located in: Tucson, Phoenix, Flagstaff, and Las Vegas, NV.
500 N. Beaver Street, Flagstaff, AZ 86001
PH:(928) 779-1500

PINEHAVEN

LANDSCAPE
IRRIGATION

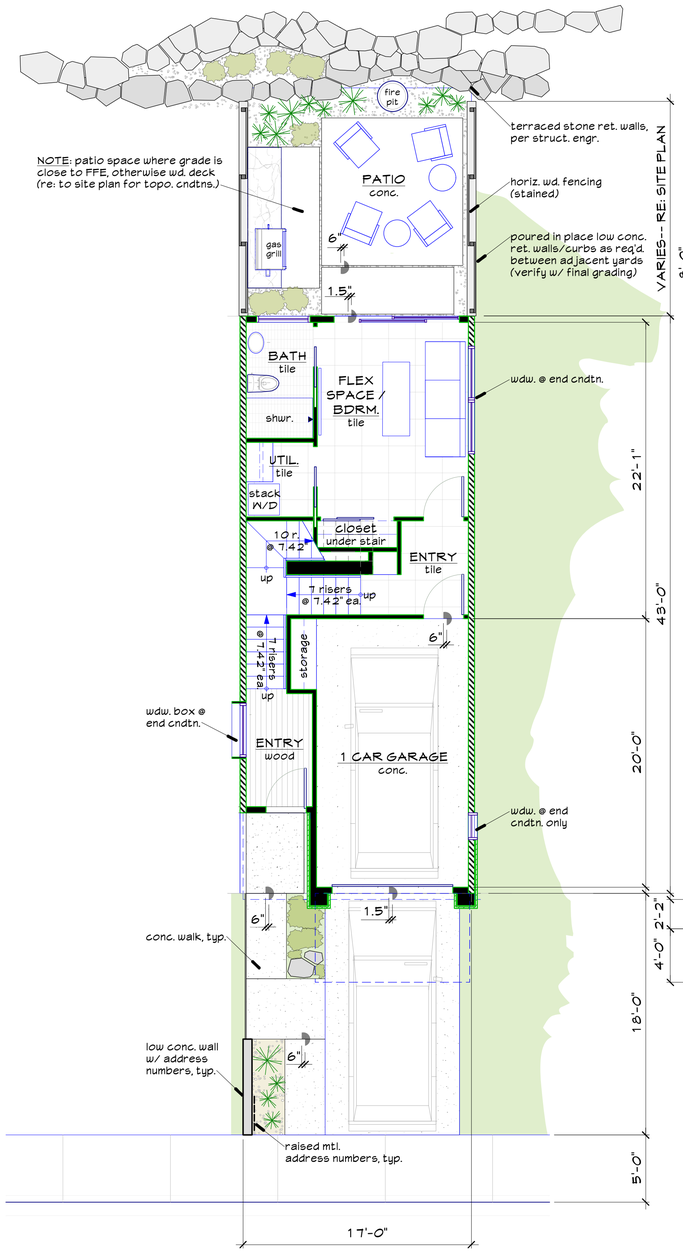
REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
34188
STEPHEN C. PARSONS
Date Signed 6/14/24
ARIZONA U.S.A.

DESIGNED BY:	SP
DRAWN BY:	SP
CHECK BY:	SP
DATE:	MAY 2024

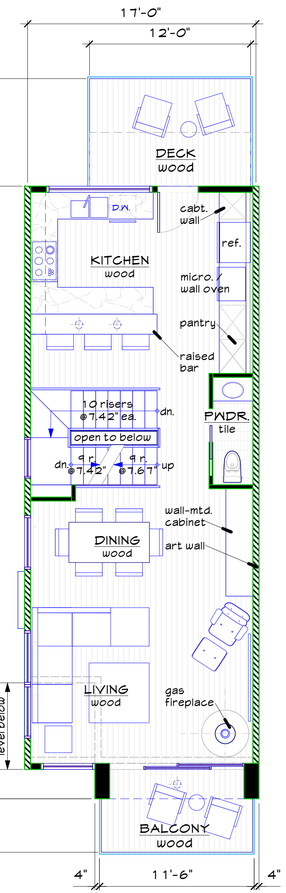
PROJECT NO.
322021A001

SHEET
L2.2

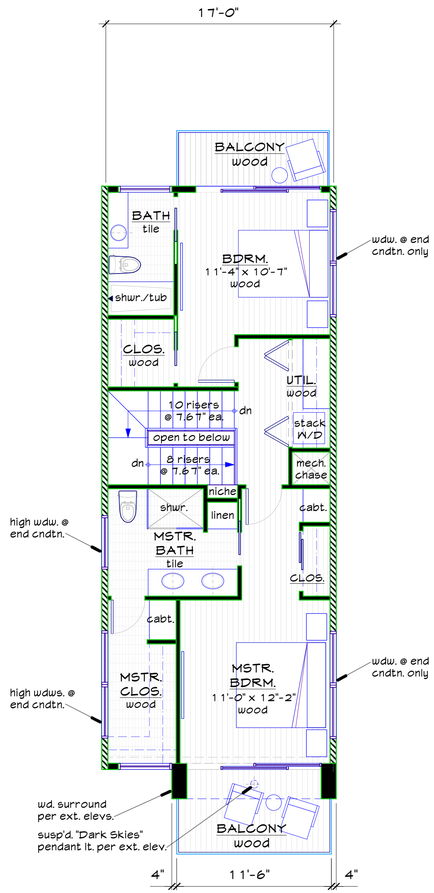
N:\322021A001_Pinehaven\dwg\Cur-Shts\Improvement\LS-IR.dwg, 5/1/2024 3:37:40 PM



GROUND FLOOR



SECOND FLOOR



THIRD FLOOR

0 1 2 4 8 16'

REVISIONS

REV.	DATE	DESCRIPTION	INIT
			MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE: 3/16" = 1'-0"
DWN BY: M LIND
CHK BY:

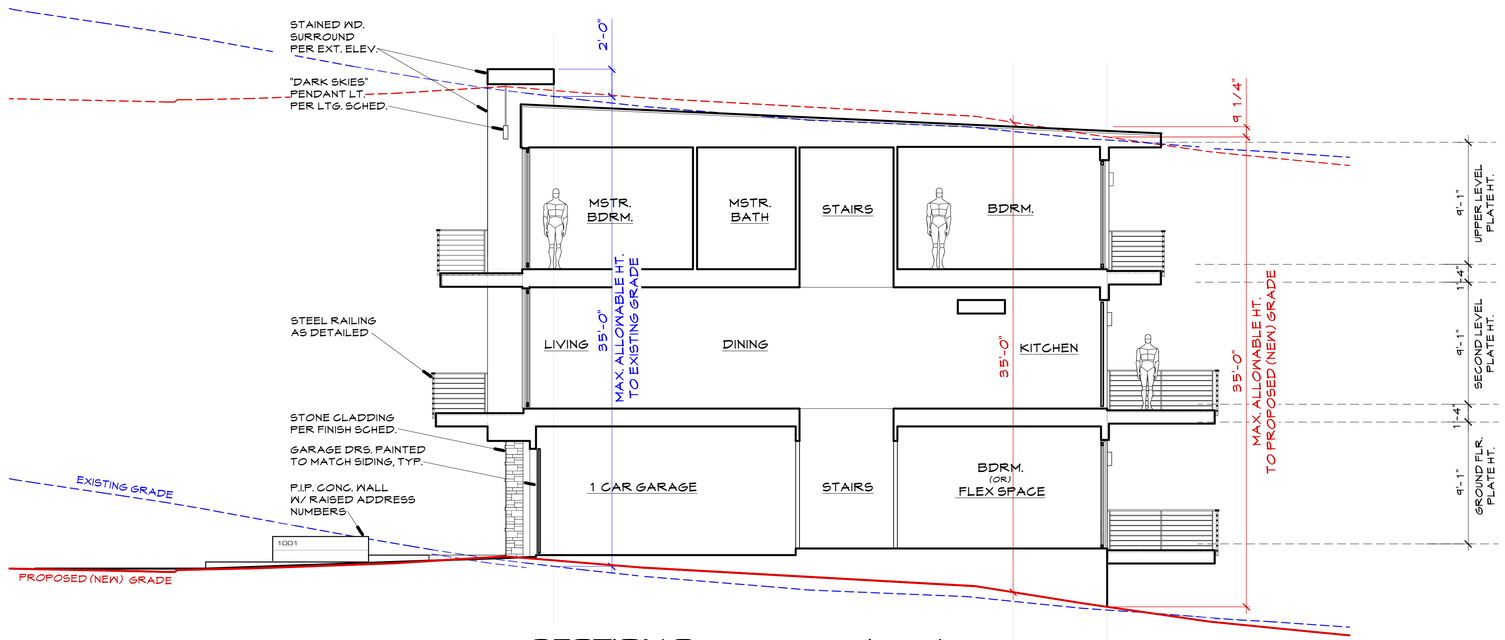
PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2055 S. MAIN STREET LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

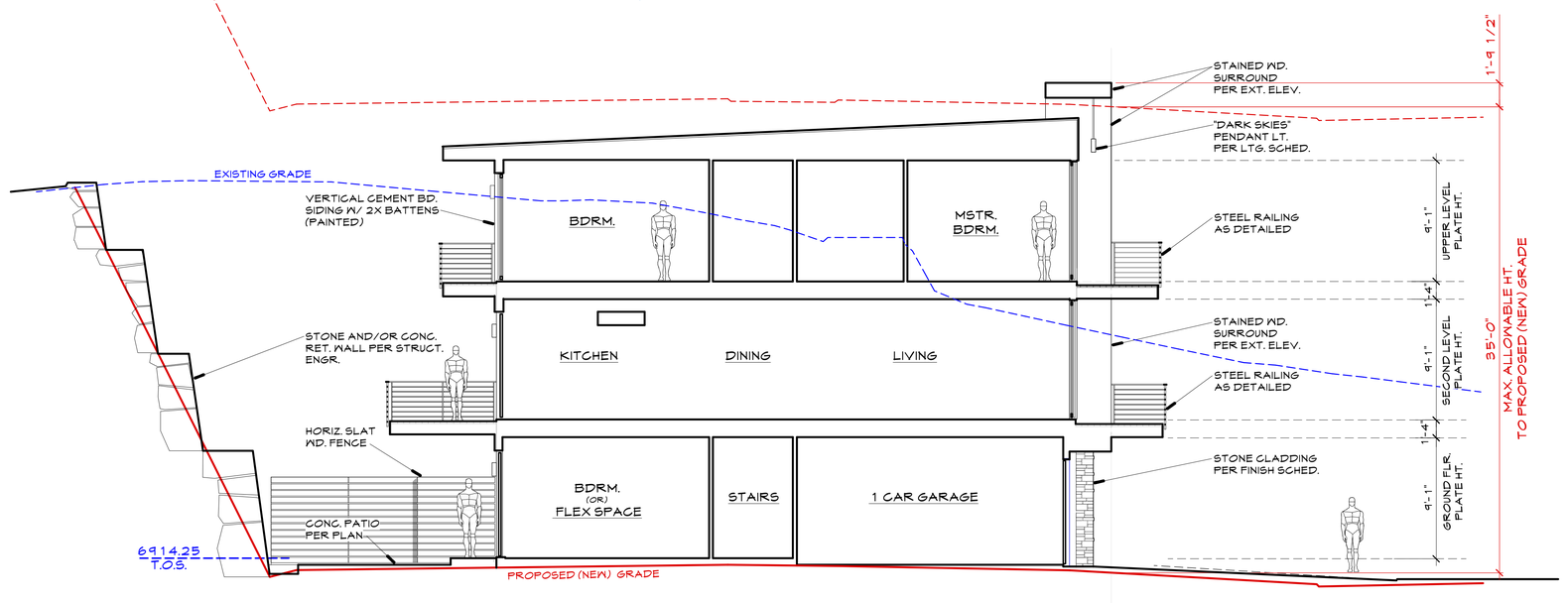
TITLE: FLOOR PLANS
unit "A" (3 story townhome)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-1.1
REV 0

I:\Shared drives\PROJ\22004 FLAGSTAFF 72\DRAWINGS\CONST DWGS\arch TITLE 22004



SECTION @ worst case location
"A" unit #1030



SECTION @ best case location
"A" unit #1940

0 1 2 4 8 16'

REVISIONS

REV	DATE	DESCRIPTION	INIT	MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE: 3/16" = 1'-0"
DWN BY: M LIND
CHK BY:

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: BUILDING SECTIONS
unit "A" (3 story townhome)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-1.2
REV 0

FRONT ELEVATION (typical)
unit "A"

LEFT SIDE ELEV. (@ end condition)
unit "A"

0 1 2 4 8 16'

REVISIONS

REV	DATE	DESCRIPTION	INIT	MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE: 3/16" = 1'-0"
DWN BY: M LIND
CHK BY:

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: EXTERIOR ELEVATIONS
unit "A" (3 story townhome)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-1.3
REV 0

REAR ELEVATION (typical)
unit "A"

RIGHT SIDE ELEV. (@ end condition)
unit "A"

REVISIONS

REV	DATE	DESCRIPTION	INIT	MDT

ViewPoint Engineering
FIRM No. F-23395
viewpointengineering.com
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

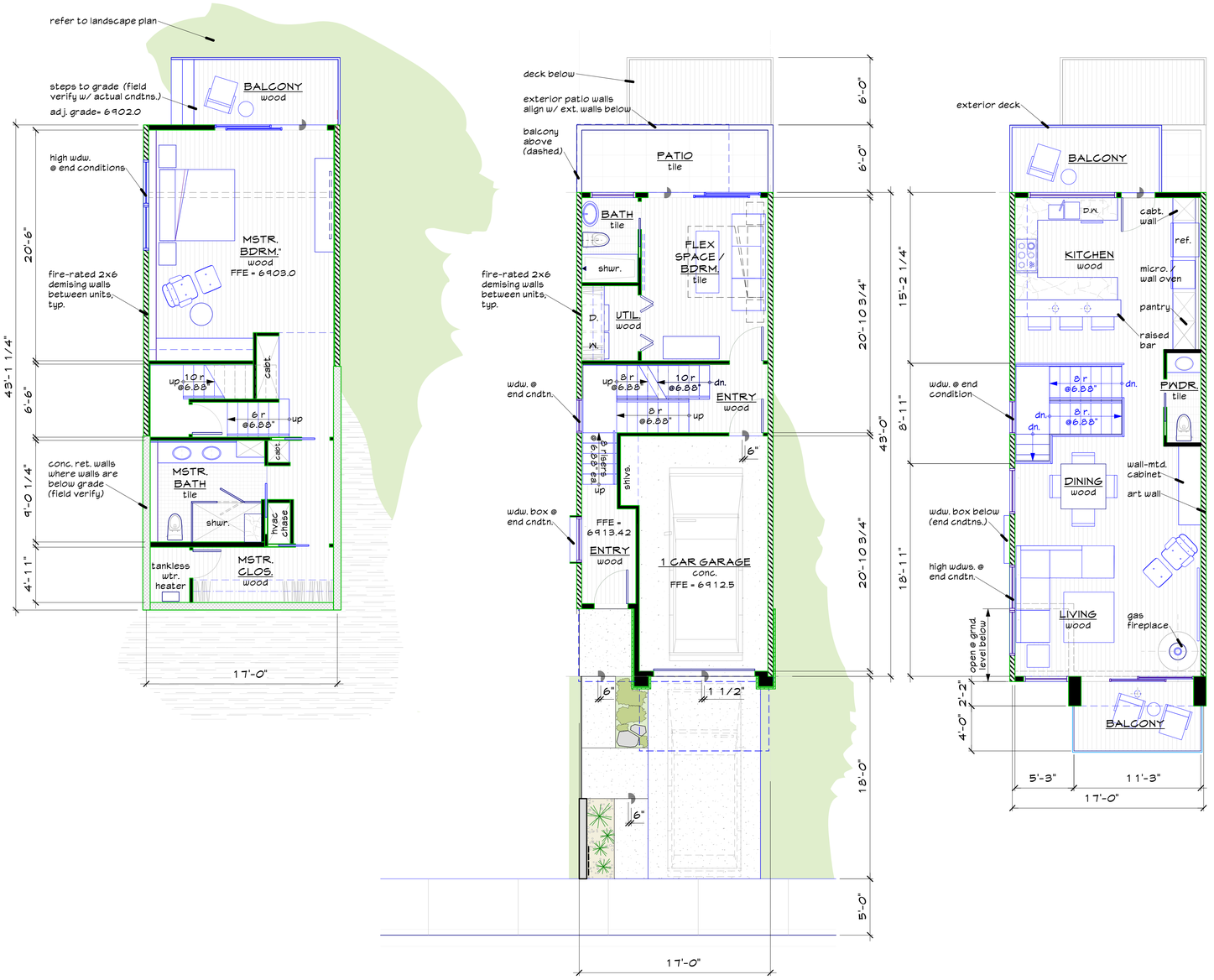
SCALE: 3/16" = 1'-0"
DWN BY: M LIND
CHK BY:

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: EXTERIOR ELEVATIONS
unit "A" (3 story townhome)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-1.4
REV 0



LOWER FLOOR
unit # 1240 (RE: SITE PLAN)

GROUND FLOOR
unit #1240

SECOND FLOOR
unit #1240

0 1 2 4 8 16'

REVISIONS			
REV	DATE	DESCRIPTION	INIT
			MDT

ViewPoint Engineering
FIRM No. F-23395
viewpointengineering.com
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

SCALE: 3/16" = 1'-0"
DWN BY: M LIND
CHK BY:

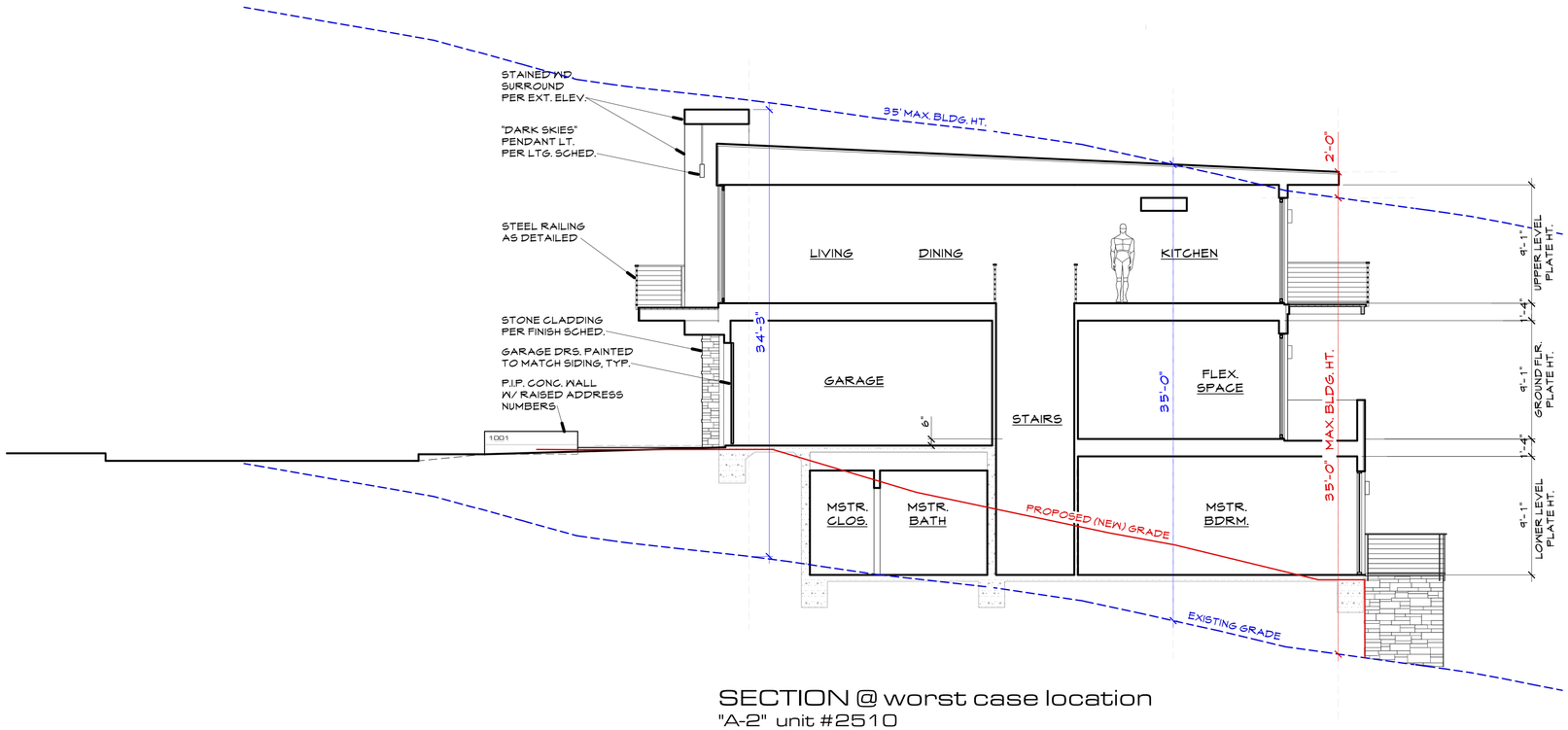
PROJECT: **PINEHAVEN RESIDENTIAL LAND DEVELOPMENT**
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **FLOOR PLANS**
unit "A-2" (3 story townhome modified w/ lower level)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID **A-2.1** REV 0

V:\Shared drives\PROJ\22004 FLAGSTAFF 12\DRAWINGS\CONST DWGS\arch TITLE 22004



SECTION @ worst case location
"A-2" unit #2510

0 1 2 4 8 16'

REVISIONS

REV	DATE	DESCRIPTION	INIT	MDT

ViewPoint Engineering
FIRM No. F-23395
viewpointengineering.com
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

SCALE: 3/16" = 1'-0"
DWN BY: M LIND
CHK BY:

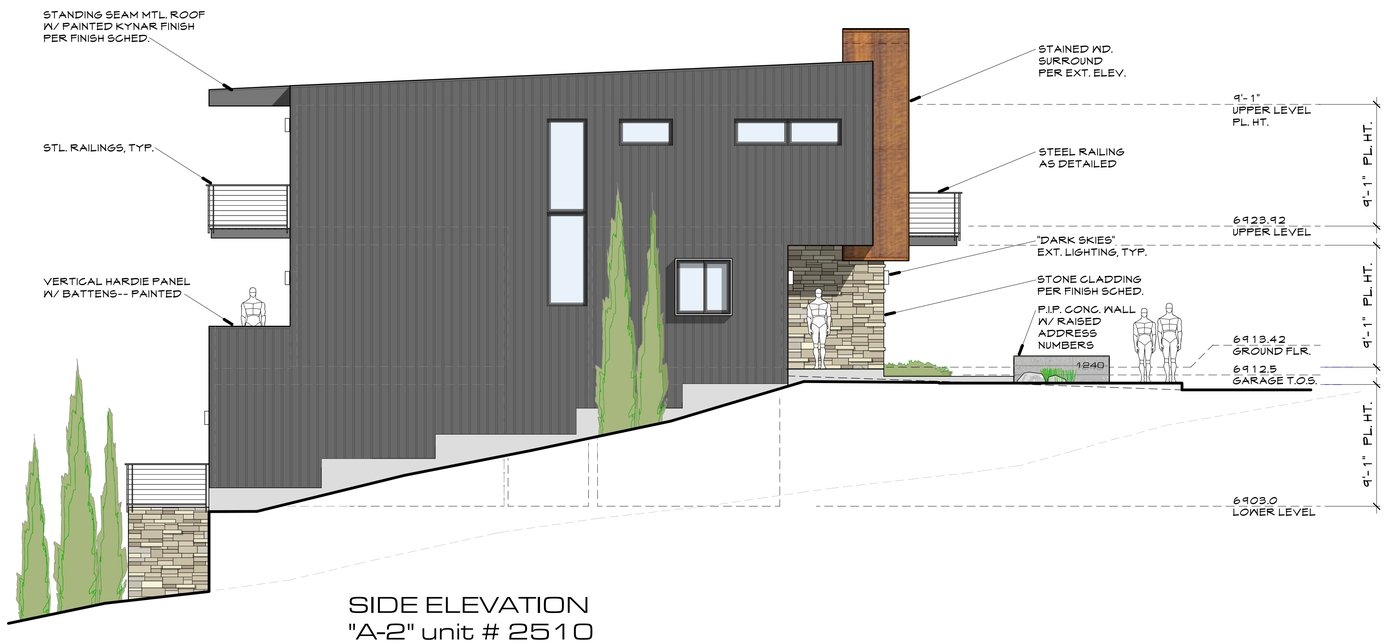
PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: BUILDING SECTIONS
unit "A-2" (3 story townhome modified w/ lower level)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-2.2
REV 0

FRONT ELEVATION (typical)
"A-2" w/ lower level



SIDE ELEVATION
"A-2" unit # 2510

0 1 2 4 8 16'

REVISIONS			
REV.	DATE	DESCRIPTION	INIT
			MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE: 3/16" = 1'-0" 0"
DWN BY: M LIND
CHK BY:

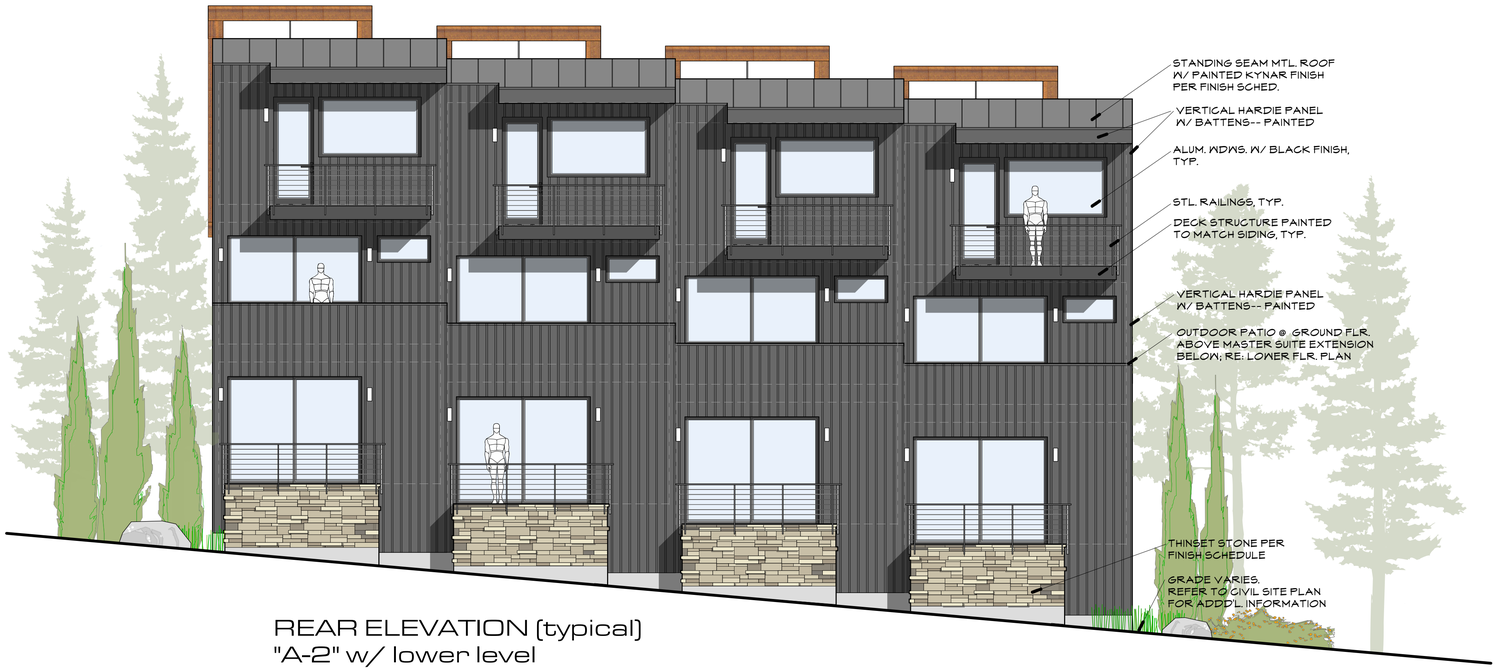
PROJECT: **PINEHAVEN RESIDENTIAL LAND DEVELOPMENT**
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

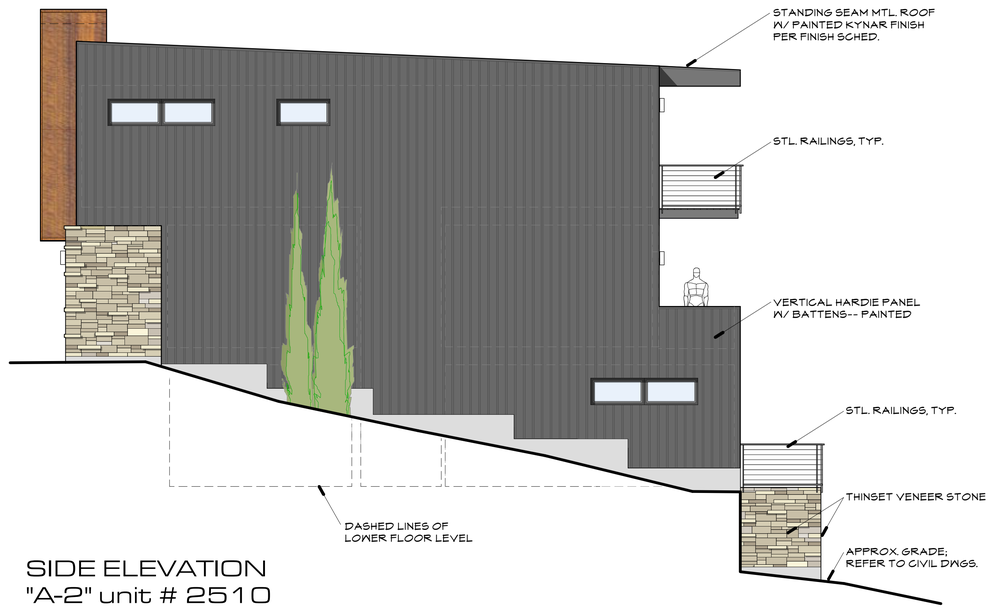
TITLE: **EXTERIOR ELEVATIONS**
unit "A-2" (3 story townhome modified w/ lower level)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-2.3
REV 0

V:\Shared drives\PROJ\22004 FLAGSTAFF 1\DRAWINGS\CONST DWGS\arch TITLE 22004



REAR ELEVATION (typical)
"A-2" w/ lower level



SIDE ELEVATION
"A-2" unit # 2510

0 1 2 4 8 16'

REVISIONS			
REV	DATE	DESCRIPTION	INIT
			MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE: 3/16" = 1'-0"
DWN BY: M LIND
CHK BY:

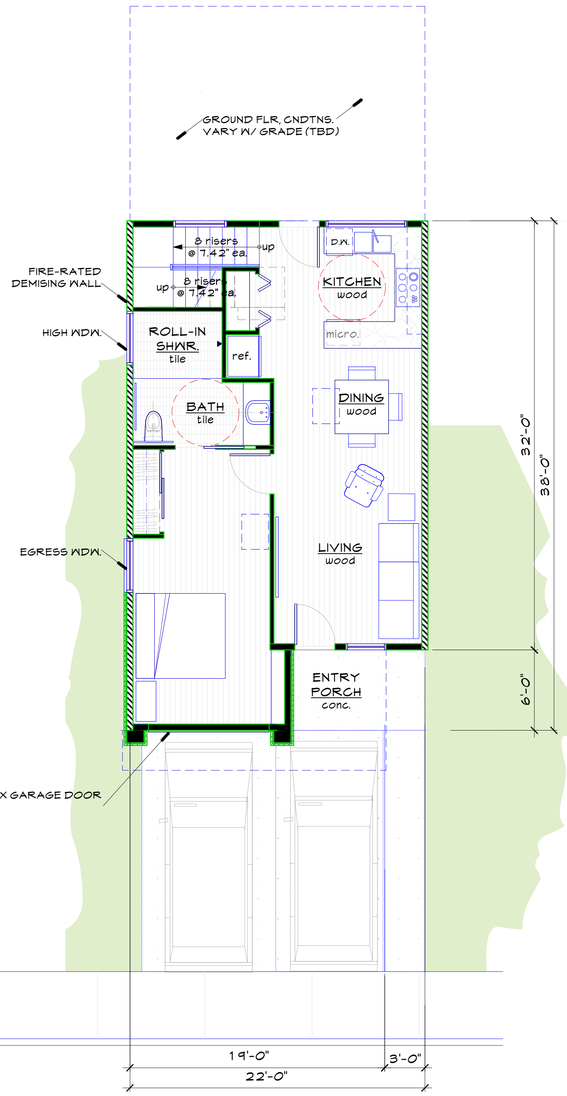
PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: EXTERIOR ELEVATIONS
unit "A-2" (3 story townhome modified w/ lower level)

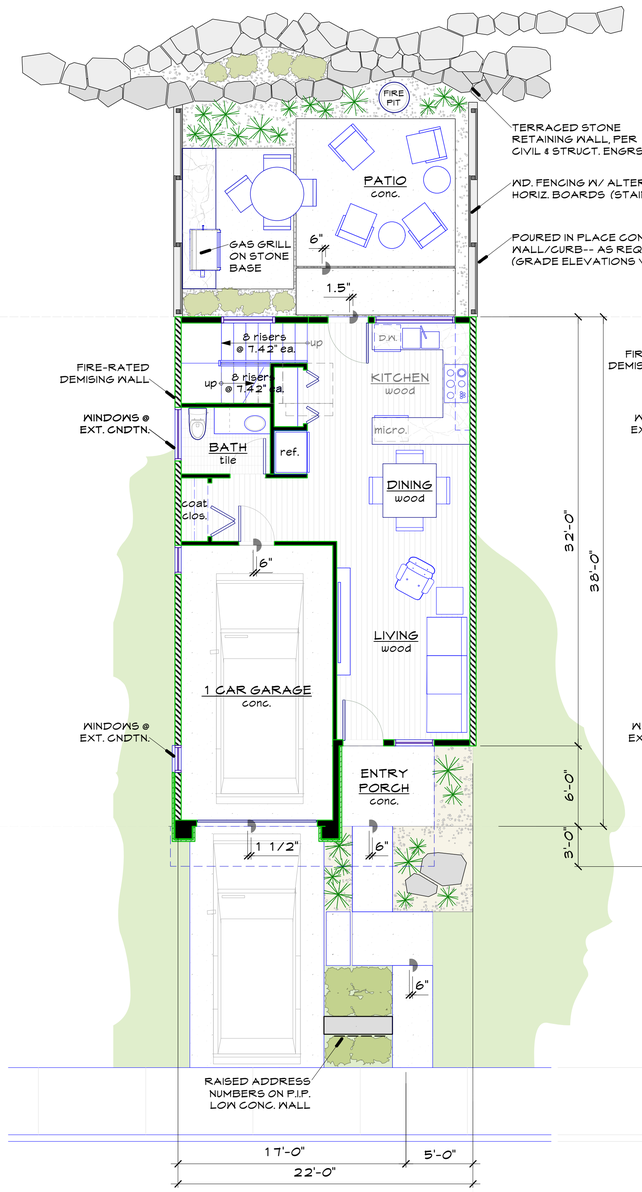
PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-2.4
REV 0

V:\Shared drives\PROJ\22004 FLAGSTAFF 13\DRAWINGS\CONST DWGS\arch TITLE 22004



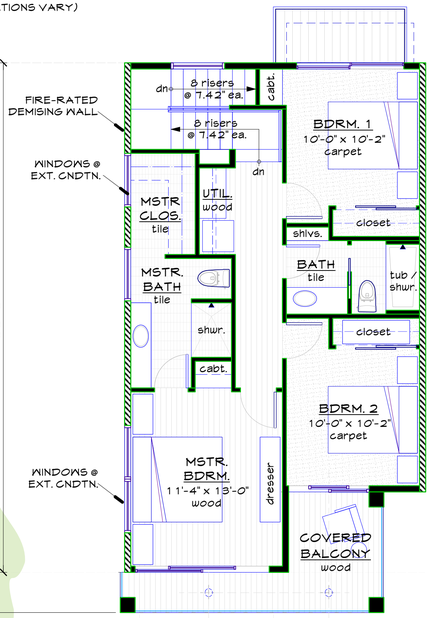
ACCESSIBLE UNIT

note: to provide an egress window in the ground floor bdrm., accessible units must be on on an outside location.



