Clackamas County Planning and Zoning Division
Department of Transportation and Development

Development Services Building
150 Beavercreek Road | Oregon City, OR 97045

503-742-4500 | zoninginfo@clackamas.us
www.clackamas.us/planning

Notice of a Public Hearing on a Land Use Proposal in Your Area

Date of Mailing of this Notice: September 19, 2024

Notice Sent To: Agencies, Community Planning Organization(s) and property owners within 2,640 feet of the subject property.

HEARING DATE: October 24, 2024

HEARING TIME: This hearing will not begin before 9:30 a.m.**.** However, it may begin later depending on the length of any preceding items.

HEARING LOCATION: The public hearing will be conducted virtually using the Zoom platform. One week prior to the hearing, a Zoom link to the public hearing and details on how to observe and testify online or by telephone will be available on our website: www.clackamas.us/meetings/planning/hearingsofficer

File Number: Z0339-24

Applicant: Vertical Bridge, Brandon Clower

Property Owner: Lukas-Hanna Irrevocable Trust

Proposal: Verizon Wireless proposes to install antennas, and associated equipment on a new 195' tall self-support tower. Equipment cabinets and a generator will be placed at grade, surrounded by a chain link fence.

Applicable Zoning and Development Ordinance Criteria: Sections 202, 406, 835, 1203, 1307, and 1000s.

These criteria may be viewed online at http://www.clackamas.us/planning/zdo.html

Site Address and/or Location: 18133 S STEINER RD, Beavercreek, 97004

Assessor's Map: T03S, R03E, Section 19, Tax Lot(s) 00600, W.M.

Property Size: Approximately 217.55 acres

Zoning: Timber (TBR)

NOTICE TO MORTGAGEE, LIENHOLDER, VENDOR OR SELLER: ORS CHAPTER 215 REQUIRES THAT IF YOU RECEIVE THIS NOTICE, IT MUST PROMPTLY BE FORWARDED TO THE PURCHASER.

HOW TO OBTAIN ADDITIONAL INFORMATION

Staff Contact: Joy Fields; 503-742-4510 or jfields@clackamas.us

A copy of the application, all documents and evidence submitted by or on behalf of the applicant, and applicable criteria are available for inspection at no cost. In addition, a staff report on the application will be available for inspection at no cost at least **seven days prior to the hearing**. Copies may be purchased at the rate of $2.00 per page for 8 1/2" x 11" or 11" x 14" documents, $2.50 per page for 11" x 17" documents, $3.50 per page for 18" x 24" documents and $0.75 per sq ft with a $5.00 minimum for large format documents, or you may view these materials:

1. By emailing or calling the staff contact; or
2. Online at https://accela.clackamas.us/citizenaccess/. After selecting the "Planning" tab, enter the File Number to search. Select Record Info and then select "Attachments" from the dropdown list, where you will find the submitted application.

Community Planning Organization for Your Area: The following recognized Community Planning Organization (CPO) has been notified of this application and may develop a recommendation. You are welcome to contact the CPO and attend their meeting on this matter, if one is planned. If this CPO currently is inactive and you are interested in becoming involved in land use planning in your area, please contact Clackamas County Community Engagement at communityinvolvement@clackamas.us. **CPO:** Redland - Fischers Mill - Viola **Contact**: Lance Ward; lancecward@aol.com; 503.631.2550.

HOW TO SUBMIT TESTIMONY ON THIS APPLICATION

- All interested parties are invited to "attend" the hearing remotely online or by telephone and will be provided with an opportunity to testify orally, if they so choose. One week prior to the hearing, specific instructions will be available online at www.clackamas.us/meetings/planning/hearingsofficer
- Written testimony received by **October 11, 2024**, will be considered by staff prior to the issuance of the staff report and recommendation on this application. However, written testimony will continue to be accepted until the record closes, which may occur as soon as the conclusion of the public hearing.
- Written testimony may be submitted by email, fax, or regular mail. Please include the permit number on all correspondence and address written testimony to the staff contact who is handling this matter.
- Testimony, argument, and evidence must be directed toward the criteria identified above, or other criteria in the Zoning and Development Ordinance or Comprehensive Plan that you believe apply to the decision. Failure to raise an issue in person at the hearing or by letter prior to the close of the record, or failure to provide statements or evidence sufficient to afford the Hearings Officer an opportunity to respond to the issue, precludes an appeal to the Oregon Land Use Board of Appeals based on that issue.
- Written notice of the Hearing Officer's decision will be mailed to you if you submit oral or written testimony or make written request for notice of decision **and provide a valid mailing address**.

PROCEDURE FOR THE CONDUCT OF THE HEARING

The hearing will be conducted by one of the Land Use Hearings Officers, who are appointed by the Board of County Commissioners to conduct public hearings and issue decisions on certain land use permit applications. The following procedural rules have been established to allow an orderly hearing:

1. The length of time given to individuals speaking for or against an item will be determined by the Hearings Officer prior to the item being considered.
2. A spokesperson representing each side of an issue is encouraged.
3. Prior to the conclusion of the evidentiary hearing, any participant may request an opportunity to present additional evidence, argument, or testimony regarding the application. The Hearings Officer will either continue the hearing or leave the record open for additional written evidence, argument, or testimony.

Clackamas County is committed to providing meaningful access and will make reasonable accommodations, modifications, or provide translation, interpretation or other services upon request. Please contact us at 503-742-4545 or email DRenhard@clackamas.us.

503-742-4545: ¿Traducción e interpretación? |Требуется ли вам устный или письменный перевод?
翻译或口译？| Cần Biên dịch hoặc Phiên dịch? | 번역 또는 통역?

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TYPE II OR III LAND USE APPLICATION

DEEMED COMPLETE

ORIGINAL DATE SUBMITTED: 8/19/2024

FILE NUMBER: Z0339-24

APPLICATION TYPE: CONDITIONAL USE

The Planning and Zoning Division staff deemed this application complete for the purposes of Oregon Revised Statutes (ORS) 215.427 on: September 6, 2024

Joy Fields, AICP
Staff Name

Principal Planner
Title

Comments:

This has a DSL notice. This is a Type III application with a public hearing to be heard by the Hearings Officer.

Check one:

☐ The subject property is located inside an urban growth boundary. The 120-day deadline for final action on the application pursuant to ORS 215.427(1) is:

☑ The subject property is not located inside an urban growth boundary. The 150-day deadline for final action on the application pursuant to ORS 215.427(1) is: February 3, 2025

Planning and Zoning
Department of Transportation and Development
Development Services Building
150 Beavercreek Road | Oregon City, OR 97045
503-742-4500 | zoninginfo@clackamas.us
www.clackamas.us/planning

STAFF USE ONLY

RECEIVED

Aug 19 2024

Clackamas County
Planning & Zoning Division

Staff Initials: *File Number:* **Z0399-24**

Land use application for:

CONDITIONAL USE

Application Fee: $7,735, unless for mining, then $14,230. (+$150 for expanded notification area if the property is in the AG/F, EFU, FF-10, FU-10, RA-1, RA-2, RC, RI, RR, RRFF-5, or TBR zone, + $4,030 if Hydrogeologic Review is required)

APPLICANT INFORMATION			
Applicant name: Vertical Bridge	Applicant email: paul.danneberg@verticalbridge.com	Applicant phone: 206-375-3798	
Applicant mailing address: 750 Park of Commerce Drive, Ste. 200	City: Boca Raton	State: FL	ZIP: 33487
Contact person name (if other than applicant): Brandon Clower	Contact person email: saq@capitaldesignservices.com	Contact person phone: 971-979-0075	
Contact person mailing address: 1910 4th Ave E, PMB 196	City: Olympia	State: WA	ZIP: 98506

PROPOSAL	
Brief description of proposal: Proposal to construct a 195' tall self-support communications tower within a 75' x 75' fenced equipment area.	Pre-application conference file number: ZPAC0024-24

SITE INFORMATION		
Site address: 18133 S. Steiner Road, Beavercreek, OR 97004	Comprehensive Plan designation:	Zoning district: TBR
Map and tax lot #: *Township:* 3S *Range:* 3E *Section:* 19 *Tax Lot:* 00600 *Township:* _____ *Range:* _____ *Section:* _____ *Tax Lot:* _____ *Township:* _____ *Range:* _____ *Section:* _____ *Tax Lot:* _____		Land area: 216.8
Adjacent properties under same ownership: *Township:* _____ *Range:* _____ *Section:* _____ *Tax Lot:* _____ *Township:* _____ *Range:* _____ *Section:* _____ *Tax Lot:* _____		

Printed names of all property owners:	Signatures of all property owners:	Date(s):
Lukas-Hanna Irrevocable Trust	Martin Hertrich Digitally signed by Martin Hertrich Date: 2024.03.20 15:23:56 -07'00'	

I hereby certify that the statements contained herein, along with the evidence submitted, are in all respects true and correct to the best of my knowledge.

Applicant signature: D Brandon Clower Digitally signed by D Brandon Clower DN: C=US, E=bclower@capitaldesignservices.com, O=Capital Design Services, CN=D Brandon Clower Date: 2024.03.20 13:01:25-07'00'

Date:

A. Complete a pre-application conference:

You must attend a pre-application conference with Planning and Zoning staff before filing this application. Information about the pre-application conference process and a request form are available from the Planning and Zoning website.

B. Review applicable land use rules:

This application is subject to the provisions of Section 1203, *Conditional Uses* of the Clackamas County Zoning and Development Ordinance (ZDO).

It is also subject to the ZDO's definitions, procedures, and other general provisions, as well as to the specific rules of the subject property's zoning district and applicable development standards, as outlined in the ZDO.

C. Turn in all of the following:

☐ **Complete application form:** Respond to all the questions and requests in this application, and make sure all owners of the subject property sign the first page of this application. Applications without the signatures of *all* property owners are incomplete.

☐ **Application fee:** The cost of this application is **$7,735**, unless it is for mining, in which case the cost is **$14,230**. A $150 notification surcharge also applies if an expanded notification area is required by ZDO Section 1307. If Hydrogeologic Review is required, there is an additional $4,030 fee. Payment can be made by cash, by check payable to "Clackamas County", or by credit/debit card with an additional card processing fee using the *Credit Card Authorization Form* available from the Planning and Zoning website. Payment is due when the application is submitted. Refer to the FAQs at the end of this form and to the adopted Fee Schedule for refund policies.

☐ **Vicinity map:** Provide a map of the area around the property, drawn to scale, that shows the uses and location of improvements on adjacent properties and properties across any road.

☐ **Site plan:** Provide a site plan (also called a plot plan). A *Site Plan Sample* is available from the Planning and Zoning website. The site plan must be accurate and drawn to-scale on paper measuring no larger than 11 inches x 17 inches. The site plan must illustrate all of the following (when applicable):

- Lot lines, lot/parcel numbers, and acreage/square footage of lots;
- Contiguous properties under the same ownership;
- All existing and proposed structures, fences, roads, driveways, parking areas, and easements, each with identifying labels and dimensions;
- Setbacks of all structures from lot lines and easements;
- Significant natural features (rivers, streams, wetlands, slopes of 20% or greater, geologic hazards, mature trees or forested areas, drainage areas, etc.); and
- Location of utilities, wells, septic drain fields, and replacement drain field areas.

☐ **Service Feasibility Determinations:** Request that the property's water provider, sanitary sewer provider, and surface water management authority, as applicable, each complete a Preliminary Statement of Feasibility and include those completed statements with your application. If the proposed development will be served by an onsite wastewater treatment system (e.g., a septic system), include an approved Site Evaluation or Authorization Notice from the Septic & Onsite Wastewater Program attesting to the feasibility of your proposal.

☐ **Building elevation diagrams:** Attach drawings of all proposed new and remodeled structures. The drawings must be to-scale and must show each side of the building and any windows, doors, or other appurtenances. Include all measurements (height, length, width, and area).

☐ **Hydrogeologic review report:** You must include a hydrogeologic review report if new industrial, commercial, or institutional development using exempt-use well or wells is proposed within a sensitive groundwater area outside of the Portland Metropolitan Urban Growth Boundary, Government Camp, Rhododendron, Wemme/Welches, Wildwood/Timberline, and Zigzag Village. The report must address applicable requirements of ZDO Subsection 1006.03(E). Additional guidance on completing the report is available from the Planning and Zoning website. Your report will be peer-reviewed by qualified professionals contracted by the County. Evaluation of any required hydrogeologic review report costs an additional $3,230.

☐ **Any additional information or documents, such as a traffic impact study, advised of during the pre-application conference**

D. Respond in a narrative:

Your application submittal must include a narrative that fully responds to the following. Due to the technical nature of these requirements, guidance on how best to respond will be provided during the required pre-application conference.

1. How is the use listed as a conditional use in the Zoning and Development Ordinance (ZDO) section for the zoning district in which the subject property is located?

2. How are the characteristics of the subject property suitable for the proposed use considering size, shape, location, topography, existence of improvements, and natural features?

3. How does the proposed use comply with ZDO Subsection 1007.07, *Transportation Facilities Concurrency*?

4. How is safety of the transportation system adequate to serve the proposed use.

5. Explain how the proposed use will not alter the character of the surrounding area in a manner that substantially limits, impairs, or precludes the use of surrounding properties for the primary uses allowed in the zoning district(s) in which surrounding properties are located.

6. How is the proposed use consistent with the applicable goals and policies of the Comprehensive Plan?

7. Explain how the proposed use complies with any applicable requirements of the zoning district and any overlay zoning district(s) in which the subject property is located, ZDO Section 800, *Special Use Requirements*, and Section 1000, *Development Standards*.

FAQs

What is a conditional use?
A conditional use is a land use that may be allowed by the Zoning Development Ordinance (ZDO) in certain zoning districts under specified conditions. Exercising a conditional use requires approval of a conditional use permit.

What is the permit application process?
Conditional use permits are subject to a "Type III" land use application process, as provided for in Section 1307 of the ZDO. Type III decisions include notice to owners of nearby land, the Community Planning Organization (CPO) if active, service providers (sewer, water, fire, etc.) and affected government agencies, and are reviewed at a public hearing before the County Land Use Hearings Officer. If the application is approved, the applicant must comply with any conditions of approval identified in the decision. The County's decision can be appealed to the Oregon Land Use Board of Appeals (LUBA).

What is needed for the County to approve a land use permit?
Conditional uses *may* be permitted after an evaluation by the Hearings Officer of applicable standards. The applicant is responsible for providing evidence that their proposal does or can meet those standards. In order to address the standards, the information requested in this application should be as thorough and complete as possible. A permit will only be approved or denied after a complete application is received and reviewed. The County approves an application only if it finds that the proposal meets the standards or can meet the standards with conditions.

How long will it take the County to make a decision about an application?
The County makes every effort to issue a decision on a Type III land use application within 12 weeks (84 days) of when we deem the application to be complete. State law generally requires a final County decision on a land use permit application in an urban area within 120 days of the application being deemed complete, and within 150 days for a land use permit in a rural area, although there are some exceptions.

If an application is submitted and then withdrawn, will a refund be given?
The fee for this application includes a $3,830 fee for review by the Hearings Officer, which will be fully refunded if the application is withdrawn before the hearing occurs. If the submitted Type III application is withdrawn before it is publicly noticed, 75% of the portion of the application fee paid that is not the Hearings Officer review fee (i.e., the remainder), or the remainder minus $250, whichever is less, will be refunded. If a submitted application is withdrawn after it is publicly noticed, but before a staff report is issued, 50% of the remainder, or $500, whichever is less, will be refunded. No refund on the remainder will be given after a staff report is issued.

The additional Hydrogeologic Review fee, if applicable, can be refunded in full, provided the application is withdrawn before any work has been done by the hydrogeologist; after any work has been done by the hydrogeologist, no portion of the Hydrogeologic Review fee will be refunded.

Who can help answer additional questions?
For questions about the County's land use permit requirements and this application form, contact Planning and Zoning at **503-742-4500** or zoninginfo@clackamas.us. You can also find information online at the Planning and Zoning website: www.clackamas.us/planning.

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August 12th, 2024

Clackamas County
Planning & Zoning Department of Transportation and Development
Development Services Building
150 Beavercreek Road
Oregon City, OR 97045

RE: Application for a Type III Conditional Use Permit in Clackamas County, Oregon
18133 S. Steiner Road / Parcel ID# 00918476 / Taxlot # 33E19 00600 / ZPAC0024-24

Please find and accept the enclosed land use application and supporting documents for a new Verizon Wireless telecommunication facility on behalf of Vertical Bridge Towers and the property owner, Lukas-Hanna Irrevocable Trust:

- Clackamas County's Development Application form with the following attachments:
  - Project Narrative
  - ODAV Determination
  - Towair Letter
  - Zoning Drawings
  - RF Justification Letter
  - Existing Towers Map
  - Photo Simulations
  - Noise Study
  - Stormwater Drainage Report
  - NIER Study

Please do not hesitate to reach out with questions if additional information is required. Thank you.

Sincerely,

Brandon Clower

Brandon Clower
Site Acquisition Manager
Capital Design Services
971.979.0075 (Mobile)
saq@capitaldesignservices.com

WIRELESS COMMUNICATION FACILITY
PROJECT NARRATIVE

Verizon Wireless; Goat Yoga

I. PROJECT INFORMATION

Applicant:	Vertical Bridge 750 Park of Commerce Drive, Ste. 200 Boca Raton, FL 33487
Agent/Contact Person:	Brandon Clower of Capital Design Services 1910 4th Ave E, PMB 196 Olympia, WA 98506 971.979.0075 (Mobile) saq@capitaldesignservices.com
Property Owner:	Lukas-Hannah Irrevocable Trust
Site Location:	18133 S. Steiner Road, Beavercreek, OR 97004 Parcel ID: 00918476
Legal Description:	See Survey in attached plans
Zoning Designation:	TBR – Timber Resource
Adjacent Zoning:	TBR (East) / TBR & RRFF5 (North) / TBR (West) / RRFF5 (South)
Size of Site:	217.55 AC
Existing Structures:	One Residence
Adjacent Land Uses:	Timber Resource & Rural Residential
Access Roads:	The property has direct frontage on S. Steiner Road (dead-end)
Topography:	2-30% Slopes
Site Overlays:	N/A
Project Description:	Verizon Wireless proposes to install antennas, and associated equipment on a new 195' tall self-support tower. Equipment cabinets and a generator will be placed at grade, surrounded by a chain link fence. All improvements will be installed within the proposed lease area.