GROUND FLOOR

unit #2610



SECOND FLOOR

unit #2610

0 1 2 4 8 16'

V:\Shared drives\PROJ\22004 FLAGSTAFF 13\DRAWINGS\CONST DWGS\arch TITLE 22004

REVISIONS

REV.	DATE	DESCRIPTION	INIT
			MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

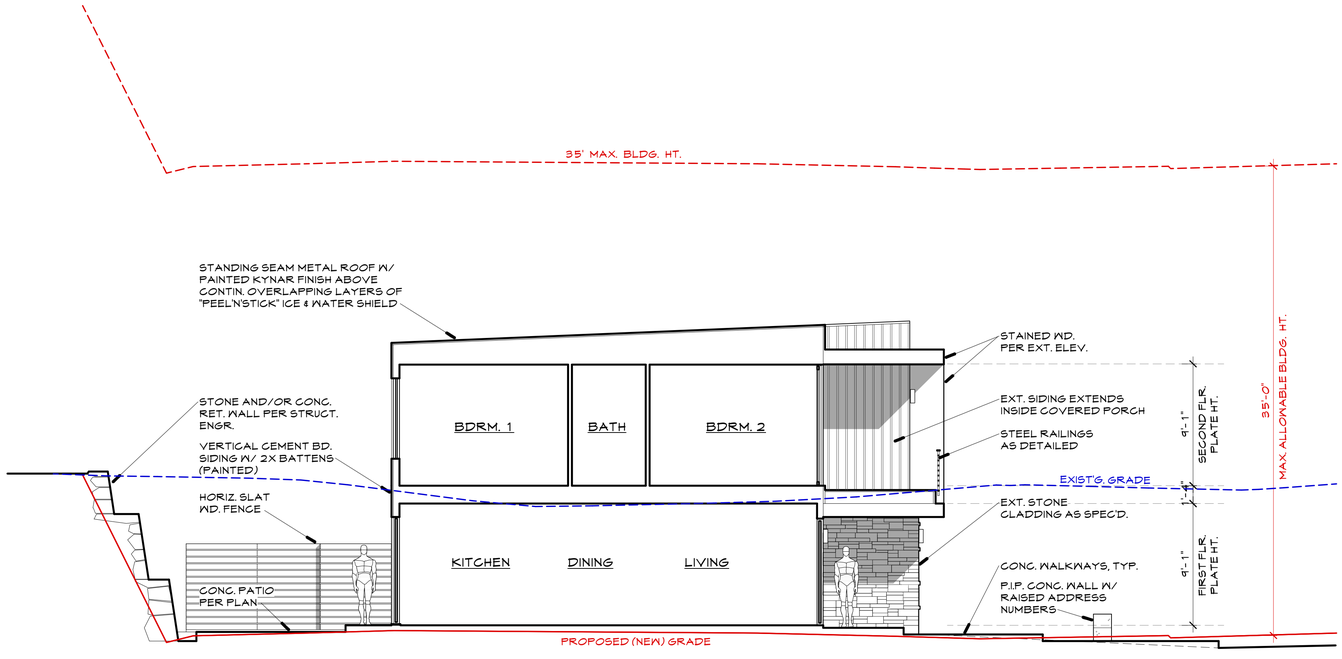
SCALE: 3/16 = 1'-0"
DWN BY: M LIND
CHK BY:

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

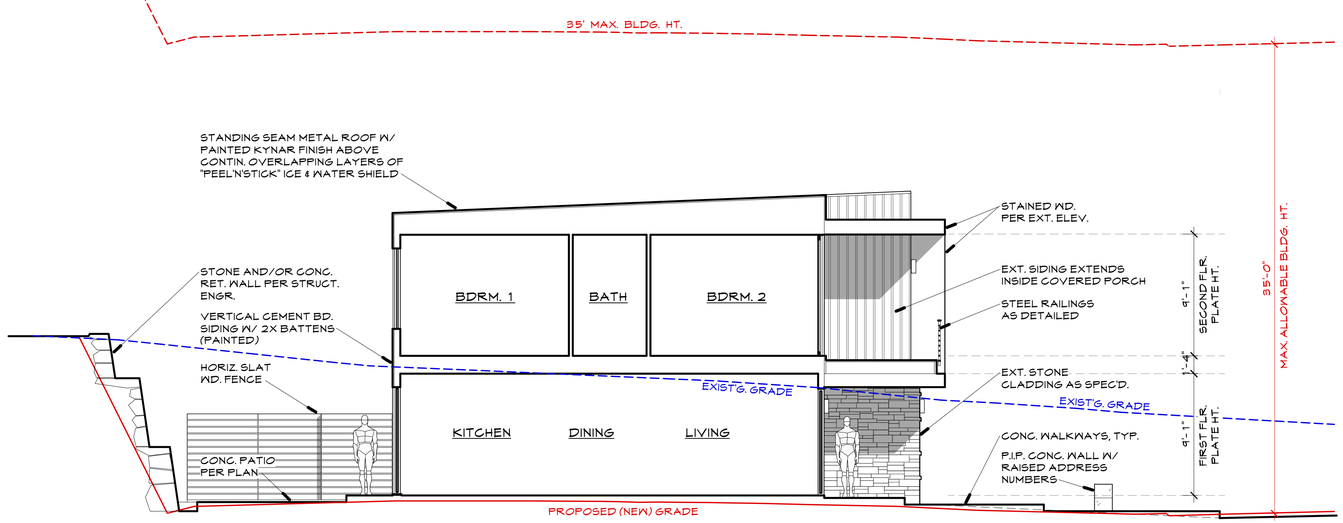
APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: FLOOR PLANS
unit "B" (2 story townhome)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-3.1
REV 0



SECTION @ best case location
"B" unit #2810



SECTION @ worst case location
"B" unit #2610

0 1 2 4 8 16'

REVISIONS

REV.	DATE	DESCRIPTION	INIT
			MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE: 3/16 = 1'-0"
DWN BY: M LIND
CHK BY:

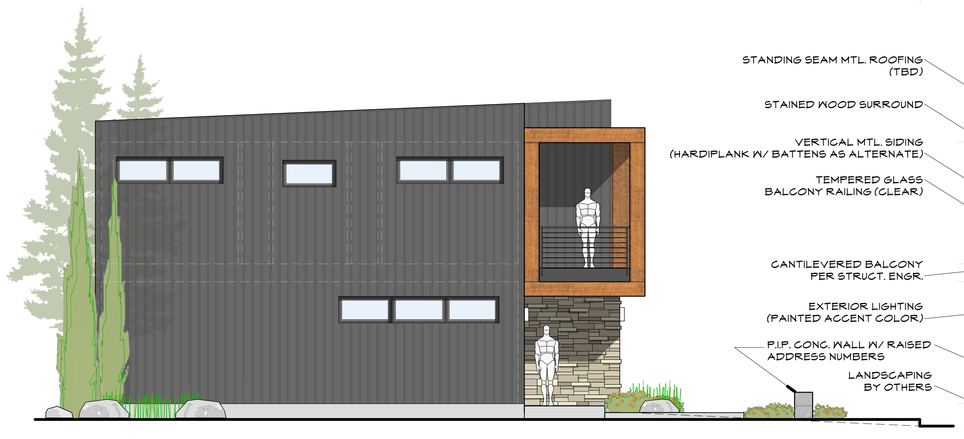
PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

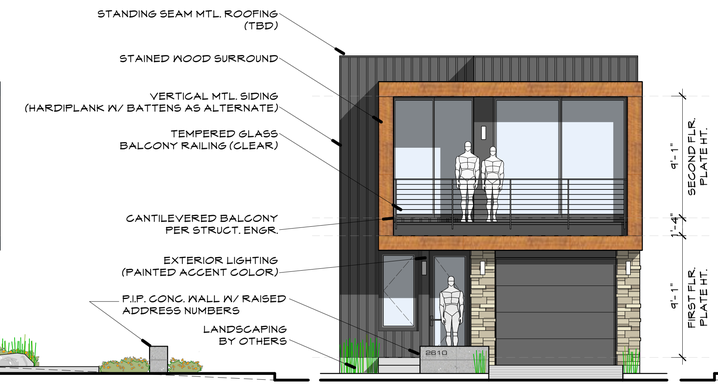
TITLE: BUILDING SECTIONS
unit "B" (2 story townhome)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-3.2
REV 0

V:\Shared drives\PROJ\22004 FLAGSTAFF TOWNHOMES\CONST DWGS\arch TITLE 22004



LEFT SIDE ELEVATION
unit "B"



FRONT UNIT ELEVATION
unit "B"

RIGHT SIDE ELEVATION
unit "B"

FRONT ELEVATION (typical)
unit "B"

0 1 2 4 8 16'

REVISIONS			
REV	DATE	DESCRIPTION	INIT
			MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE: 3/16 = 1'-0"
DWN BY: M LIND
CHK BY:

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2351 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: EXTERIOR ELEVATIONS
unit "B" (2 story townhome)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-3.3
REV 0

C:\Users\mlind\PROJ\22004 FLAGSTAFF TOWNHOMES\CONST SHEETS\arch TITLE 22004

REAR ELEVATION (typical)
unit "B"

0 1 2 4 8 16'

REVISIONS			
REV.	DATE	DESCRIPTION	INIT
			MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE: 3/16 = 1'-0"
DWN BY: M LIND
CHK BY:

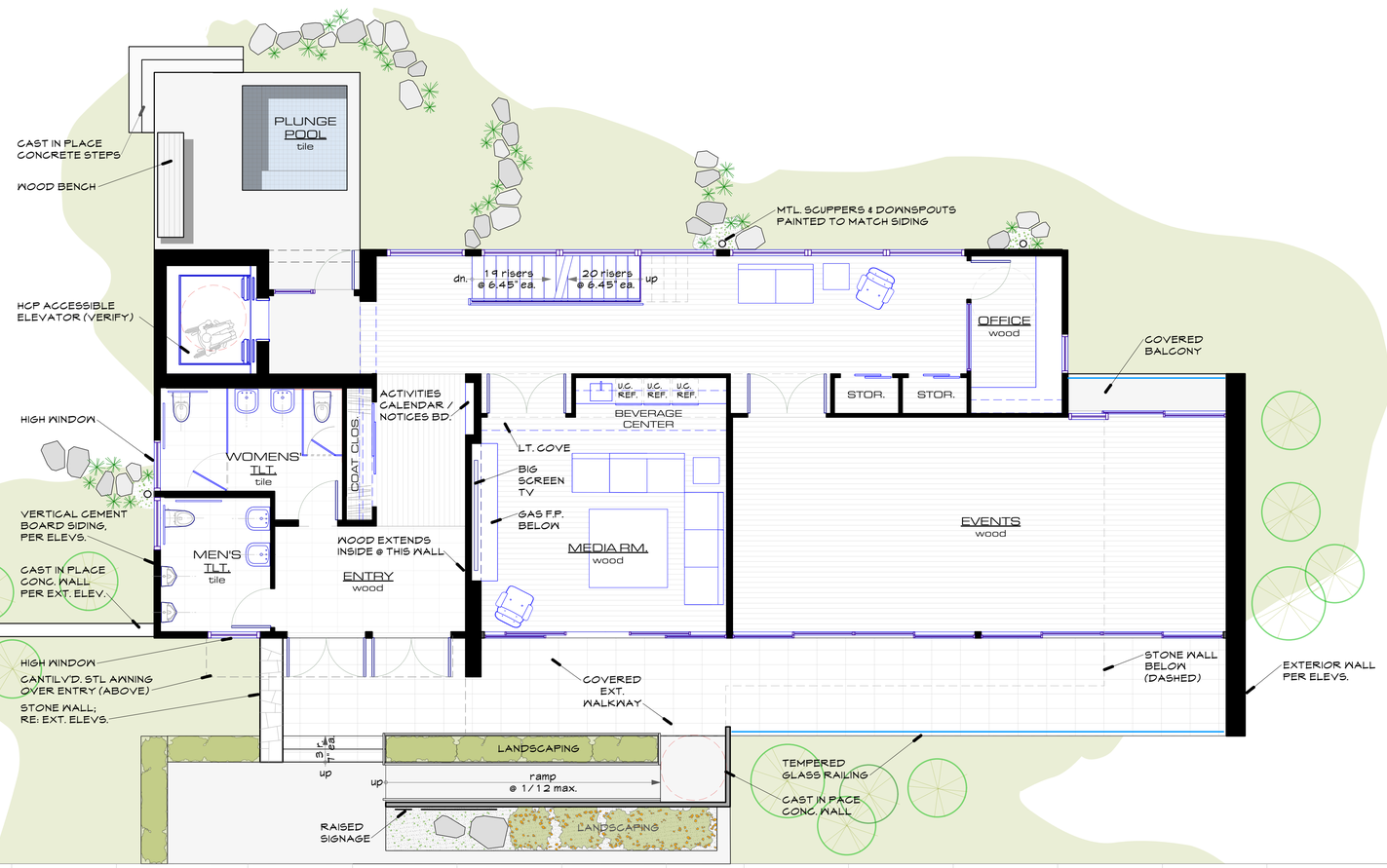
PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: EXTERIOR ELEVATIONS
unit "B" (2 story townhome)

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-3.4
REV 0

V:\Shared drives\PROJ\22004 FLAGSTAFF TOWNHOMES\CONST DWGS\arch TITLE 22004



GROUND FLOOR PLAN
clubhouse

NORTH

0 1 2 4 8 16'

REVISIONS			
REV.	DATE	DESCRIPTION	INIT / MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

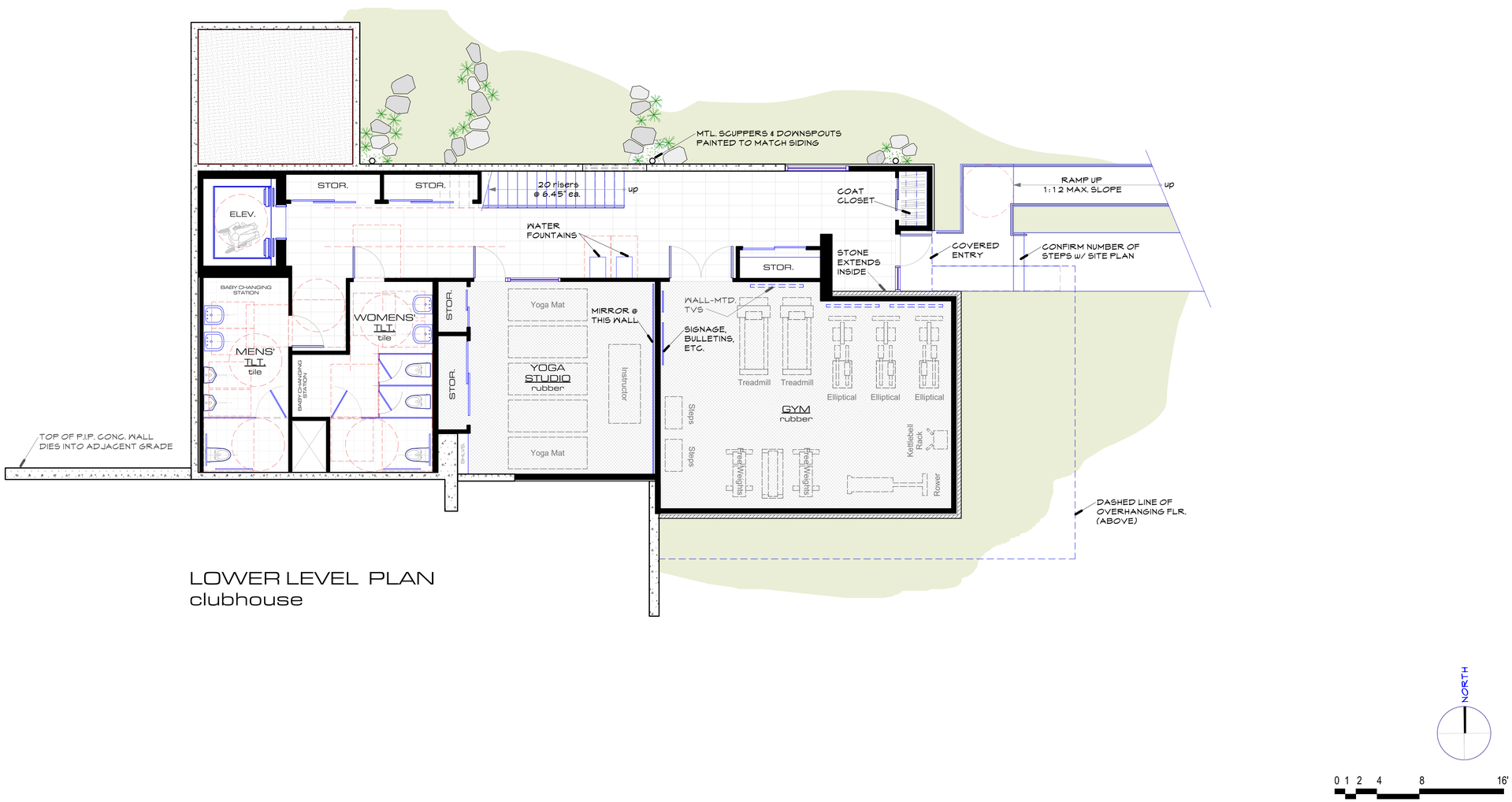
SCALE: 3/16" = 1'-0"
DWN BY: M LIND
CHK BY:

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: GROUND FLOOR PLAN
community clubhouse

PROJECT NO. 22004
DATE: MAY 30, 2023
SHEET ID: A-4.1
REV: 0



LOWER LEVEL PLAN
clubhouse

REVISIONS

REV	DATE	DESCRIPTION	INIT
			MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

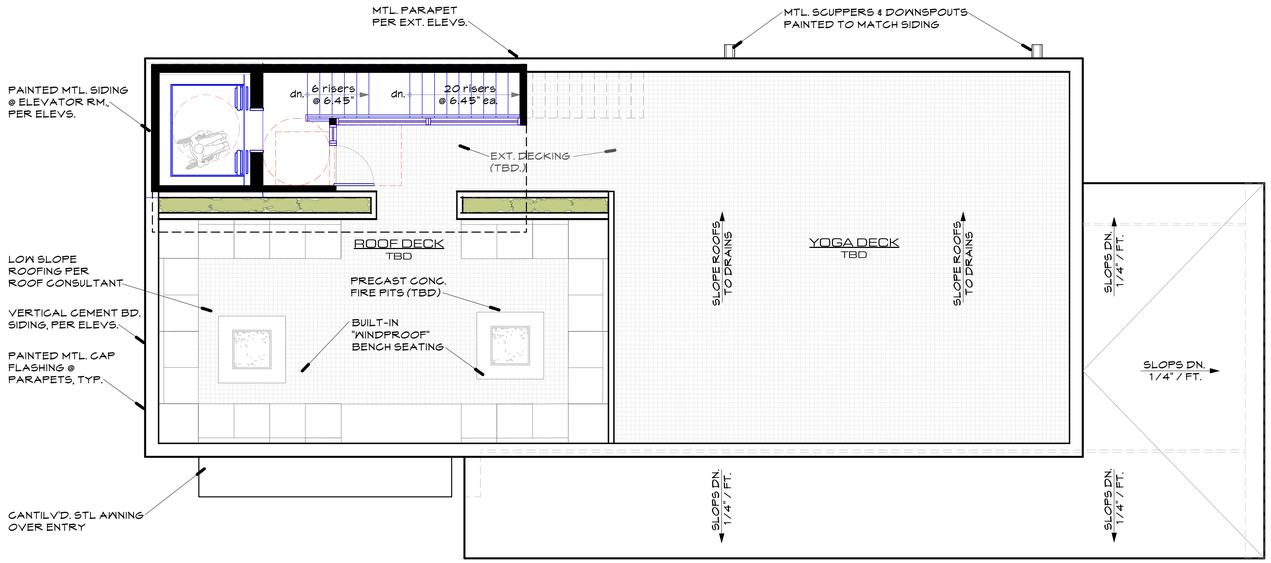
SCALE: 3/16" = 1'-0"
DWN BY: M LIND
CHK BY:

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

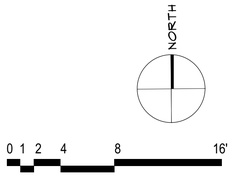
APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: LOWER FLOOR PLAN
community clubhouse

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-4.2
REV 0



ROOF PLAN
clubhouse



REVISIONS

REV	DATE	DESCRIPTION	INIT
			MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

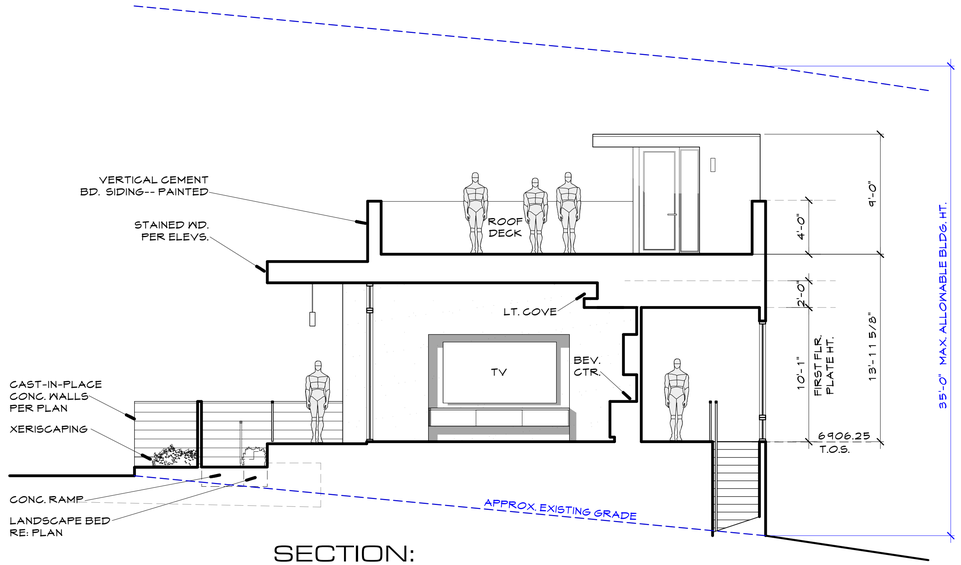
SCALE: 3/16" = 1'-0"
DWN BY: M LIND
CHK BY:

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

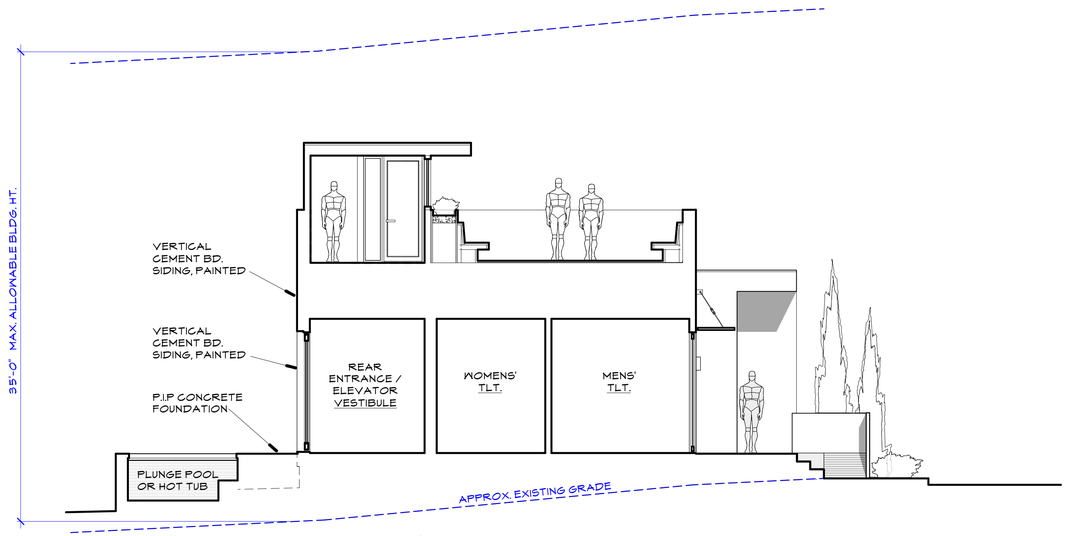
APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: ROOF PLAN
community clubhouse

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-4.3
REV 0



SECTION:
thru entry ramp & media room
clubhouse



SECTION: thru entry
clubhouse

0 1 2 4 8 16'

REVISIONS

REV	DATE	DESCRIPTION	INIT
			MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE: 3/16" = 1'-0"
DWN BY: M LIND
CHK BY:

PROJECT: **PINEHAVEN RESIDENTIAL LAND DEVELOPMENT**
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

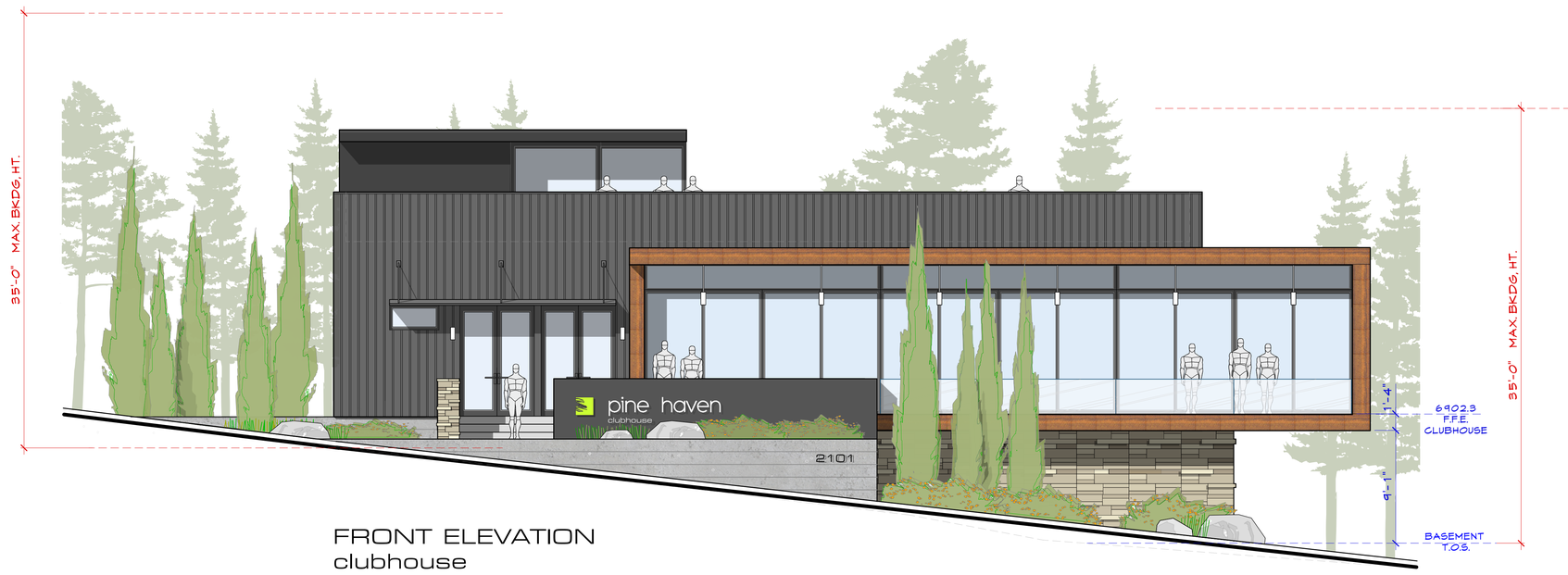
APPLICANT: **RODG DT FLAGSTAFF PROP CO LLC**
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: **BUILDING SECTIONS**
community clubhouse

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-4.4
REV 0

V:\Shared drives\PROJ\22004 FLAGSTAFF 13\DRAWINGS\CONST DWGS\arch TITLE 22004

RIGHT ELEVATION
clubhouse



FRONT ELEVATION
clubhouse

0 1 2 4 8 16'

REVISIONS

REV	DATE	DESCRIPTION	INIT
			MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE: 3/16" = 1'-0"
DWN BY: M LIND
CHK BY:

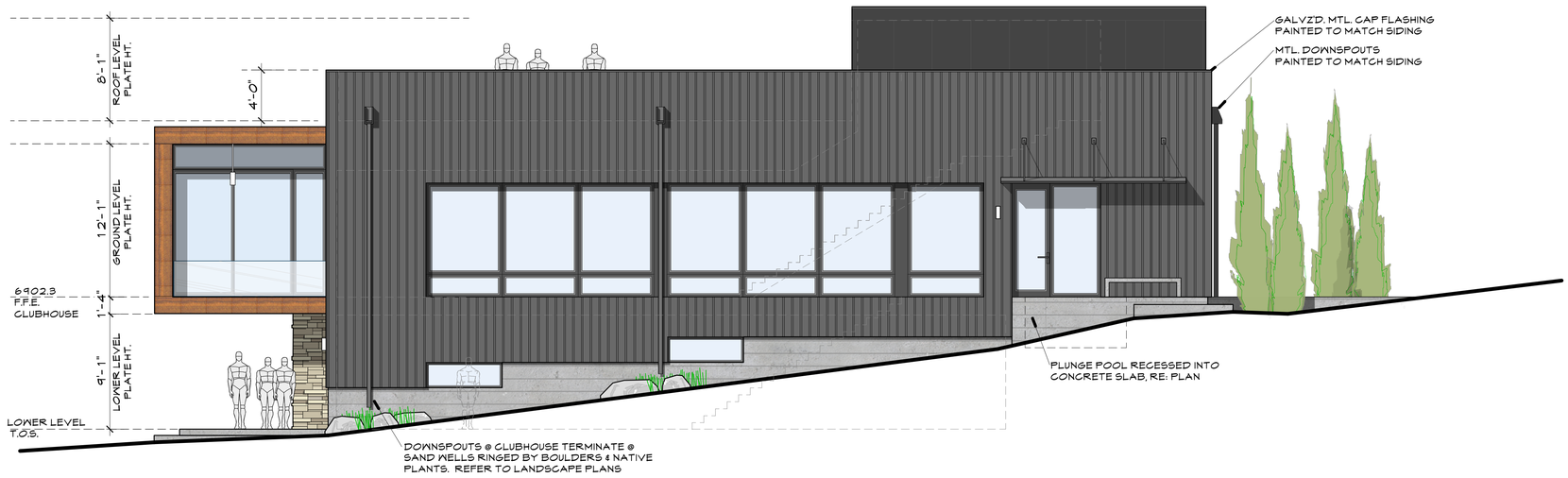
PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: EXTERIOR ELEVATIONS
community clubhouse

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-4.5
REV 0

LEFT ELEVATION
clubhouse



REAR ELEVATION
clubhouse

0 1 2 4 8 16'

REVISIONS

REV	DATE	DESCRIPTION	INIT	MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE: 3/16" = 1'-0"
DWN BY: M LIND
CHK BY:

PROJECT: PINEHAVEN RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: EXTERIOR ELEVATIONS
community clubhouse

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-4.6
REV 0

EXTERIOR PAINT COLORS

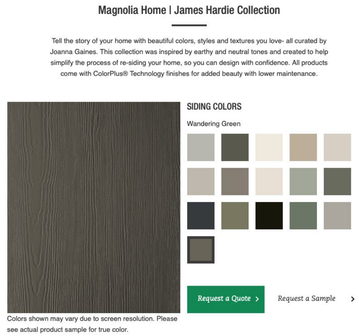
SIDING, FASCIA, SOFFITS:
painted Kelly Moore "Hazel's Coat"
(KM3928-5]

RGB: 85 79 71 **HEX:** #554F47
LRV: 8.03%

RAILINGS:
painted Kelly Moore "Portland Whitbed"
(KM3922-2]

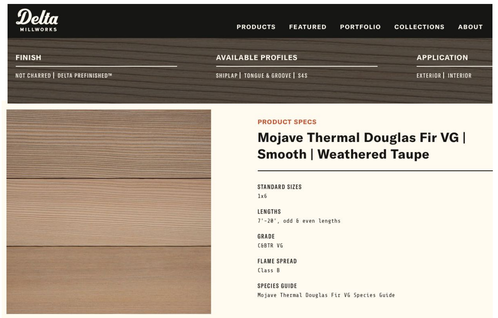
RGB: 213 209 202 **HEX:** #D5D1CA
LRV: 63.99%

SIDING cement board "hardie" siding:
(vertical panels= textured / battens & trim=smooth

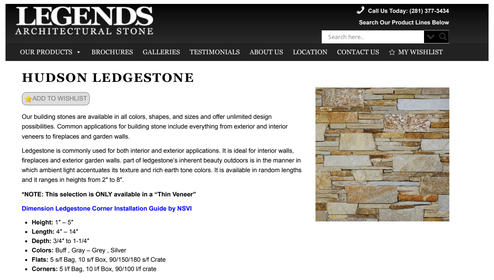


Colors shown may vary due to screen resolution. Please see actual product sample for true color.

WOOD PANELLING
(thermally modified wood)



STONE

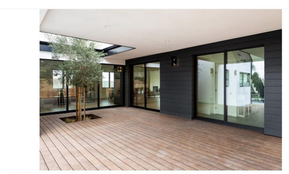


ROOFING
[standing seam, mtl, w/ knar finish]

Chart of SRI Values

Berridge Colors	Solar Reflectance	Emissivity	SRI
Aged Bronze	.31	.85	31
Almond	.65	.86	77
Bristol Blue	.33	.85	33
Buckskin	.43	.83	46
Burgundy	.32	.84	32
Charcoal Grey	.29	.84	28
Cityscape	.48	.85	54
Colonial Red	.35	.83	35
Copper Brown	.32	.85	32
Dark Bronze	.28	.85	27
Deep Red	.41	.84	44
Evergreen	.30	.83	29

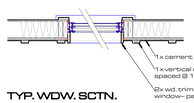
WINDOWS (matrial: aluminum, color: black)



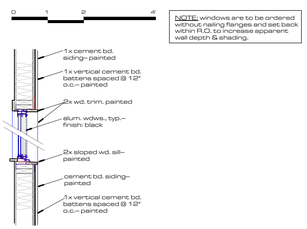
Classic Line

Western Window Systems' Classic Line of aluminum moving glass walls and windows combines exceptional capability with ease of use and versatility. With a narrow profile, stainless-steel rolling hardware, and standard or thermally broken aluminum for energy performance, no wonder it's been the choice of builders for over two decades.

Architectural Details How They're Made



TYP. WDW. SCTN.
plan view @ cement bd. siding



TYP. WDW. SCTN.
thru head & sill @ cement bd. siding

RETAINING WALLS
(board-form concrete, natural finish)

DECKS
(Trex composite, color: "Clamshell")

Clam Shell

Clam Shell is an easy-to-match shade of medium grey, featuring a low-maintenance, wood-like grain pattern.
Read More

12 Inch Composite Deck Board Sample **$5.00**

Order a Sample

Naturals

Basics

REVISIONS

REV	DATE	DESCRIPTION	INIT	MDT

ViewPoint Engineering
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702
FIRM No. F-23395
viewpointengineering.com

SCALE: N.A.
DWN BY: M LIND
CHK BY:

PROJECT: PINEHAVEN
RESIDENTIAL LAND DEVELOPMENT
2951 S. MASONIC LANE
COCONINO COUNTY, ARIZONA

APPLICANT: RODG DT FLAGSTAFF PROP CO LLC
2121 E. 6TH STREET, SUITE 203, AUSTIN, TEXAS 78702

TITLE: MATERIAL SELECTIONS & EXT. FINISHES
pine haven project

PROJECT NO. 22004
DATE MAY 30, 2023
SHEET ID A-5.0
REV 0

X:\Shared drives\PROJ\22004 FLAGSTAFF 1\SDP&MINOR\DOCS\SDP2 SHEETS\Sheet TITLE 22004

Planning & Zoning Commission 5. B.
Meeting Date: 07/23/2025
From: Bethan Heng, Planner

Information

TITLE:
Public Hearing: CUP Extension Request (PZ-24-00046) - Mountain View Baptist Church

At the June 26, 2024 meeting, the Commission approved a Conditional Use Permit request from Mountain View Baptist Church to establish a new 6,674 sq. ft. building, which includes a place of worship with more than 250 seats, office rooms, and meeting rooms. Places of worship with more than 250 seats require a Conditional Use Permit (CUP) in the Rural Residential (RR) zone. The applicant is requesting an extension of 180 days maximum.

STAFF RECOMMENDED ACTION:
Staff recommends that the request for the CUP extension be granted by the Planning and Zoning Commission with the original requirements included in Conditional Use Permit No. PZ-24-00046 and as follows:

1. The development of the site shall substantially conform to the plans as presented with the Conditional Use Permit application and with the Site Plan as approved by the Inter-Division Staff on January 9, 2024. Modifications to the approved site plan shall require additional review by the IDS team.

Executive Summary:
The Zoning Code states that a conditional use permit will become null and void one year after the effective date unless one of the following has occurred:
a. A grading permit or building permit has been issued and construction commenced and diligently pursued;
b. The approved use has been established; or
c. An extension has been granted by the Planning Commission. Such extension shall be for a maximum of 180 days, and no extension may be granted which would extend the validity of the permit more than 18 months beyond the effective date of the permit. The Planning Commission may, when granting an extension for a conditional use permit, modify the original conditions or add conditions to the original conditional use permit, if deemed appropriate; or
d. The Planning Commission has established a different expiration date for the conditional use permit, such as tying it to the expiration date of a Zoning Map amendment for the same property.

Attachments

CUP Extension Request
PZ-24-00046 - Staff Report
MV Church Recorded CUP
MC Church Recorded Prop 207
Mountainview Church Site Plan Approval

Mountainview Church Site Plan Conditions of Approval
PZ-24-00046 - MV Church - Narrative
Mountain View Church Addition - Neighborhood Meeting Report

2150 E LINDA VISTA DR
FLAGSTAFF AZ 86004
EMAIL: MVFLAGSTAFF@GMAIL.COM
WEBSITE: MVFLAGSTAFF.ORG
(928) 526-4783

REQUEST TO EXTEND
CONDITIONAL USE PERMIT PZ-24-00046

June 16, 2025

Michelle McNulty
Planning Director
City of Flagstaff
211 W Aspen Avenue
Flagstaff, AZ 86001
Office (928) 213-2607
Email: michelle.mcnulty@flagstaffaz.gov

Reference: Extension for Conditional Use Permit No. PZ-24-00046

Dear Ms McNulty,

June 26, 2024 the Planning and Zoning Commission approved the Conditional Use Permit to Mountain View Church for a 6,674 square foot place of worship including a sanctuary, office spaces, a library, and meeting rooms, on a 2.99 acre site located at 2150 E Linda Vista Drive.

Since the Conditional Use Permit was granted, Mountain View Church has submitted the Civil Plans to the City of Flagstaff for review and has received approval. Mountain View hired an architect, Reece Studio Architects, who is still working on construction drawings. We would like to start construction by the end of this year.

Please approve our request to extend the Conditional Use Permit for 180 days.

Sincerely,

James Graves
President
Mountain View Church
2150 E. Linda Vista Drive
Flagstaff, AZ 86004

Enclosure: Conditional Use Permit No. PZ-24-00046

Official Records of Coconino County 3998209
Patty Hansen - Recorder 07/09/2024 01:54 PM Pgs: 3
FLAGSTAFF CITY OF $15.00

COCONINO COUNTY, ARIZONA RECORDER
CONDITIONAL USE PERMIT
FROM GRANTOR: CITY OF FLAGSTAFF
COCONINO COUNTY, ARIZONA
OFFICE OF PLANNING AND ZONING
TO GRANTEE: MOUNTAIN VIEW BAPTIST CHURCH

Permit No. PZ-24-00046
June 26, 2024

Permission is hereby granted to Mountain View Baptist Church to establish a Place of Worship with more than 250 seats pursuant to Section 10-40.30.050.B of the *Flagstaff Zoning Code*. The CUP is for a 6,674 square foot place of worship which includes a sanctuary, a library, office spaces, and meeting rooms on a 2.99-acre site located at 2150 E Linda Vista Dr in the Rural Residential (RR) Zone, and legally described as Coconino County Assessor parcel number 108-01-001V in the city of Flagstaff, Arizona.

After a public hearing held on June 26, 2024, the Planning and Zoning Commission voted to grant this Conditional Use Permit subject to the following conditions:

1. The development of the site shall substantially conform to the plans as presented with the Conditional Use Permit application.

Furthermore, this permit is issued on the express condition that the use permitted herein shall conform in all relevant respects to the ordinances of the City of Flagstaff and the laws of the State of Arizona.

Any and all conditions endorsed on this permit are subject to periodic review by the City of Flagstaff's Planning Director. Following review, the Planning and Zoning Commission shall be notified when the conditions of operation imposed in the approval and issuance of this permit have not been or are not being complied with.

The Planning and Zoning Commission shall consider the matter of revocation and set the permit for public hearing. If the Planning and Zoning Commission finds, following the public hearing, that the conditions imposed in the issuance of this permit are not being complied with, this permit may be revoked and further operation of the use for which this permit was approved shall constitute a violation of the Zoning Code.

This Conditional Use Permit shall become null and void one (1) year from the effective date of June 26, 2024, unless the following shall have occurred:

1. A building permit has been issued and construction begun and diligently pursued; or
2. The approved use has been established; or
3. An extension has been granted by the Planning and Zoning Commission. Such extension shall be for a maximum of one hundred eighty (180) days and no extension may be granted which would extend the validity of the permit more than eighteen (18) months beyond the date of approval of the permit.
4. Property Owner shall sign Consent to Conditions/Waiver for Diminution of Value form as a condition of issuance of the Conditional Use Permit by the City.
5. Development of the use shall not be carried out until the applicant has secured all other permits and approvals required by the Zoning Code, the City, or applicable regional, State, and federal agencies.

This document___does modify, or _X_ does not modify the provisions of a previous Conditional Use Permit recorded in docket_____, Office of the Coconino County, Arizona, Recorder.

Planning Director, City of Flagstaff

By: _____
Applicant (if other than the property owner)

STATE OF ARIZONA)
) ss
County of_____)

Before me, the undersigned Notary Public, personally appeared_____who executed the foregoing document for the purposes contained therein.

SUBSCRIBED AND SWORN to before me this_____day of_____, 2024.

_____
Notary Public

My Commission expires: _____

By: _____
Property Owner

PLANNING & DEVELOPMENT SERVICES REPORT
CONDITIONAL USE PERMIT

PZ-24-00046

DATE: **June 6, 2024**
MEETING DATE: **June 26, 2024**
REPORT BY: **Bethan Heng**

REQUEST:
PZ-24-00046; A Conditional Use Permit request from Mountain View Baptist Church, for a Place of Worship church addition with more than 250 seats at 2150 E Linda Vista Dr (APN 108-01-001V), within the Rural Residential (RR) zone. This application proposes to develop a 6,674 square foot place of worship which includes a sanctuary, a library, office spaces, and meeting rooms on a 2.99-acre site.

STAFF RECOMMENDATION:
Staff believes that the proposed Conditional Use Permit (CUP) request is in substantial conformance with the required findings and recommends the Planning and Zoning Commission approve PZ-24-00046, subject to the following conditions:

1. The development of the site shall substantially conform to the plans as presented with the Conditional Use Permit application**.**

PRESENT LAND USE:
Mountain View Baptist Church currently has a 5,525 sq. ft. building for an existing place of worship, located at 2150 E Linda Vista Dr. Places of worship with 250 seats or less are permitted in the Rural Residential (RR) zone.

PROPOSED LAND USE:
The applicant is proposing a new 6,674 sq. ft. building, which includes a place of worship with more than 250 seats, office rooms, and meeting rooms. Places of worship with more than 250 seats require a Conditional Use Permit (CUP) in the Rural Residential (RR) zone.

NEIGHBORHOOD DEVELOPMENT:

North: Skyline Estates, R1 zone
South: Greenlaw Estates 7 Subdivision, R1 zone
East: Linda Vista Park Estates Subdivision, R1 zone
West: Peace Lutheran Church of Flagstaff, R1 zone

STAFF REVIEW:

I. Project Information

A. Background

Section 10-40.30.030.B of the Flagstaff Zoning Code, Residential Zone – Allowed Uses, identifies places of worship with more than 250 seats as an allowed land use in the Rural Residential (RR) Zone subject to the approval of a Conditional Use Permit (CUP) by the Planning Commission. Section 10-80.20.160 of the Flagstaff Zoning Code defines "Place of Worship" by the following definition: "A facility for public or private worship services such as a church, synagogue, mosque, temple, convent or monastery, or similar structure/building. Also includes functionally related internal facilities such as assembly halls, sanctuaries, classrooms, conference rooms and meeting rooms, kitchens, multi-purpose rooms, and storage. Does not include commercial

entertainment or convention facilities."

The applicant for this CUP has an existing and operating place of worship with 250 seats or less at the subject site of 2150 E Linda Vista Dr. The proposed 6,674sf building addition is for a place of worship use with 362 seats and is proposed to serve as the main gathering hall for assembly. The proposed building addition also includes office rooms and meeting rooms to be functionally related to the main use of the place of worship. The existing building, which currently seats 221 people, will serve as the auxiliary sanctuary for supplemental assembly activities such as children's church as well as other staff-oriented uses. Since the new building will have a place of worship with more than 250 seats, the applicant is requesting a Conditional Use Permit (CUP) for this use.

The subject property is approximately 2.99 acres. Mountain View Baptist Church is located south of the Skyline Estates subdivision, north of the Greenlaw Estates 7 subdivision, west of the Linda Vista Park Estates subdivision, and east of the Peace Lutheran Church of Flagstaff. This location is also within a quarter mile from bus stops to NAIPTA Mountain Line's Route 2 along E Lockett Rd. The subject property is not within an Activity Center or Pedestrian Shed as depicted in the Regional Plan. There is no Resource Protection Overlay over this subject property.

I. *Required Findings*

The Planning Commission may approve the Conditional Use Permit only after making the following five findings:

A. ***Finding #1:***

The conditional use is consistent with the objectives of the Zoning Code and the purpose of the Zone in which the site is located.

The subject property is currently zoned Rural Residential (RR), with places of worship with more than 250 seats permitted with a Conditional Use Permit (CUP).

"The Rural Residential (RR) zone applies to areas of the City appropriate for both housing and limited agricultural uses that preserve the area's rural character. This zone is predominantly large lot single-family development. However, it does allow for cluster and planned residential developments, which provide opportunities for higher densities. The RR zone applies to those non-urban areas of the City that cannot be economically and efficiently provided with City services associated with urban living. As such, it is designed for the utilization and enjoyment of the City's unique mountain environment with a minimum amount of municipal services and improvements. This zone is also intended to be used to protect against premature development in areas on the fringe of the urban service area." (Flagstaff Zoning Code 10-40.30.030)

The primary reason for the CUP is to protect the uses that are allowed by right which may be incompatible with the use needing a CUP. The RR zone allows places of worship with more than 250 seats with the granting of a Conditional Use Permit (CUP), while the current use of a place of worship with 250 seats or less is permitted outright within the RR zone. By obtaining the CUP, this request for the proposed addition would be meeting this finding.

B. ***Finding #2***

That granting the conditional use will not be detrimental to the public health, safety, or welfare.

1. Property damage or nuisance arising from noise, smoke, odor, dust, vibration or illumination;
2. Hazard to persons or property from possible explosion, contamination, fire or flood; and
3. Impact on surrounding areas arising from unusual volume or character of traffic.

The requested CUP for the proposed building addition for a place of worship with more than 250 seats will not be introducing potential hazards to the public health, safety, or welfare. The current building and sanctuary will serve as the auxiliary building, supplemental to the use of the proposed building addition, which will become the new main building and sanctuary. The purpose of the addition will include a 4,200 gross sq. ft. sanctuary, which will accommodate 362 seats, as well as offices, meeting rooms, and a library to serve the needs of the church staff.

If the proposed project is developed in accordance with City codes, standards, and requirements as discussed, the project should not be detrimental to the public health, safety, or welfare.

C. ***Finding #3***

The characteristics of the conditional use as proposed, and as it may be conditioned, are reasonably compatible with the types of uses permitted in the surrounding area. The Conditional Use Permit shall be issued only when the Planning Commission finds that the applicant has considered and adequately addressed the following to ensure that the proposed use will be compatible with the surrounding area (Flagstaff Zoning Code 10-20.40.050.E.3):

- Access, traffic, and pedestrian, bicycle and vehicular circulation;
- Adequacy of site and open space provisions, including resource protection standards, where applicable;
- Noise, light, visual and other pollutants;
- Proposed style and siting of structure(s), and relationship to the surrounding neighborhood;
- Landscaping and screening provisions, including additional landscaping in excess of otherwise applicable minimum requirements;
- Impact on public utilities;
- Signage and outdoor lighting;
- Dedication and development of streets adjoining the property; and
- Impacts on historical, prehistoric or natural resources.

1. *Access and Traffic; Pedestrian, Bicycle and Vehicular Circulation*

Access to the site is provided from E Linda Vista Dr. The proposed use is not anticipated to have a large impact on traffic circulation, and a Traffic Impact Analysis is not required for this project. Pedestrian access from E Linda Vista Dr is available with the sidewalk along E Linda Vista Dr, which also has a bike path alongside the main road. Additionally, an ADA sidewalk connecting access from the public road to the South courtyard of the building is proposed with this application. Four bicycle parking spaces are also proposed on site, meeting the bicycle parking requirement. The subject property is also within a quarter mile from bus stops that service NAIPTA Mountain Line's Route 2.

The proposed use of place of worship is meeting the parking demands. In Section 10-80.20 of the Flagstaff Zoning Code, "Places of Worship" are defined as "A facility for public or private worship services such as a church, synagogue, mosque, temple, convent or monastery, or similar structure/building. Also includes functionally related internal facilities such as assembly halls, sanctuaries, classrooms, conference rooms and meeting rooms, kitchens, multi-purpose rooms, and storage." Parking requirements for places of worship as found in Table 10-50.80.040.A require 1 parking space per 60 gross sq. ft. in the main sanctuary. The main sanctuary, which is proposed within the building addition, requires 70 parking spaces based on the intended 4,200 gross sq. ft. of main sanctuary space. The site is meeting this requirement with 88 spaces.

2. *Adequacy of Site/Open Space/Resource Provisions*
Not applicable.

3. *Noise, Light, Visual and Other Pollutants*
It is not anticipated that the proposed uses for the site will create any noise, visual, or other pollutants into the area. The site is well maintained. The applicant will submit an application for outdoor signage for City review.

4. *Style and Siting of Structure(s), and Relationship to Surrounding Neighborhood*
Applications for Conditional Use Permit (CUP) requests are expected to conform to Architectural Design features as found in Section 10-50.20. The proposed building addition meets architectural design standards. The building addition applies building-forward design, as well as site planning design standards with new parking placed to the rear of the buildings. The building addition also incorporates materials that provide an indigenous appearance, such as split-face CMU blocks and aluminum frame and paneling, which satisfies the requirement for primary materials. The façade improvements are complementary to the existing architectural style, colors, and materials of the existing building, which currently incorporates elements of indigenous materials, building articulation, and muted colors on its exterior.

5. *Landscaping and Screening*
An expansion or alteration of an existing nonresidential use that "results in a 35 percent or more increase in dwelling units, gross floor area, seating capacity, or parking spaces, either with a single or cumulative addition(s) or expansion(s)" are expected to conform to Landscaping Standards as found in Section 10-50.60. In accordance with Section 10-50.60.030, in review of a final landscape plan, an alternative landscaping scheme may be submitted to the Director, with the condition of one or more justification. This application has an approved alternative landscaping scheme, based on the justification that 1) "Topography, soil, or other site conditions are such that full compliance is impossible or impractical" and 2) it is "…demonstrated that the alternative proposal will result in better environmental or aesthetic quality and conditions". The approved alternative landscaping scheme and the applicant's justification, approved by the Planning Director, is attached to this item.

6. *Impact on Public Utilities*
The site is connected to existing City sewer and water services. No new off-site improvements are required.

7. *Signage and Outdoor Lighting*
All exterior lighting will be required to comply with the City of Flagstaff's strict outdoor lighting requirements which support and maintain our designation as an International Dark Sky City. Section 10-50.70: Outdoor Lighting Standards of the Zoning Code allows single family residences to have up to 10,000 lumens of outdoor lighting (if using non-LED bulbs) or 6,993 lumens of outdoor lighting if all lighting is using LED bulbs. All outdoor lighting fixtures must be fully or partially shielded; no unshielded fixtures are allowed.

8. *Dedication and Development of Streets*
No dedication or development of public streets is required.

9. *Impacts on Resources*
This site is not currently listed on any state or federal historic registry, nor does the site have any other historical significance. The site is not located within the Resource Protection Overlay Zone.

II. *Citizen Participation*

The applicant notified nearby property owners within 300 feet of the subject site of this application via mailer and held an in-person neighborhood meeting on Thursday, April 25, 2024, at 5:30 p.m. The meeting was held at the subject property. The Neighborhood Meeting Report from this meeting is attached to this item.

Since there were no substantial concerns that were raised during the first neighborhood meeting, the applicant submitted a written request to have the second neighborhood meeting waived as per Section 10-20.30.060.G, which the Planning Director approved. The approved waiver for the second neighborhood meeting is also attached to this item.

As of the date of this report, staff has received no comments from the public.

III. *Recommendation*

In accordance with the findings presented in this report, staff recommends that the request for the CUP be granted by the Planning and Zoning Commission with the requirements included in Conditional Use Permit No. PZ-24-00046 and as follows:

1. The development of the site shall substantially conform to the plans as presented with the Conditional Use Permit application**.**

IV. *Attachments*

The draft documents have been prepared in accordance with the staff recommendation and do not indicate the Commission's final decision. These documents will be updated after the public hearing on this case to reflect the Commission's decision.

- Draft Conditional Use Permit No. PZ-24-00046
- Draft Notice of Decision
- Draft Prop 207 Waiver
- Neighborhood Meeting Report
- Neighborhood Meeting Mailing List
- Waiver of Second Neighborhood Meeting
- Approved Alternative Landscaping Plan Request
- Conditional Use Permit Application
    - Narrative
    - Vicinity Map
    - Site Plan
    - Floor Plans
    - Elevations
    - Alternative Landscaping Scheme

Official Records of Coconino County 3998209
Patty Hansen - Recorder 07/09/2024 01:54 PM Pgs: 3
FLAGSTAFF CITY OF $15.00

COCONINO COUNTY, ARIZONA RECORDER
CONDITIONAL USE PERMIT
FROM GRANTOR: CITY OF FLAGSTAFF
COCONINO COUNTY, ARIZONA
OFFICE OF PLANNING AND ZONING
TO GRANTEE: MOUNTAIN VIEW BAPTIST CHURCH

Permit No. PZ-24-00046
June 26, 2024

Permission is hereby granted to Mountain View Baptist Church to establish a Place of Worship with more than 250 seats pursuant to Section 10-40.30.050.B of the *Flagstaff Zoning Code*. The CUP is for a 6,674 square foot place of worship which includes a sanctuary, a library, office spaces, and meeting rooms on a 2.99-acre site located at 2150 E Linda Vista Dr in the Rural Residential (RR) Zone, and legally described as Coconino County Assessor parcel number 108-01-001V in the city of Flagstaff, Arizona.

After a public hearing held on June 26, 2024, the Planning and Zoning Commission voted to grant this Conditional Use Permit subject to the following conditions:

1. The development of the site shall substantially conform to the plans as presented with the Conditional Use Permit application.

Furthermore, this permit is issued on the express condition that the use permitted herein shall conform in all relevant respects to the ordinances of the City of Flagstaff and the laws of the State of Arizona.

Any and all conditions endorsed on this permit are subject to periodic review by the City of Flagstaff's Planning Director. Following review, the Planning and Zoning Commission shall be notified when the conditions of operation imposed in the approval and issuance of this permit have not been or are not being complied with.

The Planning and Zoning Commission shall consider the matter of revocation and set the permit for public hearing. If the Planning and Zoning Commission finds, following the public hearing, that the conditions imposed in the issuance of this permit are not being complied with, this permit may be revoked and further operation of the use for which this permit was approved shall constitute a violation of the Zoning Code.

This Conditional Use Permit shall become null and void one (1) year from the effective date of June 26, 2024, unless the following shall have occurred:

1. A building permit has been issued and construction begun and diligently pursued; or
2. The approved use has been established; or
3. An extension has been granted by the Planning and Zoning Commission. Such extension shall be for a maximum of one hundred eighty (180) days and no extension may be granted which would extend the validity of the permit more than eighteen (18) months beyond the date of approval of the permit.
4. Property Owner shall sign Consent to Conditions/Waiver for Diminution of Value form as a condition of issuance of the Conditional Use Permit by the City.
5. Development of the use shall not be carried out until the applicant has secured all other permits and approvals required by the Zoning Code, the City, or applicable regional, State, and federal agencies.

This document___does modify, or _X_ does not modify the provisions of a previous Conditional Use Permit recorded in docket_____, Office of the Coconino County, Arizona, Recorder.

Planning Director, City of Flagstaff

By: _____
Applicant (if other than the property owner)

STATE OF ARIZONA)
) ss
County of_____)

Before me, the undersigned Notary Public, personally appeared_____who executed the foregoing document for the purposes contained therein.

SUBSCRIBED AND SWORN to before me this_____day of_____, 2024.

_____
Notary Public

My Commission expires: _____

By: _____
Property Owner

STATE OF ARIZONA)
) ss
County of Coconino)

Before me, the undersigned Notary Public, personally appeared James Graves who executed the foregoing document for the purposes contained therein.

SUBSCRIBED AND SWORN to before me this 8 day of July, 2024.

Tamara Kinney
Notary Public

My Commission expires: 3.30.2028

OFFICIAL SEAL
TAMARA WOLFE KINNEY
NOTARY PUBLIC - ARIZONA
COCONINO COUNTY
COMM# 686071
My Comm. Expires March 30, 2028

Official Records of Coconino County 3998208
Patty Hansen - Recorder 07/09/2024 01:52 PM Pgs: 1
FLAGSTAFF CITY OF $15.00

When recorded, mail to:
City Clerk
City of Flagstaff
211 W. Aspen Avenue
Flagstaff, Arizona 86001

CONSENT TO CONDITIONS/WAIVER FOR DIMINUTION OF VALUE

The undersigned is the owner of certain real property legally described as Coconino County Assessor parcel number 108-01-001V in the City of Flagstaff, Arizona that is the subject of Conditional Use Permit Application No. PZ-24-00046. By signing this document, the undersigned agrees and consents to all of the conditions imposed by the City of Flagstaff in conjunction with the approval of Conditional Use Permit No. PZ-24-00046 and waives and fully releases any and all claims and causes of action that the owner may have, now or in the future, for any "diminution in value" and for any "just compensation" under the Private Property Rights Protection Act, Arizona Revised Statutes § 12-1131, et seq., that may now or in the future exist as a result of the approval of Conditional Use Permit No. PZ-24-00046. Within ten (10) days after the execution of this Consent to Conditions/Waiver for Diminution of Value by the undersigned, the City Clerk shall cause this document to be recorded in the official records of Coconino County, Arizona.

Dated this 8 day of July, 2024

PROPERTY OWNER:

James Graves
Print Name

Sign Name

State of Arizona)
) ss
County of Coconino)

SUBSCRIBED AND SWORN to before me this 8 day of July, 2024, by:

Tamara Kinney
Notary Public

OFFICIAL SEAL
TAMARA WOLFE KINNEY
NOTARY PUBLIC - ARIZONA
COCONINO COUNTY
COMM# 666071
My Comm. Expires March 30, 2028

My commission expires: March 30, 2028

City of Flagstaff

Community Development

January 9, 2024

Jim Graves
Mountain View Church
2150 E Linda Vista Dr

RE: Mountain View Church Addition Site Plan Approval (PZ-20-00010-01)

Dear Jim Graves:

As of the date of this correspondence, the City of Flagstaff Inter-Division Staff (IDS) has approved Project No. PZ-20-00010-01 for the proposed development of a 6,674 square foot place of worship which includes development includes a sanctuary, office spaces, a library, and meeting rooms, located at 2150 E Linda Vista Dr. The Coconino County Assessor Parcel Number for the subject property is 108-01-001V. The approval is subject to the attached Conditions of Approval and a successful approval of a Conditional Use Permit from Planning and Zoning Commission.

Unless modified to comply with the Conditions of Approval, development shall substantially conform to the Site Plan Review Submittal and the approved drawings as follows:

- Site Plan prepared by Reece and Rowe Architects dated October 24, 2023,
- Landscape & Irrigation Plan prepared by Reece and Rowe Architects dated December 22, 2023,
- Floor Plan prepared by Reece and Rowe Architects dated December 22, 2023,
- Building Elevations prepared by Reece and Rowe Architects dated December 22, 2023.

This approval shall be valid for a period of one year following the above date, January 9, 2024. If, at the expiration of this period, the property has not been improved for the approved development; or a certificate of occupancy has not been issued; or the site has not been occupied per Zoning Code section 10-20.40.140, the site plan approval shall expire. A request for extension may be made at least 30 days prior to the date of expiration.

Any future alterations of the approved development will require approval from the Current Planning staff. This may include a Minor Modification to Development Approval, a Minor Improvement Permit, or a new Concept Plan Review; as well as any additional permits required.

The next step in the development process is Civil Improvement Plan ("Civil") review. Detailed minimum requirements and Civil Plan Review application can be found on the City of Flagstaff website: https://www.flagstaff.az.gov/4697/Development-Engineering. Please include with your submittal a copy of this letter along with your responses to each comment. Prior to submittal, please contact the Development Engineering Project Manager assigned to the project, David Millis, to discuss the application submittal requirements, the review process, and the timing of reviews. Civil Plan review and a Grading Permit will be required for this project. The requirements for this project will not include all items indicated on the application checklist due to the limited scope of improvements proposed in this project. Dave can be reached at (928) 213-2681 or via e-mail at david.millis@flagstaffaz.gov

We look forward to working with you and your development team through the civil review process, building permit review process, and construction/completion of the approved project. Should you have any questions, comments, or concerns, please do not hesitate to contact me.

Sincerely;

Bethan Heng
Planner
City of Flagstaff Current Planning
928-213-2603
bethan.heng@flagstaffaz.gov

Attachment: Conditions of Approval

City of Flagstaff
Community Development
Substantive Review Comments

Project Name: Mountain View Church **Date:** 01/09/2024
Project No.: PZ-20-00010-01
Project Address: 2150 E Linda Vista Dr

Application Type: Site Plan
Review Type: Substantive 2nd Submittal

Project Manager: Bethan Heng
E-mail: bethan.heng@flagstaffaz.gov
Phone: 928-213-2603

Status of Review: Approved w/ Conditions
In accordance with ARS 9-835(J), the Substantive Review of the application is complete and the application has been approved subject to the following conditions and comments. This correspondence is being transmitted on Day 32 of the 33-day Substantive Review Timeframe (which includes the granted additional 11 days).

PROJECT SUMMARY:
This application proposes to develop an addition for a place of worship on a 2.99-acre site located at 2150 E Linda Vista Dr (APN 108-01-001V). The proposed development includes a sanctuary, office spaces, a library, and meeting rooms. The site is zoned Rural Residential (RR) and place of worship with 250 or more seats requires a Conditional Use Permit in the zone.

CONDITIONS OF RESUBMITTAL COMMENTS:

Substantive Current Planning: Current Planning, Bethan Heng *Approved with Conditions* 01/09/2024
Conditions of Approval:

1. Parking Standards (10-50.80)
    a. Please show width and length of curved parking stalls to the Northeast of subject property at point of Civil Plan Review.
    b. Please include parking calculations for all uses on site. Please see Parking Standards under General Comments for parking spaces requirement. Square footage for Auxiliary Worship Assembly space does not have to be included in parking count, as discussed at second submittal, based on the intention for this assembly area to be used for Children's Church. However, all meeting rooms & offices in both the new and existing building must be parked. Please adjust calculations at point of Civil Plan Review.
2. Landscape Plan (10-50.60)
    a. Required Landscaping Calculations are incorrect. 1 Tree per 15 feet of street buffer is required since the subject property is zoned Rural Residential. Please adjust Landscaping Calculation Table accordingly and provide correct quantities at point of Civil Plan Review.
    b. The alternative landscaping plan, prepared by Reece and Rowe Architects dated December 22, 2023 and submitted for the January 4th, 2024 IDS Meeting, has been reviewed and approved by the Planning Director on January 9, 2024. Future submittals of the Landscaping Plan shall substantially conform to what was approved on this Landscaping Plan.

City of Flagstaff
Community Development
Substantive Review Comments

General Comments:

1. Project Information/Data:
    a. Subject property is zoned Rural Residential (RR). Places of Worship facilities that exceeds 250 seats will need a Conditional Use Permit.
2. Site Planning Standards (10-30.60):
    a. Site Planning Design Standards apply since the proposed addition will require a Conditional Use Permit as required by Section 10-30.60.020. However, the existing structure on site was approved and built before the enactment of this requirement from current Flagstaff Zoning Code. The applicant is encouraged to incorporate as much Site Planning Design Standards as possible to the project. Site Planning Design Standards can be found in Section 10-30.60 of the Flagstaff Zoning Code. Project Narrative submitted for the January 4th, 2024 IDS Meeting suffices for how this project intends to meet Site Design Standards.
3. Architectural Design Standards (10-50.20):
    a. Architectural Design Standards apply since proposed addition includes an expansion of more than 25 percent of gross floor area. (10-50.20.020) LRV Chart and Materials Chart included in Elevations Plan submitted for the January 4th, 2024 IDS Meeting satisfy the Architectural Design Standards.
4. Landscaping Standards (10-50.60):
    a. Landscaping standards apply since the proposed addition is more than 35 percent increase in gross floor area and seating capacity. (10-50.60.020)
    b. Plant quantities and placement can be found in Table 10-50.60.050.B – Required Plan Quantities.
    c. A list of approved plant species can be found in Appendix 3 – City of Flagstaff Landscape Plant List.
5. Outdoor Lighting Standards (10-50.70):
    a. Outdoor Lighting permits should be submitted at the same time as Building Permit Submittal. If submitted as a part of a Building permit submittal, the Outdoor lighting application incurs no additional cost to the applicant.
6. Parking Standards (10-50.80):
    a. Number of Motor Vehicle Parking Space are required as follows:
        i. Places of worship – 1 per 60 gsf in main sanctuary. Site Plan meets requirement.
    b. Bicycle parking spaces are required. The greater of two bicycle spaces, or five percent of the required vehicle parking. Proposed bicycle parking meets this requirement. (10-50.80.050)
7. Other
    a. Retaining Walls - 5ft wall shown on Sheet A9.1 meet requirements as found in Section 10-30.60.040.
        i. Retaining walls shall blend with the natural features of the site and shall be constructed with native rock or masonry that conveys a scale, color, and texture similar to that of traditional rock walls, such as split-face block or scored and textured concrete.
        ii. The height of exposed retaining walls and retaining walls visible from the public right-of-way shall be limited to no more than five feet where feasible. Where greater heights are needed to retain cut or fill conditions, a series of terraced or stepped walls shall be used or a building shall be placed to screen the cut slope so it is not visible from public right-of-way.
        iii. The width of a retaining wall terrace must be no less than three feet.

Next Steps:

1. Submit for Civil Plan Review. Please coordinate with David Millis from Development Engineering at David.millis@flagstaffaz.gov
2. Submit for Conditional Use Permit (CUP)

Substantive Engineering: Development Engineering, James Boyer *Approved with Conditions* 01/08/2024
Conditions of Approval:
Civil Plan review and a Grading Permit will be required for this project. Contact David Millis Development Engineer David.millis@flagstaffaz.gov prior to initiating Civil Plan preparation. The requirements for this project will not include all items indicated on the application checklist due to the limited scope of improvements proposed in this project.

Substantive Fire Prevention: Fire Prevention Christopher Jack *Approved with Conditions* 11/21/2023
Underground fire line, automatic sprinklers, and fire alarm system are deferred submittals through the fire department.

Substantive Water Services: Water Services, Jackson Salazar *Approved with Conditions* 11/28/2023
Conditions of Approval:
1. Per City Code SECTION 7-03-001-0011, water meters and service lines shall be sized per AWWA Manual M22 to meet the domestic pressure and flow demands. Sizing will be submitted to the City Utilities Department by the developer or owner for City review at building permit. Caution: this information is needed early in the design process so that corrections are not made after the service lines are installed.

Substantive Public Works: Public Works, Samuel Beckett *Approved with Conditions* 01/04/2024
Conditions of Approval:
In order for the solid waste enclosure to be safely accessible for service, there should be a clearance rectangle of 20' wide by 50' long in front of the enclosure and the centerline of the clearance rectangle should not deviate more than 30 degrees from the vehicle's path of approach. The clearance rectangle should be free of all potential obstacles, including parking spaces.

Substantive Stormwater: Stormwater, Douglas Slover *Approved* 11/28/2023
General Comments
1. Concentrated flows should not be routed across sidewalk. A scupper may be needed at retention basin outlet. COF Stormwater and designer will need to discuss options prior to Civil Submittal

Future Submittal Requirements
1. Provide Drainage Report with Civil Submittal
2. Provide O&M with Civil Submittal
3. Include Erosion Control Plan with Civil Submittal

Substantive Building & Safety: Building Safety, Brian Cook *Approved* 11/15/2023
No Comments

Substantive Parks: Parks, Amy Hagin *Approved* 11/21/2023
No Comments

Substantive Traffic: Traffic, Reid Miller *Approved* 11/21/2023
No Comments

Substantive HPC/Comm Design: Heritage Preservation, Mark Reavis *Approved* 11/21/2023
No Comments

REECE and ROWE
ARCHITECTS

FLAGSTAFF | **PHOENIX**

1254 W. UNIVERSITY, #100 | 4343 E. AVALON DRIVE
FLAGSTAFF, ARIZONA 86001 | PHOENIX, ARIZONA 85018
PHONE: 928-779-4340 | PHONE: 602-957-4343
FAX: 928-779-5087 | FAX: 602-957-7546

February 15, 2024

City of Flagstaff
Community Development Division
211 W. Aspen Avenue
Flagstaff, Arizona 86001

RE: Applicant: Mountain View Church
Project Title: MV Church C.U.P. 2024
Project Narrative for Conditional Use Permit

Planning and Zoning Commission and Community Development:

In representation of Mountain View Church (the "Applicant" or "MV Church") regarding their application for a conditional use permit, and in response to the City of Flagstaff zoning requirement, per **TABLE 10-40.30.030(B)** where a facility exceeding 250 seats in the sanctuary will require an approved Conditional Use Permit (CUP). This narrative is in regards to the Applicant's proposed construction of a new auditorium/assembly facility (the "Project").

MV Church is located at 2150 E. Linda Vista Dr. Flagstaff, AZ 86004. MV Church's site consists of one (1) regular shaped parcel identified as Assessor's Parcel Number 108-01-001V (2.99 Acres ≈ 130,215 SF) The parcel is zoned Rural Residential and is currently functioning as an Assembly place of religious worship.

<u>In response to 10-20.40.050 Section E Findings:</u>

1. The proposed expanded Assembly use seeks to maintain the zoning code's objective for a "place-based" approach, i.e., reinforcing Flagstaff's unique character as described in part 3 of Findings.

2. The conditional use seeks to provide amenities that are in the interest of public health and wellbeing
    a. There is no proposed or anticipated use that would position this Project to contribute to unwanted sensory nuisance(s) to neighbors.
    b. Contents associated with the Project's proposed use, that are within and surrounding the Project itself, are within the bounds of normal use and are not associated with hazardous conditions that would otherwise present life-safety concerns in regards to explosion, contamination, fire, or flood.
    c. There is no anticipated adverse impact to surrounding areas in regards to traffic or volume thereof.

3. The conditional use of the Project is commensurate with surrounding uses as there are 4 additional and distinct properties functioning as places of worship within approximately 750' of the Project's property

REECE and ROWE
ARCHITECTS

FLAGSTAFF | **PHOENIX**

1254 W. UNIVERSITY, #100 | 4343 E. AVALON DRIVE
FLAGSTAFF, ARIZONA 86001 | PHOENIX, ARIZONA 85018
PHONE: 928-779-4340 | PHONE: 602-957-4343
FAX: 928-779-5087 | FAX: 602-957-7546

boundary. The Applicant has successfully submitted Concept Plan and Site Plan phase documentation, as required by the City of Flagstaff Community Development Department, and has received approval in these phases. Not merely as a matter of course, but also in response to the City's zoning code requirements, the design team has taken the following elements into careful consideration. These elements are described below and illustrated in the associated graphics of this submittal.

a. *Access, traffic, and pedestrian, bicycle and vehicular circulation;*
   i. The site provides a pedestrian connection path that traverses the site from an internal public area of the site down to the public way.
   ii. Bicycle parking & racks are positioned visibly from the street-side to signal to cyclists a clear destination for storage.

b. Adequacy of site and open space provisions, including resource protection standards, where applicable;
   i. The two Sanctuary spaces are situated on site to create a common open-air court between which is visually and physically accessible from the south side of the lot.

c. *Noise, light, visual and other pollutants;*
   i. Limiting grading of the site for parking in an effort to minimize the use and requirement of retaining walls.
   ii. The new parking area is located upon the naturally higher elevation on site.

d. *Proposed style and siting of structure(s), and relationship to the surrounding neighborhood;*
   i. The proposed construction is on par with the scale, massing and height of the existing structure on site in respect to it's use.
   ii. Additionally, it is our opinion that new construction should demonstrate some distinction from earlier structures as a matter of maintaining a distinct historical building record.
   iii. The slope and predominant roof-configuration of the new structure relates to the existing.

e. *Landscaping and screening provisions, including additional landscaping in-excess of otherwise applicable minimum requirements;*
   i. To the greatest extent possible the new building has been situated for a BUILDING FORWARD DESIGN, with new parking areas located behind.
   ii. Vegetated screens are proposed along the southern edge of the existing parking area

f. *Impact on public utilities;*
   i. There is no anticipated excessive demand of public utilities from the typical use of this Project.

REECE and ROWE
ARCHITECTS

FLAGSTAFF
1254 W. UNIVERSITY, #100
FLAGSTAFF, ARIZONA 86001
PHONE: 928-779-4340
FAX: 928-779-5087

PHOENIX
4343 E. AVALON DRIVE
PHOENIX, ARIZONA 85018
PHONE: 602-957-4343
FAX: 602-957-7546

g. *Signage and outdoor lighting;*
   i. No new signage proposed
   ii. Lighting shall conform to the City of Flagstaff's Dark Sky Ordinance.

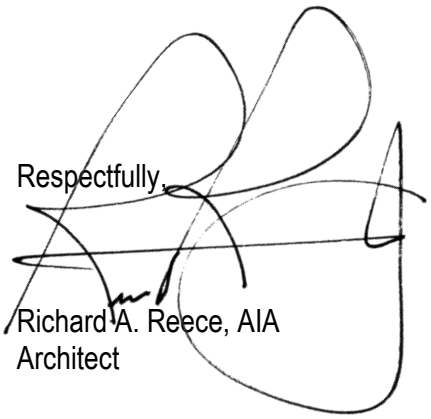
h. *Dedication and development of streets adjoining the property; and*
   i. No dedications proposed.

i. *Impacts on historical, prehistoric or natural resources*
   i. None known.

In conclusion, the design team, in cooperation with the Applicant, have sought to adhere to the greatest extent possible to the City of Flagstaff's Zoning Code and its objectives for the design and construction of this new Project. In our estimation, this new addition and expansion to the existing facility will compliment not just the existing building itself, but also the place in which it resides and be of great benefit those who fill these spaces for generations to come.

Thank you for your consideration in this matter.

Respectfully,



Richard A. Reece, AIA
Architect

2150 E LINDA VISTA DR
FLAGSTAFF AZ 86004
EMAIL: MVFLAGSTAFF@GMAIL.COM
WEBSITE: MVFLAGSTAFF.ORG
(928) 526-4783

Neighborhood Meeting

Date: April 25, 2024 **Time: 5:30 pm**

Call to order
Pastor Nathaniel Bradford will conduct the meeting and opened in prayer. This meeting is to inform you of our intention to expand our building. New building will be a multi purpose but primarily for youth and other areas. (worship services, class rooms, and weddings, etc.)

Present Attendees:
Pastor Nathaniel Bradford, Jim Graves (Leadership), Youth Pastor Derek Williams, Children's Director Savanna Weiss, Worship Pastor Joshua Adams, Audio-Visual Tech Todd Sweetland, Assistant Pastor Zac Matus, & Ty Reece (Architect)

Neighborhood attendees: Larry & Carol Moyzes, Susan Lundberg (Peace Lutheran Church), Rick & Carla Conway, Michael Leverington, Pastor Bill Weiss (Peace Lutheran Church), Michael Terzich, and Lori McElfresh. (signature of attendees attached)

Agenda Includes: Site Plan, Elevations Plan, Floor Plan, & Landscape Plan

Jim Graves
Site Plan - Explains how the existing building and parking area will look. The city requires additional parking behind the new building. We are preserving as many trees as possible and how far the property line will be from the fence for parking—Jim also shared about the ADA requirements. Ty said ADA discouraged going through the parking lot.

Site Plan Questions:
Q: Rick Conway - Property owner north side. Has all of this been surveyed out property line.
A: Jim Graves shares all property lines have been done.

Elevations Plan Questions:
Q: Michael Terzich from Swiss Manor - asked if they were using split face block is more commercial need to put something more pleasing.
A: Jim - Split face block & stucco is the structure of building.
Q: Carla Conway - North exposure of the building what they will see. How wide is that section?
A: Jim - it will further north face. North side visible part and TY shared 74ft.