II. INTRODUCTION

Verizon Wireless is requesting approval to construct a new wireless communication facility (WCF) on privately owned land in Clackamas County, OR. The proposed WCF is intended to fill a significant gap in coverage experienced by Verizon Wireless customers affecting voice, data, and 911 services. The proposed facility will improve the quality of these services for Verizon customers in the Beavercreek area of Clackamas County. The tower is designed to accommodate up to three (3) carriers, in addition to Verizon Wireless, allowing multiple wireless providers to serve the County with excellent coverage.

The proposed facility meets Verizon's coverage objectives within a geographic area not presently served by Verizon by extending coverage in the East Beavercreek area. As shown in this narrative, Verizon's proposal is the least intrusive means of extending their service to fill a gap in coverage. There are no existing structures of sufficient height within a 5.0-mile radius of the proposed location that could serve as a suitable alternative for colocation. The selected site is zoned TBR, Timber Resource Use, where wireless communication facilities are a Conditional Use.

Additionally, this proposal meets the County's criteria for siting a new WCF, adhering to setback, height, screening, and other requirements, therefore, the Applicant requests that the County approve this new facility as proposed.

III. PROJECT PROPOSAL NARRATIVE

The proposed facility for Verizon Wireless will consist of a 195' tall self-support tower with antennas and ancillary equipment. This tower will be sited within a new 75' x 75' lease area on private property. Within this ground lease area, Verizon intends to install two (2) equipment cabinets with a generator on a concrete pad.

Impact to public facilities and services will be minimal as the location on the property inside a fenced compound will utilize only fiber and power, both of which are available nearby and will be routed to the site via an underground trench. During construction or operation of the site, minimal traffic would be generated as a result of the facility. Once construction is completed, an equipment technician would visit the site approximately once per month for routine maintenance purposes only.

Fiber service and electrical power are the only public facilities required by the proposed site. Verizon Wireless's proposed site is an unmanned facility, and would not require any water, waste treatment or management of hazardous materials.

The proposed communication facility will not interfere with surrounding properties or their uses, and will not cause interference with any electronic equipment, such as telephones, televisions, or radios. Non-interference is ensured by the Federal Communications Commission (FCC) regulation of radio transmissions.

PROPOSED FACILITY DESIGN SPECIFICATIONS AND DETAILS

Equipment: The proposed design for the wireless communication facility includes a 195' steel self-support tower as depicted on plans and elevations. The tip height of the antennas will be at 194' on the top of the tower. A nine (9) panel antenna mount array consisting of three (3) sectors total will be utilized, offset a maximum of 5'-0" from the face of the tower. Additionally, six (6) remote radio heads will be installed behind the antennas along with one (1) surge protector. On the ground, power and battery cabinets (two total), and one backup emergency diesel fueled

generator will be mounted on a concrete pad (as shown on the Enlarged Site Plan). One (1) utility frame for power meters (one meter to be utilized by Verizon Wireless), and their connections for power/fiber which will be routed underground from nearby utility demarcations via a 30' access/utility easement from the right-of-way. All proposed ground equipment will be enclosed within a chain-link security fence with dark green privacy slats as shown on the plans.

Height: The height is as described above, and all visible components are depicted on the Elevation page of the plans. Per the RF justification letter and propagation maps, the antenna tip height of 194' is the minimum height required to achieve the design objective.

Construction: Construction is anticipated once all permits and approvals are received, estimated for Fall/Winter of 2024-25. Construction will entail clearing and grubbing, foundation construction and installation of the required equipment in an orderly manner. A temporary staging area is available on the owner's property and will not impact local traffic or block access. Various types of construction equipment will be required during various stages of construction including, but not limited to, backhoes, dump truck, concrete trucks, crane (for tower placement), excavators, trenching equipment, and other specialized equipment for projects of this scope.

IV. CODE COMPLIANCE

The proposed Verizon Wireless facility complies with all requirements of the Clackamas County Zoning and Development Ordinance. These requirements are addressed below in the following sequence (Applicant's responses are shown italicized below):

Section 406 Timber District (TBR)
Section 835 Wireless Telecommunication Facilities
Section 1000 Development Standards
- Section 1002
- Section 1005.04
- Section 1006.06(C)
- Section 1009.01 / 1009.04 / 1009.10
- Section 1015
- Section 1021

Section 1203 Conditional Uses

Section 406 Timber District (TBR)

Per Section 406.04 and Table 406-1, Permitted Uses in the TBR District, radio communication facilities are permitted as a Conditional Use and subject to Section 835. Please see Applicant's responses to Section 835 below.

Section 406.05 Approval Criteria for Specific Uses

A. General Criteria

1. The use may be allowed provided that:

a. The proposed use will not force a significant change in, or significantly increase the cost of, accepted farming or forest practices on agriculture or forest lands; and

b. The proposed use will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel.

The proposed footprint of the wireless facility is only 5625 square feet (75' x 75') and all equipment will be contained within the fenced boundary. The compound is proposed near the northwest corner of the property to minimize impacts to the parcel and future forest or farming practices. It is anticipated that this proposed use will not force a significant change or increase the cost of farming/forest practices on the parcel.

The proposed development will require a fuel break per Clackamas County requirements around the proposed compound, which will help minimize the potential for fire hazards. Additionally, a fire approved turnaround will be provided at the equipment area as well as required pullouts along the access road. These improvements will assist in reducing the overall risk and costs associated with a wildfire.

H. Utility and Solid Waste Disposal Facility Uses

4. Television, microwave, and radio communication facilities and transmission towers, provided the base of such structure shall not be closer to the property line than a distance equal to the height of the tower.

The proposed tower will be set back 785'-3" from the northern property line, 3905'-11" from the eastern property line, 3157'-8" from the southern property line, and 260'-4" from the western property line. Therefore, this requirement has been met.

Section 406.07 Dimensional Standards

A. Minimum Lot Size: New lots of record shall be a minimum of 80 acres in size…

The Applicant is not proposing a new lot, therefore, this section does not apply.

B. Minimum Front Setback: 30 feet.

The proposed tower is 3157'-8" from the front property line, therefore, this requirement has been met.

C. Minimum Side Setback: 10 feet.

The proposed tower is 260'-4" from the nearest side property line, therefore, this requirement has been met.

D. Minimum Rear Setback: 30 feet; however, accessory buildings shall have a minimum rear yard setback of 10 feet.

The proposed tower is 785'-3" from the rear property line, therefore, this requirement has been met.

E. Modifications. Modifications to dimensional standards are not proposed, therefore, this section does not apply.

Section 406.08 Development Standards

A. Fire-Siting Standards for New Structures: Fuel-free break standards shall be provided surrounding any new structure approved after April 28, 1992, pursuant to a land use application, as follows:

1. A primary fuel-free break area shall be maintained surrounding any new structure, including any new dwelling.

    a. The primary safety zone is a fire fuel break extending a minimum distance around structures. The minimum distance is established by Table 406-2, Minimum Primary Safety Zone and Figure 406-1, Example of Primary Safety Zone. The goal within the primary safety zone is to remove fuels that will produce flame lengths in excess of one foot. Vegetation within the primary safety zone may include green lawns and shrubs less than 24 inches in height. Trees shall be spaced with greater than 15 feet between the crowns and pruned to remove dead and low (less than eight feet) branches. Accumulated leaves, needles, limbs and other dead vegetation shall be removed from beneath trees. Nonflammable materials (i.e., rock) instead of flammable materials (i.e., bark mulch) shall be placed next to the structure. As slope increases, the primary safety zone shall increase away from the structure and down the slope at a 45-degree angle from the structure, in accordance with Table 406-2 and Figure 406-1:

Table 406-2: Minimum Primary Safety Zone

Slope	Feet of Primary Safety Zone	Feet of Additional Primary Safety Zone Down Slope
0%	30	0
10%	30	50
20%	30	75
25%	30	100
40%	30	150

The existing slope in and around the proposed wireless facility is ~2%. Therefore, per Table 406-2, a 30' Primary Safety Zone and 0' Primary Safety Zone down slope are required. The proposed tower is centered within a 75' x 75' fenced area with a center-to-center distance of 37'-6". The proposed compound will have a gravel surface and be cleared of all vegetation within and just outside the fence area. Therefore, this design will meet the 30' primary safety zone requirement.

2. For any new dwelling, a secondary fuel-free break area shall be cleared and maintained on land surrounding the dwelling that is owned or controlled by the owner.

    The Applicant is not proposing any new dwellings, therefore, this section does not apply.

Section 835 Wireless Telecommunication Facilities

Per Table 835-1, A Level Two Wireless Telecommunication Facility is permitted within the TBR zone and subject to a Type II Conditional Use Permit.

Section 835.06 Standards

D. Level Two Wireless Telecommunication Facilities: A level two wireless telecommunication facility (including a level two collocation or placement on a utility pole) shall be subject to the following standards:

1. New Towers: If a new wireless telecommunication tower is proposed:

a. No new tower will be permitted unless no existing support structure can accommodate the proposed antenna. All proposals for new wireless telecommunication facilities must be accompanied by a statement from a qualified person that the necessary telecommunication service cannot be provided by collocation for one or more of the following reasons:

i. No existing support structures, or approved but not yet constructed support structures, are located within the geographic area required to meet the applicant's engineering requirements;

ii. Existing support structures are not of sufficient height to meet the applicant's engineering requirements;

iii. Existing support structures do not have sufficient structural strength to support the applicant's proposed antenna and related equipment;

iv. The applicant's proposed antenna would cause electromagnetic interference with the antenna on the existing support structure, or the existing antenna would cause interference with the applicant's proposed antenna; or

v. The applicant demonstrates that there are other limiting factors that render existing support structures unsuitable.

As described in the attached RF Justification Letter, Verizon's main objective is to improve cellular service near Mompano Reservoir including an area to the south that contains sections of poor coverage. A search ring was established to research potential properties that would support a new communications tower and the large parent parcel with adequate screening was selected for the proposed tower. The closest existing tower in the area is ~1.7 miles from the proposed tower site, which is geographically too far from the target coverage area, see enclosed Existing Towers Map and RF Justification Letter. Additionally, the two nearest towers are at a much lower ground elevation, and only 120' height which render them inadequate for effective coverage improvements.

b. If the tower is inside the Portland Metropolitan Urban Growth Boundary, it shall be a monopole.

The proposed tower is outside of the Portland Metropolitan Urban Growth Boundary, therefore, this requirement does not apply.

c. The tower shall be designed and built to accommodate collocation or additional loading. This means that the tower shall be designed specifically to accommodate no less than the following equipment, in addition to the applicant's proposed equipment:

i. Twelve antennas with a float plate wind-loading of not less than four square feet per antenna;

ii. A standard mounting structure, standoff arms, platform, or other similar structure designed to hold the antennas;

iii. Cable ports at the base and antenna levels of the tower; and

iv. Sufficient room within or on the tower for 12 runs of 7/8-inch coaxial cable from the base of the tower to the antennas.

The tower has been designed to accommodate up to four (4) wireless carriers which includes their respective mounts, antennas, ancillary equipment, and cabling, therefore, this requirement has been met.

d. The tower shall be painted or coated in a manner that blends with the surrounding area. The finished coloring shall result in a non-reflective surface that makes the tower as visually unobtrusive as possible unless state or federal regulations require different colors.

The proposed tower will be painted with a non-reflective, galvanized gray coating to minimize glare and blend in with the sky.

e. If the proposed wireless telecommunication facility requires approval of a conditional use permit, placement of the tower in an alternate location on the tract may be required, if the alternate location would result in greater compliance with Section 1203, Conditional Uses, than the proposed location. In order to avoid relocating the proposed tower, the applicant shall demonstrate that the necessary wireless communication service cannot reasonably be provided from the alternate location.

The area on the parent parcel where the tower is proposed is ideal for multiple reasons. It is of a sufficient ground elevation to have a greater impact over a large coverage area, and it is entirely screened on four sides by large coniferous trees. An existing gravel access road partially exists and there is a gap in the foliage to construct the remainder of the road to the site, which will result in fewer impacts to the forested area.

The proposed facility in its current location complies with all aspects of Section 1203, see responses on pages 17-20 below. The location chosen provides excellent natural screening and minimal impacts to the property while at the same time improving cellular coverage to emergency services and the surrounding community.

2. Equipment shelters shall be entirely enclosed. They may be painted or coated with a finish that best suits the operational needs of the facility, including the ability to reflect heat and to resist accumulations of dirt. If there is a conflict between acceptable colors

and the operational needs of the facility, the use of architectural screen panels may be required.

The Applicant is not proposing any equipment shelters, therefore, this section does not apply.

3. No lighting shall be permitted on a wireless telecommunication tower, except as required by state or federal regulations. If lighting is required, the light shall be shielded or deflected from the ground, public rights-of-way, and other lots, to the extent practicable.

   An ODAV Determination Letter has been obtained which indicates that FAA filing is not required (see enclosed document). Additionally, a preliminary TOWAIR inquiry was completed which indicates that the proposed structure will not require FAA registration (see enclosed document). Furthermore, the proposed tower is under 200' in height, therefore, lighting should not be required.

4. Unless the wireless telecommunication facility is located entirely on a utility pole, it shall be located within an area that is enclosed on all sides. The enclosure shall be a minimum of six feet tall and sight-obscuring.

   The facility will be enclosed with a 6'-0" tall chain link fence with dark green privacy slats to assist with equipment screening, therefore, this requirement has been met.

5. Landscaping shall be placed outside of the enclosed area required pursuant to Subsection 835.06(D)(4) and shall include ground cover, shrubs, and trees that are reflective of the natural surrounding vegetation in the area. However, if a portion of the wireless telecommunication facility is screened from points offsite by a building with a height of at least eight feet, landscaping is not required for the screened area. In addition, Subsection 1009.10 applies.

   The proposed facility will be sited within an existing heavily treed area, which consists of ~100' tall coniferous trees and forest ground cover. The nearest residence to the north, on an adjacent parcel of land is approximately 1200' away and is 200' lower in ground elevation. The existing forest encircles the proposed facility in all directions for approximately 1000'. Because of this, the Applicant is requesting that the existing trees and vegetation be allowed to function as a natural landscape buffer for the proposed facility.

6. Noise generated by the wireless telecommunication facility shall not exceed the maximum levels established by the Oregon Department of Environmental Quality (DEQ). If lots adjacent to the subject property have a lower DEQ noise standard than the subject property, the lower standard shall be applicable.

   The Applicant has enlisted the assistance of an Acoustical Engineer to conduct a Noise Study on the proposed equipment, see enclosed report which demonstrates that predicted sound levels at the nearest property line meet the established code limits.

7. Dimensional Standards: Dimensional standards applicable to wireless telecommunication towers are listed in Table 835-2, Dimensional Standards for Wireless Telecommunication Towers.

Table 835-2: Dimensional Standards for Wireless Telecommunication Towers

Zoning District	Maximum Height	Minimum Tower Separation	Minimum Front, Side, and Rear Setbacks
All zoning districts inside the Portland Metropolitan Urban Growth Boundary (UGB), HR, MRR, RR, and RTC	100 feet	1000 feet	The minimum setbacks generally applicable in the subject zoning district, or a distance equal to the height of the tower, whichever is greater
FF-10, RA-1, RA-2, RC, RI, and RRFF-5, provided that the tower is outside the UGB	150 feet	2000 feet	
AG/F, EFU, and TBR, provided that the tower is outside the UGB	250 feet	2,640 feet	

Per Table 835-2, in the TBR zone, the maximum tower height is 250 feet. The Applicant is proposing a tower height of 195', therefore, this requirement has been met. The minimum tower separation is 2,640 feet and the closest tower is approximately 1.2 miles away, therefore, this requirement has been met. The minimum setbacks have been met, see comments in Section 406.07 above.

Section 1000 Development Standards

1002.01 Hillsides

A. Development on slopes greater than or equal to 20 percent and less than or equal to 35 percent – except that for residential development in the RR, MRR, and HR Districts, the upper limit is 25 percent – shall require review of a Type I application pursuant to Section 1307, Procedures, and shall be subject to the following standards…

The proposed site area is in the NW corner of the existing parcel, in a location that is heavily treed and relatively flat. A topographical survey was conducted in a ~600' diameter, extending outward around the proposed tower in all directions. Within that surveyed diameter area, the existing slope was found to be an average of ~3.3% and minimal grading (if any) will be required, see enclosed drawings with survey. Because the proposed development will occur in an area that is well under the 20% slope threshold, this section does not apply.

1005.04 Outdoor Lighting

A. Outdoor Lighting Devices:

1. Shall be architecturally integrated with the character of the associated structures, site design, and landscape.

2. Shall not direct light skyward.

3. Shall direct downward and shield light; or direct light specifically toward walls, landscape elements, or other similar features, so that light is directed within the boundaries of the subject property;

4. Shall be suitable for the use they serve (e.g. bollard lights along walkways, pole mounted lights for parking lots);

5. Shall be compatible with the scale and intensity of uses they are serving. The height of pole-mounted fixtures shall not exceed 25 feet or the height of the tallest structure onsite, whichever is less; and

6. At entrances, shall be glare-free. Entrance lighting may not exceed a height of 12 feet and must be directed downward.