Q: Carol Moyzes - parking lot is it going to be paved? Current Gravel?
A: Jim Graves said the parking is 30ft away from property line. Jim answers it will be asphalt. Gravel is temporary.
Q: Michael Terzich - what is the purpose of the building since I was late.
A: Pastor Nathaniel is sharing what are plans are for the new building multi purpose youth is growing, worship services, class rooms, and specials occasions.
Q: Michael Terzich - will it be used for the school in future, he has concern about more traffic and noise.
A: Jim & Pastor Nathaniel shared the school needs more spaced but first codes need to be met.
Q: Carla Conway - had meeting with the City planning and zoning asked for files DRV, citations and additions to parking. A lot of recesses at school and do not like to listen to them all day.
Q: Michael Terzich - Concerning zoning if you have plans to expand the school take that into consideration.
A: Jim said no zoning for churches
Q: Rick Conway - Items are close to their fence line and do not want this to continue at the school. If school expanded concerned about traffic on Linda Vista and 4th Street. They have the city out there now with counting meters to see traffic.
A: Pastor Nathaniel state we want to be transparent in everything we do here at MV.
Q: Carla Conway - answer to the question is it your plans to have a school answer no. But you talked to them to use this building. CUP allowed you to do that.
A: Jim said we do not have a CUP yet but this is part of that process and school still up for discussion.
Q: Larry Moyzes - worried about deer
A: Pastor Nathaniel & Jim stated when construction happens they go but come back.

Comment:
Pastor Nathaniel shared if the school would be here they would come up into the parking and should not cause too many issues.

Q: Michael Terzich - What is access to parking lot & any fencing
A: Jim Graves shows out to enter and exit. Jim stated no fencing has been discussed yet.

Q: Michael Terzich what is the structure on north ramp construction on north side & is there stairs on the mid section. Instead of ramp you could do a lift to not impact that area.
A: Jim Graves that is behind the existing building to get up to the ramp and will be some steps.
Ty sharing it is close but there will be a ramp.

Floor Plan
Jim Graves - shares 4 classrooms, 3 offices, restrooms, rest is warming kitchen on lower level and storage.
Q: Carol Moyzes - asking if a gym and capacity
A: Pastor Nathaniel share how they seat in current sanctuary and sharing he would like to seat 250.
Q; Michael Terzich - capacity of the classrooms
A: TY - capacity for new structure is 362 assembly area
Q: Carol Moyzes - asking 2 gyms
A: Jim said no only 1 gym

Landscape:
Jim Graves shares and show how they are adding 35 more new trees and 150 shrubs north side.

Q: Carol Moyzes - asking where the 35 trees will be
A: Jim shares where current are and idea where they will go.
Q: Michael Terzich - does the city require retention pond from runoff.
A: Jim Graves we do have it and showed be closer to sidewalk.
Q: Rick Conway - Is the dark area the greenbelt or buffer zone? When designing the site plan, is the buffer zone or greenbelt maintained, or how long has that been in effect? Asphalt was to be 20 feet then green zone, but is the parking lot storage area at the school a concern?
A: Jim stated that the landscaper buffer and the city would tell them the requirements, and the city would require one year to irrigate it. Ty is confirming the information on the requirements. Jim stated that the property line is 15 feet, and another 15 feet is to the parking lot.

Q: Carla Conway - How busy will the building be during the week.
A: Pastor Derek - Mountain View use of the building Sunday mornings and Wednesday evenings.
A: Pastor Nathaniel & Jim Graves - Most of our activity will be in courtyard in between new and current building.

Q: Carol Moyzes - We are right behind where the basketball area is and they enjoy where the kids are playing love it and the music.
A: Pastor Nathaniel - The pastor thanks them for their comment. The pastor shared that Light Night is a significant activity with over 1600 people, and we have the AZ Rangers that partner with us for traffic and crowd control. As well as VBS. There are no activities in the back of building.

Q: Michael Terzich - Are you loosing the face of current building, and placement of new building.
A: Jim Graves & Ty - Diagram only shows new building with gray part of current building and where youth will play in building.
Q: Michael Leverington - Who is your architect?
A: TY Reece & Row
Q: When is construction going to start
A: Jim Graves - Not in 2024 must have this meeting then planning & zoning
Pastor Nathaniel shared decision will be made by the church once all requirements met to make the final decision once we know cost.
Q: Carol wanted to know if this meeting is required by city
A: Jim Grave - This is required by city to notify our neighbors
Q: Michael Leverington - floor plan in upper right corner how far from fence line to parking there?
A: Jim Graves - TY about 40 ft

Pastor Nathaniel and Jim asked anymore questions. Meeting was closed and thanked everyone for coming.

Meeting closed at 6:30 pm

Neighborhood Meeting Thursday, April 25 @ Mountain View Flagstaff Church
2150 E Linda Vista Dr, Flagstaff AZ 86004 (928) 526-4783

Name	Address
Larry & Carol Moyzis	2211 E Forest Hts Dr
Susan Lundberg -	3430 North 4th Street - Peace Lutheran
Carla + Rick Conway	3603 N. Stone Crest ST Flagstaff AZ 86004
Michael Leverington	3585 N. Wayman St Flagstaff, AZ 86004
Bill Weiss (Peace Lutheran)	5105 E Crestview St Flagstaff
TY REECE (Architect)	3225 N. TINDLE BLVD
Michael Terzich	3868 N. Steves Blvd.

Neighborhood Meeting Thursday, April 25 @ Mountain View Flagstaff Church
2150 E Linda Vista Dr, Flagstaff AZ 86004 (928) 526-4783

Name	Address
Lori McElfresh	2233 E. Forest Heights Dr. 86004

Planning & Zoning Commission 6. A.
Meeting Date: 07/23/2025
From: Alaxandra Pucciarelli, Current Planning Manager

Information

TITLE:
A request for Preliminary Block Plat approval for Canyon del Rio Phase 2 located at 3200 E Butler Avenue within the Single-family Residential (R1) zone and the Medium Density Residential (MR) zone.

STAFF RECOMMENDED ACTION:

Staff recommends the Planning and Zoning Commission, in accordance with the findings presented in this report, forward the Preliminary Block Plat for Canyon del Rio Phase 2 to the City Council with a recommendation of approval with the following conditions:

1. The final plats for each phase shall be in substantial conformance with the preliminary plat including the phasing plan and map (sheets PH01 and PH02) of the preliminary Block Plat of Canyon del Rio Phase 2. Each phase and parcel of the Canyon del Rio plat must meet all requirements independently.
2. The Final Plat for Canyon del Rio Phase 2 must meet the conditions of approval in the IDS approval comment letter dated June 5, 2025, as well as the conditions of approval of both the Traffic Impact Analysis dated April 2, 2025, and the Whetstone Memo dated July 10, 2025.

Executive Summary:
Canyon del Rio is a 1,426 residential dwelling unit development with 225,000 square feet of commercial development on 261 acres. The development is intended to provide a mix of housing types with supporting commercial services and open space areas. The Phase 1 Block Plat was approved on June 1, 2021. The current request is for Phase 2 of Canyon del Rio (tract Z of Phase 1), consisting of four blocks, five tracts, and JW Powell public right-of-way on 119 acres.

Attachments

Staff Report
Application
Preliminary Block Plat Narrative
Preliminary Block Plat
IDS Approval comment Letter
CDR Phase 2 TIA comment Letter
CDR Phase 2 Whetstone Memo comment letter

PLANNING & DEVELOPMENT SERVICES REPORT
PRELIMINARY BLOCK PLAT

PZ-18-00113-06 **DATE: July 14, 2025**

REQUEST:
A request for Preliminary Block Plat approval for Canyon del Rio Phase 2 located at 3200 E Butler Avenue within the Single-family Residential (R1) zone and the Medium Density Residential (MR) zone.

STAFF RECOMMENDATION:
Staff recommends the Planning and Zoning Commission, in accordance with the findings presented in this report, forward the Preliminary Block Plat to the City Council with a recommendation of approval subject to conditions.

PRESENT LAND USE:
The subject site consists of undeveloped land located in central Flagstaff.

PROPOSED LAND USE:
Canyon del Rio is a 1,426 residential dwelling unit development with 225,000 square feet of commercial development on 261 acres. The development is intended to provide a mix of housing types with supporting commercial services and open space areas. The Phase 1 Block Plat was approved on June 1, 2021. The current request is for Phase 2 of Canyon del Rio (tract Z of Phase 1), consisting of four blocks, five tracts, and JW Powell public right-of-way on 119 acres.

NEIGHBORHOOD DEVELOPMENT:
See the attached vicinity map for more information.

North:	Canyon del Rio Phase 1, Highway Commercial (HC) zone; High Density Residential (HR) zone, MR zone, and R1 zone
East:	Vacant land in the Rural Residential (RR) zone, proposed to be developed as a single family subdivision
South:	Vacant land and Single family homes in the Estate Residential (ER) zone and Coconino County jurisdiction
West:	Vacant land in the ER zone owned by Little America Hotel

REQUIRED FINDINGS:
The Planning and Zoning Commission shall find the proposed Preliminary Block Plat meets the requirements of City Code Title 10, Flagstaff Zoning Code; City Code Title 11, General Plans and Subdivisions; and City Code Title 13, Engineering Design Standards and Specifications.

STAFF REVIEW:

I. Project Information

A. Background
Canyon del Rio is a proposed 1,426 residential dwelling unit and 225,000 square foot commercial development located in the city of Flagstaff. The development underwent a concept zoning map amendment that rezoned 88.88 acres of the site from Research and Development (RD) zone to 27.9 acres MR zone, 30 acres HR zone, and 25.9 acres HC zone. The overall development proposes a mixture of high-, medium-, and single-family residential units combined with commercial service and open space on 261 acres. The Phase 1 Block Plat created Tract Z (119.60 acres) for future development. The Phase 2 Preliminary Block Plat proposes to subdivide tract Z into four blocks, five tracts, and public right-of-way for streets.

The site is situated north and west of the Butler Avenue and Fourth Street intersection. The site is heavily treed and is located within the Resource Protection Overlay Zone (RPO). The site has varied topography, including many slopes and small valleys. The most significant is the Rio de Flag drainage that runs across the southeast corner of the development and continues downstream to Foxglenn Park. The proposed Fourth Street alignment that will ultimately connect Butler Avenue and John Wesley Powell Boulevard runs along the eastern boundary. Butler Avenue is the northern boundary of the development; Herald Ranch Road and Little America are located adjacent to the western boundary. An existing aboveground 69 KV transmission line crosses the site in an east-west direction at the south end of the subdivision.

The Phase 1 block plat and the Development Agreement included a Phasing Map and Matrix to both allow flexibility in the order of development as well as ensure that each block was provided with the improvements necessary to support development on the site. Sheets 17 and 18 (PH01 and PH02) of the Phase 2 Preliminary Block Plat describes the public improvements that will be required prior to development of the remaining Phase 2 parcels, building on the Phasing Map and Matrix utilized to develop Phase 1. The phasing plan allows the developer flexibility by not defining a specific order of parcel development; any of the parcels defined by the block plat can be developed when the appropriate public improvements are provided.

The applicant, Canyon del Rio Investors, LLC. (CDRI) is seeking Preliminary Block Plat approval for a 4-block, 5-tract subdivision with rights-of-way for JW Powell Blvd and Harold Ranch Road. Each block will be either subdivided further into the individual lots that will be sold to homeowners or developed using the City's site plan review process. The site plan review process is used for land uses that are allowed by the zoning district. Typically, commercial and high-density rental land uses use the site plan process, and residential ownership products comply with the City's subdivision requirements. Preliminary and final plats will be reviewed and approved for each of the blocks that propose subdivision.

The intensities (commercial) and densities (residential) are provided as part of the "Lot Coverage and Building Information" chart provided on Sheet 1 (CVR), of the Phase 2 Preliminary Block Plat. The chart provides previous and existing zoning districts and anticipated land uses. This chart builds off the chart provided with the Phase 1 Block Plat and the Development Agreement.

B. Type of Plat

This preliminary block plat request is to create blocks, tracts, and right-of-way for the future development of phase 2 of Canyon del Rio. The proposed use of the four proposed blocks is residential. The size and purpose of the tracts are listed under "Summary of Tracts" on Sheet 1 (CVR). Tracts ZZ, A, B, and C are primarily reserved for drainage and the Rio de Flag floodplain. Tract S is intended for future development and an application for a single-family residential subdivision is currently being reviewed by staff.

II. Required Findings: Conformance with City Development Standards

Staff reviewed and approved the Preliminary Plat based on conformance with City Code Title 10, Flagstaff Zoning Code; City Code Title 11, General Plans and Subdivisions; and City Code Title 13, Engineering Design Standards and Specifications.

A. City of Flagstaff Zoning Code (Title 10)

1. **Existing Zoning Regulations**

   The property included in this plat is zoned both R1 and MR. The proposed blocks meet the minimum parcel dimensions stipulated by the Zoning Code. The standards for the individual lots will be determined with the platting of each individual block. Future subdivision plats will create individual lots that will be required to meet the dimensional requirements of city code. These subdivisions will also need to meet the density requirements of either the zoning code or the density identified on the Lot Coverage/Building Information table of the block plat. The parcel-specific densities of the table were set with the approval of the Settlement Agreement made between the developer and the City of Flagstaff in 2013 and amended in 2015.

2. Natural Resources

A Natural Resource Protection Plan (NRPP) was provided as part of this Preliminary Block Plat (sheets 19 and 20 (NRPP1 and 2)). Resources on the site include steep and moderate slopes and a relatively consistent forest across the site. Floodplains are preserved at 100% and Tracts A and B are being dedicated to the City for maintenance of the Rio de Flag Floodplain. The specific resources to be protected have not yet been identified with this Preliminary Block Plat. The preserved resources will be identified with the platting/site plan review of the individual blocks.

A zoning code text amendment exempting public rights-of-way from resource calculation standards was approved by City Council in February 2025. This new code standard may be applied retroactively to the entire Canyon del Rio development per the development agreement.

The Zoning Code protection factors for resources in the MR and R1 districts are as follows:

100% of rural floodplains
70% of slopes between 17% and 24.99%
80% of slopes between 25% and 34.99%
100% of slopes greater than 35%
50% of forest canopy

The Planning Director approved a request to reduce the slope and forest canopy protection factors by 5%.

The Development Agreement discusses the resources and allows the developer to create two "resource banks": one for the residential properties and one for the commercial properties. These banks will allow the application of extra resources from one parcel to another parcel when extra resources are available.

3. Parks, Open Space, Pedestrian, and Bicycle Facilities

Internal to the Canyon del Rio development, approximately 54 acres have been identified for open space. The phase 2 Block Plat shows areas to be dedicated to the City as open space, as well as proposed FUTS trail alignments. The FUTS will be constructed as each parcel develops. Additionally, each parcel will be required to meet the open space and civic space requirements associated with the proposed development.

The JW Powell Blvd roadway section was agreed to as part of the amended Canyon del Rio development agreement. The cross section includes bike lanes and sidewalks. There is also a pedestrian underpass that allows the FUTS to continue under the future JW Powell Blvd.

4. Historic/Cultural Resources

At the time of original development approvals, the City of Flagstaff Heritage Preservation Commission accepted the Cultural Resource Report prepared by a professional meeting Secretary of the Interior Standards on file with the State.

B. City of Flagstaff Subdivision Standards (Title 11)

1. Preliminary Plat

This Preliminary Block Plat was reviewed and approved with conditions by the Inter-Division Staff on June 5, 2025.

2. Subdivision Standards and Regulations

IDS also approved the Preliminary Plat based on conformance with relevant standards in Section 11-20.120: Subdivision Design Standards and Requirements. These design standards require that all lots or parcels created by the subdivision of land shall have their own frontage to a public or private street. Public and private streets shall be designed and improved to public street standards in accordance with city standards. Tract S is dependent on future development of an adjacent parcel for access and utilities.

i. Lot Design

The future subdivision lots shall comply with the code standards for lot design.

ii. Street Design

The proposed street designs meet either Engineering Standards or the standards agreed to in the amended Canyon del Rio development agreement.

iii. Easement Design

The proposed subdivision meets the standards for easement design:

• Easements shall be provided and dedicated where deemed necessary for specific purposes.

• Drainage easements shall substantially follow the line of any existing watercourse that traverses the land.

iv. Block Design

The future subdivisions shall include local roads that create blocks that meet code standards .

3. Minimum Required Subdivision Improvements

The subdivider is required to improve all streets, pedestrian ways, alleys, and easements in the subdivision and adjacent to it as required to serve the subdivision. Staff review of the Preliminary Plat along with the impact analyses discussed in the Engineering Standards section below identified the required improvements in conformance with Section 11-20.130: Minimum Required Subdivision Improvements. The Phasing Map and Matrix identify what improvements are required for each parcel to be developed. These improvements will formally be approved with Civil Engineering Plans review, which will occur after Preliminary Plat approval by City Council.

C. City of Flagstaff Engineering Standards (Title 13)

As part of the Preliminary Plat review, Staff conducted a public systems analysis to confirm preliminary compliance with Engineering Standards. Following Preliminary Plat approval, the applicant shall submit and receive approval for Civil Engineering Plansfor the subdivision prior to review and approval of the Final Plat. Approval of the Civil Engineering Plans will be contingent on the plat meeting City Engineering Standards.

1. Access and Traffic

The Canyon Del Rio Phase 2 and R1 Transportation Impact Analysis (TIA) included analysis of Parcels Q1/Q2, Q3, O/P, R1, R2/R3, and R4/R5. The original approved TIA sealed June 5, 2017 did not include the current design of JW Powell connecting to S Fourth Street. A new TIA was required due to site plan changes, outdated traffic analysis, and to justify a lower roadway classification through Q & O/P. City staff approved the TIA with conditions and required additional analysis to be completed at the intersection of Whetstone and Fourth Street. The results of the approved TIA and the additional memo include off-site improvements detailed in the attached TIA approval with conditions memos. The developer is also required to provide a cost share of the intersection construction at Whetstone and JW Powell. This agreement will be required for civil plan approval. Included in the conditions are the following:

- Based on the TIA recommendations and the poor LOS/delay at the study intersections, right of way shall be reserved for a two-lane roundabout at the intersections of JWP & Whetstone, JWP & Fourth Street, and JWP & Herold Ranch.
- A 52.9% proportional cost share is required for the construction of a single lane roundabout at the intersection of JWP and Whetstone.

2. Water and Wastewater

Civil Design & Engineering, Inc., on behalf of the City of Flagstaff Water Services Division, prepared the Water and Wastewater Impact Analysis (WSIA) dated July 2015. The analysis was based on the demands generated by Canyon del Rio and a residential dwelling cap of 1,715 units and 67.9 acres of commercial development.

Water

The closest source of Zone B water for this site includes a 24-inch waterline within Butler Avenue along the northern property boundary. The existing Zone B waterline is supported by a new secondary water line extending new lines from north of I-40 to Soliere Drive, Fourth Street and to the site. Internally, 12-inch supply mains will be installed under the internal spine loop and with the roadways identified by the Phasing Map and Plan. A 20-inch main will be located under Fourth Street across the frontage of Canyon del Rio; this will ultimately be extended in the new John Wesley Powell Boulevard right-of way. Connection with the individual subdivisions and site plan approvals will extend the water system, providing services to individual structures. Canyon del Rio Investors have agreed through the Development Agreement to provide roughly $667,000 in a cash-in-lieu payment for future water storage, due with the issuance of the 400th-dwelling unit. The developer has also agreed to provide up to two well sites on the Canyon del Rio site if the City identifies that successful production wells warrant further exploration.

Wastewater
Several connections to the sewer are available to this project, given its location at the intersection of Butler Avenue and Fourth Street, and the location of the Rio de Flag Wash and the major sewer interceptor line located within the Wash. The nearest sewer that allows for gravity flow from the Canyon del Rio site is in the Rio de Flag Wash. The existing sewer line is 42-inches in diameter and gravity flows to the east along the river channel.

The Wildcat Hill Wastewater Treatment Plant will treat all sewage collected for Canyon del Rio. The design flows from the Canyon del Rio development indicate an average daily flow increase to the plant of 456,738 gallons per day.

The Water and Sewer Impact Analysis does not identify the need for off-site improvements from the Canyon del Rio development.

3. **Stormwater**
A completed Drainage Impact Analysis (2013) and Preliminary Drainage Report (2025) for Canyon del Rio has been submitted and reviewed by Stormwater Staff. To meet the volume storage requirements of the DIA, CDR will provide LID retention measures, for 1-1/2-inch rainfall. The development will use open space corridors to manage major portions of the stormwater on the project site. A series of retention basins will be constructed in the open space areas across the property. These basins will convey on-site and off-site flows from the project site ultimately outletting to the Rio de Flag channel. As the blocks are developed, each will provide stormwater mitigation on site. The system shown on the preliminary plat focuses on the public street improvements as well as some of the drainage for development on the Phase 1 portion of Canyon del Rio.

Low Impact Development (LID) water quality requirements are required to meet the ½-inch threshold, less than the current 1-inch code requirement. The ½-inch threshold was negotiated as part of the settlement agreement approved in 2013. The water quality aspects of the LID requirements will be met near the discharge points of impervious surface areas.

RECOMMENDATION:
Staff recommends the Planning and Zoning Commission, in accordance with the findings presented in this report, forward the Preliminary Block Plat for Canyon del Rio Phase 2 to the City Council with a recommendation of approval with the following conditions:

1. The final plats for each phase shall be in substantial conformance with the preliminary plat including the phasing plan and map (sheets PH01 and PH02) of the preliminary Block Plat of Canyon del Rio Phase 2. Each phase and parcel of the Canyon del Rio plat must meet all requirements independently.

2. The Final Plat for Canyon del Rio Phase 2 must meet the conditions of approval in the IDS approval comment letter dated June 5, 2025, as well as the conditions of approval of both the Traffic Impact Analysis dated April 2, 2025, and the Whetstone Memo dated July 10, 2025.

ATTACHMENTS:

- Application
- Preliminary Block Plat Narrative
- Preliminary Block Plat
- IDS approval comment letter
- CDR Phase 2 TIA comment letter
- CDR Phase 2 Whetstone Memo comment letter

City of Flagstaff — Community Development Division

211 W. Aspen Ave
Flagstaff, AZ 86001
928-389-1016
www.flagstaff.az.gov
P: (928) 213-2618

Date Received	Application for Subdivision Review	File Number

Property Owner(s) CDR LAND INVESTORS II LLC & CDR Devcorp LTD		**Phone** 602-615-3048
Mailing Address 3605 S. Flagstaff Ranch Road	**City, State, Zip** Flagstaff, AZ. 86005	**Email** cwhiting@capstonehomesaz.com
Applicant(s) CDR Devcorp LTD		**Phone** 602-615-3048
Mailing Address 3605 S. Flagstaff Ranch Road	**City, State, Zip** Flagstaff, AZ. 86004	**Email** cwhiting@capstonehomesaz.com
Project Representative Kayla Fleishman, EIT Charity Lee- Entitlements Manager Capstone Homes		**Phone** 928-389-1016 928-600-3594
Mailing Address 110 West Dale Avenue	**City, State, Zip** Flagstaff, AZ 86001	**Email** clee@capstonehomesaz.com kfleishman@ardurra.com

Requested Review:
- ☐ Development Master Plan
- ☐ Conceptual Plat
- ☐ Preliminary Plat P&Z and Council
- ☐ Modified Subdivision
- ☒ Preliminary Plat
- ☐ Final Plat- Council

Project Name: CDR Phase 2	**Site Address** 3200 E. Butler Ave		**Parcel Number** APN - 106-08-043
Proposed Use Residential	**Existing Use** Undeveloped		**Subdivision, Tract & Lot Number** Tract Z of CDR Phase 1 Final Plat, Inst. No. 3944598
Zoning District MR & R1	**Regional Plan Category** Suburban - Future	**Flood Zone** X & AE	**Size of Site (Sq. ft. or Acres)** 119.6 ac

Property Information:
- ☐ Yes ☒ No Located in an existing Local/National Historic District? (Name: _____)
- ☐ Yes ☒ No Existing structures are over 50 years old at the time of application?
- ☒ Yes ☐ No Subject property is undeveloped land?

Surrounding Uses (Res, Com, Ind)	North	South	East	West
	Residential	Residential	Residential	Residential

Proposed Use:	Number of Lots	Number of Units	Number of acres per use	Building Square Feet
Only within Phase 2	6 lots/tract		119.6 ac	

Please complete a *"Subdivision Review Application"* and provide an initialed *"Application and Information Checklist"* form along with the required number of plans and information as appropriate for a Development Master Plan, Conceptual, Preliminary or Final Plat. **Incomplete submittals will not be scheduled.**

Property Owner Signature: (required)	Date: 2/27/24	Applicant Signature:	Date: 2/27/24

For City Use

Date Filed:	**Case Number (s)**	
P & Z Hearing Date:	**Publication and Posting Date:**	
Council Hearing Date:	**Publication and Posting Date:**	
Fee Receipt Number:	**Amount:**	**Date:**

Action by Planning and Zoning Commission:	Action By City Council:
☐ Approved	☐ Approved
☐ Denied	☐ Denied
☐ Continued	☐ Continued

Staff Assignments	Planning	Engineering	Fire	Public Works/Utilities	Stormwater

PROJECT NARRATIVE
FOR
THE PRELIMINARY BLOCK PLAT
OF CANYON DEL RIO PHASE 2

Located within Section 24, T 21 N, R 7 E, G&SR&M
Flagstaff, Arizona

Prepared by:
Ardurra Group, Inc.
110 West Dale Avenue
Flagstaff, AZ 86001

Prepared for:
CDR Devcorp, Ltd.
3605 South Flagstaff Ranch Road
Flagstaff, AZ 86005

Date: September 5, 2024
Revised: April 7, 2025
Ardurra Project No. 223357

PROJECT NARRATIVE
PRELIMINARY BLOCK PLAT FOR CDR PHASE 2

DESCRIPTION OF THE PROPOSAL

Canyon del Rio (CDR) is a proposed 262-acre mixed use development located at the southwest corner of Butler Avenue and Fourth Street. Within the 262 acres are multiple parcels with various uses including retail, office, multifamily housing, single family housing, school, and church. This narrative is for the Preliminary Block Plat for CDR Phase 2 (Block Plat) which will define where the blocks, tracts, and roads are in Phase 2. CDR Phase 2 consists of the land described as Tract Z, or Coconino County Assessor's Parcel Number 106-08-043, of the Final Block Plat for CDR Phase 1 according to instrument number 3944598. Tract Z is approximately 119.60 acres.

Blocks, Right-of-way, and Tracts are the three main components of the Block Plat. Blocks within Phase 2 include residential zoning where neighborhoods will be built and will be defined by their specific zoning category on the Block Plat. Phase 2 includes the dedication of Right-of-Way (ROW) for J.W. Powell Boulevard (JWP), a minor arterial roadway, and Harold Ranch Road, (Local) which will be labeled and dedicated to the City with the Final Block Plat approval. ROW for JWP through Parcel R1 will be dedicated via Map of Dedication or by the Final Plat for Parcel R1, whichever comes first, and recorded by a separate instrument number. This dedication is to be done concurrently with the Final Block Plat. Tracts will also be identified and will be mainly used for open space, trails, utilities, and storm water detention.

JWP through Canyon del Rio will be developed in accordance with the Phasing Matrix included in the Block Plat once the civil engineering plans and Final Block Plat approvals are complete. Planning for the individual Blocks will follow the City's Final Plat or Site Plan process to finalize their development plans.

Tract ZZ is the remnant piece between Parcel R1 and the JWP ROW, intended for private drainage facilities to be dedicated to the HOA.

Tract A and Tract B is intended to be dedicated to the City of Flagstaff as floodplain and open space.

Tract C is intended to be dedicated to the HOA for the regional detention basin

Parcel Q-1/Q-2 and Tract S are zoned R1-Single Family Residential.

Parcels Q-3, R-2/R-3, and R-4/R-5 are zoned MR – Medium Density Residential.

Overall zoning category sums for Phase 2 of Canyon del Rio will be:

- R1-Single Family Residential: 30.11 acres
- MR-Medium Density Residential: 63.47 acres
- Tracts A B & ZZ: 15.59 acres
- Tracts C: 2.66 acres
- Right-of-Way: 7.77 acres
- Total Area of CDR Phase 2: 119.6 acres

The existing CDR Phase 2 parcel boundary will not be changed and the existing zoning of the property aligns with the proposed blocks.

CONSTRUCTION PHASING

Canyon del Rio will be constructed in phases. Phase 1 has been completed which includes the construction of the "loop" roads and utilities in Peak Point Road from Fourth Street to Crest Stone Road and Whetstone Drive from Fourth Street to Crest Stone Road. The parcels within Phase 1 have utilities and access available and the parcels can be improved.

Phase 2 will include the construction of JWP and its associated improvements like water, sewer, stormwater detention, etc. Once JWP is constructed, most of the Blocks within Phase 2 will have utilities and access available and the parcels can be improved. Based on the Traffic Statement included in this submittal, the traffic generation within the CDR 2 Blocks is not anticipated to require any collector roadways. Each Block will construct the local roadways and utilities within their boundaries to provide access and service.

The Phasing Matrix chart on sheet PH02 of the Block Plat plans shows more detailed information on the CDR phasing and the infrastructure needed to construct each Block.

OPEN SPACE, RESOURCE PROTECTION, AND TRAILS

CDR is planned to contain open space, tree resources, and slope resources in common areas and within the Parcels themselves. Each Parcel within the Property will meet resource requirements which will be consistent with the Development Agreement and determined when the Final Plat or Site Plan of each Parcel is approved.

The Flagstaff Resource Text Amendment has been approved by the City Council. The modification removes the resource protection requirement from all public roads and utilities. Per the Development Agreement it has been applied retroactively to the entire CDR Property. This Natural Resource Protection Plan provides an updated Resource Bank for all of the residential parcels in Canyon Del Rio. The City of Flagstaff has also approved (10/28/2024) a 5%

reduction to the required resource protection. This factor has been included in the resource tables on NRPP2.

The Block Plat calculates the resources available and identifies where the resources would be located and the calculations for parcels that have already been completed or are currently under review. Every Parcel within the Property will be allowed to share the forest resources within CDR to achieve the amount of forest resources that are required of that Parcel. A resource bank will be maintained by CDR, and coordinated with the City, to keep an ongoing accounting of available resources. Each subsequent parcel that is developed will include an updated resources bank and the remaining allowable disturbance.

Ultimately, CDRI has already recorded comprehensive Master Covenants, Conditions and Restrictions ("Master CC&Rs") covering Phase 1. CDR Phase 2 will be annexed into the existing property owner's association and be subject to their existing CC&Rs.

The Master CC&Rs will provide commercially standard guidelines and rules insuring the Property is developed in a uniform manner that complies with the Development Agreement and reflects the Property's unique characteristics, benefiting all Parcel owners. The Master CC&Rs will also provide for the formation of a Master Association that will maintain specified common areas and common area improvements within the Property, together with an assessment mechanism to fund anticipated maintenance, repair and replacement expenses. Individual Parcels within the Property may also be subject to separate recorded covenants, conditions and restrictions (Sub-CC&Rs). The Sub-CC&Rs will establish Parcel specific rules and restrictions, and also provide for the formation of Parcel specific associations – in most cases, Homeowner Associations relating to the Property's single-family and condominium communities.

Open spaces and FUTS trails will transect the project and provide convenient access from the residential parcels throughout the community. "Social" trails are also proposed throughout to provide additional connectivity. The FUTS trail system will meet the intent of connectivity but may be with the design of the Blocks.

The Canyon Del Rio Open Space Tracking table has been included on Sheet DR01. The Development Agreement for Canyon Del Rio required 54 acres of Open Space. This table indicates the open space that has already been dedicated in Phase 1 and the proposed with Phase 2 of Canyon Del Rio. The Open Space indicated on DRO1 is projected meet the requirements of the development agreement. The open space within the Flood plain will be dedicated as Tract A and B to the City with the Phase 2 Final Block plat. The individual blocks will still dedicate the required open space within their boundaries as required by the zoning code. Any remaining open space required by the development agreement will be tracked during the design and platting of the individual Blocks.

PUBLIC SERVICES

Essential public services such as water and wastewater will be provided within JWP with service stubs provided to each parcel. Stormwater is being addressed through the Preliminary Drainage Report and related discussions. The City's Design Standards for solid waste dumpster enclosures and trash truck turning movements will be followed with the future design of each Parcel.

The Phasing Matrix chart on sheet PH02 of the Block Plat plans shows more detailed information on the CDR phasing and the infrastructure needed to construct each Block.

PLOTTED: Jul 07, 2025 - 2:47pm

PRELIMINARY BLOCK PLAT (PHASE 2) OF CANYON DEL RIO FLAGSTAFF, ARIZONA

LOCATED IN THE WESTERN HALF OF SECTION 24, TOWNSHIP 21 NORTH RANGE 7 EAST GILA AND SALT RIVER MERIDIAN, COCONINO COUNTY.

LEGEND

EXISTING		PROPOSED	
	PROPERTY BOUNDARY		RIGHT-OF-WAY
	RIGHT-OF-WAY		LOT LINE
	LOT LINE		EASEMENT
	CENTERLINE		CENTERLINE
	EASEMENT		CONTOUR (MAJOR)
	CONTOUR (MAJOR)		CONTOUR (MINOR)
12"W	CONTOUR (MINOR)	20"W	20" WATER LINE
	12" WATER LINE	8"SS	8" SEWER LINE
8"SS	8" SEWER LINE		STORM DRAIN PIPE
42"SS	42" SEWER LINE		
OHE	OVERHEAD ELECTRIC		PHASE 2
RW	RECLAIM WATER LINE		OPEN SPACE
	STORM DRAIN PIPE		CLEAR VIEW ZONE FOR RIGHT TURN FROM MINOR ROAD
	100-YEAR FLOODPLAIN		CLEAR VIEW ZONE FOR LEFT TURN FROM MINOR ROAD
	PHASE 1 INST. NO. 3944598		CLEAR VIEW ZONE FOR LEFT TURN FROM MAJOR ROAD
	DETENTION BASIN		

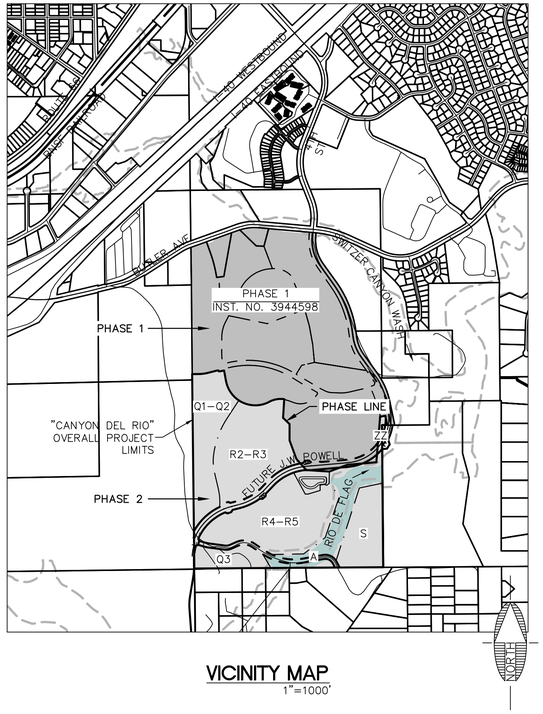
LOT COVERAGE/BUILDING INFORMATION

Parcel	Existing Zoning	Proposed Zoning	Use	Net Acreage	Development Units	0.20 FAR SF
E-1	R&D - Research and Development	HC-Highway Commercial	Office/Retail	6.4	N/A	55,757
E-2	R&D - Research and Development	HC-Highway Commercial	Office/Retail	2.7	N/A	23,522
F	R&D - Research and Development	HC-Highway Commercial	Office/Retail	1.4	N/A	12,197
G	R&D - Research and Development	MR-Medium Density Residential	Attached Residential	9.1	50	N/A
H	R&D - Research and Development	HC-Highway Commercial	Office/Retail	1.8	N/A	15,682
I	R1- Single Family Residential	R1- Single Family Residential	Detached Residential	13.4	50	N/A
J-1	R&D - Research and Development	HR-High Density Residential	Attached Residential/Multi-Family/ Apartments	11.6	240	N/A
J-2	R&D - Research and Development	HR-High Density Residential	Attached Residential/Multi-Family/ Apartments	18.4	432	N/A
K-1	R&D - Research and Development	HC-Highway Commercial	Retail	4.6	N/A	40,075
K-2	R&D - Research and Development	HC-Highway Commercial	Retail	8.8	N/A	76,666
N	R&D - Research and Development	MR-Medium Density Residential	Attached Residential/Duplex Units	7.1	42	N/A
O	R&D - Research and Development	MR-Medium Density Residential	Attached Residential/Church or School	6.1	49	N/A
P	R&D - Research and Development	MR-Medium Density Residential	Attached Residential/Church or School	5.4	40	N/A
Q-1	R1- Single Family Residential	R1- Single Family Residential	Detached Residential	10.2	41	N/A
Q-2	R1- Single Family Residential	R1- Single Family Residential	Detached Residential	3.9	21	N/A
Q-3	MR-Medium Density Residential	MR-Medium Density Residential	Attached Residential/Duplex Units	6	80	N/A
R-1 thru 5	MR-Medium Density Residential	MR-Medium Density Residential	Detached Residential	73.2	367	N/A
S	R1- Single Family Residential	R1- Single Family Residential	Detached Residential	10.6	14	N/A
Total Commercial Acreage					25.7	
Total Residential Units					1426	
Total Acreage ROW					28.6	

Notes:

1. Open space areas are reserved throughout the project consisting of areas between parcels and the floodplain areas within the Rio De Flag. Refer to Sheet 3 for the locations of open space and trails.

2. Floor areas shown on parcels E1/E2, K1/K2, and F are from the site capacity calculations. Ultimate maximum floor areas may be different based on the actual type of development. A 0.20 FAR was used for the impact analyses and also for calculating the building square footages listed in the table.



VICINITY MAP
1"=1000'

SHEET INDEX		
SHT NO.	DWG NO.	TITLE
1	CVR	COVER SHEET
2	EX01	RECORD OF EXISTING BOUNDARY SURVEY
3	PM01	PRELIMINARY PLAT OVERVIEW MAP
4	PP01	PRELIMINARY PLAT
5	XS01	TYPICAL ROADWAY CROSS SECTIONS
6	SC01	OVERVIEW MAP
7	SC02	CLEARVIEW ZONE PLAN (1)
8	SC03	CLEARVIEW ZONE PLAN (2)
9	SC04	CLEARVIEW ZONE PLAN (3)
10	GD01	GRADING PLAN
11	GD02	GRADING - PLAN & PROFILE (1)
12	GD03	GRADING - PLAN & PROFILE (2)
13	GD04	GRADING - PLAN & PROFILE (3)
14	GD05	GRADING - PLAN & PROFILE (4)
15	UT01	UTILITIES PLAN
16	DR01	DRAINAGE AND OPEN SPACE PLAN
17	PH01	PHASING MAP
18	PH02	PHASING MATRIX
19	NRPP1	NATURAL RESOURCE PROTECTION PLAN (1)
20	NRPP2	NATURAL RESOURCE PROTECTION PLAN (2)

SUMMARY OF TRACTS

1. TRACT ZZ (±0.43 AC) IS INTENDED FOR PRIVATE DRAINAGE FACILITIES AND DRAINAGE MAINTENANCE EASEMENT.
2. TRACT A (±1.93 AC) IS INTENDED FOR OPEN SPACE AND THE FEMA FLOODPLAIN TO BE DEDICATED TO THE CITY OF FLAGSTAFF.
3. TRACT B (±12.35 AC) IS INTENDED FOR OPEN SPACE, UTILITIES, FUTURE WELL FACILITIES AND THE FEMA FLOODPLAIN TO BE DEDICATED TO THE CITY OF FLAGSTAFF.
4. TRACT C (±2.66 AC) IS INTENDED FOR DRAINAGE AND TO BE DEDICATED TO THE HOA WITH A DME TO THE CITY OF FLAGSTAFF.
5. TRACT S (±13.04 AC) IS INTENDED FOR PURPOSE OF FUTURE DEVELOPMENT.

FLOODPLAIN DEDICATION

CDR DEVCORP. LTD., AN ARIZONA CORPORATION, AS OWNER, AND CANYON DEL RIO INVESTORS II, LLC, AN ARIZONA LIMITED LIABILITY COMPANY, AS OWNER, HEREBY DEDICATE TO THE CITY OF FLAGSTAFF, IN FEE SIMPLE BUT SUBJECT TO ALL MATTERS OF RECORD, TRACT A AND TRACT B (THE "FLOODPLAIN DEDICATED AREAS"); PROVIDED, HOWEVER, THAT (1) THE FLOODPLAIN DEDICATED AREAS MUST BE USED AND MAINTAINED BY THE CITY OF FLAGSTAFF SOLELY FOR OPEN SPACE PURPOSES AND (2) EACH OWNER HEREBY RESERVES AND EXCEPTS FROM SUCH DEDICATION, FOR THE USE AND BENEFIT OF EACH SUCH OWNER AND ITS SUCCESSORS AND ASSIGNS, EXCLUSIVE EASEMENTS OVER, ACROSS, UNDER, THROUGH, AND UPON THE FLOODPLAIN DEDICATED AREAS FOR THE INSTALLATION, CONSTRUCTION, MAINTENANCE, REPAIR AND OPERATION OF (A) THE FLAGSTAFF URBAN TRAIL SYSTEM AND OTHER TRAILS; (B) WATER, SEWER AND ALL OTHER UTILITY LINES AND FACILITIES OF EVERY TYPE AND NATURE; (C) DRAINAGE AND STORMWATER RETENTION; (D) ROADWAYS; AND (E) SUCH OTHER USES REASONABLY REQUIRED IN CONNECTION WITH THE DEVELOPMENT OF CANYON DEL RIO. AS A CONDITION TO SUCH DEDICATION, THE CITY OF FLAGSTAFF AGREES THAT ALL RESOURCES WITHIN THE FLOODPLAIN DEDICATED AREAS WILL BE COUNTED TOWARDS SATISFACTION OF THE RESOURCES REQUIRED UNDER THE RESOURCE PROTECTION OVERLAY ZONE FOR CANYON DEL RIO.

PROPERTY OWNER:

CANYON DEL RIO INVESTORS II, LLC (CDRI)
3605 S. FLAGSTAFF RANCH RD.
FLAGSTAFF, AZ 86005
CONTACT: ROBERT M. SEMPLE, CPA

CDR DEVCORP LTD
3605 S. FLAGSTAFF RANCH RD.
FLAGSTAFF, AZ 86005
CONTACT: CLINT WHITING

PROJECT DEVELOPER:

CDR DEVCORP LTD
3605 S. FLAGSTAFF RANCH RD.
FLAGSTAFF, AZ 86005
CONTACT: CLINT WHITING

PLAT PREPARER:

SHEPHARD-WESNITZER, INC., AN ARDURRA COMPANY
CONTACT: ALICIA STOFFERS
110 W. DALE AVENUE
FLAGSTAFF, ARIZONA 86001
928-773-0354

PROJECT INFORMATION

SITE ADDRESS: TO BE ASSIGNED (CURRENTLY A PORTION OF THE PARCELS ASSOCIATED WITH THIS PROJECT ARE LOCATED AT 3200 E. BUTLER AVENUE.)

APNS: 106-08-043

CITY ENGINEER

BY: _____ DATE: _____

CITY PUBLIC WORKS DIRECTOR

BY: _____ DATE: _____

CITY WATER SERVICES DIRECTOR

BY: _____ DATE: _____

AUTHORIZATION TO CONSTRUCT:

THE SIGNATURES ABOVE ARE REQUIRED BEFORE THE CONTRACTOR CAN COMMENCE. UNSIGNED, THESE PLANS HAVE NOT BEEN COMPLETED WITH RESPECT TO AGENCY REVIEW AND APPROVAL.

ADEQUATE WATER SUPPLY NOTE:

THE CITY OF FLAGSTAFF PROVIDES WATER [UTILITY] SERVICE PURSUANT TO STATE LAW, AND IS CURRENTLY OPERATING UNDER A DESIGNATION OF ADEQUATE WATER SUPPLY GRANTED BY THE ARIZONA DEPARTMENT OF WATER RESOURCES, APPLICATION NO. 41-900002.0002.

ALTICE USA

JASON QUINLAN (BY LETTER) 05/08/2025
BY: DATE:

ARIZONA PUBLIC SERVICE

CHAD BROOKS (BY LETTER) 05/03/2024
BY: DATE:

UNISOURCE ENERGY SERVICES

MARTIN CONBOY (BY LETTER) 05/03/2024
BY: DATE:

CENTURYLINK

BY: DATE:

UTILITY CONFLICT

UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND WERE COMPILED FROM RECORD DRAWINGS, SURVEY, AND CONSTRUCTION PLANS FURNISHED BY OTHERS. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR DETERMINING THE ACTUAL LOCATIONS OF ALL UNDERGROUND LINES THAT MAY AFFECT WORK PRIOR TO CONSTRUCTION.

ACTION IS BEING TAKEN TO OBTAIN RESPONSES FROM THE FRANCHISE UTILITY COMPANIES IN REGARDS TO THE POSSIBLE UTILITY CONFLICTS.

RESOURCE PRESERVATION

THE PROJECT DOES FALL WITHIN THE CITY OF FLAGSTAFF RESOURCE PROTECTION OVERLAY ZONE. REFER TO THE PRELIMINARY NATURAL RESOURCE PROTECTION PLAN FOR MORE INFORMATION ON THE FOREST RESOURCES AVAILABLE ON THIS PROJECT SITE. THE NARRATIVE CONTAINS THE CROSS-CREDITING DESCRIPTION. A MASTER ASSOCIATION WILL BE CREATED TO ADMINISTER THIS.

FEMA DESIGNATION

THE PROJECT AREA IS WITHIN ZONES AE AND X DESIGNATED BY FEMA FIRM'S 04005C-6828G. A GOOD PORTION OF THE PROJECT AREA HAS BEEN DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THEREFORE, NO BUILDING WILL OCCUR IN A FLOODPLAIN. A SMALL PORTION OF THE PROJECT AREA HAS BEEN DETERMINED TO BE WITHIN THE 100-YR FLOODPLAIN.

WATER AND SEWER IMPACT ANALYSIS

THE PRELIMINARY PLAT IS IN COMPLIANCE WITH THE RECOMMENDATIONS SET FORTH IN THE PUBLIC W.S.I.A. PREPARED BY THE CITY OF FLAGSTAFF UTILITIES DEPARTMENT DATED JULY 29, 2015.

EARTHWORK SUMMARY

EXCAVATION: 59,163 C.Y.
EMBANKMENT: 108,467 C.Y.

THESE PRELIMINARY EARTHWORK VALUES ARE FOR THE CONSTRUCTION OF J.W. POWELL BOULEVARD AND REGIONAL DETENTION BASIN.

SOURCE OF PROJECT INFORMATION

BOUNDARY BASED ON CDR PHASE 1 FINAL PLAT PER INSTRUMNET NO. 394459.

TOPOGRAPHIC INFORMATION ACCORDING TO AN ALTA SURVEY PREPARED BY SHEPHARD-WESNITZER, INC. IN MAY 2003, INSTRUMENT NUMBER 3203783, OFFICIAL RECORDS OF COCONINO COUNTY, ARIZONA.

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 MERIDAN, 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.

LEGAL DESCRIPTIONS

ASSESSOR'S PARCEL NUMBER 106-08-043 (TRACT Z) ACCORDING TO INSTRUMENT NUMBER 3944598, OFFICIAL RECORDS OF COCONINO COUNTY, ARIZONA.

CERTIFICATE OF LAND SURVEYOR

I HEREBY STATE THAT THE SURVEY SHOWN HEREON WAS DONE UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

_____
Aaron D. Borling, RLS 48756

Registered Professional Engineer
CERTIFICATE NO.
49953
ALICIA ANNE STOFFERS
ARIZONA U.S.A.

FLAGSTAFF ARIZONA

CDR PHASE II - PRELIMINARY BLOCK PLAT

COVER SHEET

JOB NO: 223357
DATE: JUL 25
SCALE: AS SHOWN
DRAWN: KMF/BH
DESIGN: KMF/BH
CHECKED: SC/DEC/ADB

REVISIONS

NO.	DESCRIPTION	DATE	BY

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 dig in Arizona
ARIZONA811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

DRAWING NO.
CVR

SHT NO. 1 OF 20

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - COVER.DWG BHONAHE

PLOTTED: Jul 07, 2025 - 2:47pm

NORTH

SCALE 1" : 200'
0 100 200

106-08-002T
FLAGSTAFF UNIFIED SCHOOL DISTRICT #1
(NOT A PART)

SINAGUA HEIGHTS SUBDIVISION

106-08-001D
COCONINO HUMANE ASSOC. INC
(NOT A PART)

CWE 1/64

S 0°30'11" E 662.44'

REBAR STAMPED "LS 16630 FLAGSTAFF ENGINEERING"
NWSE 1/64

106-08-003F
BURCH 6 LLC
(NOT A PART)

N 89°32'15" E 660.12'

S 89°36'21" W 660.26'

106-08-005G
CANYON CHAPEL INC
(NOT A PART)

106-08-001C
CITY OF FLAGSTAFF
(NOT A PART)

106-11-042
CITY OF FLAGSTAFF
(NOT A PART)

2 1/2" ALUMINUM CAP STAMPED
"CITY OF FLAGSTAFF LS 16630" #1100
NORTHING= 52318.51
EASTING= 44745.93
ELEV= 6880.14

3/4" OPEN PIPE
C1/4 S24

S 0°29'59" E 2644.85'

S 0°29'29" E 1986.62'

BLM BRASS CAP
1965

1/4 S13
S24

1/4 S24
S25

CNS 1/64

106-08-005G
CANYON CHAPEL INC
(NOT A PART)

TRACT Y
0.73 ACRES

75' ROW

106-08-005J
FLAGSTAFF ELKWOOD PARTNERS LP
(NOT A PART)

106-08-000
STATE LAND
(NOT A PART)

102' ROW

FOURTH STREET

106-07-033C
PEACE MATTHEW
(NOT A PART)

TRACT X
0.94 ACRES

BLOCK K2
8.80 ACRES

BLOCK N
7.11 ACRES

BLOCK R1
27.07 ACRES

FOURTH STREET

BLOCK E2
2.64 ACRES

BLOCK K1
3.40 ACRES

70' ROW

WHETSTONE DRIVE

106-08-005K
CLIPPER PINEHURST FLAGSTAFF LLC
(NOT A PART)

BLOCK E1
6.35 ACRES

PHASE 1

PHASE 2

CANYON DEL RIO PHASE II

TRACT Z
119.60 ACRES

BLOCK O
6.49 ACRES

S 89°34'20" W 2655.62'

BUTLER AVENUE

BLOCK J1
9.85 ACRES

BLOCK J2
20.2 ACRES

S 89°35'39" W 2638.48'

106-07-012A
KIMBRELL PAUL F
& TERRY M JT
(NOT A PART)

106-07-001C
RINALDI JAMES
(NOT A PART)

BLOCK F
1.44 ACRES

70' ROW

CREST STONE ROAD

BLOCK G
PER INST. 3957199
9.03 ACRES

BLOCK P
5.40 ACRES

106-07-010
O'NEILL COLLEEN
(NOT A PART)

TRACT W
1.78 ACRES

70' ROW

PEAK POINT ROAD

106-07-011B
SCHMITT FAMILY TRUST DTD
(NOT A PART)

106-08-005H
CSL FLAGSTAFF 2019 LLC
(NOT A PART)

70' ROW

BLOCK I
PER INST. 3957200
13.31 ACRES

2x2 SQUARE ROD W/ PUNCH MARK
COF CP#1922200

N 0°43'05" W 2645.53'

REBAR W/1.5" ALUMINUM CAP STAMPED "LS 4321"

N 0°38'39" W 2646.63'

BLM BRASS CAP 1965
COF CP#2122101

14 13
23 24

23 24
26 25

1/4 S23
S24

106-04-070
CITY OF FLAGSTAFF
(NOT A PART)

106-04-069
WOODSHIRE ON BUTLER LLC
(NOT A PART)

106-10-002
LITTLE AMERICA HOTELS & RESORTS INC
(NOT A PART)

106-04-006B
HORSESHOE REALTY FLAGSTAFF LLC
(NOT A PART)

106-04-005B
LITTLE AMERICA HOTEL & RESORTS INC
(NOT A PART)

106-09-002
LITTLE AMERICA HOTELS & RESORTS INC
(NOT A PART)

106-04-007E
CITY OF FLAGSTAFF
(NOT A PART)

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 MERIDAN, 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 (R1).

Registered Professional Engineer
CERTIFICATE NO.
49953
ALICIA ANNE STOFFERS
Date Signed: 7/07/25
ARIZONA, U.S.A.

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - RECORD SURVEY.DWG BHONAME

RECORD OF EXISTING BOUNDARY SURVEY

CDR PHASE II - PRELIMINARY BLOCK PLAT

FLAGSTAFF
ARIZONA

JOB NO:	223357
DATE:	JUL 25
SCALE:	AS SHOWN
DRAWN:	BH
DESIGN:	BH
CHECKED:	AOB

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swaz.com

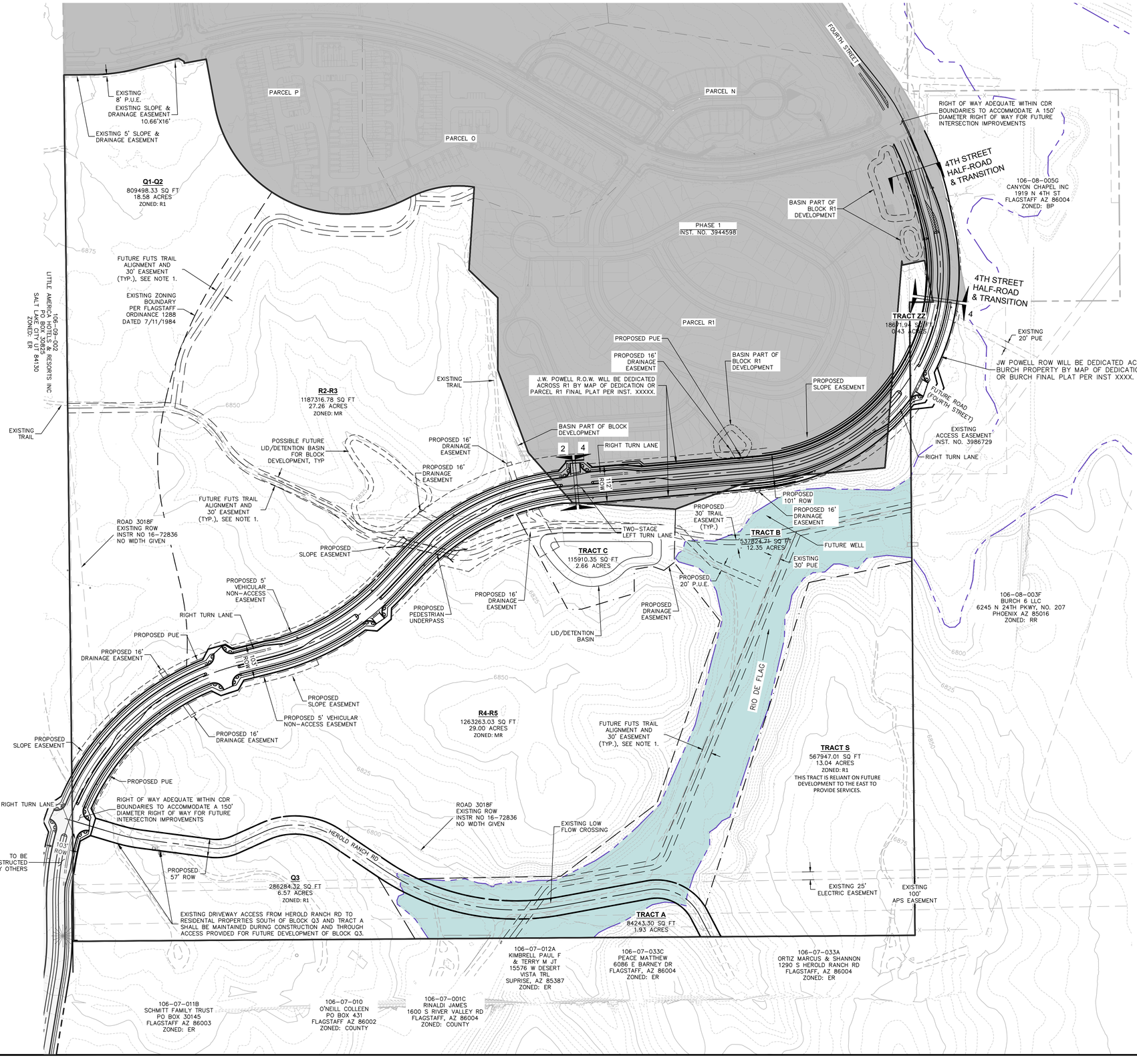
Shephard Wesnitzer, Inc.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

Call at least two full working days before you plan to excavate.
ARIZONA811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

DRAWING NO.
EX01

SHT NO.	OF
2	20



SCALE 1" : 150'
0 75 150

NOTES:
1. THE FUTS TRAIL SYSTEM WILL MEET THE INTENT OF THE CONNECTIVITY BUT THE TRAIL ALIGNMENT IS SUBJECT TO CHANGE AS THE PARCELS ARE DEVELOPED.

FLAGSTAFF ARIZONA

CDR PHASE II – PRELIMINARY BLOCK PLAT

PRELIMINARY PLAT OVERVIEW MAP

JOB NO:	223357
DATE:	JUL 25
SCALE:	AS SHOWN
DRAWN:	KMF
DESIGN:	KMF
CHECKED:	SCJ/DEC

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0334
928.774.6934 fax
www.swiaz.com

SWI
Shephard Wesnitzer, Inc.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

Call at least two full working days before you plan to excavate
ARIZONA811
BlueStake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

DRAWING NO.
PM01

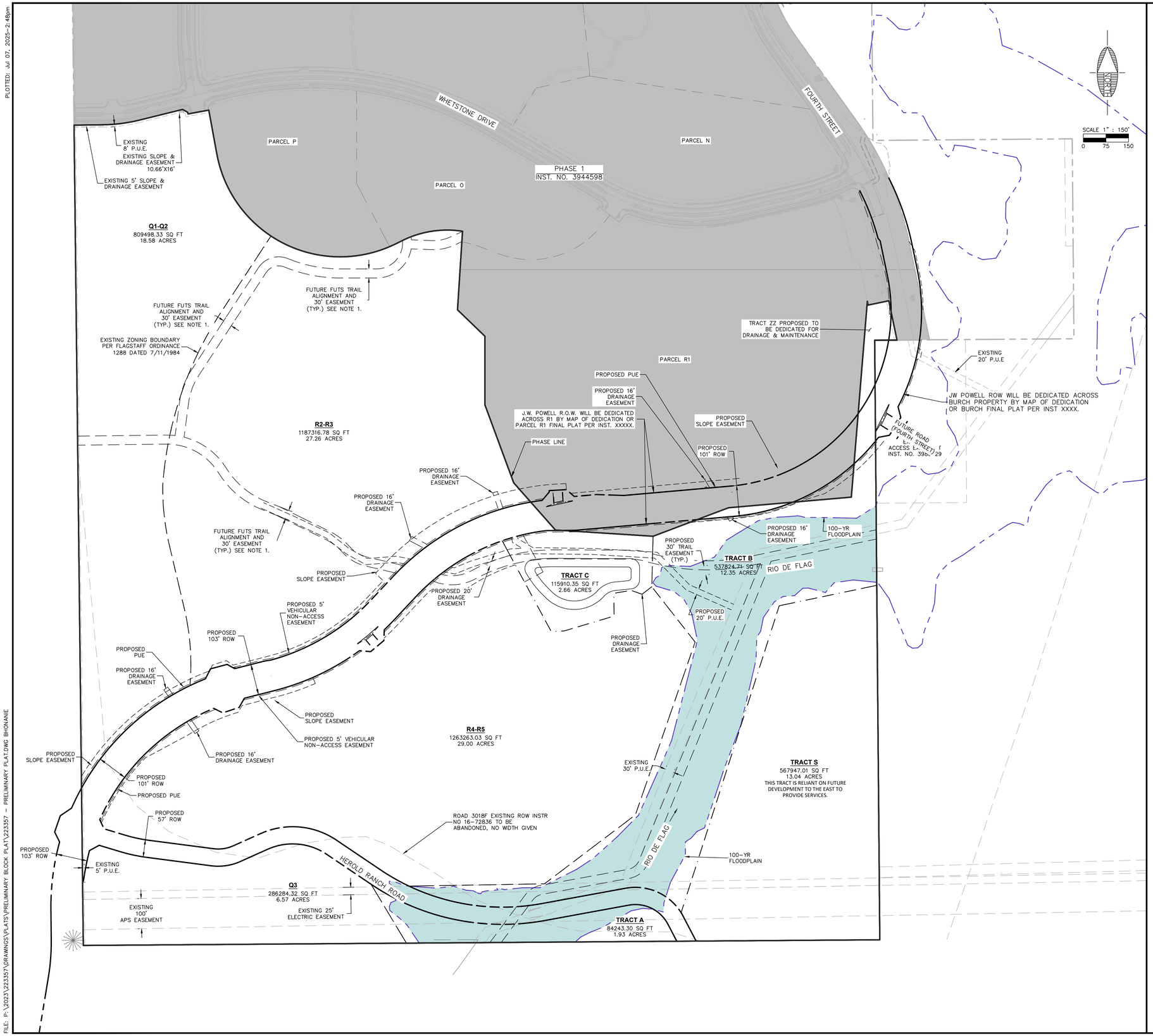
SHT NO.	OF
3	20

Registered Professional Engineer
CERTIFICATE NO.
49953
ALICIA ANNE STOFFERS
Date Signed 7/07/25
ARIZONA, U.S.A.

PLOTTED: Jul 07, 2025 - 2:48pm

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - PRELIMINARY PLAT.DWG BHONAME

PLOTTED: Jul 07, 2025 - 2:48pm



FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - PRELIMINARY PLAT.DWG BHONANIE

FLAGSTAFF
ARIZONA

CDR PHASE II - PRELIMINARY BLOCK PLAT

PRELIMINARY PLAT

JOB NO:	223357
DATE:	JUL 25
SCALE:	AS SHOWN
DRAWN:	KMF
DESIGN:	KMF
CHECKED:	SCI/CEC

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0334
928.774.8934 fax
www.swiaz.com

Shephard Wesnitzer, Inc.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

Call at least two full working days before you dig in Arizona
ARIZONA811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

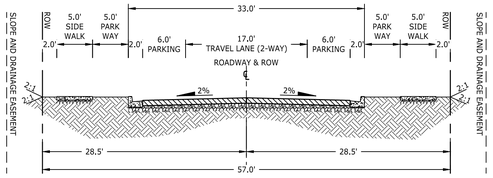
DRAWING NO.
PP01

SHT NO. 4 OF 20

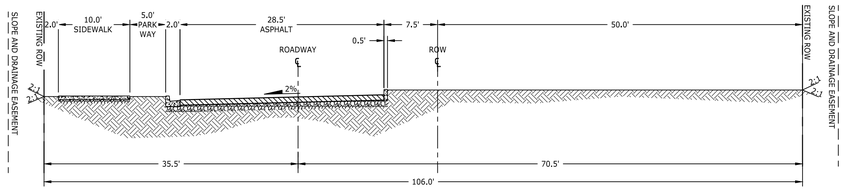
Registered Professional Engineer
CERTIFICATE NO.
49953
ALICIA ANNE STOFFERS
Date Signed: 7/07/25
ARIZONA, USA

PLOTTED: Jul 07, 2025 - 2:48pm

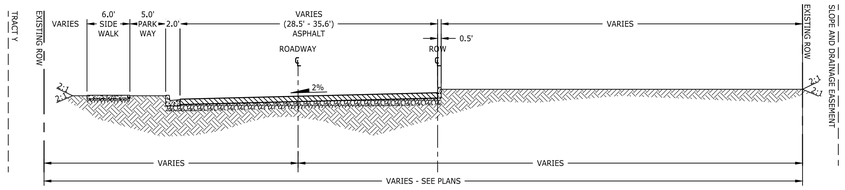
ROADWAY SECTIONS PER DA DATED 12/02/2024



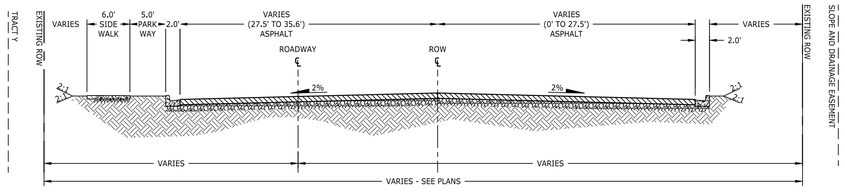
RESIDENTIAL LOCAL (COF 10-09-038)



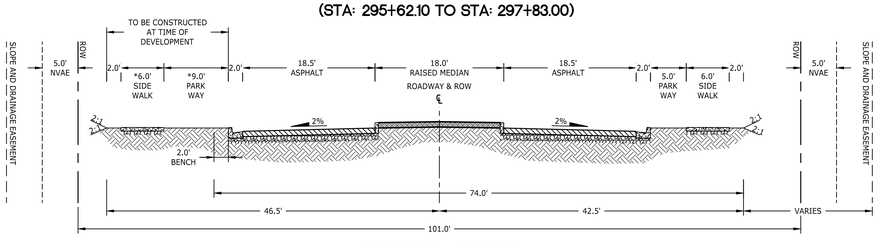
4TH STREET - EXISITNG CONDITION



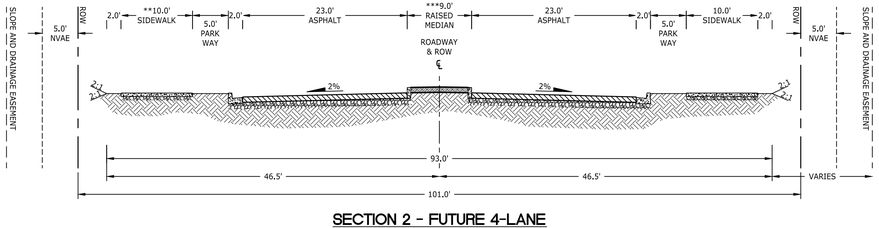
4TH STREET - TRANSITION
(STA: 297+83.00 TO STA: 298+39.89)



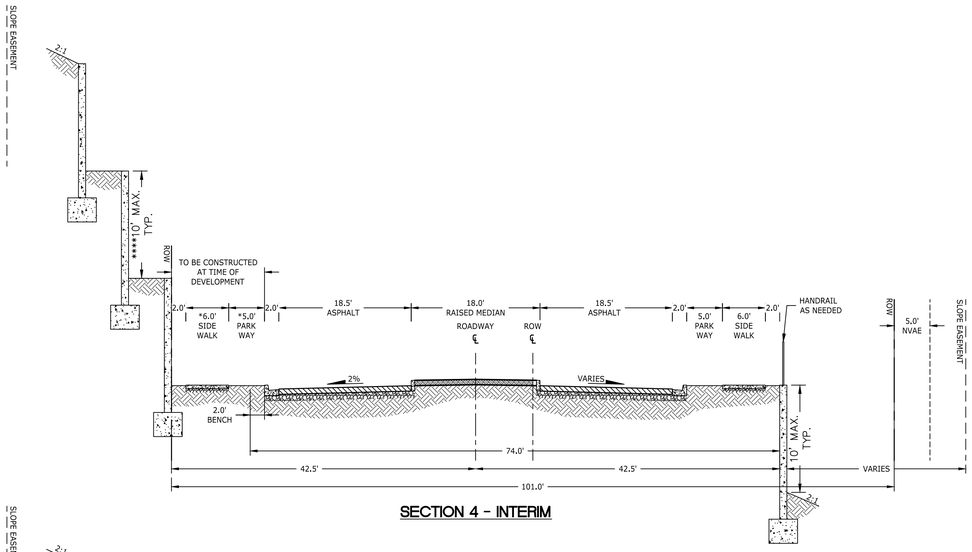
4TH STREET - TRANSITION
(STA: 295+62.10 TO STA: 297+83.00)



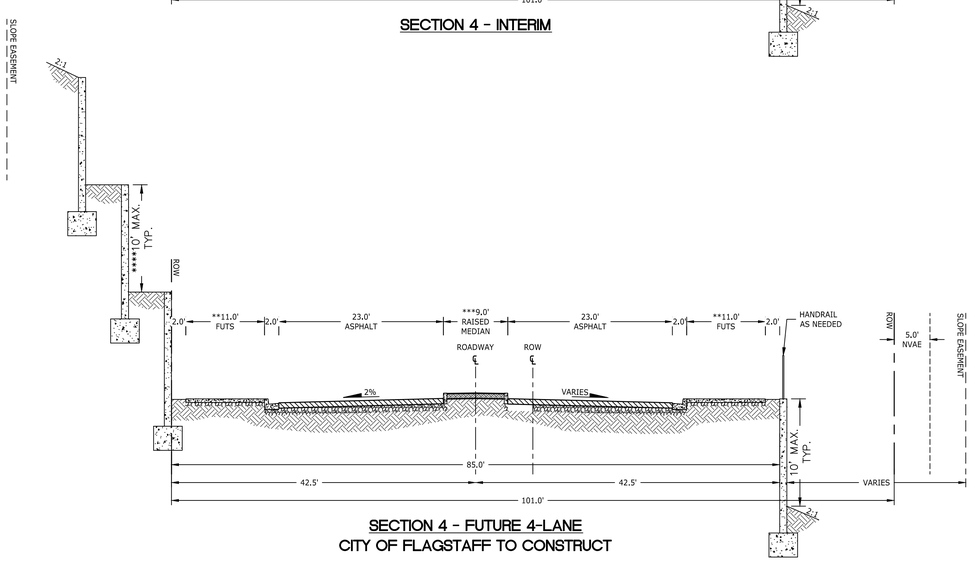
SECTION 2 - INTERIM



SECTION 2 - FUTURE 4-LANE
CITY OF FLAGSTAFF TO CONSTRUCT



SECTION 4 - INTERIM



SECTION 4 - FUTURE 4-LANE
CITY OF FLAGSTAFF TO CONSTRUCT

* SIDEWALK & PARKWAY TO BE BUILT BY ADJACENT DEVELOPMENTS.

** WHEN THE ROADWAY IS CONVERTED TO A 4-LANE CROSS SECTION, THE BIKE LANE WILL COME OFF THE ROADWAY AND A FUTS WILL NEED TO BE CONSTRUCTED.

*** ALLOWS FOR THE 9' RAISED MEDIAN, OR WHERE LEFT TURNS ARE NEEDED, LIP OF GUTTER TO LIP OF GUTTER WILL BE 11' - 11' - 11' - 11' - 11', WITH NO RAISED MEDIAN.

**** A VERTICAL ROCK SLOPE MAY BE UTILIZED AT THE CUT WALLS WITH GEOTECHNICAL CERTIFICATION.

Registered Professional Engineer
CERTIFICATE NO. 49953
ALICIA ANNE STOFFERS
Date Signed: 7/07/25
ARIZONA, U.S.A.

FLAGSTAFF ARIZONA

CDR PHASE II - PRELIMINARY BLOCK PLAT

TYPICAL ROADWAY CROSS SECTIONS

JOB NO: 223357
DATE: JUL 25
SCALE: AS SHOWN
DRAWN: KMF
DESIGN: KMF
CHECKED: SCI/CEC

REVISIONS

NO.	DESCRIPTION	DATE	BY

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0334
928.774.8934 fax
www.swiaz.com

Shephard Wesnitzer, Inc.

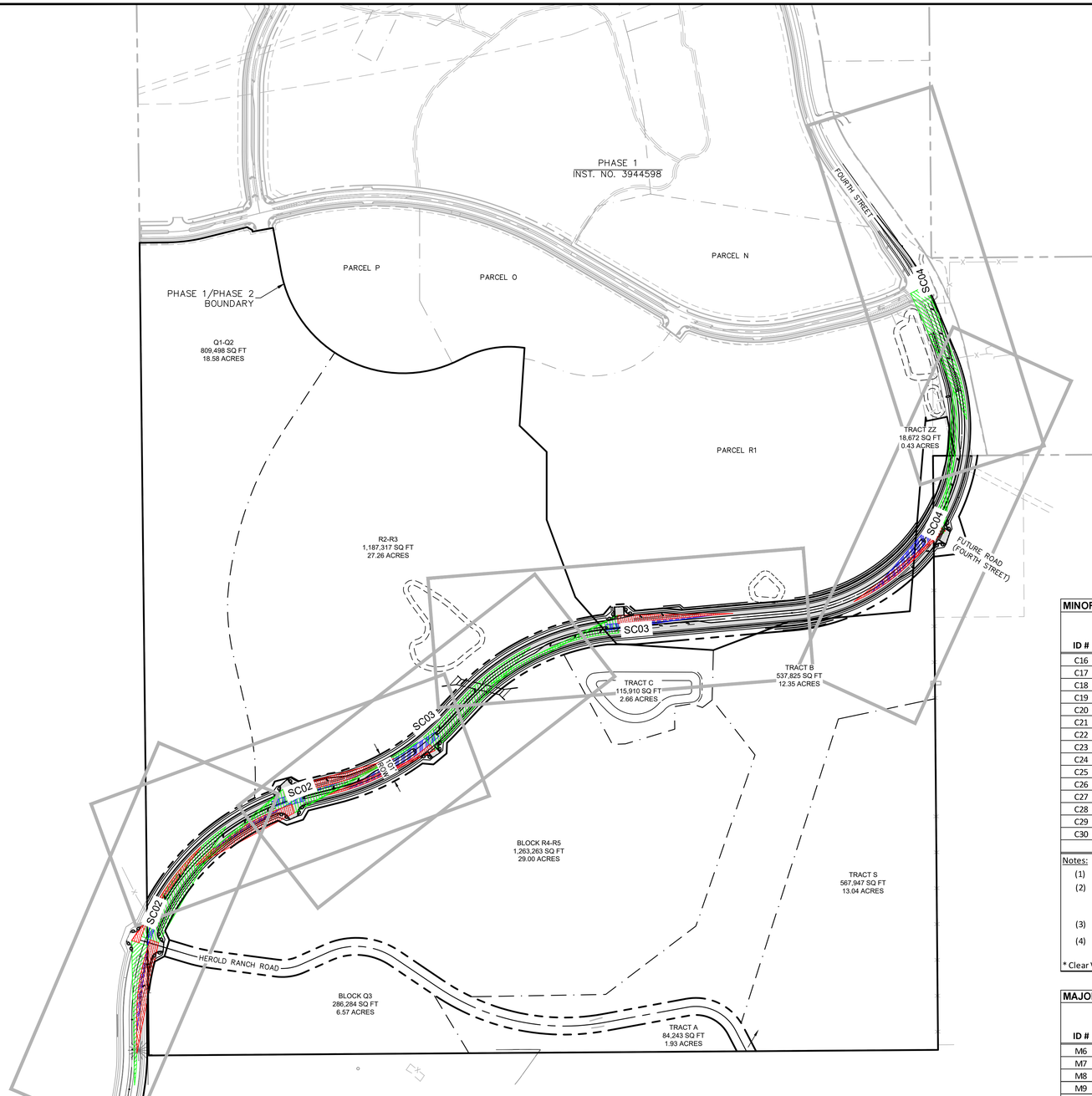
Call at least two full working days before you begin excavation
ARIZONA811 BlueStake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

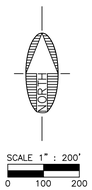
DRAWING NO.
XS01

SHT NO. 5 OF 20

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - TYPICAL ROADWAY CROSS SECTIONS.DWG BHONANIE

PLOTTED: Jul 07, 2025 - 2:49pm





MINOR ROAD CLEAR VIEW ZONE CALCULATIONS

ID #	MINOR ROAD (STOP CONTROL)	MAJOR ROAD	MANEUVER DIRECTION	MAJOR ROAD 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)
C16	Whetstone	J.W. Powell Boulevard	Left	40	7.5	**Yes**	**Yes**	**2**	8	470	305
C17	Burch Access Road	J.W. Powell Boulevard	Left	40	7.5	Yes	Yes	2	8	470	305
C18	Burch Access Road	J.W. Powell Boulevard	Right	40	6.5	Yes	No	1	6.5	385	305
C19	Proposed Driveway R1	J.W. Powell Boulevard	Left	40	7.5	Yes	Yes	2	8.0	470	305
C20	Proposed Driveway R1	J.W. Powell Boulevard	Right	40	6.5	Yes	No	1	6.5	385	305
C21	Proposed Driveway R4-R5	J.W. Powell Boulevard	Left	40	7.5	Yes	Yes	2	8	470	305
C22	Proposed Driveway R4-R5	J.W. Powell Boulevard	Right	40	6.5	Yes	No	1	6.5	385	305
C23	Proposed Driveway R4-R5	J.W. Powell Boulevard	Left	40	7.5	Yes	Yes	2	8	470	305
C24	Proposed Driveway R4-R5	J.W. Powell Boulevard	Right	40	6.5	Yes	No	1	6.5	385	305
C25	Proposed Driveway R2-R3	J.W. Powell Boulevard	Left	40	7.5	Yes	Yes	2	8	470	305
C26	Proposed Driveway R2-R3	J.W. Powell Boulevard	Right	40	6.5	Yes	No	1	6.5	385	305
C27	Herold Access Road S	J.W. Powell Boulevard	Left	40	7.5	Yes	Yes	2	8	470	305
C28	Herold Access Road S	J.W. Powell Boulevard	Right	40	6.5	Yes	No	1	6.5	385	305
C29	Herold Access Road N	J.W. Powell Boulevard	Left	40	7.5	Yes	Yes	2	8	470	305
C30	Herold Access Road N	J.W. Powell Boulevard	Right	40	6.5	Yes	No	1	6.5	385	305

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. For left turns onto roadways with more than two lanes, consult AASHTO Geometric Design of Highways and Streets for additional time gap information.