Outdoor lighting will be proposed in the form of one shielded utility light that will be mounted to a new h-frame in the equipment area. This light will only be utilized in the event of maintenance work being done at night, or in low light conditions. The light is shielded and aimed directly at the equipment cabinets. Additionally, the light is on a 60-minute timer so as not to remain lit any longer than necessary, therefore, minimal impacts to the surrounding area will occur.

1006.06 Surface Water Management and Erosion Control

C. Approval of a development shall be granted only if the applicant provides a preliminary statement of feasibility from the surface water management regulatory authority. The statement shall verify that adequate surface water management, treatment and conveyance is available to serve the development or can be made available through improvements completed by the developer or the system owner.

1. The surface water management regulatory authority may require a preliminary surface water management plan and report, natural resource assessment, and buffer analysis prior to signing the preliminary statement of feasibility.

2. The statement shall be dated no more than one year prior to the date a complete land use application is filed and need not reserve surface water treatment and conveyance system capacity for the development.

A brief Stormwater Narrative Report was completed analyzing the parent parcel and the effects of the proposed development. Please refer to the enclosed study for additional information.

1009.01 Landscaping General Provisions

A. Landscaping materials shall be selected and sited to produce a hardy and low maintenance landscaped area with an emphasis on fast-growing plants. Selection shall include consideration of soil type and depth, spacing, exposure to sun and wind, slope and contours of the subject property, building walls and overhangs, and compatibility with existing vegetation to be preserved. Notwithstanding the requirement for hardiness, annuals are permitted as provided in Subsection 1009.01(B).

B. A variety of plants, intermixed throughout landscaped areas, shall be provided, as follows:

   1. Evergreen and deciduous;

   2. Trees, shrubs, and groundcover;

   3. Plants of varying textures;

   4. Plants of varying widths and heights at maturity; and

   5. Plants with seasonal color interest (e.g., foliage, flowering perennials, annuals).

C. The planting of invasive non-native or noxious vegetation shall be prohibited, and existing invasive non-native or noxious vegetation shall be removed.

D. Landscaped areas shall not be used for other purposes, such as storage or display of automobiles, equipment, merchandise, or materials.

E. Landscaping of the unimproved area between a lot line and the improved portion of an adjacent road right-of-way shall be required when there are no immediate plans to develop or otherwise disturb the unimproved area, and one or more of the following apply:

   1. The subject property is located inside the Portland Metropolitan Urban Growth Boundary;

   2. Landscaping is necessary to present an appearance consistent with the proposed development as viewed from the road;

   3. Landscaping is necessary to reduce dust, noise, erosion, or fire hazard; or

   4. The road is designated as a scenic road on Comprehensive Plan Map 5-1, Scenic Roads.

   The proposed communications tower and associated equipment compound will be situated on a heavily forested parcel, surrounded by mature coniferous trees on all four sides. The visibility of the proposed compound from adjacent parcels is non-existent, and only a portion of the tower will be visible above the existing treetops. Because of this, the Applicant is requesting an exemption from having to plant additional landscaping around the tower. We would propose that the existing forest canopy and ground cover provide a landscaping buffer for the new equipment compound and tower. We have included a photo simulation of what the proposed equipment area will look like, utilizing the surrounding forest as a visual buffer, see Photo Simulation (View 1) in the attached documents.

   Additionally, Section 'E' above does not apply to this parcel, the nearest existing right-of-way is approximately .6 miles to the south and the existing parcel is already heavily forested between the ROW and the proposed development.

1009.04 Screening and Buffering

A. Screening shall be used to eliminate or reduce the visual impacts of the following:

   1. Service areas and facilities, such as loading areas and receptacles for solid waste or recyclable materials;

   2. Storage areas;

   3. Ground-mounted rainwater collection facilities with a storage capacity of more than 100 gallons;

   4. Parking lots within or adjacent to an Urban Low Density Residential, VR-5/7, VR-4/5, RA-1, RA-2, RR, RRFF-5, FF-10, FU-10, or HR District; and

   5. Any other area or use, as required by this Ordinance.

B. Screening shall be accomplished by the use of sight-obscuring evergreen plantings, vegetated earth berms, masonry walls, sight-obscuring fences, proper siting of disruptive elements, building placement, or other design techniques.

C. Screening shall be required to substantially block any view of material or equipment from any point located on a street or accessway adjacent to the subject property. Screening from walkways is required only for receptacles for solid waste or recyclable materials. A sight-obscuring fence at least six feet in height and up to a maximum of 10 feet in height shall be required around the material or equipment.

D. Buffering shall be used to mitigate adverse visual impacts, dust, noise, or pollution, and to provide for compatibility between dissimilar adjoining uses. Special consideration shall be given to buffering between residential uses and commercial or industrial uses, and in visually sensitive areas.

E. Buffering shall be accomplished by one of the following:

   1. A landscaping strip with a minimum width of 15 feet and planted with:

      a. A minimum of one row of deciduous and evergreen trees staggered and spaced a maximum of 30 feet apart;

      b. A perennial, evergreen planting with sufficient foliage to obscure vision and which will grow to form a continuous hedge a minimum of six feet in height within two years of planting; and

      c. Low-growing evergreen shrubs and evergreen ground cover covering the balance of the area;

   2. A berm with a minimum width of ten feet, a maximum slope of 40 percent on the side away from the area screened from view, and planted with:

      a. A perennial, evergreen planting with sufficient foliage to obscure vision and which will grow to form a continuous hedge within two years of planting. The minimum combined height of the berm and planting shall be six feet; and

b. Low-growing evergreen shrubs and evergreen ground cover covering the balance of the area;

3. A landscaping strip with a minimum width of five feet and including:

a. A masonry wall or sight-obscuring fence a minimum of six feet in height. The wall or fence is to be placed along the interior side of the landscaping strip;

b. Evergreen vines, evergreen trees, or evergreen shrubs, any of which shall be spaced not more than five feet apart; and

c. Low-growing evergreen shrubs and evergreen ground cover covering the balance of the area; or

4. Another method that provides an adequate buffer considering the nature of the impacts to be mitigated.

F. Required walkways shall be accommodated, even if such accommodation necessitates a gap in required screening or buffering.

1009.10 Planting & Maintenance

A. Impervious weed barriers (e.g., plastic sheeting) are prohibited.

B. Plants shall not cause a hazard. Plants over walkways, sidewalks, pedestrian pathways, and seating areas shall be pruned to maintain a minimum of eight feet below the lowest hanging branches. Plants over streets, bikeways, accessways, and other vehicular use areas shall be pruned to maintain a minimum of 15 feet below the lowest hanging branches.

C. Plants shall be of a type that, at maturity, typically does not interfere with above or below-ground utilities or paved surfaces.

D. Plants shall be installed to current nursery industry standards.

E. Plants shall be properly guyed and staked to current nursery industry standards as necessary. Stakes and guys shall not interfere with vehicular or pedestrian traffic, shall be loosened as needed to prevent girdling of trunks, and shall be removed as soon as sufficient trunk strength develops, typically one year after planting.

F. Landscaping materials shall be guaranteed for a period of one year from the date of installation. The developer shall either submit a signed maintenance contract for the one-year period or provide a performance surety pursuant to Section 1311, Completion of Improvements, Sureties, and Maintenance, covering the landscape maintenance costs for the one-year period.

G. Plants shall be suited to the conditions under which they will be growing. As an example, plants to be grown in exposed, windy areas that will not be irrigated shall be sufficiently hardy to thrive under these conditions. Plants shall have vigorous root systems, and be sound, healthy, and free from defects and diseases.

H. When planted, deciduous trees shall be fully branched, have a minimum caliper of two inches, and have a minimum height of eight feet.

I. When planted, evergreen trees shall be fully branched, have a minimum height of eight feet, and have only one leader.

J. Shrubs shall be supplied in minimum one-gallon containers or eight-inch burlap balls with a minimum spread of 12 inches.

K. Ground cover shall be planted a maximum of 30 inches on center with a maximum of 30 inches between rows. Rows of plants shall be staggered. Ground cover shall be supplied in minimum four-inch containers, except that the minimum shall be reduced to two and one-quarter inches or equivalent if the ground cover is planted a minimum of 18 inches on center.

L. Plants shall be spaced so that ground coverage three years after planting is expected to be 90 percent, except where pedestrian amenities, rainwater collection systems, or outdoor recreational areas count as landscaping pursuant to Subsection 1009.02. Areas under tree drip lines count as ground coverage.

M. Irrigation of plants shall be required, except in wooded areas, wetlands, and in river and stream buffers. The irrigation system shall be automatic, except that hose bibs and manually operated methods of irrigation may be permitted in small landscaped areas close to buildings. Automatic irrigation systems are subject to the following standards:

1. An automatic irrigation controller shall be required for irrigation scheduling.

2. The system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.

3. In mulched planting areas, the use of low volume irrigation is required to maximize water infiltration into the root zone.

4. Narrow or irregularly shaped areas, including turf lawn, less than eight feet in width in any direction shall be irrigated with subsurface or low volume irrigation.

5. Overhead sprinkler irrigation is prohibited within two feet of any impervious surface unless:

a. The landscaped area is adjacent to permeable surfacing and no runoff occurs; or

b. The adjacent impervious surfaces are designed and constructed to drain entirely to landscaping; or

c. The irrigation designer specifies an alternative design or technology that complies with Subsection 1009.10(M)(2).

N. Appropriate methods of plant care and landscaping maintenance shall be provided by the property owner. Pruning shall be done to current nursery industry standards.

O. Plants shall be protected from damage due to heavy foot traffic or vehicular traffic by protective tree grates, pavers, or other suitable methods.

As previously mentioned, the proposed communications tower and associated equipment compound will be situated on a heavily forested parcel, surrounded by mature coniferous trees on all four sides. There is also thick ground cover amongst the trees and what isn't

cleared for the proposed compound and access road will remain and act as a screening buffer around the development area.

The visibility of the proposed compound from adjacent parcels is non-existent, and only a portion of the tower will be visible above the existing treetops. Because of this, the Applicant is requesting an exemption from having to plant additional landscaping around the fenced equipment area. We would propose that the existing forest canopy and ground cover provide a landscaping buffer for the new equipment compound and tower. We have included a photo simulation of what the proposed equipment area will look like, utilizing the surrounding forest as a visual buffer. See Photo Simulation View 1 in the attached documents.

1015 Parking and Loading

Per Clackamas County Planning Department, for an unmanned facility, at least one parking space that is a minimum of 8.5 feet wide and 16 feet long needs to be available on the property for maintenance vehicle access and turnaround. Parking areas can be surfaced with screened gravel or better.

The proposed 12' wide access road terminates at the tower equipment compound with a 20' long by 60' wide gravel parking area. This area will be utilized for temporary maintenance parking. Additionally, a 70' long hammerhead (Clackamas County standard drawing C350) has been included in the design for fire apparatus turnaround. Please see Civil Sheet C3, and the Enlarged Site Plan, Sheet A2.0 for more information.

1021 Solid Waste and Recyclable Material Collection

Per Clackamas County Planning Department, if a trash enclosure is not proposed, describe in the written project narrative how garbage and recycling will be addressed on this site.

A garbage receptacle will not be included as part of the design of the wireless facility. Any refuse generated on site during initial construction and subsequent maintenance occurrences will be collected and hauled from the site by the responsible parties.

Section 1203 Conditional Uses

1203.01 Purpose & Applicability

Section 1203 is adopted to provide standards, criteria, and procedures under which a conditional use may be approved.

1203.02 Submittal Requirements

In addition to the submittal requirements identified in Subsection 1307.07(C), an application for a conditional use shall include:

A. Preliminary statements of feasibility required pursuant to Section 1006, Utilities, Street Lights, Water Supply, Sewage Disposal, Surface Water Management, and Erosion Control;

The proposed communication facility will require power and fiber service to be routed underground from the existing right-of-way at Steiner Road. The Applicant will work with the local utility companies to design a utility plan to service the facility which will be included in the construction drawings. A preliminary utility plan can be found within the enclosed land use drawings, see Sheet A1.1, Overall Site Plan.

The proposed development does not require street lights, water, or sewage disposal.

Surface water management including drainage and erosion control plans for the proposed facility can be found in Sheets C1 through C9. Additionally, a brief Stormwater Narrative Report prepared by a registered professional engineer has been included which details the site conditions, proposed development, and impacts to the site.

B. A vicinity map showing the relationship of the proposed use to the surrounding area;

Two vicinity maps can be found on the cover sheet of the drawing package, a localized map and an overall site map which show the proposed site in relation to the surrounding area. See Sheet T1.0.

C. A site plan of the subject property showing existing and proposed improvements; and

An Overall Site Plan, and Enlarged Site Plan detailing the Applicant's proposed site design are included in the drawing package, see Sheets A1.1 & A2.0.

D. Building profiles of proposed new and remodeled structures.

Proposed Elevations of the site are included in the drawing package, depicting the tower and equipment compound, see Sheets A3.0 & A3.1.

1203.03 General Approval Criteria

A conditional use requires review as a Type III application pursuant to Section 1307, Procedures, and shall be subject to the following standards and criteria:

A. The use is listed as a conditional use in the zoning district in which the subject property is located.

Per Section 406.04 and Table 406-1, Permitted Uses in the TBR District, radio communication facilities are permitted as a Conditional Use and subject to Section 835. Please see Applicant's responses to Section 835 above.

B. The characteristics of the subject property are suitable for the proposed use considering size, shape, location, topography, existence of improvements, and natural features.

The subject property selected for the proposed wireless communications facility has multiple features that make it ideal for the development of this type of project. The property is large, approximately 217 acres in size located in a rural area of the County, east of Beavercreek. There is only one structure on the property in the form of a residence and the remainder of the parcel is utilized as a timber resource.

The area chosen for the proposed tower is in the NW corner of the parcel, partially accessible by an existing gravel access road which transitions to a wide walking path that will be improved for access. The topography in the area is also relatively flat, so minimal grading will occur, and erosion will be kept to a bare minimum. Additionally, approximately 66% of the parcel is heavily forested with mature, coniferous trees and ground cover. Because of this, the entire compound will be screened from adjacent properties, and the tower will be screened. The tower will only be visible as it extends above the trees, which range in height from ~70-150' tall.

C. The proposed use complies with Subsection 1007.07, and safety of the transportation system is adequate to serve the proposed use.

Per Section 1007.07.B.3, unmanned facilities, such as wireless telecommunication facilities, where no employees are present except to perform periodic servicing and maintenance, are exempt from this requirement. However, an existing and proposed 12' wide gravel access road meeting ingress/egress requirements will be utilized to access the site. Required County turnouts will be utilized on the access road at 400' intervals, and a 70' long County approved hammerhead will be provided at the compound to provide adequate fire apparatus turnaround and temporary maintenance parking, as needed.

D. The proposed use will not alter the character of the surrounding area in a manner that substantially limits, impairs, or precludes the use of surrounding properties for the primary uses allowed in the zoning district(s) in which surrounding properties are located.

We understand the importance of ensuring that new developments do not alter the character of the surrounding area in a manner that substantially limits, impairs, or precludes the use of surrounding properties for their primary allowed uses. The proposed wireless communication facility has been designed and planned with careful consideration of the surrounding area and its zoning districts. We assert that the facility will not alter the character of the area in the following ways:

1. ***Aesthetic Integration****: The design of the facility incorporates materials and colors that blend with the natural and built environment of the surrounding area. This approach minimizes visual impact and preserves the aesthetic character of the neighborhood.*
2. ***Height and Visibility****: The height of the wireless communication facility is within the permissible limits set by the county. The facility has been strategically placed to minimize visibility from surrounding properties, thereby reducing any potential visual intrusion.*
3. ***Noise and Emissions****: The facility will operate within the standards set by local, state, and federal regulations regarding noise and emissions. This ensures that there will be no substantial impact on the environmental quality of the surrounding properties.*
4. ***Land Use Compatibility****: The wireless communication facility is compatible with the primary uses allowed in the zoning districts of the surrounding properties. It will not introduce activities or operations that conflict with residential, agricultural, or other land uses in the area.*
5. ***Access and Infrastructure****: The facility will not impede access to surrounding properties. All construction and operational activities will be conducted with minimal disruption to existing infrastructure and traffic patterns.*

In conclusion, the proposed wireless communication facility has been thoughtfully planned to ensure that it does not substantially limit, impair, or preclude the use of surrounding

properties for their primary allowed uses. We are committed to working with Clackamas County to address any concerns and to ensure full compliance with all applicable regulations.

E. The proposed use is consistent with the applicable goals and policies of the Comprehensive Plan.

The proposed wireless communication facility aligns with the goals and policies outlined in the Clackamas County Comprehensive Plan in several key ways:

Chapter 2 - Citizen Involvement: *The proposed use has incorporated citizen involvement processes, and will include a public hearing with opportunities for community comment and feedback. This ensures that community members have had a significant role in shaping the proposal, and have their concerns addressed.*

Chapter 3 - Natural Resources and Energy: *The proposed facility is designed with a minimal environmental footprint. We have conducted thorough environmental assessments to select a location that avoids sensitive natural resources. This includes maintaining existing forested areas, utilizing existing roads, protection of an existing historic Oak tree on the property, and minimizing utility trench routes.*

Chapter 4 - Land Use: *Our project adheres to the county's land use policies by selecting a site that is appropriately zoned and compatible with surrounding land uses. The facility design complies with all zoning regulations and integrates seamlessly into the existing landscape, minimizing visual impact and maintaining the character of the area.*

Chapter 5 - Transportation System Plan: *The proposed site is strategically located to ensure minimal disruption to the local transportation network. The proposed site is at the end of a dead-end road, and trips to the site will be minimal and for maintenance purposes only with little to no impact on existing transportation systems. Additionally, the facility will enhance connectivity and support the county's broader transportation goals by improving wireless communication infrastructure.*

Chapter 6 - Housing: *The project supports the county's housing goals by ensuring reliable wireless communication services, which are increasingly important for residential areas. Enhanced connectivity will benefit current and future residents, contributing to the overall quality of life and supporting remote work, education, and other critical needs.*

Chapter 7 - Public Facilities and Services: *Our facility will enhance public safety and emergency response capabilities by providing improved wireless communication services. This aligns with the county's objective to ensure that public facilities and services are efficient, effective, and resilient.*

Chapter 8 - Economics: *The project will have a positive economic impact by creating jobs during the construction and operation phases. Moreover, improved wireless infrastructure will attract businesses and support economic development in the region, contributing to the county's economic growth objectives.*

Chapter 9 - Open Space, Parks, and Historic Sites: *We have carefully chosen a location that avoids interference with open spaces, parks, and historic sites. Our commitment to*

preserving these valuable community assets ensures that the project enhances, rather than detracts from, the county's recreational and cultural heritage.

Chapter 10 - Community Plans and Design Plans: *The proposed facility is consistent with relevant community and design plans. We have coordinated with local planning authorities to ensure our project aligns with specific design standards and community vision, enhancing the overall coherence and aesthetic appeal of the area.*

Chapter 11 - The Planning Process: *Throughout the planning process, we have adhered to the county's rigorous planning procedures. Our comprehensive approach includes detailed site analysis, engagement with planning officials, and compliance with all regulatory requirements, ensuring a thorough and transparent planning process.*

In conclusion, our proposed wireless communication facility is designed to meet the comprehensive goals and policies of Clackamas County, promoting sustainable development, community involvement, and economic growth. We are committed to working closely with county officials and the community to ensure the successful implementation of this project.

F. The proposed use complies with any applicable requirements of the zoning district and any overlay zoning district(s) in which the subject property is located, Section 800, Special Use Requirements, and Section 1000, Development Standards.

As demonstrated above, the proposed development complies with all requirements from Section 406 applicable to the TR (Timber Resource) zoning district. The existing property does not have an applicable overlay zoning district.

As demonstrated above, the proposed development complies with all requirements from Section 800 Special Uses, specifically Wireless Telecommunication Facilities.

As demonstrated above, the proposed development complies with all requirements from Section 1000, Development Standards as they pertain to a wireless communication facility.

V. APPENDIX

- ODAV Determination
- Towair Letter
- RF Justification Letter
- Existing Towers Map
- Photo Simulations
- Noise Study
- Stormwater Drainage Report

Oregon

Tina Kotek, Governor

OREGON DEPARTMENT OF AVIATION

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July 16, 2024

Paul Danneberg, Vertical Bridge
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Mercer Island, WA 98040
paul.danneberg@verticalbridge.com

Subject: **Determination Letter Regarding the Construction or Alteration of an Antenna Tower at 199 Feet in Height Located in Clackamas County, Oregon**

ODAV Aviation Reference Number: 2024-ODAV-227-OE
Proponent/Representative Identifier: 18133 S Steiner Rd, Beavercreek – new antenna tower
FAA Aeronautical Study Number(s) (ASN), if Provided: N/a[1]

The Oregon Department of Aviation (ODAV) has conducted an aeronautical study of this proposed construction and has determined that notice to the FAA is not required. The structure does not exceed FAR Part 77.9 (a, b, or c) nor Obstruction Standards of OAR 738-070-0100.

This determination is based, in part, on the foregoing description which includes specific coordinates and heights. Any changes to the original application will void this determination. Any future construction or alteration to the original application will require a separate notice to ODAV.

Unless extended, revised, or terminated, this determination will expire 18 months after its effective date, regardless of whether the proposed construction or alteration has been started, or on the date the proposed construction or alteration is abandoned, whichever is earlier.

Findings & Mitigation:

☒ We do not object with conditions to the construction described in this proposal. This determination does not constitute ODAV approval or disapproval of the physical development involved in the proposal. It is a determination with respect to the safe and efficient use of navigable airspace by aircraft and with respect to the safety of persons and property on the ground.

☐ Marking and lighting are recommended for aviation safety. It should be installed and maintained in accordance with FAA Advisory Circular 70/7460-1M.

☐ The proposed structure should be lowered to a height that is no longer an obstruction to the imaginary surfaces set forth in FAA FAR 77.

☐ The proposed obstruction should be relocated outside the airport primary and horizontal surface FAA FAR 77.

Sincerely,

Brandon Pike, Aviation Planner

[1] Any FAA ASN listed in this letter is provided by the proponent and/or their representative, and may not be accurate. It is included only for cross-referencing purposes.

TOWAIR Determination Results

A routine check of the coordinates, heights, and structure type you provided indicates that this structure does not require registration.

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS & 6702.85 MTRS (6.70289 KM) AWAY

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	45-15-14.00N	122-46-8.00W	AURORA STATE	MARION AURORA, OR	59.8	1524.9000000000001

Your Specifications

NAD83 Coordinates

Latitude	45-17-46.6 north
Longitude	122-49-46.8 west

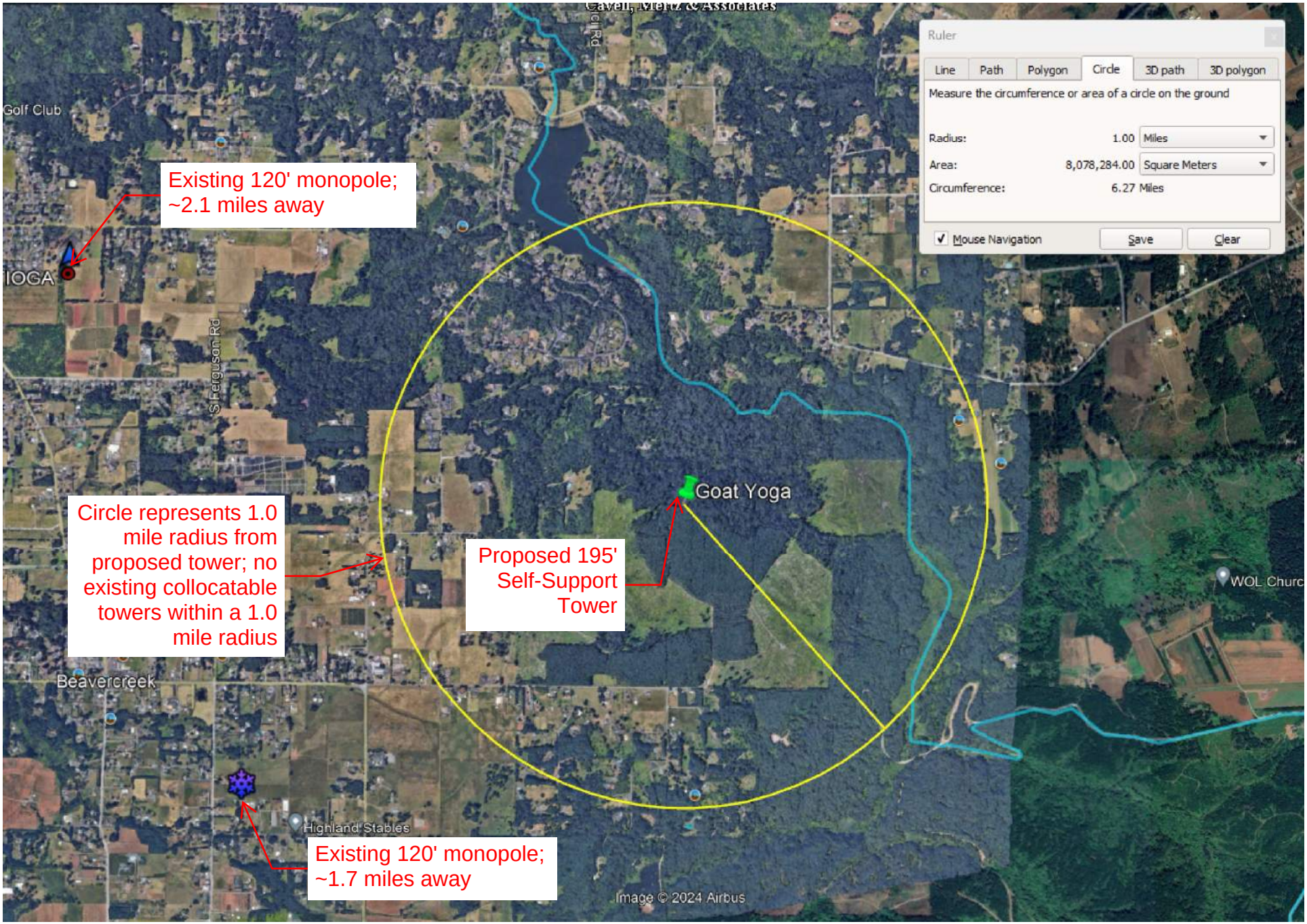
Measurements (Meters)

Overall Structure Height (AGL)	60.7
Support Structure Height (AGL)	NaN
Site Elevation (AMSL)	245.1

Structure Type

An Error has occurred. Please contact Technical Support
https://www.fcc.gov/wtbhelp
Phone: 1-877-480-3201
TTY: 1-717-338-2824
ASL Videophone: 1-844-432-2274
Hours: Monday-Friday 8:00 a.m. to 6:00 p.m. ET (except for Federal Holidays)
And report the following information.

Error at Tue, May 21 at 17:35:47 EDT on Server wireless2.fcc.gov:polver
Error Message
Exception Message null



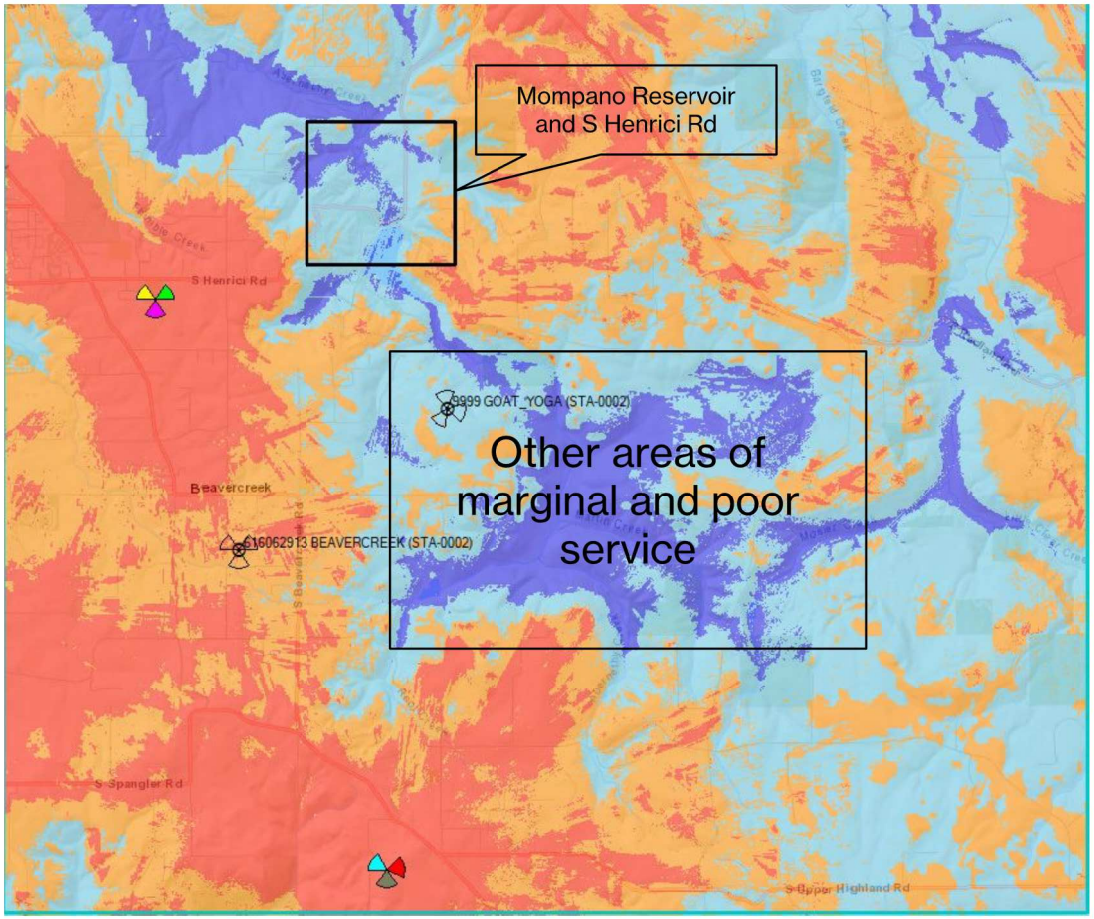
EXISTING TOWERS MAP

Goat Yoga Justification

Created By:
Tom Fergusson
RF Engineer
5/30/2024

verizon

700 MHz Current Coverage w/o the Propose Site



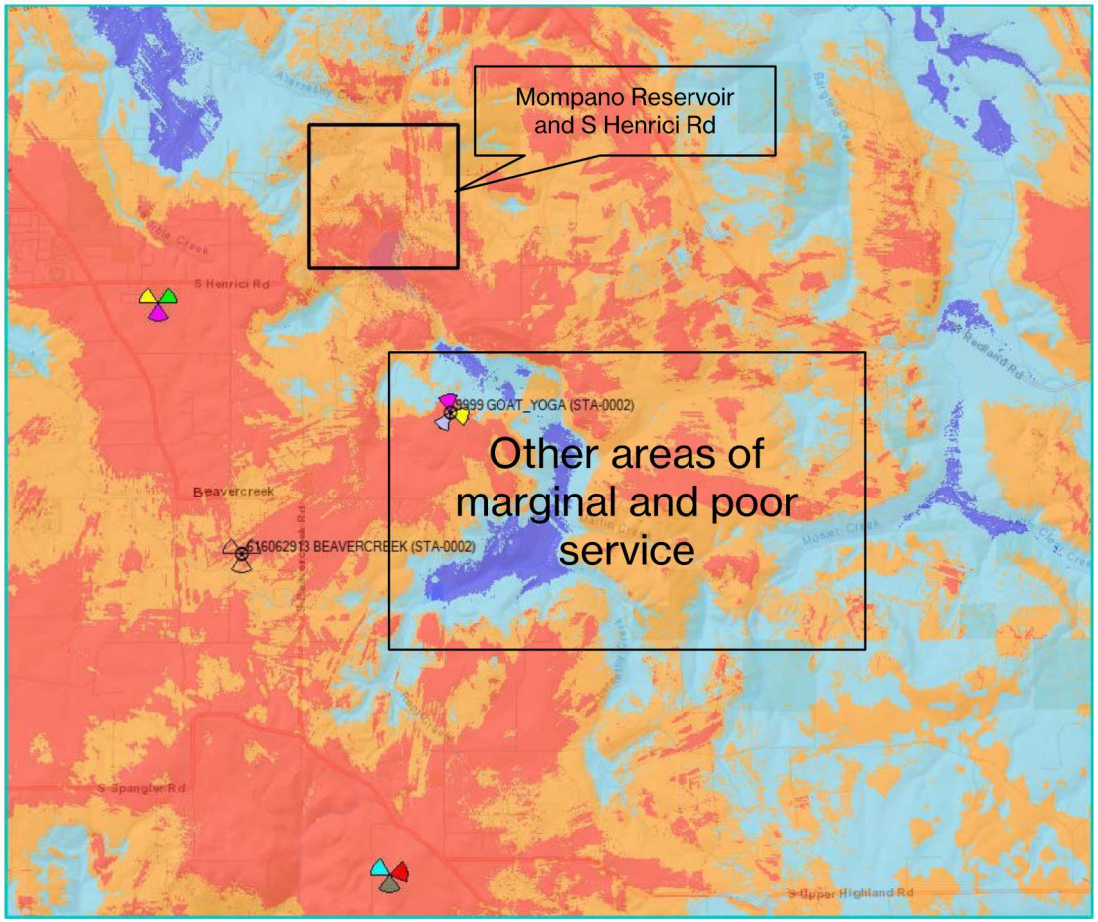
Verizon's main objective is to remove the dropped calls and poor service on South Henrici Road in the area of Mompano Reservoir. That was the original objective but as shown, Verizon has other areas with poor service so a site search ring was created to capture other areas of poor service.

LTE_NW-Mobility_RSRP-dBm (0)

- RSRP Level (DL) (dBm) >=-85 Generally good indoor service
- RSRP Level (DL) (dBm) >=-95 Generally good outdoor service
- RSRP Level (DL) (dBm) >=-105 Generally marignal service
- RSRP Level (DL) (dBm) >=-115 Generally poor to no service

verizon

700 MHz Current Coverage w/ the Propose Site



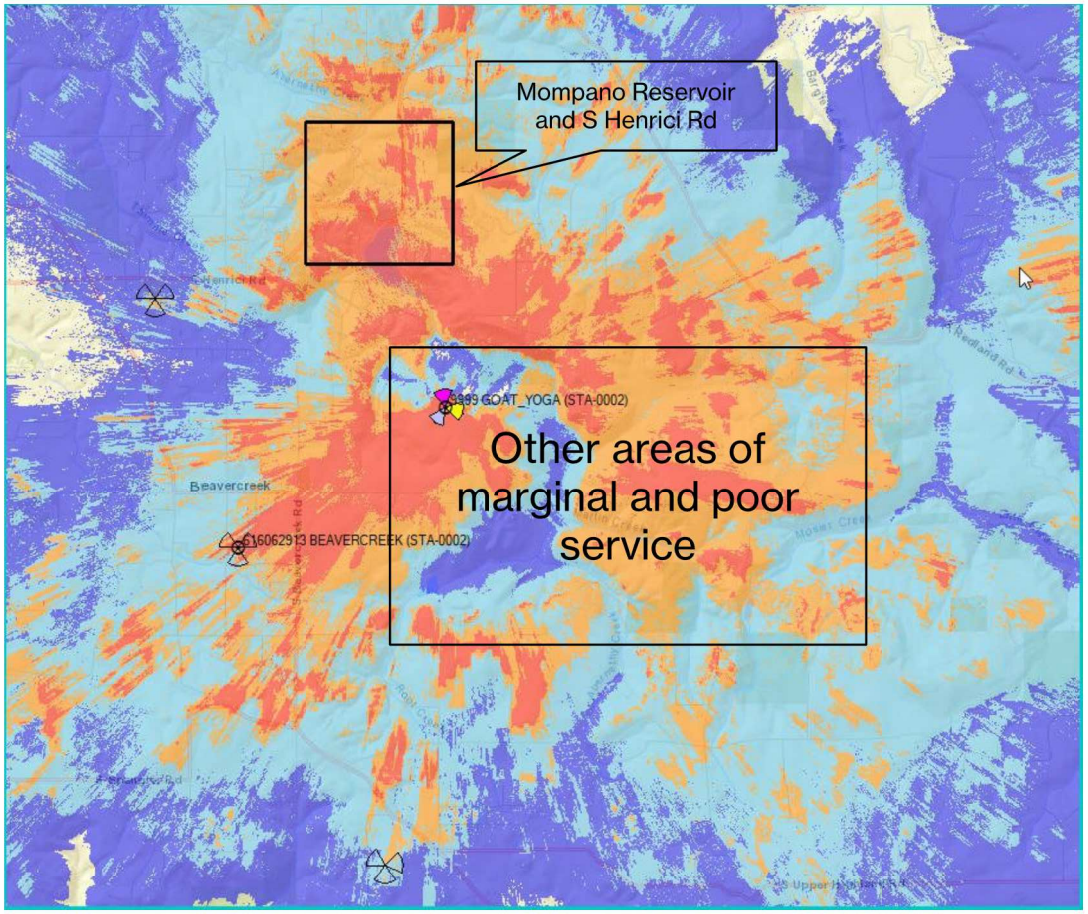
The proposed site does fit in well with other sites in the area as shown. The site does struggles to provide marginal service within areas where Verizon service is poor but this area is in a ravine without dwellings. The only way to correct this would be a taller tower or moving the location on the southern side of the plateau but since no one lives in the area, neither is a good choice for this tower.