* Clear View Zones #D1 and #D16 do not encroach into the adjacent properties at full build-out of 4th Street and are shown for reference only for the interim condition.

MAJOR ROAD CLEAR VIEW ZONE CALCULATIONS

ID #	MAJOR ROAD	MINOR ROAD (STOP CONTROL)	MANEUVER DIRECTION	MAJOR ROAD 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)
M6	J.W. Powell Boulevard	Burch Access Road	Left	40	5.5	Yes	Yes	2	6.0	355	305
M7	J.W. Powell Boulevard	Proposed Driveway R1	Left	40	5.5	Yes	yes	2	6.0	355	305
M8	J.W. Powell Boulevard	Proposed Driveway R4-R5	Left	40	5.5	Yes	yes	2	6.0	355	305
M9	J.W. Powell Boulevard	Proposed Driveway R4-R5	Left	40	5.5	Yes	yes	2	6.0	355	305
M10	J.W. Powell Boulevard	Proposed Driveway R2-R3	Left	40	5.5	Yes	yes	2	6.0	355	305
M11	J.W. Powell Boulevard	Herold Access Rd S	Left	40	5.5	Yes	yes	2	6.0	355	306

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 9-66 and 9-67. 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.

Registered Professional Engineer
CERTIFICATE NO.
49953
ALICIA ANNE STOFFERS
ARIZONA U.S.A.
Date signed: 7/07/25

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - CLEAR VIEW ZONES PLANS.DWG BHONANIE

CDR PHASE II – PRELIMINARY BLOCK PLAT
FLAGSTAFF ARIZONA

OVERVIEW MAP

JOB NO: 223357
DATE: JUL 25
SCALE: AS SHOWN
DRAWN: KMF
DESIGN: KMF
CHECKED: SCI/CEC

NO.	DESCRIPTION	DATE	BY

REVISIONS

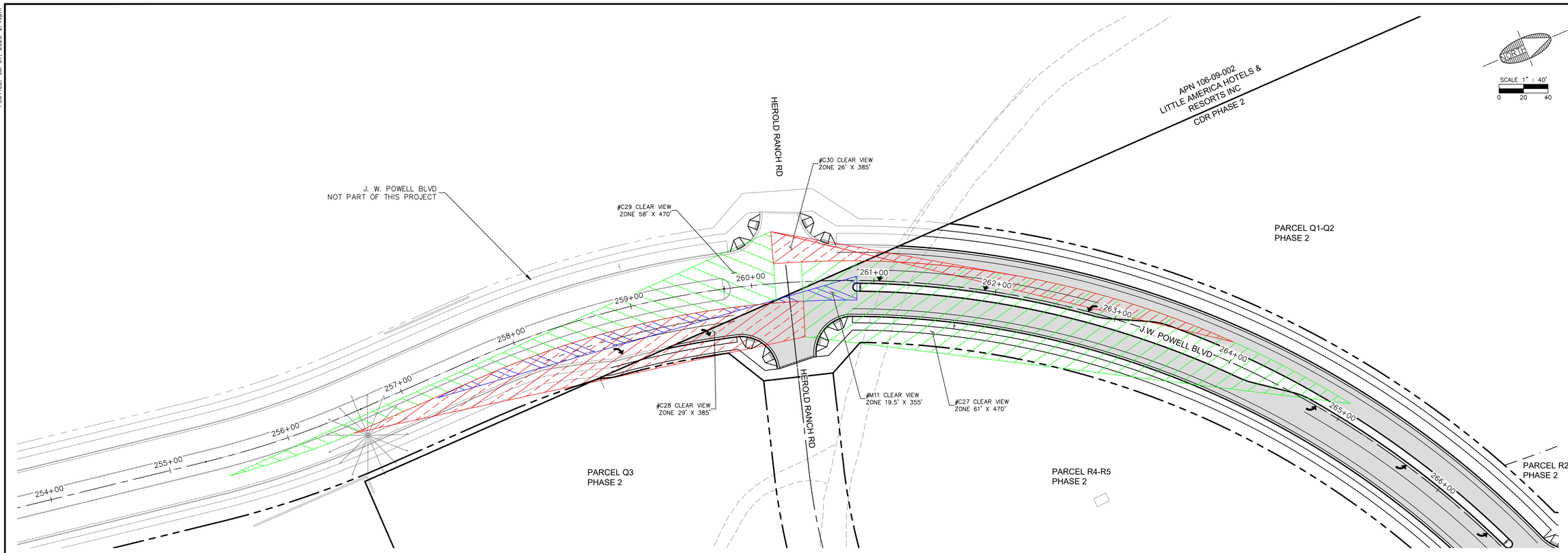
Shephard Wesnitzer, Inc.
75 Kaliof Place
Sedona, AZ 86336
928.282.1061
928.282.2058 fax
www.swiaz.com

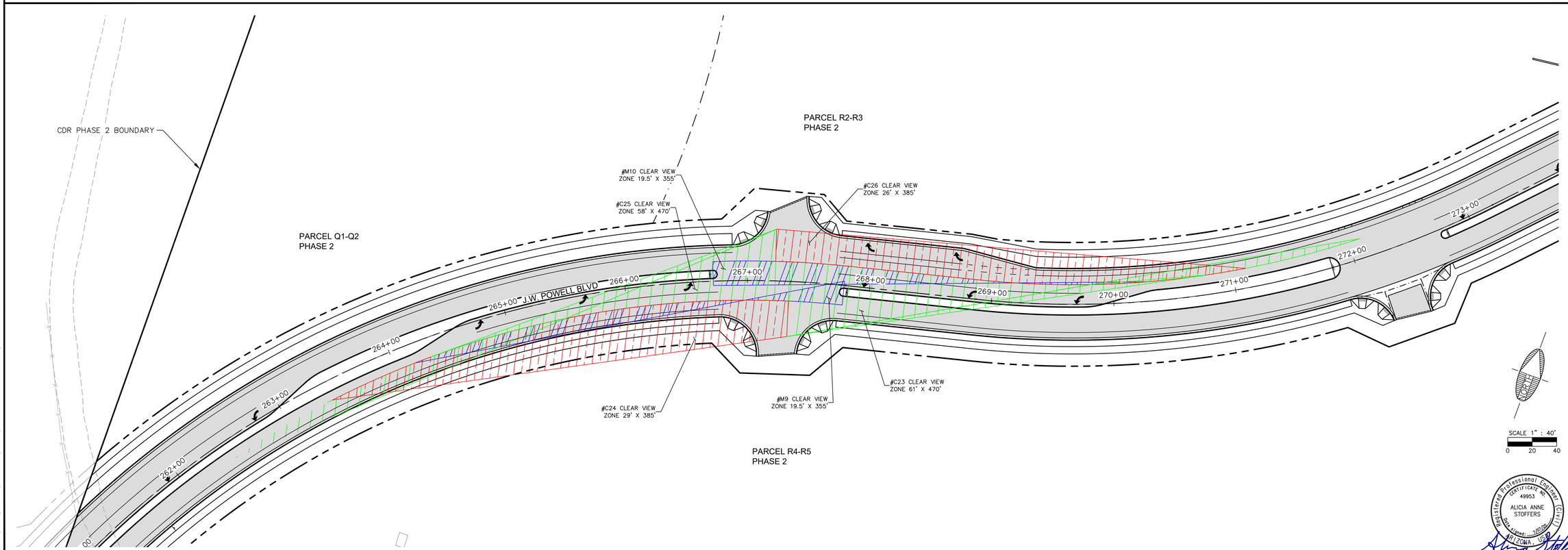
Call at least two full working days before you plan to excavate
ARIZONA811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

DRAWING NO.
SC01

SHT NO. 6 OF 20

PLOTTED: Jul 07, 2025 - 2:49pm





FLAGSTAFF
ARIZONA

CDR PHASE II – PRELIMINARY BLOCK PLAT

CLEARVIEW ZONE PLAN (1)

JOB NO:	223357
DATE:	JUL 25
SCALE:	AS SHOWN
DRAWN:	KMF
DESIGN:	KMF
CHECKED:	SCI/DEC

75 Kaibif Place
Sedona, AZ 86336
928.282.1061
928.282.2058 fax
www.swiaz.com

Shephard Wesnitzer, Inc.

REVISIONS

NO.	DESCRIPTION	DATE	BY

Call at least two full working days before you dig, it's the law!
ARIZONA811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

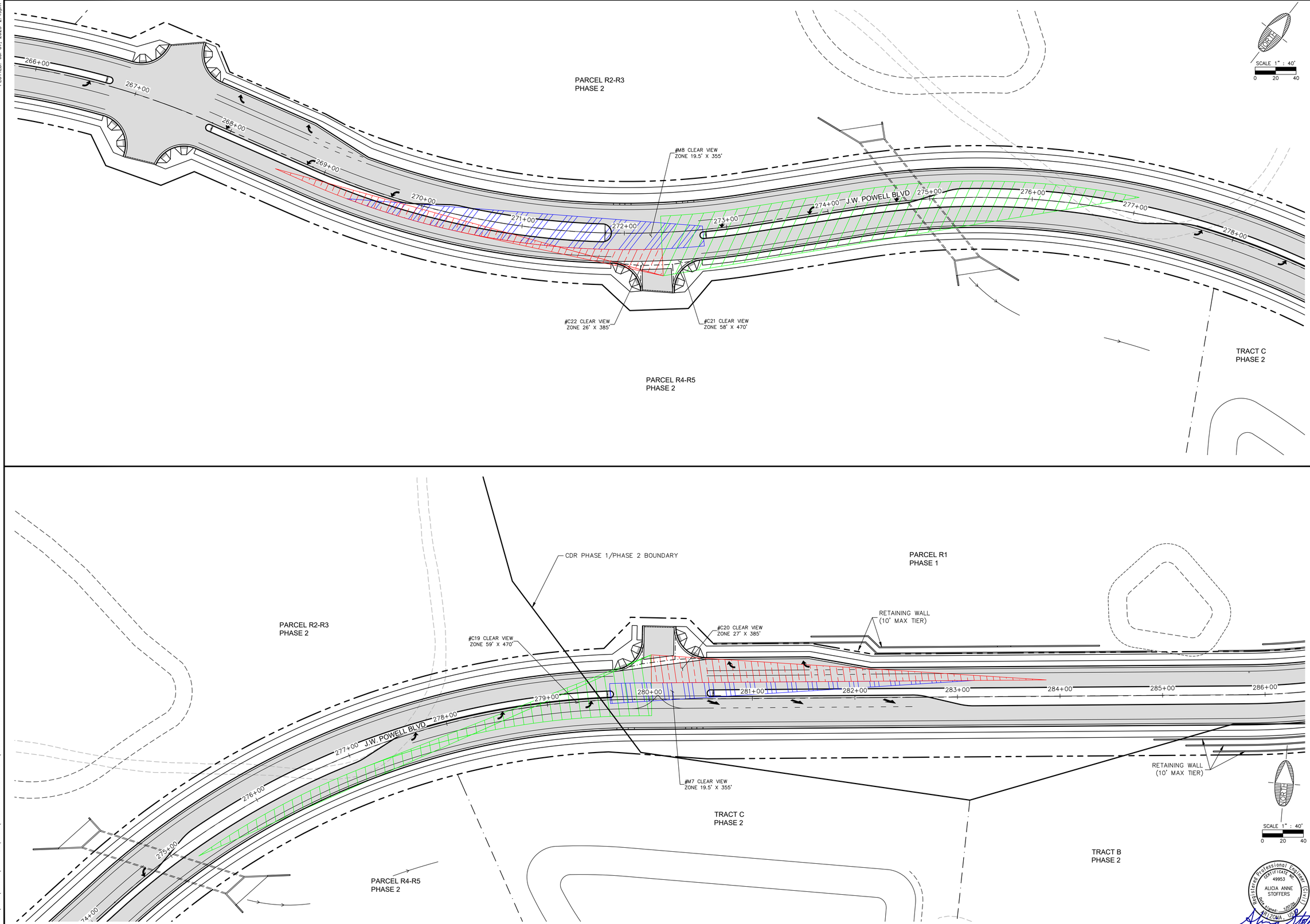
DRAWING NO.
SC02

SHT NO. 7 OF 20

Registered Professional Engineer (Civil)
CERTIFICATE NO.
49953
ALICIA ANNE STOFFERS
Date Signed: 10/31/25
ARIZONA, USA

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - CLEAR VIEW ZONES PLANS.DWG BHONAME

PLOTTED: Jul 07, 2025 - 2:49pm



FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - CLEAR VIEW ZONES PLANS.DWG BHONANIE

FLAGSTAFF
ARIZONA

CDR PHASE II – PRELIMINARY BLOCK PLAT

CLEARVIEW ZONE PLAN (2)

JOB NO:	223357
DATE:	JUL 25
SCALE:	AS SHOWN
DRAWN:	KMF
DESIGN:	KMF
CHECKED:	SCI/GEC

75 Kallof Place
Sedona, AZ 86336
928.282.1061
928.282.2058 fax
www.swiaz.com

Shephard Wesnitzer, Inc.

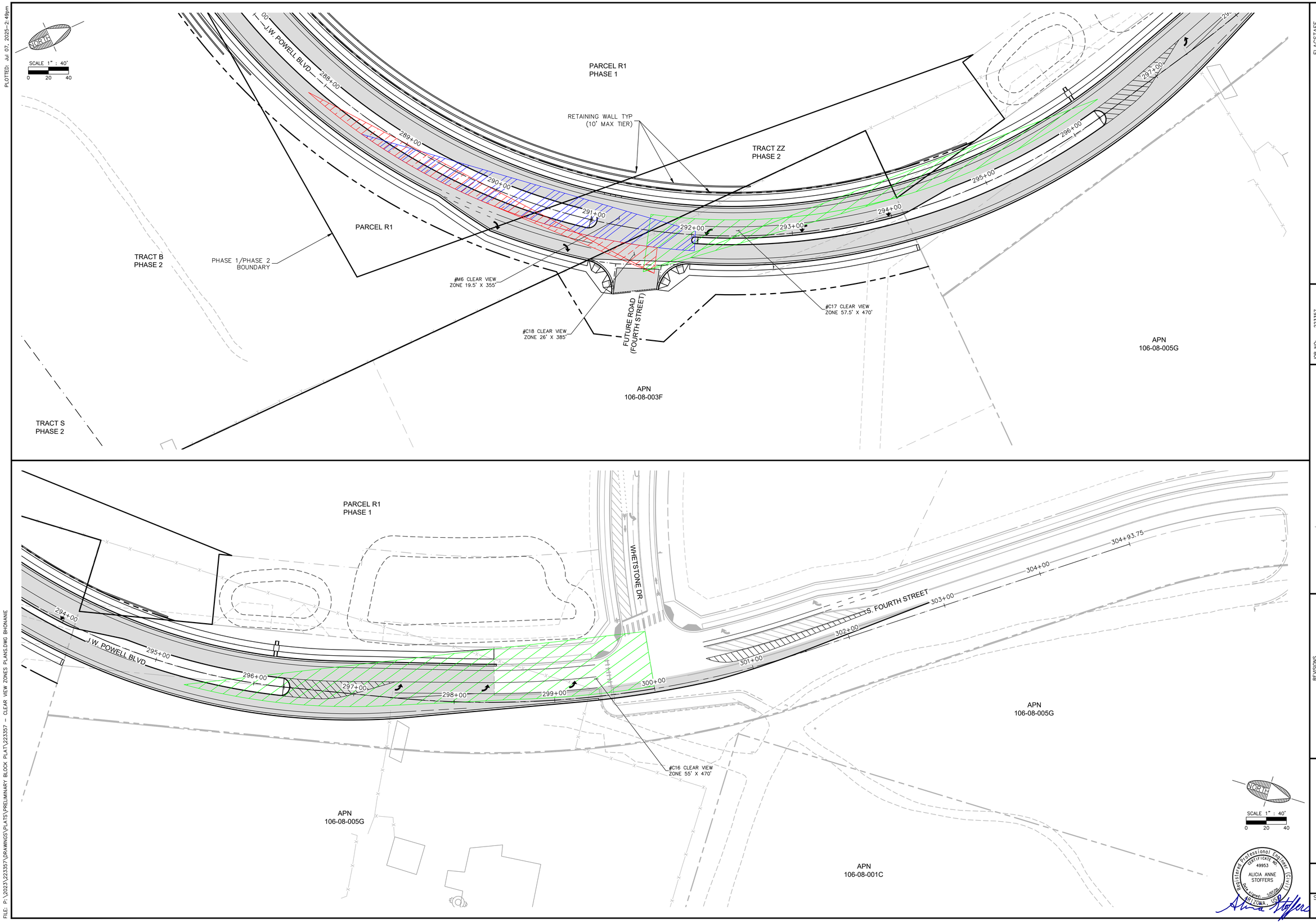
REVISIONS			
NO.	DESCRIPTION	DATE	BY

Call at least two full working days before you dig in Arizona
ARIZONA811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

DRAWING NO.
SC03

SHT NO. 8 OF 20

Registered Professional Engineer
CERTIFICATE NO.
49953
ALICIA ANNE STOFFERS
Date Signed: 7/07/25
ARIZONA, USA



PLOTTED: Jul 07, 2025-2:49pm

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - CLEAR VIEW ZONES PLANS.DWG BHONANE

FLAGSTAFF
ARIZONA

CDR PHASE II – PRELIMINARY BLOCK PLAT

CLEARVIEW ZONE PLAN (3)

JOB NO:	223357
DATE:	JUL 25
SCALE:	AS SHOWN
DRAWN:	KMF
DESIGN:	KMF
CHECKED:	SCI/GEC

75 Kallof Place
Sedona, AZ 86336
928.282.1061
928.282.2058 fax
www.swiaz.com

SWI
Shephard Wesnitzer, Inc.

REVISIONS

NO.	DESCRIPTION	DATE	BY

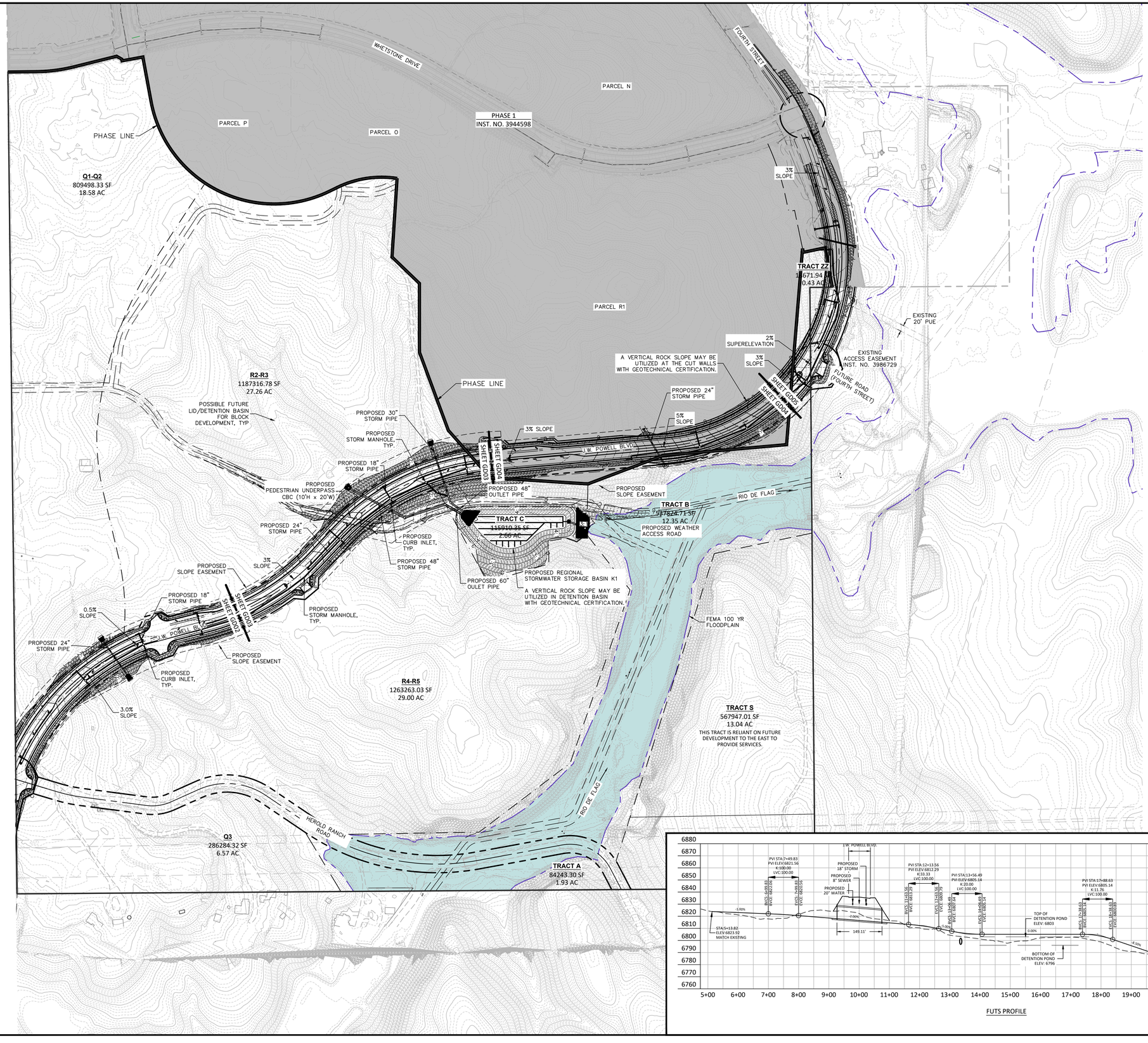
Call at least two full working days before you begin excavation.
ARIZONA811
ArizonaBlueStake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

Registered Professional Engineer (Civil)
CERTIFICATE NO. 49953
ALICIA ANNE STOFFERS
Date signed: 7/07/25
ARIZONA, USA

DRAWING NO.
SC04

SHT NO. 9 OF 20

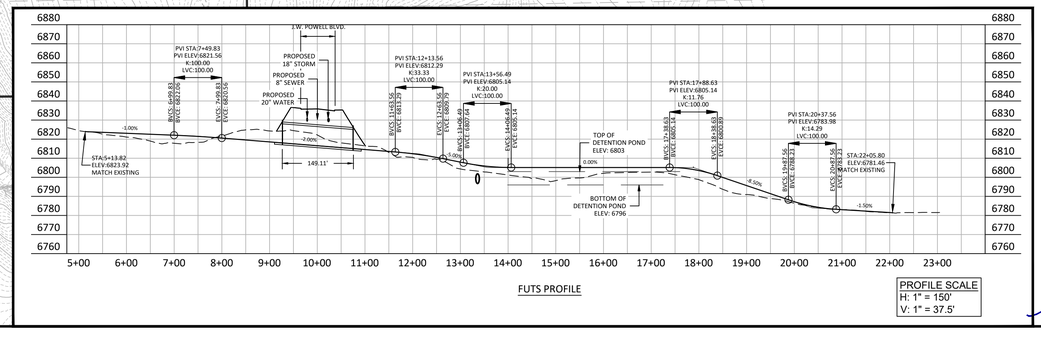
PLOTTED: Jul 07, 2025 2:50pm



EARTHWORK (UNADJUSTED)

CUT = 66,512 CY
FILL = 105,186 CY

THESE PRELIMINARY EARTHWORK VALUES ARE FOR THE CONSTRUCTION OF J.W. POWELL BOULEVARD AND REGIONAL DETENTION BASIN.



FUTS PROFILE

PROFILE SCALE
H: 1" = 150'
V: 1" = 37.5'

Registered Professional Engineer
CERTIFICATE NO.
49953
ALICIA ANNE STOFFERS
ARIZONA, U.S.A.

FLAGSTAFF ARIZONA

CDR PHASE II – PRELIMINARY BLOCK PLAT

GRADING PLAN

JOB NO:	223357
DATE:	JUL 25
SCALE:	AS SHOWN
DRAWN:	KMF
DESIGN:	KMF
CHECKED:	SCI/OEC

NO.	DESCRIPTION	DATE	BY
REVISIONS			

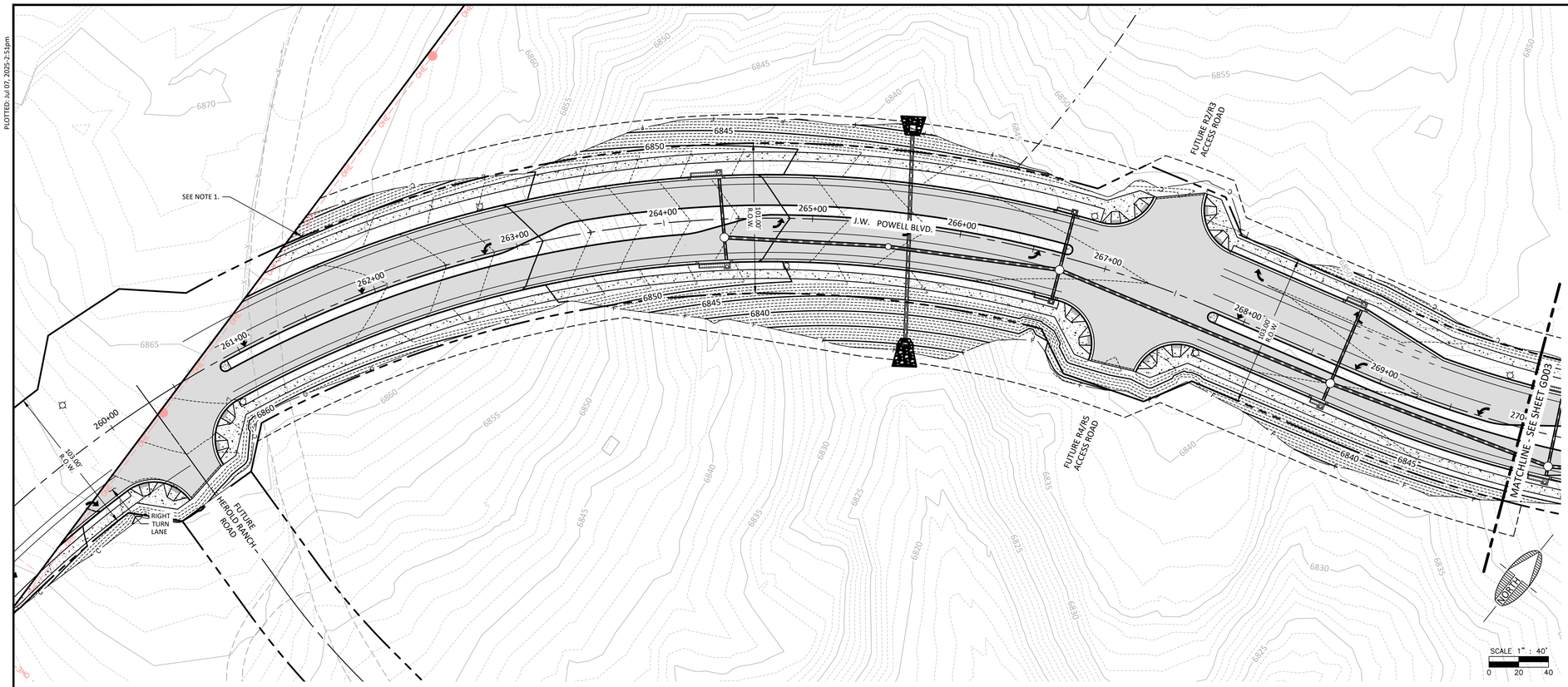
SVI
Shephard Wesnitzer, Inc.
An ARDURRA Company
110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.ardurra.com

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

DRAWING NO.
GD01

SHT NO. 10 OF 20

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - GRADING PLANS.DWG BHONANNE



NOTE:
1. FINAL GRADING AT PROPERTY LINE WILL BE DEPENDENT ON TIMING OF THE FULL EXTENSION OF JWP BLVD. SEE PHASING MATRIX ON PH01 AND PH02 FOR EXTENSION REQUIREMENTS WITHIN THE CDR PHASE 2 SITE

PLOTTED: Jul 07, 2025-2:51pm

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - PLAN & PROFILE.DWG BHONANIE

CDR PHASE II – PRELIMINARY BLOCK PLAT

FLAGSTAFF ARIZONA

GRADING - PLAN & PROFILE (1)

JOB NO:	223357
DATE:	JUL 25
SCALE:	AS SHOWN
DRAWN:	BH
DESIGN:	BH
CHECKED:	BN/AS

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

SWI Shephard Wesnitzer, Inc.
An ARDURRA Company

REVISIONS

NO.	DESCRIPTION	DATE	BY

Contact Arizona 811 at least two full working days before you begin excavation

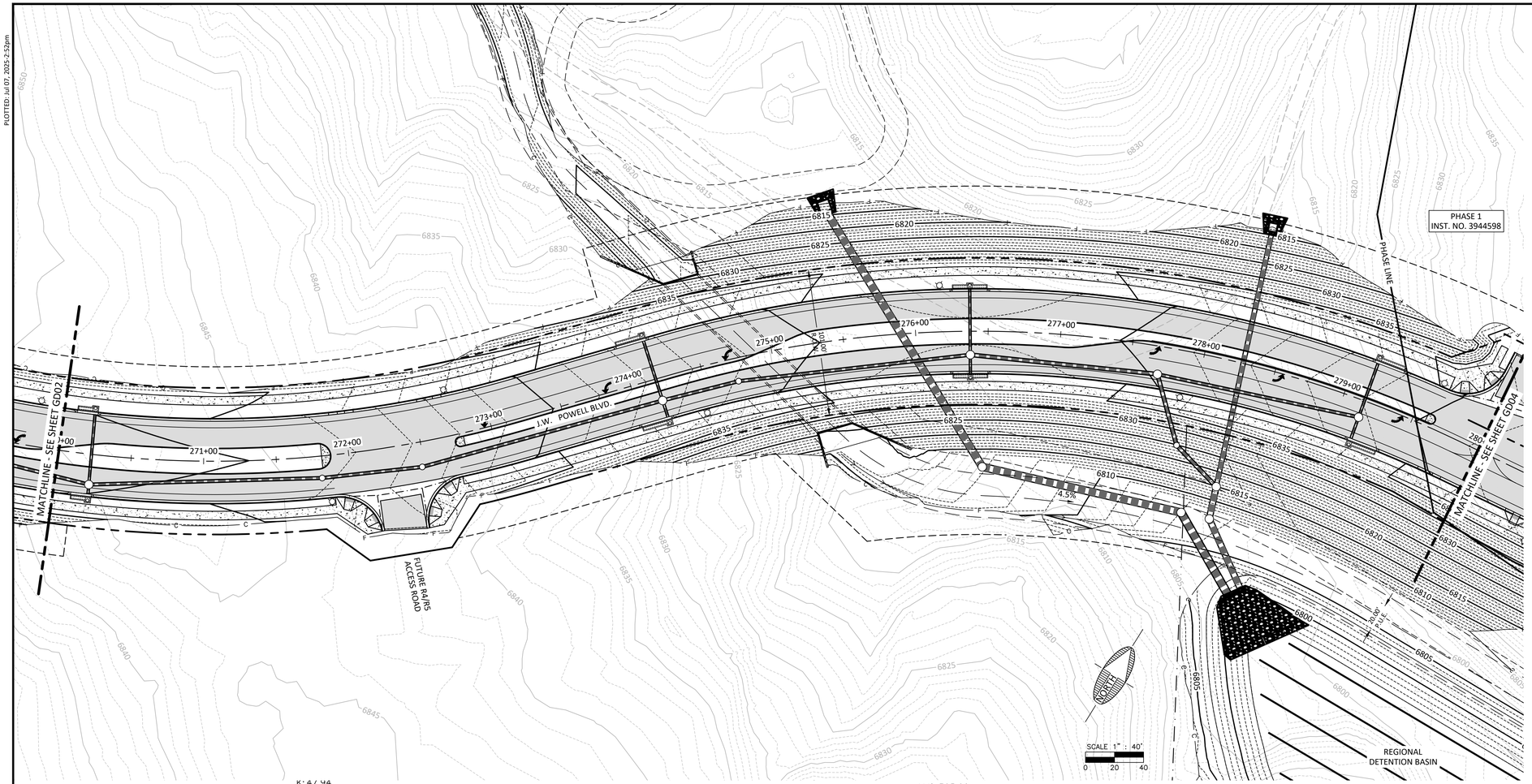
ARIZONA811 Call 811 or click Arizona811.com

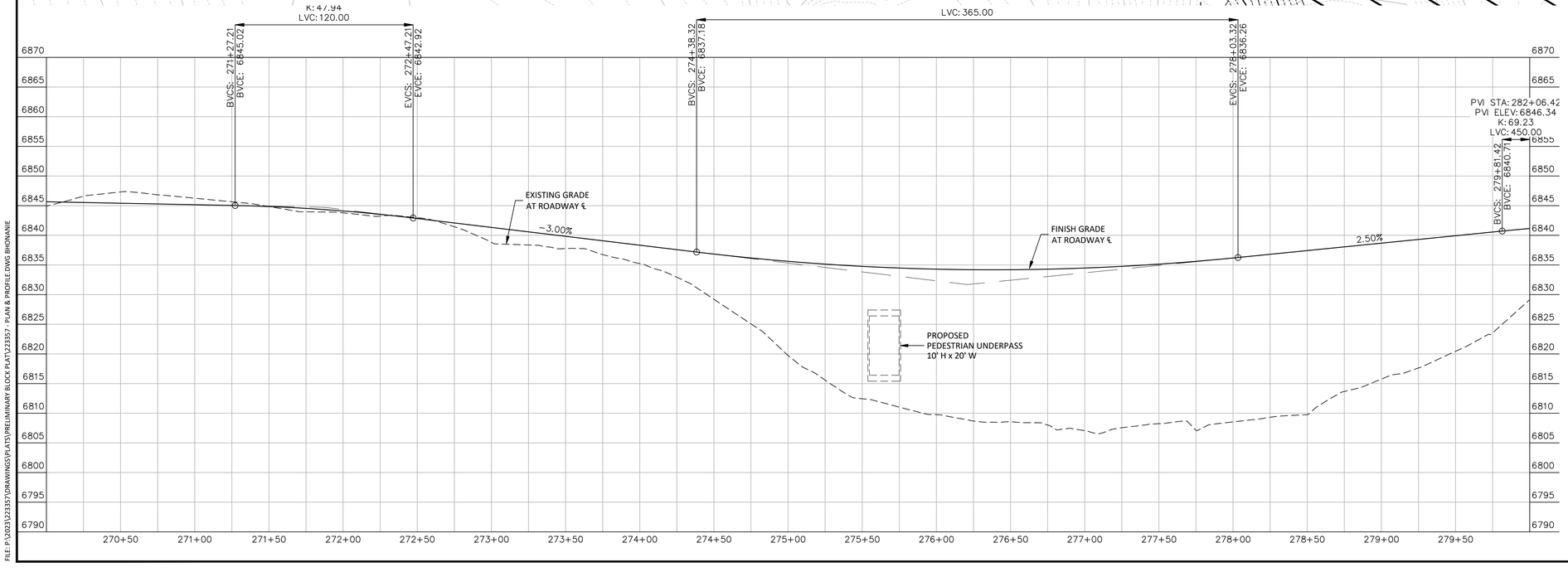
Registered Professional Engineer (Civil)
CERTIFICATE NO. 49953
ALICIA ANNE STOFFERS
Date signed: 7/07/25
ARIZONA, USA

DRAWING NO.
GD02

SHT NO. 8 OF 20

PLOTTED: Jul 07, 2025 2:52pm





FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - PLAN & PROFILE.DWG BHONANIE

GRADING - PLAN & PROFILE (2)

CDR PHASE II – PRELIMINARY BLOCK PLAT

FLAGSTAFF
ARIZONA

JOB NO:	223357
DATE:	JUL 25
SCALE:	AS SHOWN
DRAWN:	BH
DESIGN:	BH
CHECKED:	BN/AS

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

SWI
Shephard Wesnitzer, Inc.
An ARDURRA Company

REVISIONS			
NO.	DESCRIPTION	DATE	BY

Contact Arizona 811 at least two full working days before you begin excavation

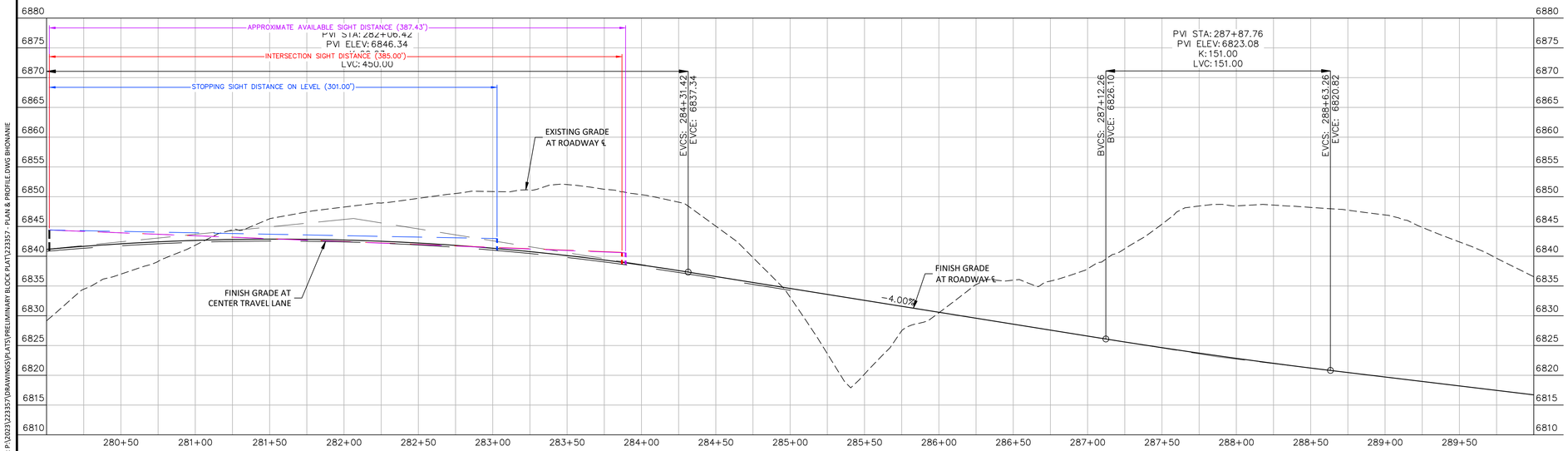
ARIZONA811 BLUE STAKE, INC.