LTE_NW-Mobility_RSRP-dBm (0)

- RSRP Level (DL) (dBm) >=-85 Generally good indoor service
- RSRP Level (DL) (dBm) >=-95 Generally good outdoor service
- RSRP Level (DL) (dBm) >=-105 Generally marignal service
- RSRP Level (DL) (dBm) >=-115 Generally poor to no service

verizon

700 MHz Propose Site Coverage at 190 ft Antenna C/L



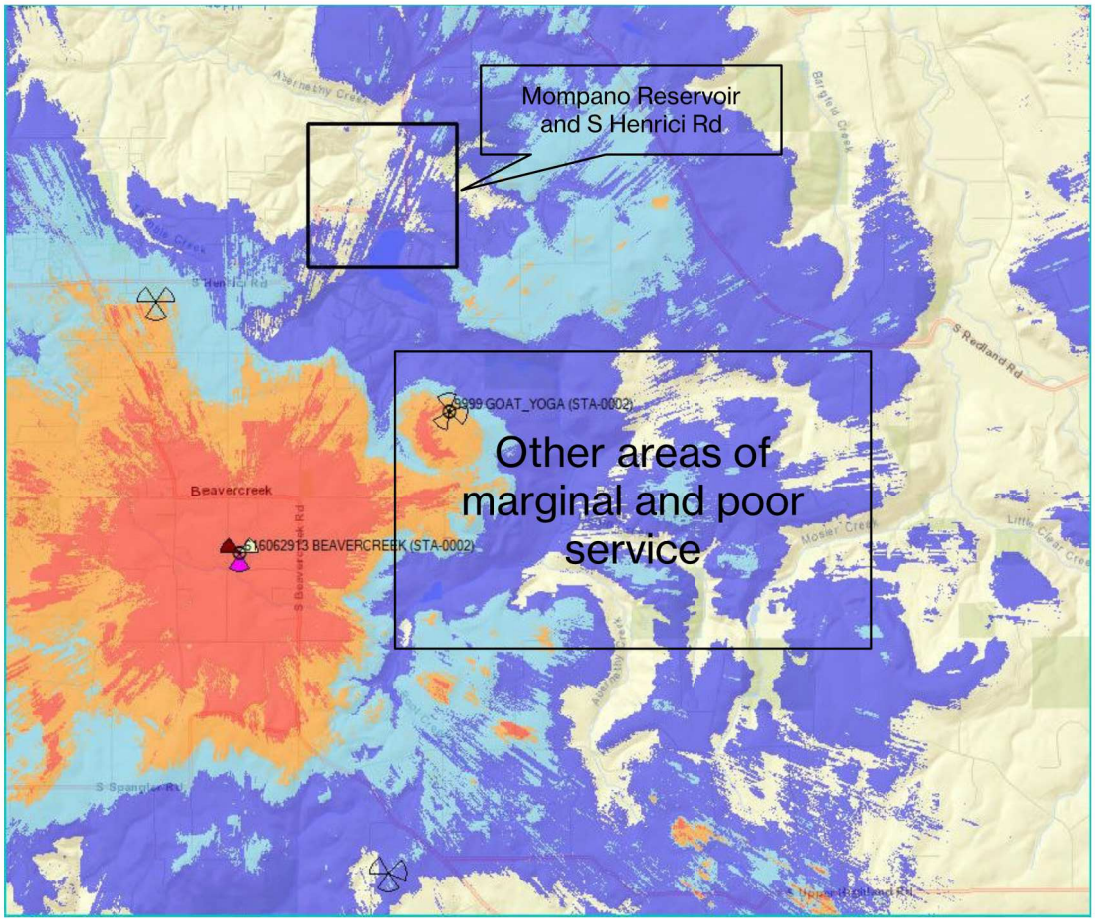
The proposed site coverage does provide coverage in the original objective plus it does provide coverage where Verizon is marginal and poor today.

LTE_NW-Mobility_RSRP-dBm (0)

- RSRP Level (DL) (dBm) >=-85 Generally good indoor service
- RSRP Level (DL) (dBm) >=-95 Generally good outdoor service
- RSRP Level (DL) (dBm) >=-105 Generally marignal service
- RSRP Level (DL) (dBm) >=-115 Generally poor to no service

verizon

700 MHz Closest Tower Coverage Verizon Is Not Using



Verizon has considered a couple of towers in Beavercreek that are the closest to the proposed tower but these towers do not cover the main objective so they were never considered. As shown, a Beavercreek site does not cover the original objective or other areas of marginal to poor service. Eventually Verizon will add a site in Beavercreek but currently the services are good in this area at this time.

LTE_NW-Mobility_RSRP-dBm (0)

- RSRP Level (DL) (dBm) >=-85 Generally good indoor service
- RSRP Level (DL) (dBm) >=-95 Generally good outdoor service
- RSRP Level (DL) (dBm) >=-105 Generally marignal service
- RSRP Level (DL) (dBm) >=-115 Generally poor to no service

verizon

Conclusion

Verizon has shown a need for better coverage North of Mompano Reservoir from past complaints and drive test data. A search ring was created with a willing landlord. The proposed site will provide coverage in the original objective plus areas that Verizon also performs marginal at best. If approved, this site will give a much better experience to our customers in this area.

Goat Yoga
US-OR-5128

Map

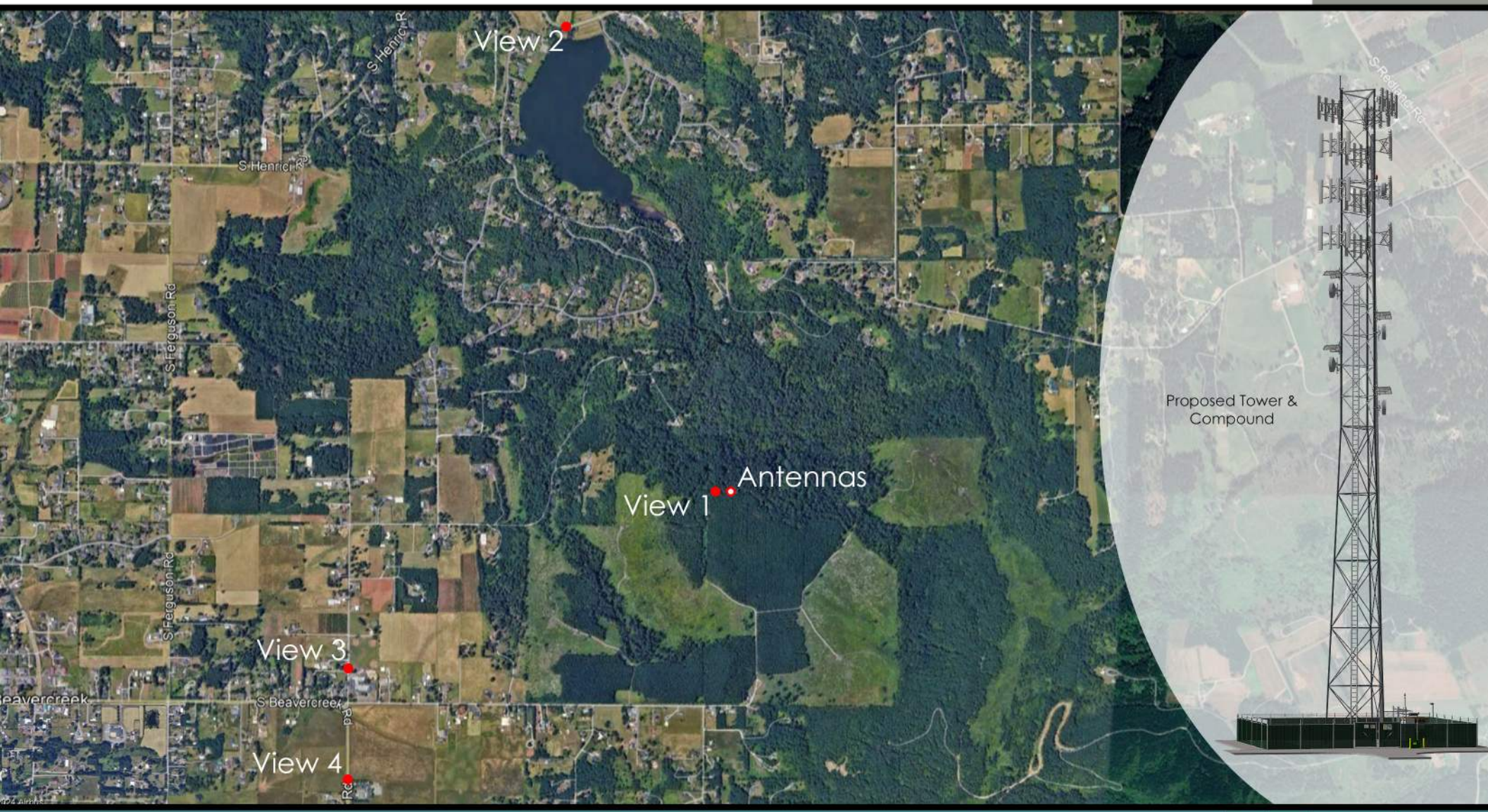


Photo Location Map

verticalbridge

verizon

Visual impact will be affected by location and visibility of observer. This document is for planning and information purposes only and is purely conceptual. This is solely the designers / photographers interpretation of the proposed development.

CAPITAL DESIGN SERVICES

N

Address: 18133 S. STEINER RD
BEAVERCREEK, OR 97004

Goat Yoga
US-OR-5128

Proposed Structure Height: 195.0' AGL (199.0' Top of Lightning Rod)
Proposed Antenna Height: 194.0' AGL (Top of Verizon Antennas)
Description:
Proposed panel & parabolic antennas w/ ancillary equipment attached to a new 195.0' Vertical Bridge lattice tower. Fenced ground equipment below.

VIEW 1

Existing Conditions - Looking East

Proposed Conditions - Looking East

CAPITAL DESIGN SERVICES

verticalbridge

verizon

Visual impact will be affected by location and visibility of observer. This document is for planning and information purposes only and is purely conceptual. This is solely the designers / photographers interpretation of the proposed development.

Address: 18133 S. STEINER RD
BEAVERCREEK, OR 97004

Goat Yoga
US-OR-5128

Proposed Structure Height: 195.0' AGL (199.0' Top of Lightning Rod)
Proposed Antenna Height: 194.0' AGL (Top of Verizon Antennas)
Description:
Proposed panel & parabolic antennas w/ ancillary equipment attached to a new 195.0' Vertical Bridge lattice tower. Fenced ground equipment below.

VIEW 2

Existing Conditions - Looking South

Proposed Conditions - Looking South

CAPITAL DESIGN SERVICES

verticalbridge

verizon

Visual impact will be affected by location and visibility of observer. This document is for planning and information purposes only and is purely conceptual. This is solely the designers / photographers interpretation of the proposed development.

Address: 18133 S. STEINER RD
BEAVERCREEK, OR 97004

Goat Yoga
US-OR-5128

Proposed Structure Height: 195.0' AGL (199.0' Top of Lightning Rod)
Proposed Antenna Height: 194.0' AGL (Top of Verizon Antennas)
Description:
Proposed panel & parabolic antennas w/ ancillary equipment attached to a new 195.0' Vertical Bridge lattice tower. Fenced ground equipment below.

VIEW 3

Existing Conditions - Looking Northeast

Proposed Conditions - Looking Northeast

CAPITAL DESIGN SERVICES

vertical bridge

verizon

Visual impact will be affected by location and visibility of observer. This document is for planning and information purposes only and is purely conceptual. This is solely the designers / photographers interpretation of the proposed development.

Address: 18133 S. STEINER RD
BEAVERCREEK, OR 97004

Goat Yoga
US-OR-5128

Proposed Structure Height: 195.0' AGL (199.0' Top of Lightning Rod)
Proposed Antenna Height: 194.0' AGL (Top of Verizon Antennas)
Description:
Proposed panel & parabolic antennas w/ ancillary equipment attached to a new 195.0' Vertical Bridge lattice tower. Fenced ground equipment below.

VIEW 4

Existing Conditions - Looking Northeast

Note:
Proposed development not visible from this location

Proposed Conditions - Looking Northeast

CAPITAL DESIGN SERVICES

verticalbridge

verizon

Visual impact will be affected by location and visibility of observer. This document is for planning and information purposes only and is purely conceptual. This is solely the designers / photographers interpretation of the proposed development.

Address: 18133 S. STEINER RD
BEAVERCREEK, OR 97004

July 26, 2024

Chris Laird
Capital Design Services, LLC
1910 4th Avenue E, PMB 196
Olympia, WA 98506

Re: Acoustical Report – Vertical Bridge US-OR-5128 Goat Yoga
Site: 18133 S Steiner Road, Beavercreek, OR 97004

Dear Chris,

The following report presents a noise study for the proposed Vertical Bridge Wireless telecommunications facility at 18133 S Steiner Road in Beavercreek, Oregon. This noise study extends from the proposed equipment to the nearest properties. The purpose of this report is to document the existing conditions and the impacts of the acoustical changes due to the proposed equipment. This report contains data on the existing and predicted noise environments, impact criteria and an evaluation of the predicted sound levels as they relate to the criteria.

Ambient Conditions

Existing ambient noise levels were measured on March 13, 2024 site with a Svantek 971 sound level meter. Measurements were conducted in accordance with Oregon Administrative Rules (OAR) 340-35-035 subsection (3)(b). The average ambient noise level was 32 dBA.

Code Requirements

The site is located within the Clackamas County zoning jurisdiction on property designated with a TBR zoning. The parcel is surrounded by receiving properties that are zoned TBR and RRFF5. TBR is a forestry zoning, and RRFF5 is a forestry residential zoning.

The proposed new equipment includes equipment support cabinets and an emergency generator. The cabinets are expected to operate 24 hours a day. The generator will operate once a week during daytime hours for maintenance and testing purposes only.

According to Clackamas County Code 6.05.040.A, noise to the surrounding parcels is limited as follows:

Noise is limited to 60 dB(A) during daytime hours. During nighttime hours, defined as the hours between 10 p.m. and 7 a.m., the maximum permissible sound level is decreased by 10 decibels. Since the proposed equipment cabinets are expected to operate 24 hours a day they must meet the 50 dB(A) nighttime limit. The generator will operate during daytime hours only, and must therefore meet the 60 dB(A) daytime limit.

Predicted Equipment Sound Levels

24-Hour Operation Equipment

The following table presents a summary of the noise-generating equipment and their associated noise levels:

Table 1: Equipment Noise Levels

Equipment	dBA (each)	Quantity	Combined dBA @ 5 ft
Charles CUBE-SS4C2288N2/N3 Cabinet	65 dBA @ 5 ft	1	65
Charles CUBE-BB48E2XVA Cabinet	65 dBA @ 5 ft	1	65
Total dBA (All cabinets combined)			**68**

Methods established by AHRI Standard 275-2010 and ASHRAE were used in predicting equipment noise levels to the receiving properties. Application factors such as location, height, and reflective surfaces are accounted for in the calculations.

The equipment will be located at grade surrounded by a 6'-0" chain-link fence with sight obscuring slats. The nearest receiving property is approximately 272 feet west of the equipment. The following table presents the predicted sound level at the nearest receiving property:

Table 2: Predicted Noise Level: Proposed Equipment Cabinets

Line	Application Factor	W
1	Sound Pressure Level at 5 ft (dBA), Lp1	68
2	Distance Factor (DF) Inverse-Square Law (Free Field): DF = 20*log (d1/d2)	-35 (272 ft)
3	New Equipment Sound Pressure Level at Receiver, Lpr (Add lines 1 and 2)	**33**

As shown in Table 2, the predicted sound level from the proposed equipment is 33 dBA at the nearest receiving property to the west, which meets the 50 dBA nighttime code limit. Noise levels at other receiving properties, which are further away, will be lower and within the code limits.

Emergency Equipment

The proposed equipment includes one Generac SD030 30 kW generator with a level 2 sound attenuated enclosure, which has a sound level of 59 dBA at 23 feet. The generator will be located at grade surrounded by a 6'-0" chain-link fence with sight obscuring slats. The nearest receiving property is approximately 290 feet west of the generator. The following table presents the predicted sound level at the nearest receiving property:

Table 3: Predicted Noise Level: Proposed Emergency Generator

Line	Application Factor	W
1	Equipment Sound Pressure Level at 23 ft. (dBA), Lp1	59
2	Distance Factor (DF) Inverse-Square Law (Free Field): DF = 20log (d1/d2)	-22 (290 ft)
3	New Equipment Sound Pressure Level at Receiver, Lpr	**37**

As shown in Table 3, the predicted sound level from the proposed generator during test cycle operation is 37 dBA at the nearest receiving property to the west, which meets the 60 dBA code limit. Noise levels at other receiving properties, which are further away, will be lower and within code limits.

Please contact us if you have any questions or require further information.

Sincerely,
SSA Acoustics, LLP

Alan Burt, P.E.
MANAGING PARTNER
SENIOR ACOUSTICAL CONSULTANT

RENEWAL DATE: 12/31/25

Vertical Bridge
US-OR-5128 Goat Yoga
Stormwater Narrative Report

PROJECT LOCATION:
18133 S. STEINER RD
BEAVERCREEK, OR 97004

Engineer: Duncanson Company
145 SW 155th Street, # 102
Seattle, WA 98166
Contact: Harold Duncanson
P: 206-244-4141
e: haroldd@duncansonco.com

Date: 7/25/2024

DCI Project: 99544.2935

DUNCANSON

Company, Inc.

Executive Summary

The Vertical Bridge Goat Yoga project involves constructing a new wireless communication facility. The site is located at 18133 S Steiner Road (east end of road), which is east of Beavercreek. The underlying parent parcel is about 300 acres currently in timber production with a house and several outbuildings in the southeast corner. The current project will occur in a portion of the site that is mostly mature forest. Improvements will include a fenced, rock surfaced equipment compound with wireless cabinets and antenna tower. The equipment compound is located on a slight knoll with the ground generally sloping gently down to the southwest and to the northwest. A crushed rock access road will be extended from an existing logging road on the property. The access will follow a trail that is likely a relic road from previous timber harvest in that the route is noticeably devoid of trees and for the most part passable by vehicles. The topography along the access road generally slopes west to southwest. The site is in the TBR zone and is surrounded by forest of varying stages of maturity. The NRCS Soil Survey identifies site soils as Jory silty clay loam, 2 to 8% slopes. These are described as well drained, type C soils with a depth to restrictive feature and water table of more than 60 inches.

This brief narrative report was prepared to satisfy the Stormwater Report and Drainage Calculation requirements of Clackamas County Roadway Standards 140.1.4.

The project proposes to use Sheet Flow Dispersion for mitigation of runoff from new impervious surfaces. Sheet Flow Dispersion is encouraged by WES standards as adopted by Clackamas County Public Works for situations such as this project. Following is a discussion on how the Site Design and Dimension requirements of WES 6.5.11 are met.

Site Requirements.

Site slopes in the project area and surrounding vicinity are gentle at about 6% or less. The site is not in a landslide hazard area and no dispersion is proposed near any slope of 25%. There are no septic systems, landfills or suspected contamination anywhere near the project. Plans include specification in the cross section to utilize topsoil in the dispersion flow path area. The improvements are offset from the downslope property line such that dispersion will occur before runoff leaves the property and so as to avoid flooding or erosion of downstream properties. There are no existing or proposed points of concentrated discharge.

Dimensions

A 2-foot wide transition zone of extended base course material is included in the design.

For the proposed 12-foot wide access road, the 10-foot minimum vegetated flow path is required.

The proposed 75-foot equipment compound is shown to be crowned so that about 37.5 feet of contributing impervious area will flow to each side (half to the north and half to the south). A 10-foot vegetated flow path is required for the first 20 feet of contributing impervious area. Then a 5-foot additional vegetated flow path is needed for the remaining 17.5 feet of contributing impervious area (fraction of 20 feet). A 30-foot vegetated flow path is shown on each side of the equipment compound. This is twice the minimum requirement.

Areas immediately adjacent to the access road (disturbed for grading) will be hydroseeded. The remaining flow path area is well forested with native understory and ground cover.

The project includes no facilities such as ditches, culverts, inlets, detention ponds, etc. that would require more quantitative analysis or calculations.

Radio Frequency Exposure

RF Safety and NIER Analysis Report

07/19/2024

Site: GOAT_YOGA

BEAVERCREEK, OR

Prepared for: Verizon

Table of Contents

1 Certification

This report, prepared by Telecom Technology Services, Inc. for **Verizon**, is intended to document compliance and evaluate power density levels as outlined in the report. The computations, analysis, and resulting report and conclusions were based on applicable FCC guidelines and regulations for maximum permissible exposure to humans consistent with FCC OET Bulletin 65, Edition 97-01.

Additionally, Telecom Technology Services, Inc. certifies that the assumptions are valid and that the data used within Telecom Technology Services control are accurate, including information collected as part of Telecom Technology Services field surveys. Telecom Technology Services, Inc. does not however certify the accuracy or correctness of any data provided to Telecom Technology Services, Inc. for this analysis and report by Verizon or other third parties working on behalf of Verizon.

I certify that the attached RF exposure analysis and report is correct to the best of my knowledge, and all calculations, assumptions and conclusions are based on generally acceptable engineering practices:

Tim Alexander, P.E.

Report Prepared by: Abdelsalam Masoud, 07/19/2024
Report Reviewed by: Robert Rodriguez, 7/19/24

2 Executive Summary

This report provides the results of an RF power density analysis performed for **Verizon** at site **GOAT_YOGA** in accordance with the Federal Communications Commission (FCC) rules and regulations for RF emissions described in OET Bulletin 65, Edition 97-01.

This report addresses RF safety for two classified groups defined by OET Bulletin 65: Occupational/ Controlled and General Population/ Uncontrolled. Based on the analysis, this site will be **Compliant** with FCC rules and regulations and Verizon's Signage and Barrier Policy if the mitigation details provided in Table 1 are implemented.

Final Compliant Configuration							
	GUIDELINES	**NOTICE**	**CAUTION**	**WARNING**	**NOC INFO**	**BARRIER/MARKER**	
Access Point(s)	☒ [1] *	☐ [ ]	☐ [ ]	☐ [ ]	☒ [1] *	☐	
Alpha	☐ [ ]	☐ [ ]	☐ [ ]	☐ [ ]	☐ [ ]	☐	
Beta	☐ [ ]	☐ [ ]	☐ [ ]	☐ [ ]	☐ [ ]	☐	
Gamma	☐ [ ]	☐ [ ]	☐ [ ]	☐ [ ]	☐ [ ]	☐	

NOTE: The table represents either the signage/barriers installed / removed OR items required by the market (if mitigation is not installed by consultant/vendor).

**** These RF signs should be posted at the Access Gate to the site. (See drawing in Section 5.2).***

Specialty Sign Detail

Location	**N/A**
Access Point	**N/A**
Alpha	**N/A**
Beta	**N/A**
Gamma	**N/A**

NOTE: The tables above represent EXISTING compliance items implemented at this location.

Notes/ Additional Compliance Requirements(s):
Mitigation is required per the Signage/ Barrier Diagram.

Table 1: Mitigation Requirements for Compliance

2.1 Conclusion and Recommendations

- The results of the analysis indicate that the power density levels in the generally accessible areas on the **Antenna** Level will not exceed the FCC's MPE limit for General Population.
- The results of the analysis indicate that the power density levels in the generally accessible areas on the **Tree** Level will not exceed the FCC's MPE limit for General Population limit.
- The maximum theoretical % MPE (General Public) is **7867.33%** directly in front of the antenna beams at the **Antenna** Level. Notice that the power density levels will exceed the FCC's MPE limit for General Population, Occupational, and 10x the Occupational in front of the antennas which it is not generally accessible area.
- NOC and Guidelines signs need to be posted at the Access Gate to the site. All Access Points to these areas need to remain lock all the time.
- *Note: Modifications to the site; and/or increases in channel counts or power levels exceeding those listed in this report will require additional evaluation to determine compliance.*

3 Introduction

The purpose of this analysis and report is to evaluate the cumulative power density levels of all non-excluded antennas located on the site and identify any areas of concern that require mitigation. This report also assesses the site's compliance with FCC OET Bulletin 65; "Guidelines for Human Exposure to Radio-frequency Electromagnetic Fields".

The power density simulation performed for this site utilized RoofMaster® analysis software. All antennas were assigned an operating frequency and transmit power and were deemed to be operating at 100% of their configured output power.

3.1 Site Description:

- **Site Name:** GOAT_YOGA
- **Street Address:** 18133 S. STEINER RD
  BEAVERCREEK, OR 97004
- **Latitude:** 45° 17' 46.583"
- **Longitude:** 122° 29' 46.763"
- **Structure Type**: Self-Support Tower
- **Structure Height**: ± 195' AGL
- **Co-Locators/ Other Antennas**: N/A
- **BTS Equipment Location**: The Verizon equipment is located on the Ground.

3.2 Site Configuration Being Modeled

- This is a Self-Support Tower site where Verizon antennas will be mounted to the mounting pipes on the Tower.
- This is a Three-sectors site supporting LTE at 700, 850, 1900, and 2100 MHz, 5GNR at 850MHz, and C-band at 3700 for all sectors. All LTE assumes 4x4 MIMO.
- The values of the antennas rad center for all sectors (190') and Tree Height (100') are based on the CDs and RFDS. These values must be verified on the site audit for the post study.

4 Predictive Analysis Details

For purposes of this analysis, RoofMaster® was configured to provide an output based on the appropriate MPE limit(s) published in the FCC's guidelines. The antenna information was loaded into RoofMaster®, an MPE predictive analysis tool by Waterford Consultants, LLC.

4.1 Analysis Locations:

Number of Elevations Analyzed: 3

- Antenna Level
- Tree Level
- Elevation Level
- A study at the Ground level was not required as the study at the Tree level shows that the MPE limit is below the General Population MPE limit at the Ground level.

4.2 Antenna Inventory

The following table contains the technical data used to simulate the power density that may be encountered with all antennas simultaneously operating at full rated power with the exception of any excluded antennas cited in this document. If co-locator's antennas exist and specific antenna details could not be secured, generic antennas, frequencies, and transmit powers were used for modeling. The assumptions used are based on past experience with communications carriers.

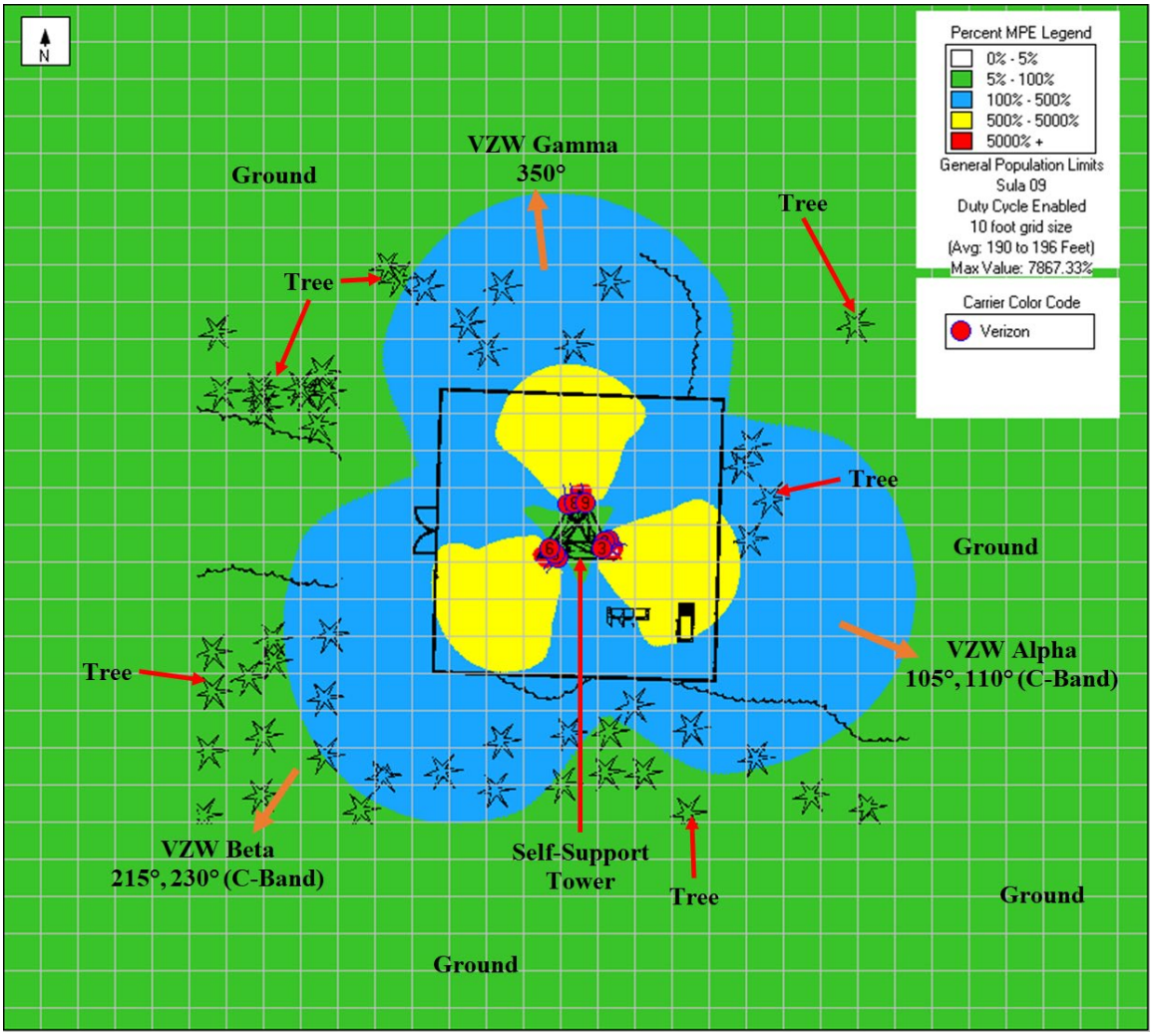
ID	Name	(MHz) Freq	Trans Power	Trans Count	Other Loss	Calc Power	Mfg	Model	Antenna Z (ft)	Tree Z (ft)	Type	(ft) Aper	dBd Gain	BWdth	Orientation
VZ Alpha_Ant1	L700	730	60.0	2	0.0	120.0	COMMSCOPE	SON NHH-65C-R2B	0.0	90.0	Panel	8.0	13.58	65	105
VZ Alpha_Ant1	L850	880	60.0	2	0.0	120.0	COMMSCOPE	SON NHH-65C-R2B	0.0	90.0	Panel	8.0	13.73	62	105
VZ Alpha_Ant1	L2100	2110	60.0	4	0.0	240.0	COMMSCOPE	SON NHH-65C-R2B	0.0	90.0	Panel	8.0	16.38	62	105
VZ Alpha_Ant2	L700	730	60.0	2	0.0	120.0	COMMSCOPE	SON NHH-65C-R2B	0.0	90.0	Panel	8.0	13.58	65	105
VZ Alpha_Ant2	L850	880	60.0	2	0.0	120.0	COMMSCOPE	SON NHH-65C-R2B	0.0	90.0	Panel	8.0	13.73	62	105
VZ Alpha_Ant2	L1900	1900	60.0	4	0.0	240.0	COMMSCOPE	SON NHH-65C-R2B	0.0	90.0	Panel	8.0	15.83	66	105
VZ Alpha_Ant3	C-Band	3700	5.0	64	0.0	320.0	Ericsson	SON AIR6419	0.0	90.0	Panel	2.4	23.45	11	110
VZ Beta-Ant1	L700	730	60.0	2	0.0	120.0	COMMSCOPE	SON NHH-55C-R2B	0.0	90.0	Panel	8.0	13.65	58	215
VZ Beta-Ant1	L850	880	60.0	2	0.0	120.0	COMMSCOPE	SON NHH-55C-R2B	0.0	90.0	Panel	8.0	14.28	53	215
VZ Beta-Ant1	L2100	2110	60.0	4	0.0	240.0	COMMSCOPE	SON NHH-55C-R2B	0.0	90.0	Panel	8.0	16	55	215
VZ Beta-Ant2	L700	730	60.0	2	0.0	120.0	COMMSCOPE	SON NHH-55C-R2B	0.0	90.0	Panel	8.0	13.65	58	215
VZ Beta-Ant2	L850	880	60.0	2	0.0	120.0	COMMSCOPE	SON NHH-55C-R2B	0.0	90.0	Panel	8.0	14.28	53	215
VZ Beta-Ant2	L1900	1900	60.0	4	0.0	240.0	COMMSCOPE	SON NHH-55C-R2B	0.0	90.0	Panel	8.0	15.55	61	215
VZ Beta-Ant3	C-Band	3700	5.0	64	0.0	320.0	Ericsson	SON AIR6419	0.0	90.0	Panel	2.4	23.45	11	230
VZ Gamma-Ant1	L700	730	60.0	2	0.0	120.0	COMMSCOPE	SON NHH-55C-R2B	0.0	90.0	Panel	8.0	13.65	58	350
VZ Gamma-Ant1	L850	880	60.0	2	0.0	120.0	COMMSCOPE	SON NHH-55C-R2B	0.0	90.0	Panel	8.0	14.28	53	350
VZ Gamma-Ant1	L2100	2110	60.0	4	0.0	240.0	COMMSCOPE	SON NHH-55C-R2B	0.0	90.0	Panel	8.0	16	55	350
VZ Gamma-Ant2	L700	730	60.0	2	0.0	120.0	COMMSCOPE	SON NHH-55C-R2B	0.0	90.0	Panel	8.0	13.65	58	350
VZ Gamma-Ant2	L850	880	60.0	2	0.0	120.0	COMMSCOPE	SON NHH-55C-R2B	0.0	90.0	Panel	8.0	14.28	53	350
VZ Gamma-Ant2	L1900	1900	60.0	4	0.0	240.0	COMMSCOPE	SON NHH-55C-R2B	0.0	90.0	Panel	8.0	15.55	61	350
VZ Gamma-Ant3	C-Band	3700	5.0	64	0.0	320.0	Ericsson	SON AIR6419	0.0	90.0	Panel	2.4	23.45	11	350

The antenna Z-heights listed above are referenced to Elevation, Antenna, and Tree Levels.