Call 811 or click Arizona811.com

DRAWING NO.
GD03

SHT NO. 9 OF 20

Registered Professional Engineer
CERTIFICATE NO.
49953
ALICIA ANNE
STOFFERS
STATE OF ARIZONA
(Civil)



CDR PHASE II – PRELIMINARY BLOCK PLAT

FLAGSTAFF ARIZONA

GRADING - PLAN & PROFILE (3)

JOB NO:	223357
DATE:	JUL 25
SCALE:	AS SHOWN
DRAWN:	BH
DESIGN:	BH
CHECKED:	BN/AS

SWI
Shephard Wesnitzer, Inc.
An ARDURRA Company
110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

REVISIONS

NO.	DESCRIPTION	DATE	BY

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 Call 811 or click Arizona811.com

Registered Professional Engineer (Civil) CERTIFICATE NO. 49953 ALICIA ANNE STOFFERS Date signed: 7/07/25 ARIZONA, USA

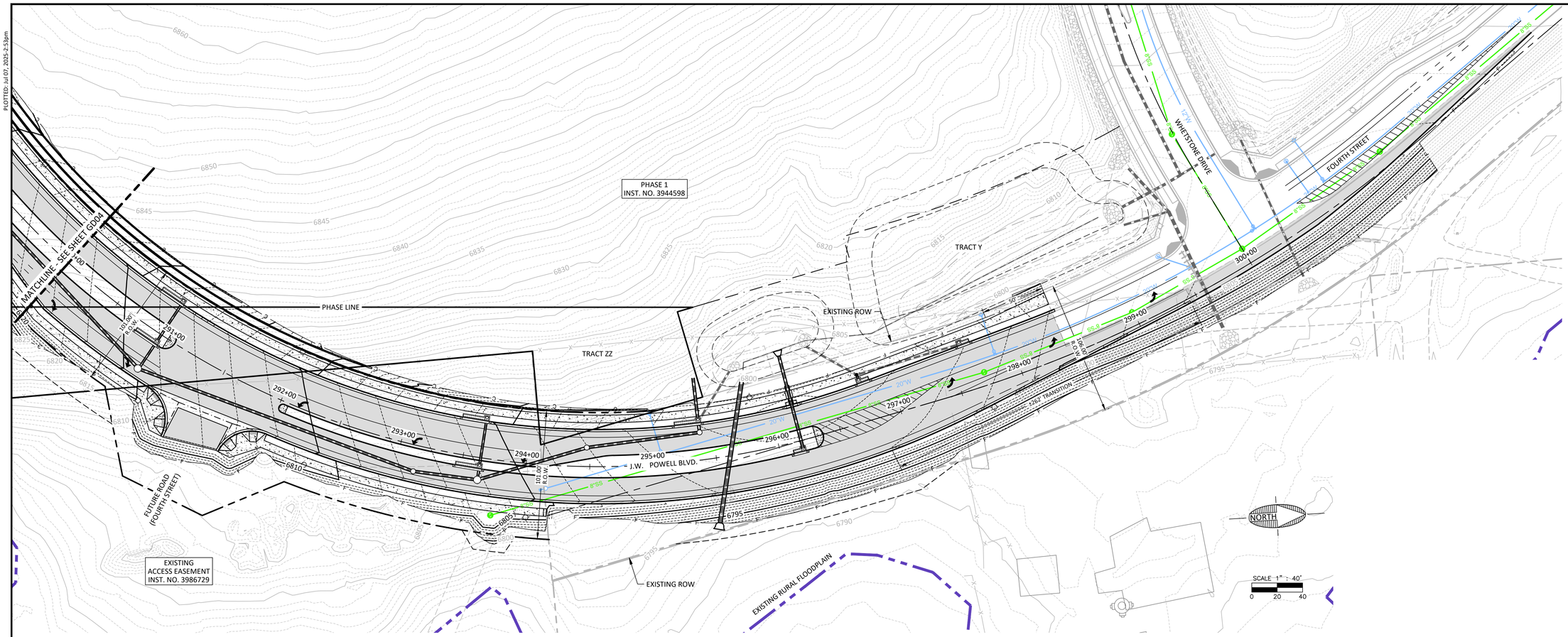
DRAWING NO. GD04

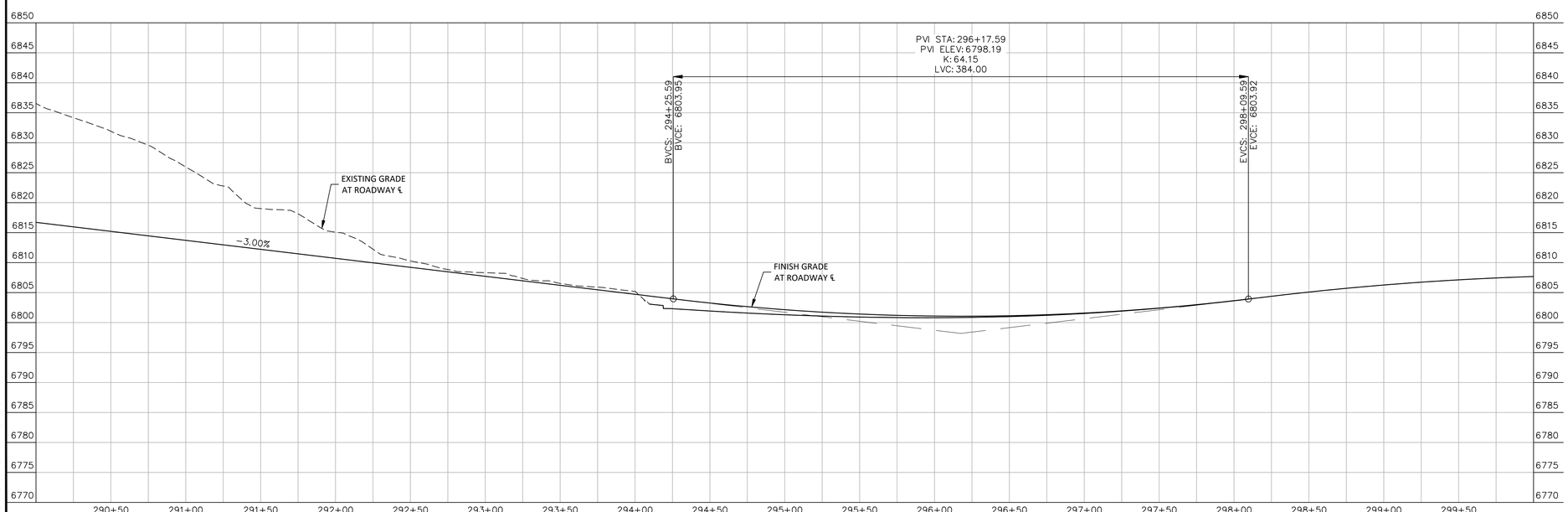
SHT NO. 10 OF 20

PLOTTED: Jul 07, 2025 - 2:52pm

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - PLAN & PROFILE.DWG BHONANIE

PLOTTED: Jul 07, 2025 2:53pm





FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - PLAN & PROFILE.DWG BHONANIE

GRADING - PLAN & PROFILE (4)

CDR PHASE II – PRELIMINARY BLOCK PLAT

FLAGSTAFF
ARIZONA

JOB NO:	223357
DATE:	JUL 25
SCALE:	AS SHOWN
DRAWN:	BH
DESIGN:	BH
CHECKED:	BN/AS

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

SWI
Shephard Wesnitzer, Inc.
An ARDURRA company

NO.	DESCRIPTION	DATE	BY
	REVISIONS		

Contact Arizona 811 at least two full working days before you begin excavation
Call 811 or click Arizona811.com

Registered Professional Engineer
CERTIFICATE NO.
49953
ALICIA ANNE STOFFERS
Date Signed: 7/07/25
ARIZONA, USA

DRAWING NO.
GD05

SHT NO. 11 | OF 20

PLOTTED: Jul 07, 2025--2:53pm

NOTES:
1. STREET LIGHTS SHALL BE PLACED EVERY 200' DOUBLE SIDED ALONG JWP..
2. FIRE HYDRANT SPACING IS AS FOLLOWS:
   2.1. FROM EXISTING HYDRANT TO HYDRANT #1 IS APPROXIMATELY 500 FT
   2.2. FROM HYDRANT #1 TO HYDRANT #2 IS APPROXIMATELY 500 FT
   2.3. FROM HYDRANT #2 TO HYDRANT #3 IS APPROXIMATELY 500 FT
   2.4. FROM HYDRANT #3 TO HYDRANT #4 IS APPROXIMATELY 500 FT
   2.5. FROM HYDRANT #4 TO HYDRANT #5 IS APPROXIMATELY 500 FT
   2.6. FROM HYDRANT #5 TO HYDRANT #6 IS APPROXIMATELY 500 FT
   2.7. FROM HYDRANT #6 TO HYDRANT #7 IS APPROXIMATELY 500 FT

SCALE 1" : 150'
0 75 150

WHETSTONE DRIVE
FOURTH STREET
PARCEL P
PARCEL N
PARCEL O
PARCEL R1
PARCEL R2
PARCEL R3
PARCEL R4-R5
PARCEL Q1-Q2
PHASE 1
INST. NO. 3944598
PHASE LINE
PROPOSED CONNECTION TO 12" WATER MAIN
Q1-Q2
809498.33 SF
18.58 AC
CONCEPT LOTTING ONLY
R2-R3
1187316.78 SF
27.26 AC
PROPOSED 12" WATER MAIN, ALIGNMENT TO BE DETERMINED WITH INTERNAL LOTS. ALIGNMENT WILL BE LOCATED WITHIN THE ROAD R.O.W. OR P.U.E.
POSSIBLE FUTURE LID/DETENTION BASIN FOR BLOCK DEVELOPMENT
PROPOSED 8" SEWER (TYP.)
PROPOSED 8" SEWER STUB
PROPOSED 8" WATER STUB
PROPOSED FIRE HYDRANT #3
PROPOSED 20" WATER MAIN(TYP.)
PROPOSED FIRE HYDRANT #2
PROPOSED FIRE HYDRANT #1
CONNECT TO EXISTING 20" WATER MAIN FROM FOURTH STREET
TRACT ZZ
18671.94 SF
0.43 AC
PROPOSED STREET LIGHT (TYP.)
EXISTING 20' PUE
EXISTING ACCESS EASEMENT PER INST NO. 3986729.
PROPOSED CONNECTION (BURCH PROPERTY) TO EXISTING 42" SEWER
EXISTING 30' PUE
EXISTING 42" SEWER MAIN (TYP.)
EXISTING 12" RECLAIMED WATER (TYP.)
RIO DE FLAG
TRACT B
537824.71 SF
12.35 AC
PROPOSED CONNECTION TO EXISTING 42" SEWER
PROPOSED WEATHER ACCESS ROAD
FUTURE 20' PUE
TRACT C
115910.35 SF
2.66 AC
BASIN K
H.W.E 6802
STORMWATER STORAGE BASIN OUTLET
PROPOSED 8" SEWER (TYP.)
PROPOSED 12" WATER MAIN(TYP.)
PROPOSED 20" WATER MAIN(TYP.)
PROPOSED 8" WATER STUB
PROPOSED 8" SEWER STUB
PROPOSED FIRE HYDRANT #4
PROPOSED FIRE HYDRANT #5
PROPOSED FIRE HYDRANT #6
PROPOSED FIRE HYDRANT #7
PROPOSED STREET LIGHT (TYP.)
PROPOSED 8" SEWER (TYP.)
PROPOSED 8" WATER STUB
PROPOSED 8" SEWER STUB
CONCEPT LOTTING ONLY
R4-R5
1263263.03 SF
29.00 AC
EXISTING 30' PUE
EXISTING 12" RECLAIMED WATER (TYP.)
EXISTING 42" SEWER MAIN (TYP.)
TRACT S
567947.01 SF
13.04 AC
THIS TRACT IS RELIANT ON FUTURE DEVELOPMENT TO THE EAST TO PROVIDE SERVICES.
PROPOSED 8" WATER STUB
PROPOSED 8" SEWER MAIN
PROPOSED 8" SEWER STUB
HERALD RANCH ROAD
PROPOSED 57' ROW
Q3
286284.32 SF
6.57 AC
EXISTING 25' ELECTRIC EASEMENT
PROPOSED CONNECTION TO EXISTING 42" SEWER
RIO DE FLAG
EXISTING 100' APS EASEMENT
TRACT A
84243.30 SF
1.93 AC

FLAGSTAFF
ARIZONA

CDR PHASE II – PRELIMINARY BLOCK PLAT

UTILITIES PLAN

JOB NO:	223357
DATE:	JUL 25
SCALE:	AS SHOWN
DRAWN:	KMF
DESIGN:	KMF
CHECKED:	SCI/DEC

REVISIONS

NO.	DESCRIPTION	DATE	BY

75 Kaliof Place
Sedona, AZ 86336
928.282.1061
928.282.2058 fax
www.swiaz.com

Shephard Wesnitzer, Inc.

Call at least two full working days before you dig, it's the law!
ARIZONA811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

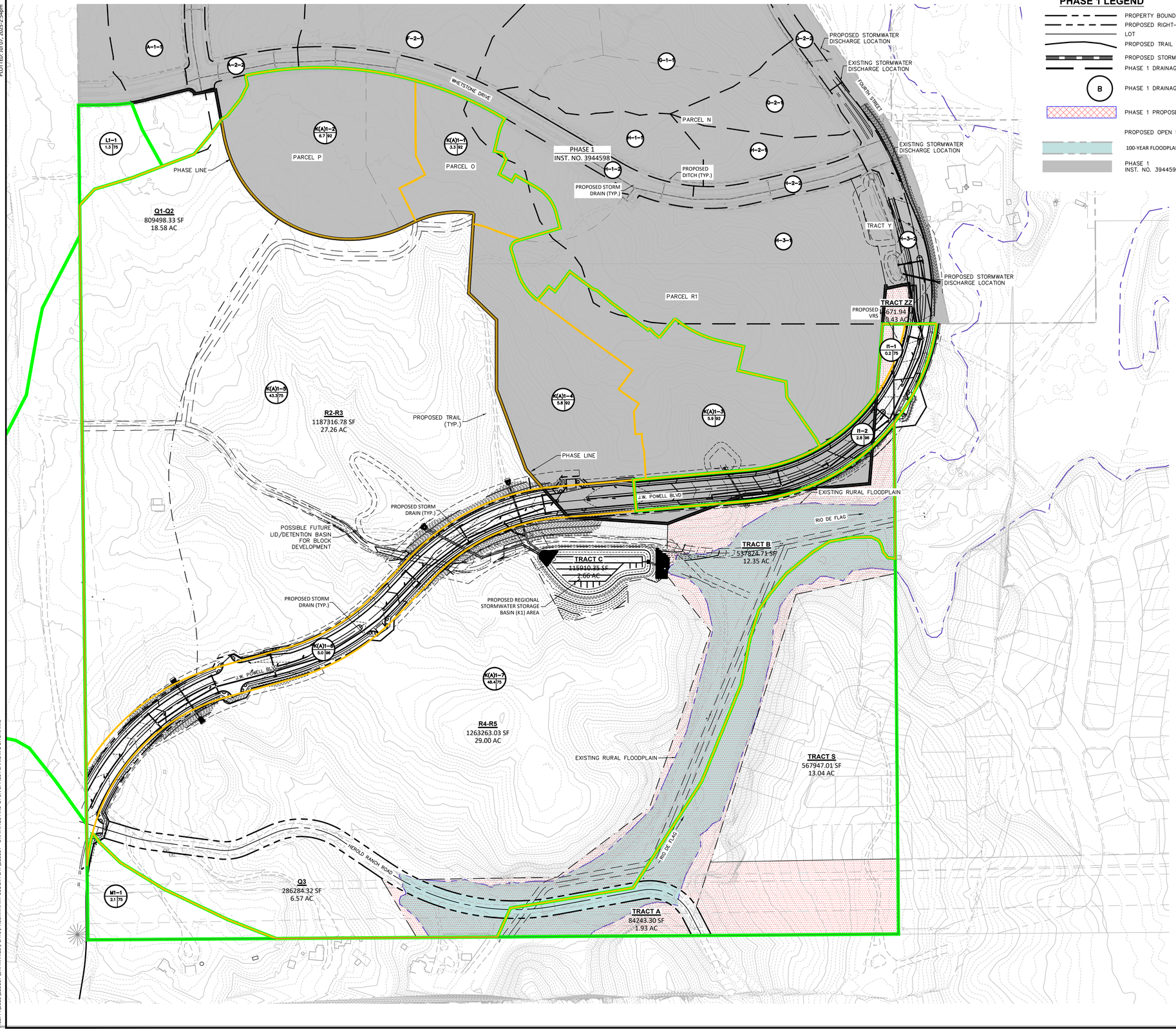
Registered Professional Engineer
CERTIFICATE NO.
49953
ALICIA ANNE STOFFERS
Date Signed: 7/07/25
ARIZONA, USA

DRAWING NO.
UT01

SHT NO. 15 OF 20

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 – UTILITIES PLANS.DWG BHONANIE

PLOTTED: JUL 07, 2025 2:54pm



PHASE 1 LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT–OF–WAY
- LOT
- PROPOSED TRAIL
- PROPOSED STORM DRAIN
- PHASE 1 DRAINAGE BASIN BOUNDARY
- PHASE 1 DRAINAGE BASIN IDENTIFIER
- PHASE 1 PROPOSED DETENTION BASIN
- PROPOSED OPEN SPACE
- 100-YEAR FLOODPLAIN
- PHASE 1 INST. NO. 3944598

PHASE 2 LEGEND

- DRAINAGE BASIN IDENTIFIER: A= MAJOR BASIN DESIGNATION -1 = SUB-BASIN DESIGNATION 13.8= APPROXIMATE BASIN AREA (ACRES) 80= SCS CURVE NUMBER
- MAJOR BASIN BOUNDARY
- MINOR BASIN BOUNDARY
- PARCEL BOUNDARY
- PROJECT BOUNDARY
- PHASE BOUNDARY
- OPEN SPACE PROVIDED PER DEVELOPMENT AGREEMENT

NORTH

SCALE 1" : 150'
0 75 150

NOTES:
1. REFER TO THE "PRELIMINARY BLOCK PLAT DRAINAGE REPORT FOR CANYON DEL RIO", DATED SEPTEMBER 5, 2024, FOR MORE INFORMATION REGARDING THE PRELIMINARY DRAINAGE DESIGN FOR THIS INTERIM CONDITION.

CDR OPEN SPACE TRACKING

	OPEN SPACE AREA (AC)	GROSS PARCEL/ TRACT AREA (AC)	% OPEN SPACE PROVIDED	VALUES BASED ON
PARCEL G	3.29	9.03	36%	FINAL PLAT
PARCEL I	1.43	13.31	11%	FINAL PLAT
PARCEL J1	3.31	9.85	34%	CIVIL PLANS
PARCEL J2	5.21	20.2	26%	CONCEPT PLAN
TRACT W	0.94	0.94	100%	FINAL BLOCK PLAT
TRACT X	1.78	1.78	100%	FINAL BLOCK PLAT
TRACT Y	0.73	0.73	100%	FINAL BLOCK PLAT
NOT YET CONSTRUCTED				
PARCEL E1	TBD[1]	6.35		
PARCEL E2	TBD	2.64		
PARCEL F	TBD	1.44		
PARCEL K1	TBD	4.34		
PARCEL K2	TBD	8.8		
PARCEL N	3.17	7.11	45%	PRELIMINARY PLAT
PARCEL O	6.86	6.49	58%	SITE PLAN
PARCEL P	--	5.4		SITE PLAN
PARCEL R1	8.67	27.59	31%	PRELIMINARY PLAT
PARCEL Q1-Q2	TBD	18.58		
PARCEL Q3	TBD	6.57		
PARCEL R2-R3	TBD	27.26		
PARCEL R4-R5	TBD	29.00		
TRACT S	3.52	13.04	27%	PRELIMINARY PLAT
TRACT A	1.93	1.93	100%	PRELIM BLOCK PLAT
TRACT B	12.35	12.35	100%	PRELIM BLOCK PLAT
TRACT C	0	2.66	0%	PRELIM BLOCK PLAT
TRACT ZZ	0.43	0.43	100%	PRELIM BLOCK PLAT
TOTAL OPEN SPACE PROVIDED	**53.62**	**237.82**	**23%**	
TOTAL REQUIRED OPEN SPACE PER DA	**54.00**			

NOTE

1.THE OPEN SPACE AS TABULATED ABOVE INCLUDES THE REQUIRED OPEN SPACE PER THE CANYON DEL RIO PRELIMINARY BLOCK PLAT AND THE DEVELOPMENT AGREEMENT. THE OPEN SPACE INCLUDES TRACT A AND B WITH THE RURAL FLOODPLAIN TO BE DEDICATED TO THE CITY WITH THE CANYON DEL RIO PHASE 2 FINAL BLOCK PLAT.

2.OPEN SPACE SHOWN ABOVE THAT IS NOT RECORDED ON FINAL PLAT OR SHOWN ON CONSTRUCTION PLANS IS SUBJECT TO CHANGE.

Registered Professional Engineer
CERTIFICATE NO.
49953
ALICIA ANNE STOFFERS
Date Signed: 7/07/25
ARIZONA, USA

FLAGSTAFF ARIZONA

CDR PHASE II – PRELIMINARY BLOCK PLAT

DRAINAGE AND OPEN SPACE PLAN

JOB NO: 223357
DATE: JUL 25
SCALE: AS SHOWN
DRAWN: JEE
DESIGN:
CHECKED:

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.6934 fax
www.swoz.com

Shephard Wesnitzer, Inc.
An ARDURRA Company

REVISIONS

NO.	DESCRIPTION	DATE	BY

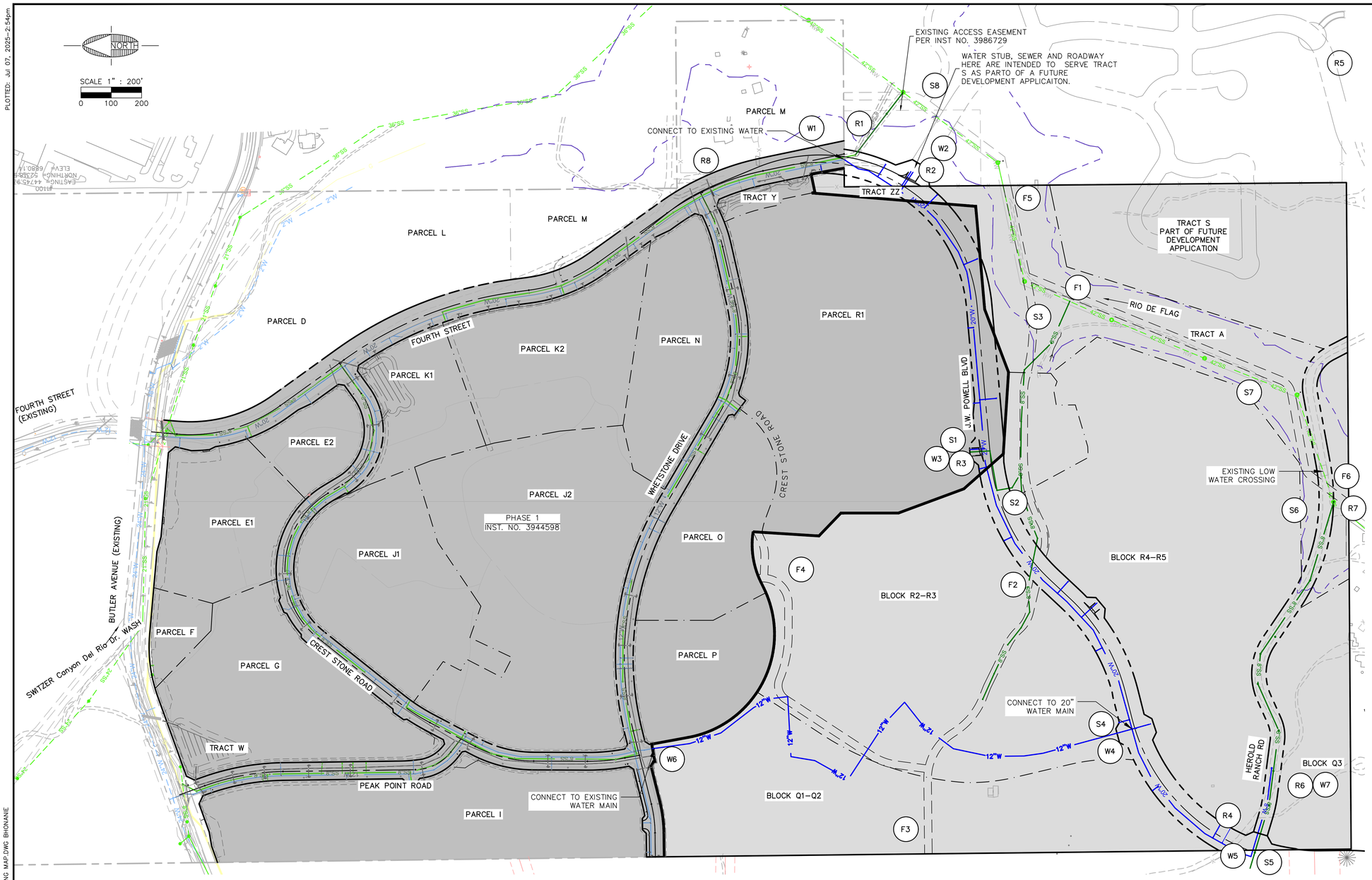
Contact Arizona 811 at least two full working days before you begin excavation
Call 811 or click Arizona811.com

DRAWING NO.
DR01

SHT NO. 16 OF 20

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - DRAINAGE AND OPEN SPACE PLAN.DWG BHONANIE

PLOTTED: Jul 07, 2025 - 2:54pm



PHASE 1
INST. NO. 3944598

PHASE 2

(SXX) LIMITS OF SEWER IMPROVEMENTS

(RXX) LIMITS OF ROADWAY IMPROVEMENTS AND OR WATER IMPROVEMENTS

(WXX) LIMITS OF WATER IMPROVEMENTS

(FXX) LIMITS OF FUTS IMPROVEMENTS

FOR PHASING MATRIX TABLE REFER TO DWG PHO2

Registered Professional Engineer
CERTIFICATE NO. 49953
ALICIA ANNE STOFFERS
Date Signed: 7/07/25
ARIZONA, U.S.A.

FLAGSTAFF
ARIZONA

CDR PHASE II – PRELIMINARY BLOCK PLAT

PHASING MAP

JOB NO:	223357
DATE:	JUL 25
SCALE:	AS SHOWN
DRAWN:	SCI/KMF
DESIGN:	SCI
CHECKED:	GEC

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 begin excavation.
ARIZONA811
ArizonaBlueStake,Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)

DRAWING NO.
PH01

SHT NO. 17 OF 20

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - PHASING MAP.DWG BHONANIE

	Project Phasing Matrix - Required Infrastructure for Each Parcel						
	R1 - PHASE 1	R1 - PHASE 2 & 3	Q1/Q2	Q3	R2/R3	R4/R5	S
Roadways - Internal Looping Required to Parcel							
J.W. Powell - Parcel Bndry (E) to Collector Road (R1, R2)		X	X	X	X	X	X
Collector Road - Parcel Bndry to Tract "S" (R2, R5)							X
J.W. Powell - Parcel Bndry (E) to Parcel Bndry R1 (W) (R2, R3)		X	X	X	X	X	
J. W. Powell Blvd - Parcel Bndry R1 to Parcel Bndry (W) (R3, R4)			X	X	X	X	
Herold Ranch (Local Road) - J.W. Powell to Block Q3 Driveway (R4, R6)				X			
Herold Ranch (20' Chip Seal Fire Access Road) to west side of County Low Water Crossing (R4, R7)				X		X	
J. W. Powell Blvd CDR 4TH ST (1/2) section - Whetstone Drive to Parcel Bndry (R8, R1)		X	X	X	X	X	
Waterline Segments							
20" Waterline in J.W. Powell - Parcel Bndry (E) to Collector Road (W1, W2)		X	X	X	X	X	X
20" Waterline in J.W. Powell - Collector Road to Parcel Bndry R1 (W2, W3)		X	X	X	X	X	
20" Waterline in J.W. Powell - Parcel Bndry R1 to Block Bndry R2/R3 (W3, W4)			X	X	X	X	
20" Waterline in J.W. Powell - Block Bndry R2/R3 to Parcel Bndry (W) (W4, W5)			X	X		X	
8" Waterline in Herold Ranch Rd to the Block Q3 Driveway with the development of Block Q3 (W5, W7)				X			
12" Waterline Connecting Whetstone Drive and J.W. Powell - Through Blocks Q1/Q2 and R2/R3 (W4, W6)			X	X	X	X	
Sewerline Segments							
J.W. Powell - Parcel Bndry R1 to ex sewer within Rio De Flag (S1, S2, S3)		X	X		X	X	
J.W. Powell - high pt (S) to low pt (S4, S2)			X		X	X	
J.W. Powell to Herold Ranch - J. W. Powell Blvd to ex sewer within Rio De Flag (S5, S6)				X			
Tract S connection to ex sewer within Rio de Flag (S8)							X
Block R4/R5 connection to ex sewer within Rio de Flag (S7)						X	
FUTS Segments							
FUTS segment 1 - J.W.P. Underpass to Rio De Flag (F1, F2)			X	X	X	X	
FUTS segment 2 - Parcel Bndry P to J.W.P. Underpass (F2, F3)					X		
FUTS segment 3 - Western Parcel Bndry Q1 & Q2 to J.W.P. Underpass (F3,F4)			X		X		
FUTS Segment 4 - Floodplain from East Property Boundary to Herold Ranch Road (F5-F6)						X	

Notes:

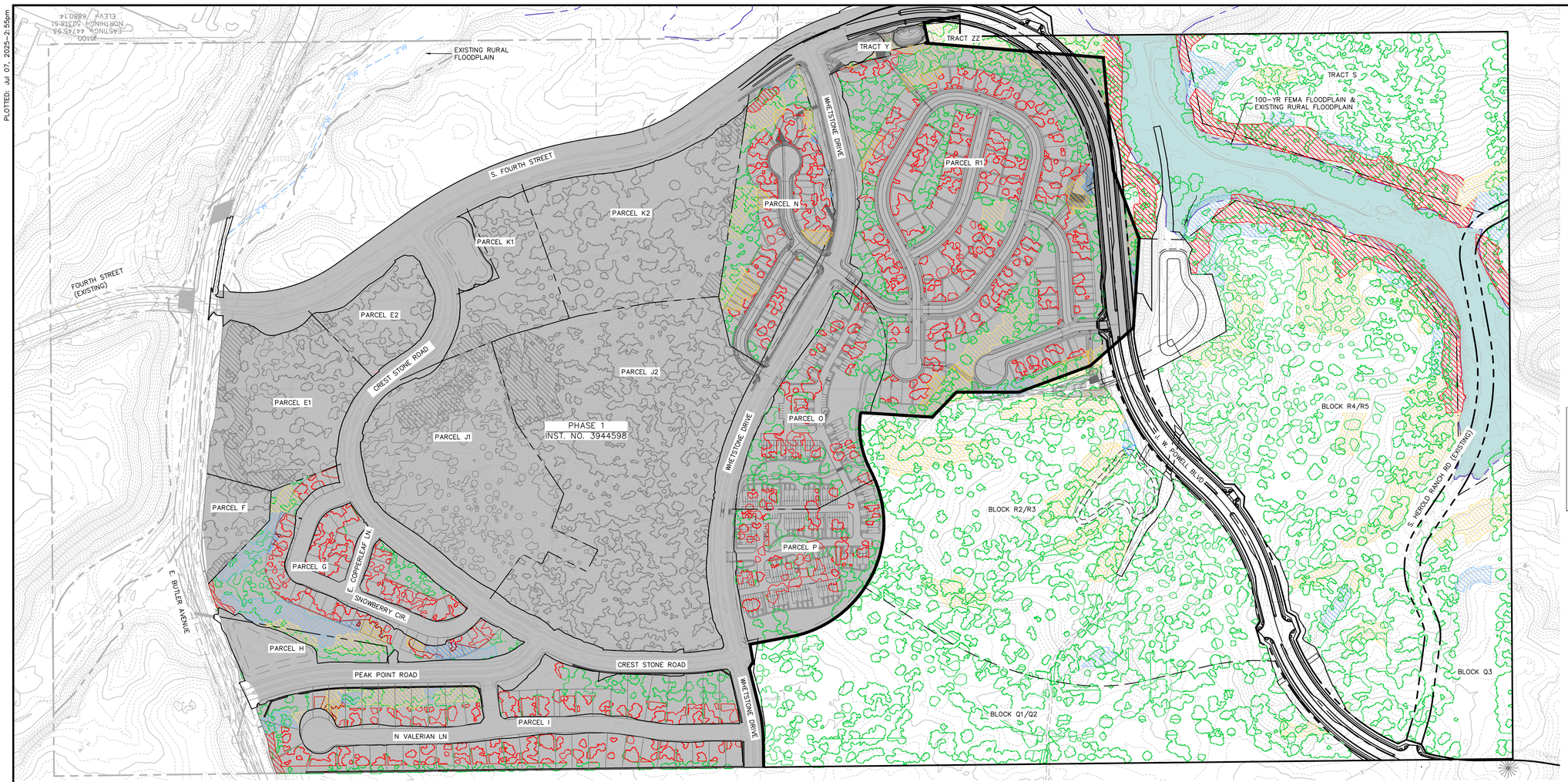
1. Any secondary access road must meet all fire access road requirements including 20' minimum unobstructed width.
2. Traffic volume considerations have not been considered as part of this analysis. Right-of-way improvements will be established through the Traffic Statement and/or individual subdivision tract improvements.
3. Blocks R1, R2/R3, R4/R5, Q1/Q2 & S will require internal roadway and connectivity to provide two points of access and water service.
4. Pursuant to the approved Drainage Impact Analysis (DIA), the developer shall mitigate the identified downstream impacts. The DIA has identified several conceptual mitigation strategies including on-site and off-site mitigations. Prior to approval of the first site plan and/or subdivision plat or any development, specific strategies must be identified and approved by the City and reflected accordingly on any Plats and/or Plans. If on-site strategies are chosen, each phase of development shall mitigate proportional impacts. A master plan for phasing of on-site mitigations may be required to ensure that each phase can mitigate proportional impacts. Each phase of development shall mitigate their fair proportionate share of the impact identified in the DIA. Detention, LID, and retention must stand alone for each phase of the project. Any phase requiring offsite improvements impacting drainage courses, peak flows or total runoff volume, such as the spine road, will mitigate these impacts with the implementation of said phase.
5. This table was intended to show just the utilities required to serve each parcel (or block). It is assumed that any roads needed to serve a parcel will also need to have the water and sewer installed at the same time as the road regardless as to whether or not that particular parcel needs the water and sewer infrastructure. Please note all parcels will have to go through the Community Development Site Plan or Platting process and meet the City of Flagstaff Zoning Code including but not limited to access, utilities, resources, and stormwater.
6. Any dead end roads in excess of 1200' are required to have a secondary access.
7. Tract S is a part of a future development application, which will provide internal roadways and utilities to meet City of Flagstaff Engineering Standards.
8. To ensure a “no-rise” condition for Lake Continental”, developments will be required to provide 1-1/2” retention volume storage, which will include water quality treatment for the first flush volume of 1/2" over all new impervious area. Retention for the 1" rainfall depth on all impervious surfaces draining to the regional detention basin south of J.W. Powell are included within the provided volume. However, the first flush volume of 1/2" over all new impervious area for the water quality component will be required to be provided with each block and has not been included in the regional detention basin. The required 1" retention volume for parcels O, P, and R1 is included within the regional detention basin south of J.W. Powell as well.
9. CDR Phase 1 infrastructure has been completed except segment R6 to R1 that will be constructed with Phase 2.
10. The 8" water line in Herold Ranch Road will be required to be looped.
11. Parcel R1 noted in this table refers to Phases 2 and 3 of the Parcel R1 Development. Phase 1 of Parcel R1 can be served by the CDR Phase 1 Infrastructure that has already been completed.
12. Waterline in J. W. Powell will be phased with ADEQ. W1-W3 will be Phase 1 and W3-W5 will be Phase 2.
13. The extension of the 12" waterline may be accomplished with each phase of Q1/Q2 & R2/R3 per COF Engineering Standards. Full buildout of these parcels will construct the required WSIA 12" waterline connection from Whetstone Dr. to J.W. Powell Blvd.
14. Blocks R2/R3 and Q1/Q2 could be phased such that they only require access from Whetstone Dr. For example, if Block Q1/Q2 is phased with the first phase only including 50 units, then primary access would only be required off Whetstone.
15. FUTS Construction may occur within each phase of Q1/Q2 and R2/R3 interim connection will be provided to existing trails. Easements will be dedicated on the Final Plats.