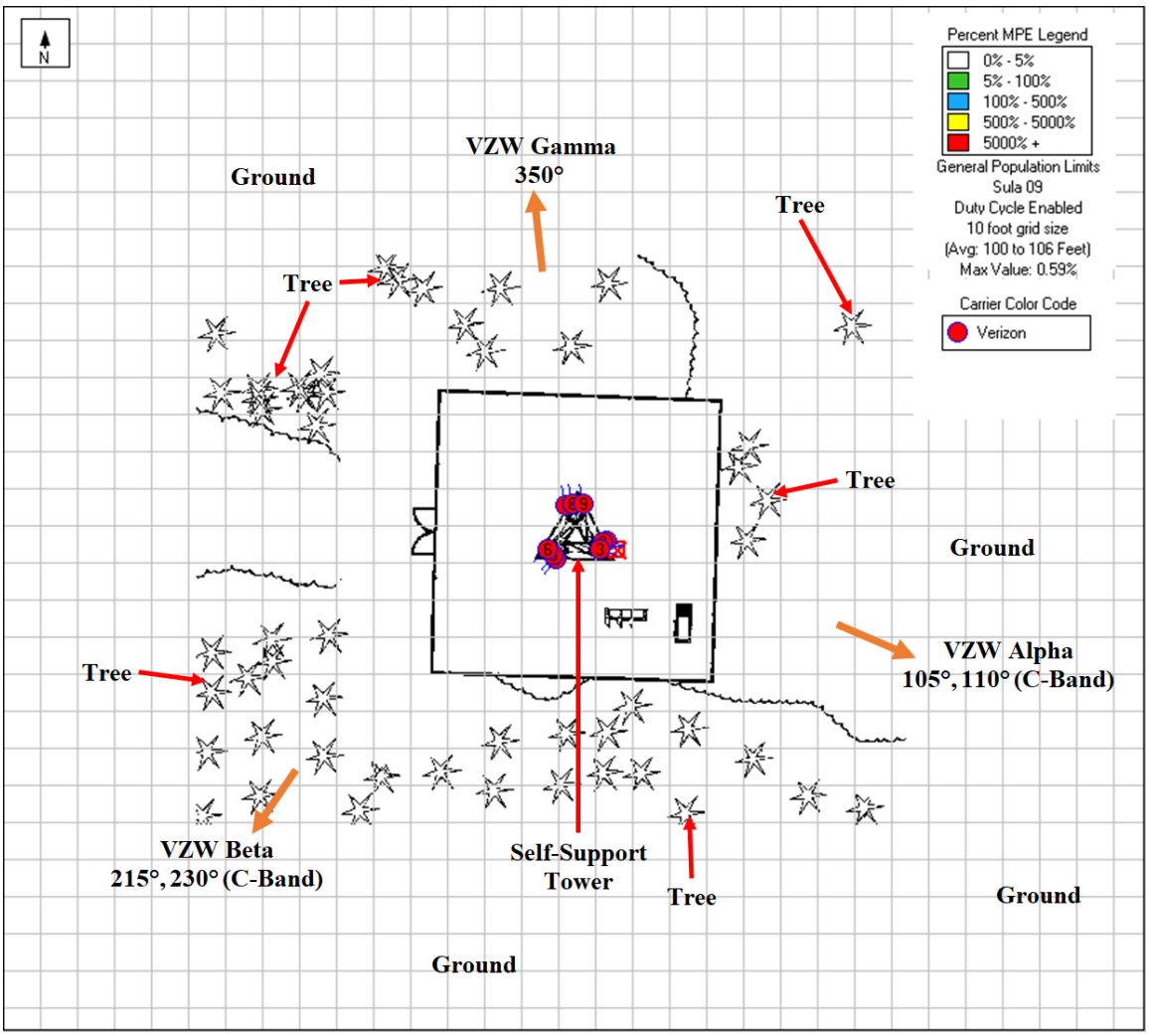
4.3 RF Emissions Diagram(s) - All Transmitters

The following Diagram(s) represent the theoretical spatially averaged Maximum Permissible Exposure (MPE) percentages that are expected for each study's elevation. An additional 1% Occupational MPE Limit (5% General Population MPE limit) is included to demonstrate where Verizon is a significant contributor to the accessible areas where multiple carriers' transmitters may be present.

Reference Plane: Antenna Level



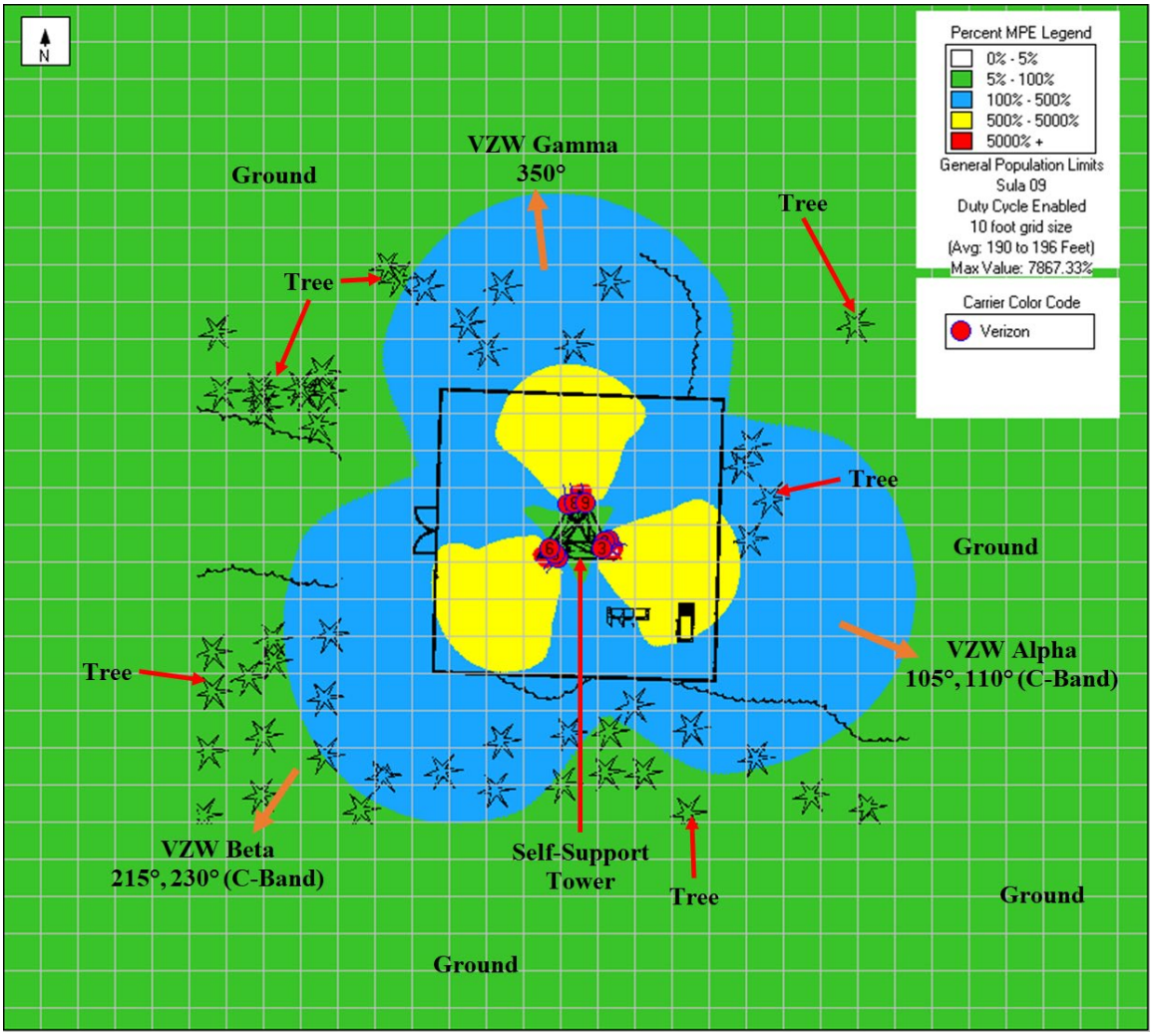
Reference Plane: Tree Level



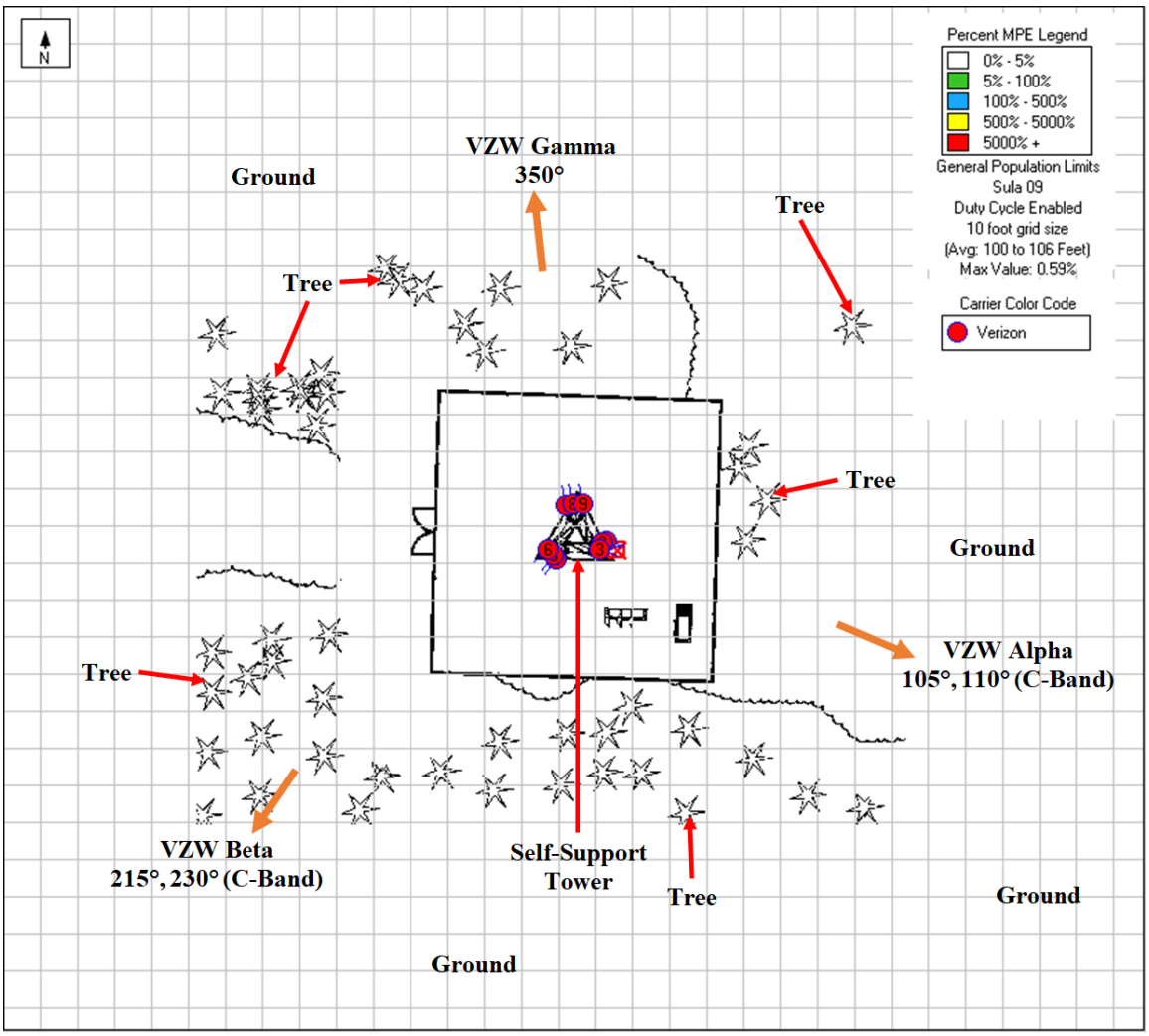
4.4 RF Emissions Diagram(s) - Verizon Transmitters *Only*

The following Diagram(s) represent the theoretical spatially averaged Maximum Permissible Exposure (MPE) percentages that are expected for each study's elevation. An additional 1% Occupational MPE Limit (5% General Population MPE limit) is included to demonstrate where Verizon is a significant contributor to the accessible areas where multiple carriers' transmitters may be present.

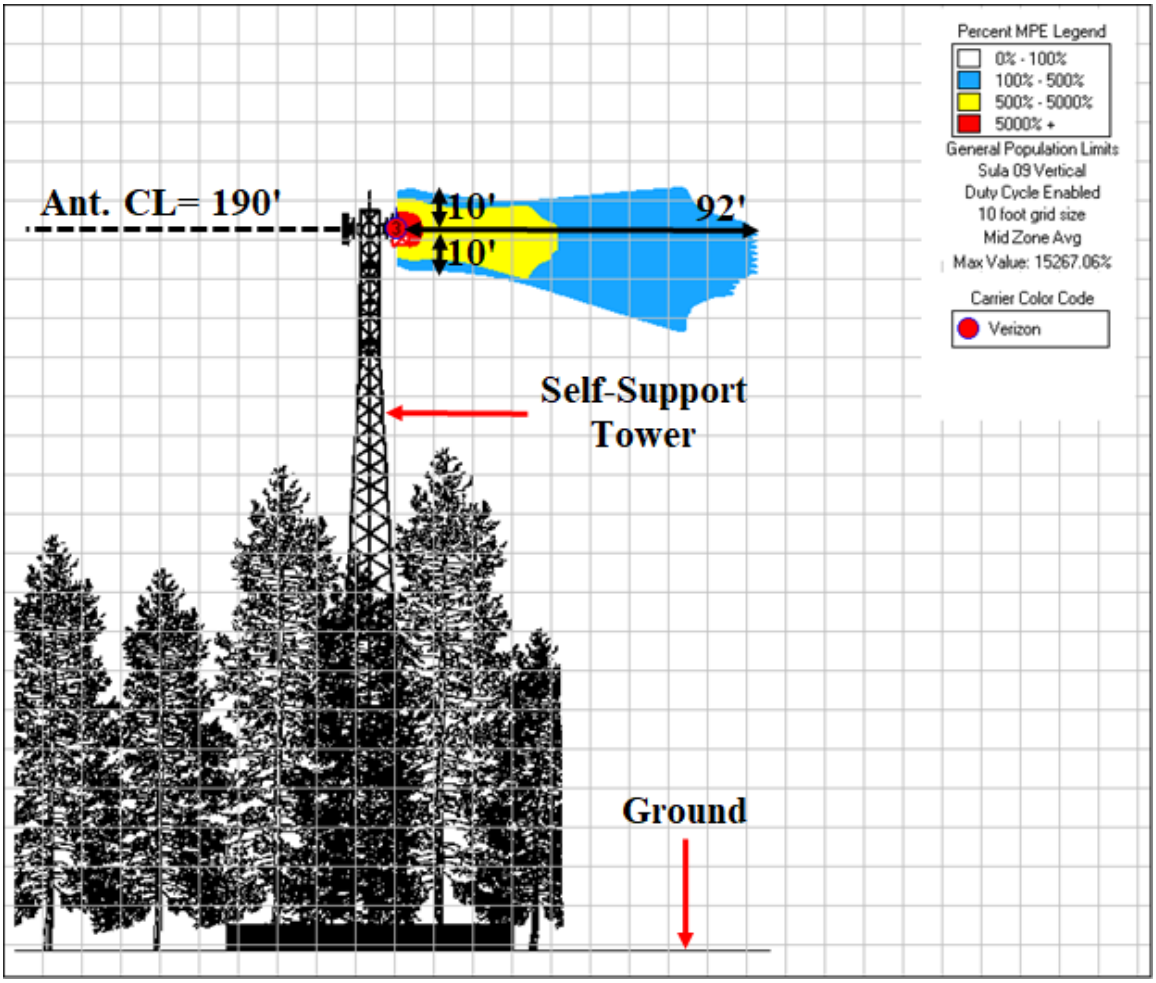
Reference Plane: Antenna Level



Reference Plane: Tree Level



Reference Plane: Elevation Level



5 Signage/ Mitigation

5.1 Signage/ Barrier Detail

Final Compliant Configuration							
	GUIDELINES	NOTICE	CAUTION	WARNING	NOC INFO	BARRIER/MARKER	
Access Point(s)	☒ [1] *	☐ [ ]	☐ [ ]	☐ [ ]	☒ [1] *	☐	
Alpha	☐ [ ]	☐ [ ]	☐ [ ]	☐ [ ]	☐ [ ]	☐	
Beta	☐ [ ]	☐ [ ]	☐ [ ]	☐ [ ]	☐ [ ]	☐	
Gamma	☐ [ ]	☐ [ ]	☐ [ ]	☐ [ ]	☐ [ ]	☐	

NOTE: The table represents either the signage/barriers installed / removed OR items required by the market (if mitigation is not installed by consultant/vendor).