EXAMPLE

TO DETERMINE THE REQUIRED INFRASTRUCTURE ASSOCIATED WITH ANY OF THE PARCELS, LOCATE THE PARCEL ALONG THE TOP OF THE TABLE AND SCROLL DOWN UNTIL THERE IS AN 'X'. THE 'X' CORRESPONDS TO THE REQUIRED INFRASTRUCTURE - WATER, SEWER, ROADWAY. EACH SEGMENT OF INFRASTRUCTURE INCLUDES ABBREVIATED LETTERS AND NUMBERS THAT CORRESPOND TO THE PHASING PLAN SHOWN ON THE PHASING MAP. THE FOLLOWING IS AN EXAMPLE FOR PARCEL R1:

THE FIRST 'X' CORRESPONDS TO THE REQUIRED ROADWAY SEGMENT FOR J. W. POWELL BLVD THAT WILL NEED TO BE CONSTRUCTED FROM THE EAST PARCEL BOUNDARY (R1) TO THE COLLECTOR ROAD (R2). THE SECOND 'X' CORRESPONDS TO THE REQUIRED SEGMENT FOR J. W. POWELL BLVD THAT WILL NEED TO BE CONSTRUCTED FROM THE EAST PARCEL BOUNDARY (R2) TO THE WEST PARCEL BOUNDARY OF R1 (R3). THE THIRD 'X' CORRESPONDS TO THE REQUIRED 20" WATERLINE SEGMENT IN J. W. POWELL BLVD THAT WILL NEED TO BE CONSTRUCTED FROM THE EAST PARCEL BOUNDARY (W1) TO THE COLLECTOR ROAD (W2). THE FOURTH 'X' CORRESPONDS TO THE REQUIRED 20" WATERLINE SEGMENT IN J. W. POWELL BLVD THAT WILL NEED TO BE CONSTRUCTED FROM THE THE COLLECTOR ROAD (W2) TO THE WEST PARCEL BOUNDARY OF R1 (W3). THE FIFTH 'X' CORRESPONDS TO THE REQUIRED SEWERLINE THAT WILL NEED TO BE CONSTRUCTED FROM THE PARCEL BOUNDARY OF R1 (S1) TO (S2) IN J. W. POWELL BLVD, TO THE EXISTING SEWERLINE IN RIO DE FLAG (S3).

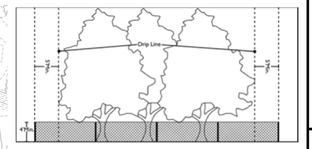
PLOTTED: Jul 07, 2025 - 2:55pm



LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- LOT
- 100-YEAR FLOODPLAIN
- SLOPE RESOURCES 17-24.99%
- SLOPE RESOURCES 25-34.99%
- SLOPE RESOURCES >35%
- EXISTING TREE CANOPY
- DISTURBED TREE CANOPY
- PHASE 1 INST. NO. 3944598

NOTES:
1. ROW INCLUDES FOURTH STREET, CREST STONE ROAD, PEAK POINT ROAD AND WHETSTONE DRIVE.
2. RESOURCES WITHIN ALL PUBLIC ROADS AND REGIONAL DETENTION BASINS ARE NOT INCLUDED IN THE NATURAL RESOURCE PROTECTION CALCULATIONS FOR THIS PROJECT.
3. RESOURCES IMPACTED BY THE FUTS DEVELOPMENT WILL BE SHOWN AS REMOVED FROM THE TOTAL TREE CALCULATION AT THE TIME OF DEVELOPMENT.



NOTES:
1. IF A "POTENTIALLY PRESERVED" TREE IS INDEED PRESERVED THROUGH THE CONSTRUCTION PROCESS, THE TREE OR GROUP OF TREES IS TO HAVE TEMPORARY CONSTRUCTION FENCING ACCORDING TO C.O.F. ENGINEERING ZONING CODE SECTION 10-50.90.090.
2. TEMPORARY FENCING SHALL BE INSTALLED ALONG THE OUTER EDGE OF THE PRESERVED NATURAL RESOURCE(S) AND COMPLETELY SURROUND THE DRIP LINES PLUS FIVE FEET OF ALL TREES OR CLUMPS OF TREES WITHIN 50 FEET OF PROPOSED LAND DISTURBANCE AREAS. THE FIGURE ABOVE ILLUSTRATES THE TEMPORARY CONSTRUCTION FENCING REQUIREMENTS. SEE C.O.F. ZONING CODE SECTION 10-50.90-090.

NORTH

SCALE 1" : 200'
0 100 200

Registered Professional Engineer
CERTIFICATE NO.
49953
ALICIA ANNE STOFFERS
ARIZONA, USA

FLAGSTAFF ARIZONA

CDR PHASE II - PRELIMINARY BLOCK PLAT

NATURAL RESOURCE PROTECTION PLAN (1)

JOB NO: 223357
DATE: JUL 25
SCALE: AS SHOWN
DRAWN: JEE
DESIGN: JEE/KMF
CHECKED: SCI

REVISIONS

NO.	DESCRIPTION	DATE	BY

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0334
928.774.6934 fax
www.ardurra.com

Shephard Wesnitzer, Inc.
An ARDURRA Company

Contact Arizona 811 at least two full working days before you begin excavation
Call 811 or click Arizona811.com

DRAWING NO.
NRPP1

SHT NO. 19 OF 20

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - NATURAL RESOURCE PROTECTION PLAN.DWG BHONANIE

PLOTTED: Jul 07, 2025 - 2:55pm

SUMMARY TABLE OF TREE RESOURCES FOR CDR

BLOCK/TRACT	LAND USE ZONE	EXISTING TREE CANOPY ($SF)_1$	REQUIRED TREE PRESERVATION RATE	REQUIRED TREE CANOPY AREA TO BE PRESERVED ($SF)_2$	TREE CANOPY AREA PRESERVED ($SF)_3$	PERCENT TREE CANOPY AREA PRESERVED$_4$	NOTES
RESIDENTIAL							
G	MR	109,957	47.5%	52,230	67,898	61.7%	APPROVED
I	R1	167,950	47.5%	79,776	104,742	62.4%	APPROVED
N	MR	80,670	47.5%	38,318	38,905	48.2%	PROPOSED
O-P	MR	149,085	47.5%	70,815	82,728	55.5%	PROPOSED
Q1/Q2	MR	277,762	47.5%	131,937	277,762	100.0%	UNDEVELOPED
Q3	MR	84,436	47.5%	40,107	84,436	100.0%	UNDEVELOPED
R1	MR	274,762	47.5%	130,512	149,699	54.5%	PROPOSED
R2/R3	MR	355,572	47.5%	168,897	355,572	100.0%	UNDEVELOPED
R4/R5	MR	338,753	47.5%	160,907	338,753	100.0%	UNDEVELOPED
S	R1	215,995	47.5%	102,598	215,995	100.0%	UNDEVELOPED
Y	MR	806	47.5%	383	806	100.0%	DRAINAGE
ZZ	MR	0	47.5%	0	0	100.0%	DRAINAGE
A	MR	13,258	47.5%	6,298	13,258	100.0%	PUBLIC LANDS
B	MR	56,051	47.5%	26,624	56,051	100.0%	PUBLIC LANDS
RESIDENTIAL TOTAL:		**2,125,057**	**47.5%**	**1,009,402**	**1,786,604**	**84%**	

NOTES:

THE FLAGSTAFF RESOURCE TEXT AMENDMENT HAS BEEN APPROVED BY THE CITY COUNCIL. PER THE DEVELOPMENT AGREEMENT IT HAS BEEN APPLIED RETROACTIVELY TO THE ENTIRE CDR PROPERTY. THIS NATURAL RESOURCE PROTECTION PLAN PROVIDES AN UPDATED RESOURCE BANK FOR ALL OF THE RESIDENTIAL PARCELS IN CANYON DEL RIO.

1. EXISTING TREE CANOPY INCLUDES TREES WITHIN THE PARCEL OUTSIDE OF SLOPE RESOURCES.

2. THIS IS CALCULATED BASED ON THE EXISTING TREE CANOPY AS DESCRIBED IN NOTE 1.

3. THIS TABLE DOES NOT INCLUDE CREDIT FOR FOREST RESOURCES IN STEEP SLOPE AREA. DURING DEVELOPMENT OF THE INDIVIDUAL SITES, THIS CREDIT MAY BE ADDED TO THE RESOURCE TOTALS. PER 10-20.90.060, UP TO 25 PERCENT OF THE FOREST RESOURCES IN THE STEEP SLOPE AREA MAY BE COUNTED TOWARDS THE REQUIRED AMOUNT OF FOREST RESOURCES FOR THE ENTIRE SITE AT A RATIO OF ONE CREDIT POINT FOR FOREST RESOURCES TO 50 SQUARE FEET OF SLOPE AREA.

4. PARCELS E1, E2, F, K1, K2, J1, AND J2, WILL BE REQUIRED TO MEET CITY OF FLAGSTAFF RESOURCE PRESERVATION REQUIREMENTS AS INDIVIDUAL STANDALONE DEVELOPMENTS. RESOURCES WITHIN COMMERCIAL AREAS TO BE TRANSFERRED AND REALLOCATED TO OTHER COMMERCIAL AREAS. THOSE PARCELS HAVE BEEN REMOVED FROM THE TABLE.

5. THE COMMERCIAL TREE RESOURCE TARGET IS INDICATED WITH A YELLOW HIGHLIGHT. THE COMMERCIAL TREE RESROUCE BUDGET IS INDICATED WITH AN ORANGE HIGHLIGHT. EACH OF THE COMMERCIAL PARCELS MUST MEET CITY OF FLAGSTAFF TREE RESOURCE PRESERVATION REQUIREMENTS AS INDIVIDUAL STANDALONE DEVELOPMENTS AS DESCRIBED IN NOTE 5. HOWEVER, AT THE COMPLETION OR APPROVAL OF ALL COMMERCIAL DEVELOPMENTS THE BUDGET MUST BE AT OR ABOVE THE TARGET. RESOURCES WITHIN COMMERCIAL AREAS TO BE

6. THE RESIDENTIAL TREE RESOURCE TARGET IS INDICATED WITH A GREEN HIGHLIGHT. THE RESIDENTIAL TREE RESROUCE BUDGET IS INDICATED WITH AN BLUE HIGHLIGHT. AT THE COMPLETION OF ALL RESDIENTIAL DEVELOPMENTS THE BUDGET MUST BE AT OR ABOVE THE TARGET.

7. APPROVED OR COMPLETED PARCEL DEVELOPMENTS ARE INDICATED WITH A PURPLE HIGHLIGHT. AS PARCEL DEVELOPMENTS ARE SUBMITTED, THE TABLE ABOVE WILL BE UPDATED TO TRACK PROGRESS OF THE BUDGET VS THE TARGET AS DESCRIBED IN NOTES 7 AND 8.

8. ALL PARCELS, EXCLUDING PHASE 1 ROADWAYS, HAVE BEEN THINNED ACCORDING TO THE FIRE-WISE PROGRAM SINCE THE NRPP WAS APPROVED FOR THE PHASE 1 INFRASTRUCTURE.

SUMMARY TABLE OF SLOPE RESOURCES 17-24.99% FOR CDR

BLOCK/TRACT	LAND USE ZONE	EXISTING SLOPE AREA ($SF)_1$	REQUIRED SLOPE (17-24.99%) PRESERVATION RATE	REQUIRED SLOPE AREA TO BE PRESERVED ($SF)_2$	SLOPE AREA PRESERVED (SF)	PERCENT SLOPE AREA PRESERVED	NOTES
RESIDENTIAL							
G	MR	19,191	66.5%	12,762	12,199	63.6%	APPROVED
I	R1	30,394	66.5%	20,212	27,772	91.4%	APPROVED
N	MR	50,079	66.5%	33,303	33,203	66.3%	PROPOSED
O-P	MR	0	66.5%	0	0	100.0%	PROPOSED
Q1/Q2	MR	6,589	66.5%	4,382	6,589	100.0%	UNDEVELOPED
Q3	MR	25,939	66.5%	17,250	25,939	100.0%	UNDEVELOPED
R1	MR	123,132	66.5%	81,883	96,388	78.3%	PROPOSED
R2/R3	MR	156,297	66.5%	103,937	156,297	100.0%	UNDEVELOPED
R4/R5	MR	227,009	66.5%	150,961	227,009	100.0%	UNDEVELOPED
S	R1	22,167	66.5%	14,741	22,167	100.0%	UNDEVELOPED
Y	MR	5,449	66.5%	3,624	5,449	100.0%	DRAINAGE
ZZ	MR	17,369	66.5%	11,551	17,369	100.0%	DRAINAGE
A	MR	0	66.5%	0	0	100.0%	PUBLIC LANDS
B	MR	12,369	66.5%	8,226	12,369	100.0%	PUBLIC LANDS
RESIDENTIAL TOTAL:		**695,985**	**66.5%**	**462,830**	**642,751**	**92%**	

NOTES:

THE FLAGSTAFF RESOURCE TEXT AMENDMENT HAS BEEN APPROVED BY THE CITY COUNCIL. PER THE DEVELOPMENT AGREEMENT IT HAS BEEN APPLIED RETROACTIVELY TO THE ENTIRE CDR PROPERTY. THIS NATURAL RESOURCE PROTECTION PLAN PROVIDES AN UPDATED RESOURCE BANK FOR ALL OF THE RESIDENTIAL PARCELS IN CANYON DEL RIO.

1.EXISTING SLOPE AREA INCLUDES SLOPE WITHIN THE PARCEL WITH THE REGIONAL DETENTION AND PUBLIC ROADS REMOVED.

2. THIS IS CALCULATED BASED ON THE EXISTING SLOPE AREA AS DESCRIBED IN NOTE 1.

3. PARCELS E1, E2, F, K1, K2, J1, AND J2, WILL BE REQUIRED TO MEET CITY OF FLAGSTAFF RESOURCE PRESERVATION REQUIREMENTS AS INDIVIDUAL STANDALONE DEVELOPMENTS. RESOURCES WITHIN COMMERCIAL AREAS TO BE TRANSFERRED AND REALLOCATED TO OTHER COMMERCIAL AREAS. THEREFORE HAVE BEEN REMOVED FROM THE TABLE.

4. THE RESIDENTIAL SLOPE RESOURCE TARGET IS INDICATED WITH A GREEN HIGHLIGHT. THE RESIDENTIAL SLOPE RESROUCE BUDGET IS INDICATED WITH AN BLUE HIGHLIGHT. AT THE COMPLETION OF ALL RESDIENTIAL DEVELOPMENTS THE BUDGET MUST BE AT OR ABOVE THE TARGET.

5. APPROVED OR COMPLETED PARCEL DEVELOPMENTS ARE INDICATED WITH A PURPLE HIGHLIGHT. AS PARCEL DEVELOPMENTS ARE SUBMITTED, THE TABLE ABOVE WILL BE UPDATED TO TRACK PROGRESS OF THE BUDGET VS THE TARGET AS DESCRIBED IN NOTES 4.

APPROVED DEVELOPMENT

RESIDENTIAL TREE RESOURCE BUDGET

RESIDENTIAL TARGET

PROPOSED DEVELOPMENT

SUMMARY TABLE OF SLOPE RESOURCES 25-34.99% FOR CDR

BLOCK/TRACT	LAND USE ZONE	EXISTING SLOPE AREA ($SF)_1$	REQUIRED SLOPE (25-34.99%) PRESERVATION RATE	REQUIRED SLOPE AREA TO BE PRESERVED ($SF)_2$	SLOPE AREA PRESERVED (SF)	PERCENT SLOPE AREA PRESERVED	NOTES
RESIDENTIAL							
G	MR	60,480	76%	45,965	50,892	84.1%	APPROVED
I	R1	13,556	76%	10,303	12,997	95.9%	APPROVED
N	MR	1,631	76%	1,240	1,171	71.8%	PROPOSED
O-P	MR	0	76%	0	0	100.0%	PROPOSED
Q1/Q2	MR	0	76%	0	0	100.0%	UNDEVELOPED
Q3	MR	7,277	76%	5,530	7,277	100.0%	UNDEVELOPED
R1	MR	9,840	76%	7,478	7,077	71.9%	PROPOSED
R2/R3	MR	11,085	76%	8,424	11,085	100.0%	UNDEVELOPED
R4/R5	MR	44,031	76%	33,464	44,031	100.0%	UNDEVELOPED
S	R1	36,061	76%	27,406	36,061	100.0%	UNDEVELOPED
Y	MR	0	76%	0	0	100.0%	DRAINAGE
ZZ	MR	0	76%	0	0	100.0%	DRAINAGE
A	MR	3,972	76%	3,019	3,972	100.0%	PUBLIC LANDS
B	MR	15,832	76%	12,033	15,832	100.0%	PUBLIC LANDS
RESIDENTIAL TOTAL:		**203,766**	**76%**	**154,862**	**190,395**	**93%**	

NOTES:

THE FLAGSTAFF RESOURCE TEXT AMENDMENT HAS BEEN APPROVED BY THE CITY COUNCIL. PER THE DEVELOPMENT AGREEMENT IT HAS BEEN APPLIED RETROACTIVELY TO THE ENTIRE CDR PROPERTY. THIS NATURAL RESOURCE PROTECTION PLAN PROVIDES AN UPDATED RESOURCE BANK FOR ALL OF THE RESIDENTIAL PARCELS IN CANYON DEL RIO.

1.EXISTING SLOPE AREA INCLUDES SLOPE WITHIN THE PARCEL WITH THE REGIONAL DETENTION AND PUBLIC ROADS REMOVED.

2. THIS IS CALCULATED BASED ON THE EXISTING SLOPE AREA AS DESCRIBED IN NOTE 1.

3. PARCELS E1, E2, F, K1, K2, J1, AND J2, WILL BE REQUIRED TO MEET CITY OF FLAGSTAFF RESOURCE PRESERVATION REQUIREMENTS AS INDIVIDUAL STANDALONE DEVELOPMENTS. RESOURCES WITHIN COMMERCIAL AREAS TO BE TRANSFERRED AND REALLOCATED TO OTHER COMMERCIAL AREAS. THEREFORE HAVE BEEN REMOVED FROM THE TABLE.

4. THE RESIDENTIAL SLOPE RESOURCE TARGET IS INDICATED WITH A GREEN HIGHLIGHT. THE RESIDENTIAL SLOPE RESROUCE BUDGET IS INDICATED WITH AN BLUE HIGHLIGHT. AT THE COMPLETION OF ALL RESDIENTIAL DEVELOPMENTS THE BUDGET MUST BE AT OR ABOVE THE TARGET.

5. APPROVED OR COMPLETED PARCEL DEVELOPMENTS ARE INDICATED WITH A PURPLE HIGHLIGHT. AS PARCEL DEVELOPMENTS ARE SUBMITTED, THE TABLE ABOVE WILL BE UPDATED TO TRACK PROGRESS OF THE BUDGET VS THE TARGET AS DESCRIBED IN NOTES 4.

6. FOR PROPPOSED DEVELOPMENT INDICATED WITH RED HIGHLIGHT, SEE INDIVIDUAL BLOCK DEVELOPMENT PLANS FOR DETAILED NRPP CALCULATIONS.

SUMMARY TABLE OF SLOPE RESOURCES +35% FOR CDR

BLOCK/TRACT	LAND USE ZONE	EXISTING SLOPE AREA ($SF)_1$	REQUIRED SLOPE (+35%) PRESERVATION RATE	REQUIRED SLOPE AREA TO BE PRESERVED ($SF)_2$	SLOPE AREA PRESERVED (SF)	PERCENT SLOPE AREA PRESERVED	NOTES
RESIDENTIAL							
G	MR	2,544	100%	2,544	2,544	100.0%	APPROVED
I	R1	3,872	100%	3,872	3,872	100.0%	APPROVED
N	MR	4,179	100%	4,179	4,179	100.0%	PROPOSED
O-P	MR	0	100%	0	0	100.0%	PROPOSED
Q1/Q2	MR	0	100%	0	0	100.0%	UNDEVELOPED
Q3	MR	0	100%	0	0	100.0%	UNDEVELOPED
R1	MR	0	100%	0	0	100.0%	PROPOSED
R2/R3	MR	0	100%	0	0	100.0%	UNDEVELOPED
R4/R5	MR	70,481	100%	70,481	70,481	100.0%	UNDEVELOPED
S	R1	75,953	100%	75,953	75,953	100.0%	UNDEVELOPED
Y	MR	0	100%	0	0	100.0%	DRAINAGE
ZZ	MR	0	100%	0	0	100.0%	DRAINAGE
A	MR	14,023	100%	14,023	14,023	100.0%	PUBLIC LANDS
B	MR	119,348	100%	119,348	119,348	100.0%	PUBLIC LANDS
RESIDENTIAL TOTAL:		**290,401**	**100%**	**290,401**	**290,401**	**100%**	

NOTES:

THE FLAGSTAFF RESOURCE TEXT AMENDMENT HAS BEEN APPROVED BY THE CITY COUNCIL. PER THE DEVELOPMENT AGREEMENT IT HAS BEEN APPLIED RETROACTIVELY TO THE ENTIRE CDR PROPERTY. THIS NATURAL RESOURCE PROTECTION PLAN PROVIDES AN UPDATED RESOURCE BANK FOR ALL OF THE RESIDENTIAL PARCELS IN CANYON DEL RIO.

1.EXISTING SLOPE AREA INCLUDES SLOPE WITHIN THE PARCEL WITH THE REGIONAL DETENTION AND PUBLIC ROADS REMOVED.

2. THIS IS CALCULATED BASED ON THE EXISTING SLOPE AREA AS DESCRIBED IN NOTE 1.

3. PARCELS E1, E2, F, K1, K2, J1, AND J2, WILL BE REQUIRED TO MEET CITY OF FLAGSTAFF RESOURCE PRESERVATION REQUIREMENTS AS INDIVIDUAL STANDALONE DEVELOPMENTS. RESOURCES WITHIN COMMERCIAL AREAS TO BE TRANSFERRED AND REALLOCATED TO OTHER COMMERCIAL AREAS. THEREFORE HAVE BEEN

4. THE RESIDENTIAL SLOPE RESOURCE TARGET IS INDICATED WITH A GREEN HIGHLIGHT. THE RESIDENTIAL SLOPE RESROUCE BUDGET IS INDICATED WITH AN BLUE HIGHLIGHT. AT THE COMPLETION OF ALL RESDIENTIAL DEVELOPMENTS THE BUDGET MUST BE AT OR ABOVE THE TARGET.

5. APPROVED OR COMPLETED PARCEL DEVELOPMENTS ARE INDICATED WITH A PURPLE HIGHLIGHT. AS PARCEL DEVELOPMENTS ARE SUBMITTED, THE TABLE ABOVE WILL BE UPDATED TO TRACK PROGRESS OF THE BUDGET VS THE TARGET AS DESCRIBED IN NOTES 4.

FLAGSTAFF ARIZONA

CDR PHASE II – PRELIMINARY BLOCK PLAT

NATURAL RESOURCE PROTECTION PLAN (2)

JOB NO: 223357
DATE: JUL 25
SCALE: AS SHOWN
DRAWN: JEE
DESIGN: JEE/KMF
CHECKED: SCI

REVISIONS

NO.	DESCRIPTION	DATE	BY

110 W. Dale Avenue
Flagstaff, AZ 86001
928.773.0334
928.774.8934 fax
www.ardurra.com

Shephard Wesnitzer, Inc.
An ARDURRA Company

Contact Arizona 811 at least two full working days before you begin excavation
Call 811 or click Arizona811.com

DRAWING NO.
NRPP2

SHT NO. 20 OF 20

Registered Professional Engineer
CERTIFICATE NO.
49953
ALICIA ANNE STOFFERS
State Arizona United
ARIZONA, USA

FILE: P:\2023\223357\DRAWINGS\PLATS\PRELIMINARY BLOCK PLAT\223357 - NATURAL RESOURCE PROTECTION PLAN.DWG BHONANIE

City of Flagstaff
Community Development
Substantive Review Comments

Project Name: Canyon Del Rio Phase 2 **Date:** June 5, 2025
Project No.: PZ-18-00113-06
Project Address: 3295 E Whetstone Dr

Application Type: Preliminary Plat
Review Type: Substantive

Project Manager: Alaxandra Pucciarelli
E-mail: apucciarelli@flagstaffaz.gov
Phone: 928 213-2640

Status of Review: Approved with Conditions
The Inter-Division Staff (IDS) Review has approved the Preliminary Plat application subject to the conditions and comments listed below. The plat will now go before the Planning and Zoning Commission and City Council. Following City Council approval, the next step in the development process is Civil Improvement Plans review. This correspondence is transmitted to the applicant on day 77 of the 78-day Substantive Review Period in accordance with ARS 9-835(J). The next submittal should include a copy of this Preliminary Plat Review Comments Letter along with your responses to each comment, in addition to all required application materials and plans.

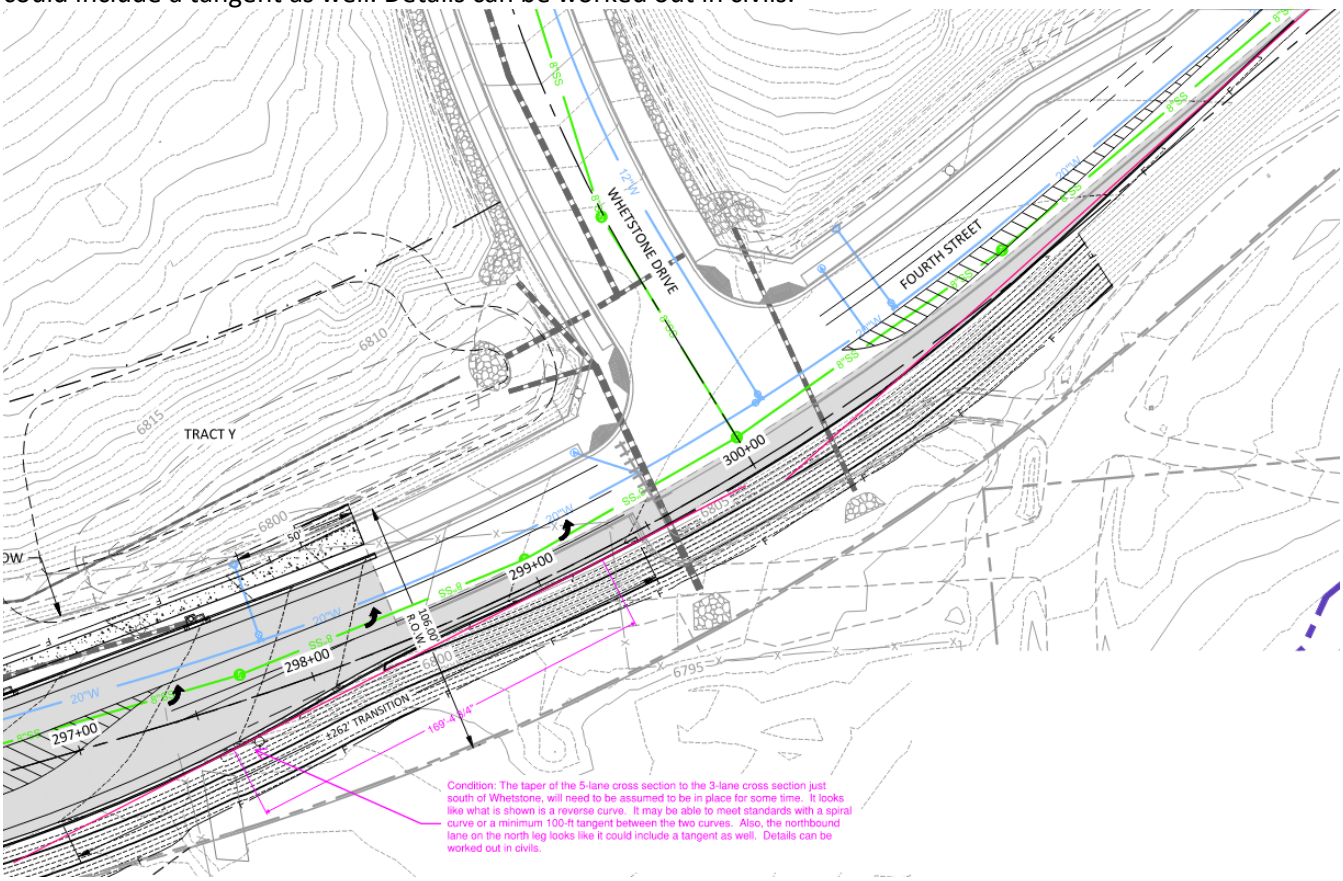
PROJECT SUMMARY:
This application is a preliminary plat of Phase 2 (aka Tract Z) of Canyon Del Rio, APN 106-08-043. The proposed development includes four blocks, five tracts, and ROW dedication of JW Powell and Harold Ranch Road.

CONDITIONS/COMMENTS:

Substantive Current Planning: Current Planning, Alaxandra Pucciarelli Approved with Conditions 06/05/2025
Conditions of Approval:
1. The language stating that the dedicated floodplain (tracts A and B) may be used to meet the common space requirements of future Planned Residential Developments must be removed prior to scheduling the Planning & Zoning Commission and City Council meetings.
General Comments:
1. Depending on how tract ZZ is developed, it may not be counted towards Open Space as indicated on sheet DR01. The development must meet the Open Space requirements of the Rezoning Ordinance and the Development Agreement.

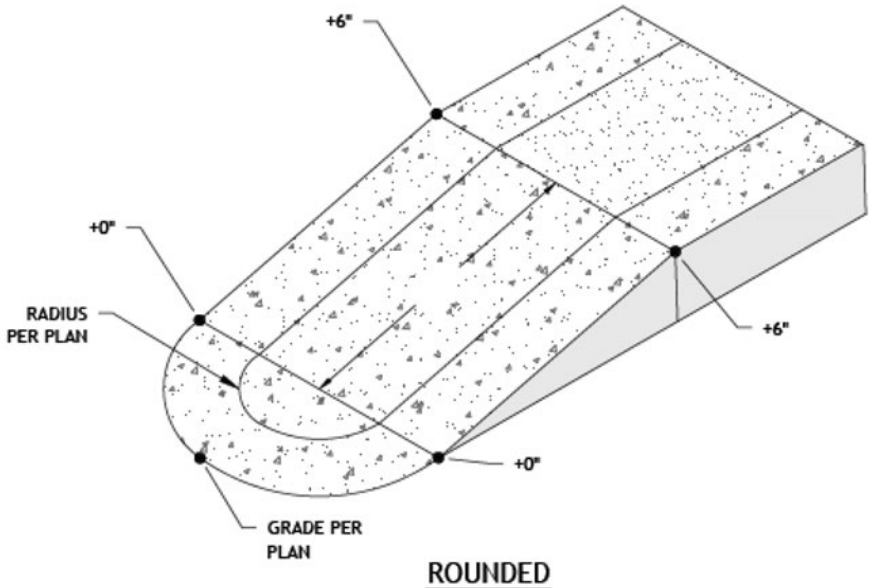
Substantive Traffic: Traffic, Stephanie Santana Approved with Conditions 06/05/2025
Approved with the following conditions:
1. The Whetstone traffic memo will be reviewed outside of this IDS submittal and comments will be provided separately.
2. The intersection of JWP and Herold Ranch shall be constructed to be functional. If CDR constructs before the City, the intersection will need to be completed to the southern leg. Details can be worked out in civils.
3. CDR and the Burch Property shall continue to coordinate for required intersection improvements at Fourth Street & JWP.
4. The taper of the 5-lane cross section to the 3-lane cross section just south of Whetstone, will need to be assumed to be in place for some time. It looks like what is shown is a reverse curve. It may be able to meet standards with a spiral

curve or a minimum 100-ft tangent between the two curves. Also, the northbound lane on the north leg looks like it could include a tangent as well. Details can be worked out in civils.



Future Submittal (Civil):

1. The details of the two-stage left turn lane will be worked out in civils. The arrows shall be lane reduction arrows, not right turn arrows. There should be a portion of solid stripe, small skip stripe, then a gap (no stripe).
2. Streetlight details and locations will be confirmed and worked out in civils.
3. Left turn storage lengths will be confirmed in civils.
4. Details of the ADA ramps will need to be worked out in civils.
5. All median noses shall start at a 0” elevation around the radius and rise to 6” elevation for a minimum 5’ transition length. Follow the sign design on Eng Standard 10-06-015.



ROUNDED

ELEVATIONS PROVIDED ARE RELATIVE TO THE ADJACENT PAVEMENT ELEVATION.

L CURB TERMINATION
NOT TO SCALE

Substantive Engineering: Development Engineering, David Millis Approved with Conditions 06/02/2025
Conditions of Future Submittals:
1. At civil plan review indicate adjustment of existing Herold Ranch Rd to align with proposed JWP intersection and provide a MAG 205 paved turn-out to provide for continuing residential access prior to the developments ahead of the development on Q3 or R4-R5.
2. During civil design and depending on the order of phasing, interim hydrant and/or blow-off locations to be determined based on the need for flushing of interim dead end mains.

General Comments:
1. Conceptual lotting within individual blocks indicated on this submittal was not reviewed as part of this submittal.

Substantive Water Services: Water Services, Courtney Hawley Approved with Conditions 02/04/2025
Conditions of Approval:
1. 12” water line on Block Q1-Q2 requires an easement on Block R2-R3. Please realign the 12” water main to limit the crossing of parcel lines.
2. Block Q3 may require additional looping, a dead end shall never exceed 1000ft.
3. All utilities shall be placed under a paved surface.

Substantive Fire Prevention: Fire Prevention, Christopher Jack Approved 02/03/2025
No Comments

City of Flagstaff
Community Development
Substantive Review Comments

Substantive Stormwater: Stormwater, Douglas Slover Approved 02/04/2025
No Comments

Substantive Parks: Parks, Amy Hagin Approved 02/04/2025
No Comments

Substantive HPC/Comm Design: Heritage Preservation, Mark Reavis Approved 05/14/2024
No Comments

Substantive Building & Safety: Building Safety, Brian Cook Approved 05/14/2024
No Comments

Substantive Public Works: Public Works, Jarrett Nelson Approved 06/18/2024
No Comments

To: **Larry Frostad, Ardurra**

From: **Stephanie Santana, Sr. Lead Transportation Engineer** SS

Date: **April 2, 2025**

RE: **Second Review of the CDR Phase 2 & R1 TIA, sealed March 18, 2025**

CC: **Jeffrey Bauman, Transportation Director / Traffic Engineer**
Alax Pucciarelli, Current Planning Manager
Ben Mejia, Senior Planner

The City of Flagstaff Transportation Engineering Section has reviewed the CDR Phase 2 & R1 TIA sealed March 18, 2025.

Please address the following comment and resubmit the TIA.

1. The intersection of JWP & Whetstone is showing failing LOS/delay and meets signal warrants as a three-leg intersection in the study year of 2045. The TIA will need to be updated to include analysis for an interim year to determine when the improvements to the intersection will be required.

The following comments are required to be included in the resubmittal of the Preliminary Block Plat for CDR Phase 2 and the Preliminary Plat for CDR R1.

1. Based on the TIA recommendations and the poor LOS/delay at the study intersections, right of way shall be reserved for a two-lane roundabout at the intersections of JWP & Whetstone, JWP & Fourth Street, and JWP & Herold Ranch.
2. The collector roadway through the Burch development (referred to as Pitch) shall be called Fourth Street per the Regional Plan.
3. Right turn lanes warrant per City of Flagstaff Engineering Standard section 13-10-010-0002 Right Turn Deceleration Lane Warrants, at intersections A11 NB, A4 SB, A6 NB, A5/A7 NB & SB, and A8 NB. Right turn lanes warrant per ADOT TGP 245 at intersections A11 NB, A4 SB, A5/A7 SB, and A8 NB. Right turn lanes shall be constructed at intersections A11 NB, A4 SB, A5/A7 SB, and A8 NB.
4. The directional splits of 70/30 were not done consistently, it can be assumed that all intersections on the north side of JWP have failing left turn movements. The recommendation for roundabouts at the intersection of JWP & Herold Ranch and JWP & Whetstone will help in the future if the left turns at these intersections need to be restricted. In the interim, a two-stage left turn lane shall be constructed at the intersection of JWP & A4 and be able to hold two vehicles with the appropriate taper lengths.

5. The existing single-family residential to the east of CDR should not be assumed to use intersection A8 (Herold Ranch Rd). Herold Ranch is an unimproved dirt road, and these trips should be assumed to use Fourth Street. When the volumes are updated, the intersection of JWP & Fourth Street result in failing LOS/delay for the westbound left turn movement. This deficiency is mitigated for CDR Phase 2 & R1 by providing ROW for a future roundabout at the intersection and will be further studied in the Fourth Street Single Family TIA.

To: **Larry Frostad, Ardurra**

From: **Stephanie Santana, Sr. Lead Transportation Engineer** *SS*

Date: **July 10, 2025**

RE: **Review of the CDR Phase 2 Whetstone Memo, sealed June 13, 2025**

CC: **Jeffrey Bauman, Transportation Director / Traffic Engineer**
Alax Pucciarelli, Current Planning Manager

The City of Flagstaff Transportation Engineering Section has reviewed the CDR Phase 2 Whetstone Memo sealed June 13, 2025. The memo is approved with the following condition.

1. A 52.9% proportional cost share is required for the construction of a single lane roundabout at the intersection of JWP and Whetstone.