**** These RF signs should be posted at the Access Gate to the site. (See drawing in Section 5.2).***

Specialty Sign Detail

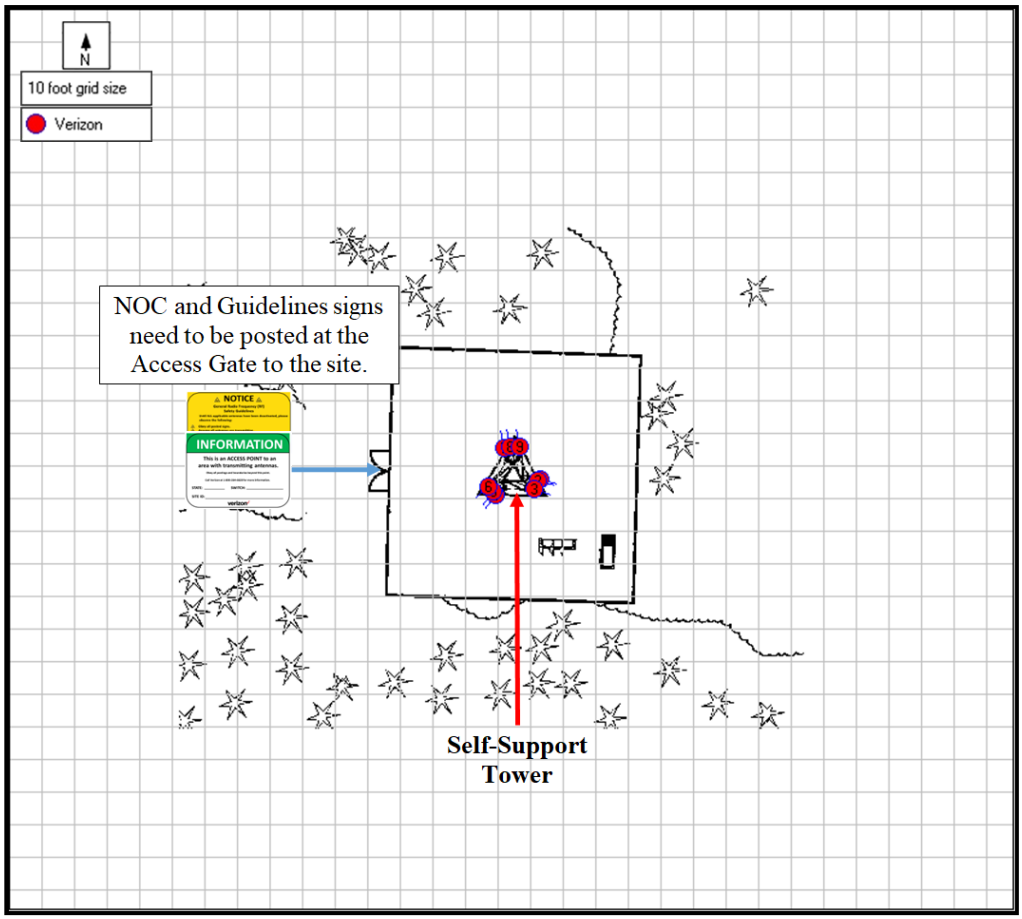
Location	N/A
Access Point	N/A
Alpha	N/A
Beta	N/A
Gamma	N/A

NOTE: The tables above represent EXISTING compliance items implemented at this location.

Notes/ Additional Compliance Requirements(s):
Mitigation is required per the Signage/ Barrier Diagram.

Table 2: Mitigation Requirements for Compliance

5.2 Signage/ Barrier Diagram



6 Conclusions and Recommendations

- The results of the analysis indicate that the power density levels in the generally accessible areas on the **Antenna** Level will not exceed the FCC's MPE limit for General Population.
- The results of the analysis indicate that the power density levels in the generally accessible areas on the **Tree** Level will not exceed the FCC's MPE limit for General Population limit.
- The maximum theoretical % MPE (General Public) is **7867.33%** directly in front of the antenna beams at the **Antenna** Level. Notice that the power density levels will exceed the FCC's MPE limit for General Population, Occupational, and 10x the Occupational in front of the antennas which it is not generally accessible area.
- NOC and Guidelines signs need to be posted at the Access Gate to the site. All Access Points to these areas need to remain lock all the time.
- *Note: Modifications to the site; and/or increases in channel counts or power levels exceeding those listed in this report will require additional evaluation to determine compliance.*

7 Appendix A: FCC Compliance and RF Safety Policies

In August of 1997, the FCC published OET Bulletin 65 Edition 97-01 to regulate methods for evaluating compliance with FCC guidelines for human exposure to radiofrequency (RF) electromagnetic fields. The FCC guidelines for human exposure to RF electromagnetic fields incorporate two categories of limits; namely "Controlled" (a.k.a. Occupational) and "Uncontrolled" (a.k.a. General Public). The guidelines offer suggested methods for evaluating fixed RF transmitters to ensure that the controlled and uncontrolled limits deemed safe by the FC for human exposure are not exceeded.

OET Bulletin 65 recommended guidelines are intended to allow an applicant to "make a reasonably quick determination as to whether a proposed facility is in compliance with the limits." In addition, the guidelines offer alternate supplementary considerations and procedures such as field measurements and more detailed analysis that should be used for multiple emitter situations.

These guidelines define RF as emissions in the frequency range of 300 kHz to 100 GHz. The FCC define Maximum Permissible Exposure (MPE) limits within this frequency range based on limits recommended by the National Council on Radiation Protection and Measurement, the Institute of Electrical and Electronics Engineers (IEEE), and by the American National Standards Institute (ANSI).

The specific MPE limits defined by the FCC are as follows:

Limits for Occupational/Controlled Exposure				
Frequency Range [MHz]	**Electric Field Strength (E) [V/m]**	**Magnetic Field Strength (H) [A/m]**	**Power Density (S) [mW/Cm^2]**	**Averaging Time |E|^2, |H|^2 or S [minutes]**
0.3 - 3.0	614	1.63	100*	6
3.0 - 30	1842/f	4.89/f	900/f^2*	6
30 - 300	61.4	0.163	1	6
300 - 1,500	-	-	f/300	6
1,500 - 100,000	-	-	5	6

Limits for General Population/Uncontrolled Exposure				
Frequency Range [MHz]	**Electric Field Strength (E) [V/m]**	**Magnetic Field Strength (H) [A/m]**	**Power Density (S) [mW/Cm^2]**	**Averaging Time |E|^2, |H|^2 or S [minutes]**
0.3 - 3.0	614	1.63	100*	30
3.0 - 30	842/f	2.19/f	180/f^2*	30
30 - 300	27.5	0.073	0.2	30
300 - 1,500	-	-	f/1500	30
1,500 - 100,000	-	-	1	30

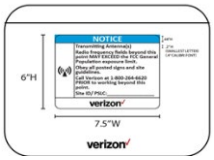
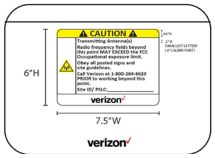
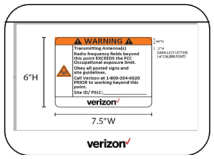
f = frequency *Plane-wave equivalent power density

The FCC states that "Occupational/ Controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for Occupational/ Controlled exposure also apply in situations when an individual is transient through a location where Occupational/ Controlled limits apply provided he or she is made aware of the potential for exposure."

For General Population/ Uncontrolled limits, the FCC states that "General Population/ Uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not fully be aware of the potential for exposure or cannot exercise control over their exposure."

For purposes of this analysis, all limits are evaluated against the Power Density limits.

Typical guidelines for determining whether Occupational/ Controlled limits can be applied include ensuring the environment (such as a rooftop) as limited/controlled access via locked doors or physical barrier that are preferably controlled by a landlord that is aware of the situation and can inform anyone going through the locked door of the existence of the RF emissions. Such notification/awareness is typically accomplished by means of signage on the door, or other access to the area of concern, as well as signage on or near the antennas. Examples of such signs include the following:

GUIDELINES	NOTICE	CAUTION	WARNING
This sign will inform anyone of the basic precautions to follow when entering an area with transmitting radiofrequency equipment.	This sign indicates that RF emissions may exceed the FCC General Population MPE limit.	This sign indicates that RF emissions may exceed the FCC Occupational MPE limit.	This sign indicates that RF emissions may exceed at least 10x the FCC Occupational MPE limit.
			

NOC INFORMATION	
Information signs are used as a means to provide contact information for any questions or concerns. They will include specific cell site identification information and the Verizon Wireless Network Operations Center phone number.	

Standards for when to use each of the above signs for Occupational situations are as follows:

No sign required: <20% of Occupational MPE
Blue Sign, Notice: 20% to <100% of MPE
Yellow Sign, Caution: 100% to <1000% of MPE
Red Sign, Warning: ≥1000% of MPE

All MPE references are to the FCC Occupational limits.

8 Appendix B: Overview of RoofMaster® Functions and Assumptions

RoofMaster® is a RF Compliance software package designed to enable the analysis, assessment and mitigation of communications sites with respect to human exposure to radiofrequency electromagnetic fields.

RoofMaster® was developed in 2008 by Waterford Consultants to support compliance assessments performed at single and multi-operator wireless locations throughout North America and has been in service since 2008. Real-world experience in evaluating thousands of base station installations is reflected in the RoofMaster® design approach. This document provides a guide for creating simulations of RF hazard conditions through the characterization of antenna systems and site features and through FCC-specified computational analysis.

On any structure, one may encounter antennas installed by wireless service providers, public safety and other FCC-licensed and unlicensed operators. Siting constraints have resulted in diverse and complex environments accessible to people performing a variety of activities around these antennas. RoofMaster® supports the characterization of these locations to convey important information regarding RF sources and accessible areas necessary to evaluate the potential for human exposure to hazardous levels of RF energy.

RoofMaster® supports the depiction of communications sites through the display of construction drawing or aerial photography image files as well as providing line drawing tools. These representations are scalable to enable the modeling of any location.

RoofMaster® utilizes a three-dimensional spatial framework consisting of a 1000 x 1000 grid with unlimited vertical dimensions necessary for the positioning of antennas and modeling of RF conditions at each grid point throughout the space. Predictive analysis is performed on a study plane at a specified elevation. The subsequent sections of this guide provide the steps necessary to create a site representation and conduct these studies.

RoofMaster® employs several power density prediction models based on the computational approaches set forth in the Federal Communications Commission's Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields, OET Bulletin 65. This guideline utilizes several antenna and operational parameters in calculating the power density contributions from each emitter at specified points throughout the study space. RoofMaster® enables antennas to be fully defined in site specific aspects as well as through the use of a library of manufacturer data. The parameters include:

§ Antenna model
§ Radiation patterns
§ Aperture length
§ Gain
§ Beamwidth
§ Antenna radiation center
§ Azimuth
§ Mechanical downtilt
§ Location
§ Frequency
§ Power into antenna

In OET-65, the Cylindrical Model is presented as an approach to determine the spatially averaged power density in the near field directly in front of an antenna. In order to implement this model in all directions, RoofMaster® utilizes the antenna manufacturer horizontal pattern data. Additionally, RoofMaster® incorporates factors that reduce the power density by the inverse square of horizontal and vertical distance beyond the near field region.

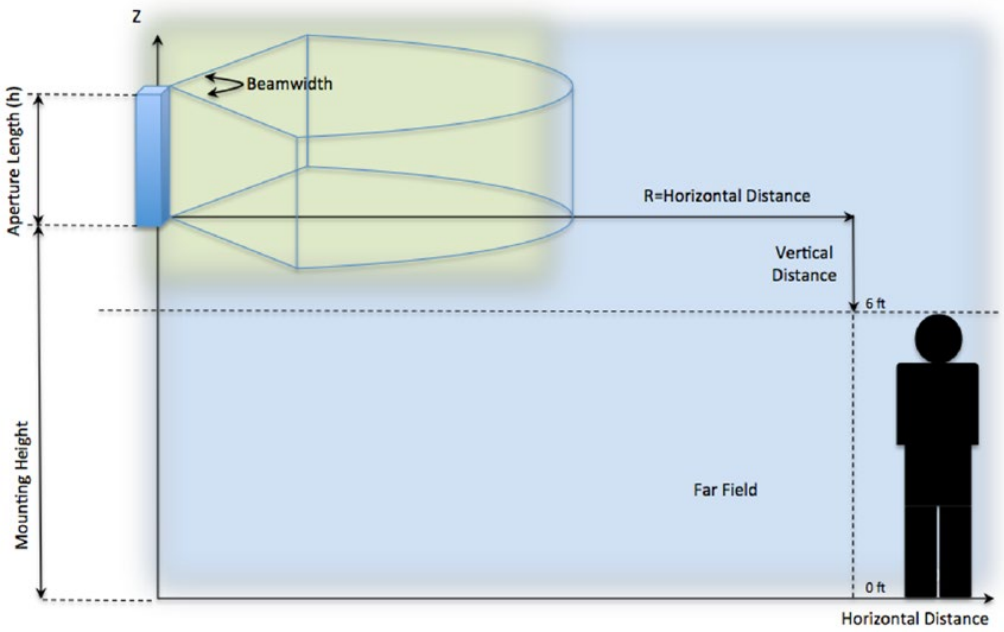
Power density is calculated as follows:

$$S = \left(\left(\frac{360}{Beamwidth} \right) \frac{P_{in} G_H H_r V_r}{2\pi Rh} \right) \frac{\mu W}{cm^2}$$

- S is the spatially averaged power density value
- R is the horizontal distance meters to the study point
- h is the aperture length in meters
- P_{in} is power into the antenna input port in Watts

RoofMaster® Implementation:

- G_H is gain offset to study point as specified in manufacturer horizontal pattern
- P_{in} is adjusted by the portion of the antenna aperture in the 0-6 ft. vertical study zone
- H_r accounts for $1/R^2$ Far Field roll off which starts at 2*h
- V_r accounts for 1/ (vertical distance)^2 roll off from antenna bottom to the top of the 0-6 ft. study zone (or antenna top to bottom of 0-6 ft. study zone)


Z
Beamwidth
Aperture Length (h)
R=Horizontal Distance
Vertical Distance
6 ft
Mounting Height
Far Field
0 ft
Horizontal Distance

9 References

FCC (1997). "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields"; Federal Communications Commission; Office of Engineering and Technology, OET Bulletin 65, Edition 97-01, August.

Waterford Consultants, LLC (2008). RoofMaster® User Guide, Waterford Consultants, LLC.

10 Limited Warranty

Telecom Technology Services, Inc. warrants that this analysis was performed in good faith using the methodologies and assumptions covered in this report and that data used for the analysis and report were obtained by Telecom Technology Services, Inc. employees or representatives via site surveys or research of Verizon's available information. In the event that specific third-party details were not available, best efforts were made to use assumptions that are based on industry experience of various carriers' standards without violating any confidential information obtained under non-disclosure terms.

Telecom Technology Services, Inc. also warrants that this analysis was performed in accordance with industry acceptable standards and methods.

There are no other warranties, express or implied, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose, relating to this agreement or to the services rendered by Telecom Technology Services hereunder. In no event shall Telecom Technology Services be held liable to Verizon, or to any third party, for any indirect, special, incidental, or consequential damages, including but not limited to loss of profits, loss of data, loss of good will, and increased expenses. In no event shall Telecom Technology Services be liable to Verizon for damages, whether based in contract, tort, negligence, strict liability, or otherwise, exceeding the amount payable hereunder for the services giving rise to such liability.

PROJECT SCOPE

PROPOSED INSTALLATION OF A TELECOMMUNICATIONS FACILITY ON AN EXISTING PARCEL.

- 75.0' X 75.0' (5625) LEASE AREA
- 6.0' TALL CHAIN-LINK FENCE W/ GREEN PRIVACY SLATS & 12.0' WIDE DUAL SWING ACCESS GATE AROUND LEASE AREA
- (4) EQUIPMENT AREAS, (3) FOR FUTURE CARRIERS
- (1) UTILITY H-FRAME W/ (4) METER BASE CAPACITY
- (1) 195.0' TOWER WITHIN FENCED LEASE AREA
- (1) ANTENNA MOUNTING ASSEMBLY, ANTENNAS, RADIOS, CABLES & GROUND SITE SUPPORT EQUIPMENT
- PROPOSED INSTALLATION OF NEW 800A ELECTRICAL SERVICE, AND FIBER SERVICE.

US-OR-5128 GOAT YOGA

18133 S. STEINER RD
BEAVERCREEK, OR 97004

ZONING DRAWINGS
FUZE PROJECT ID: 17106881 | MDG LOCATION ID: 5000933142

SHEET INDEX

PROJECT CONTACTS

APPLICANT:
ATTENTION: VERTICAL BRIDGE
750 PARK OF COMMERCE DRIVE, SUITE 200
BOCA RATON, FL 33487

PROPERTY OWNER:
LUKAS HANNAH IRREVOCABLE TRUST/
VANPORT MANUFACTURING, INC.

TOWER OWNER:
VERTICAL BRIDGE
750 PARK OF COMMERCE DRIVE, SUITE 200
BOCA RATON, FL 33487

SITE ACQUISITION AGENT:
CAPITAL DESIGN SERVICES, LLC
1910 4TH AVE E, PMB 196
OLYMPIA, WA 98506
BRANDON CLOWER
PH: 971.979.0075

ZONING/PERMITTING AGENT:
CAPITAL DESIGN SERVICES, LLC
1910 4TH AVE E, PMB 196
OLYMPIA, WA 98506
BRANDON CLOWER
PH: 971.979.0075

RF ENGINEER:
VERIZON WIRELESS
3245 158TH AVE SE
BELLEVUE, WA 98008

SURVEYOR:
DUNCANSON COMPANY, INC.
KEVIN J WALKER, PLS
PH: 206.244.4141

PROJECT INFORMATION

SITE NAME:	US-OR-5128 GOAT YOGA	
ADDRESS:	18133 S. STEINER RD BEAVERCREEK, OR 97004	
JURISDICTION:	CLACKAMAS COUNTY	
PARCEL #:	00918476	
ZONING:	TBR -TIMBER	
LATITUDE:	45° 17' 46.86" N	(45.296350° N)
LONGITUDE:	122° 29' 46.44" W	(-122.496233° W)
SOURCE:	1A CERTIFICATION	
GROUND ELEVATION:	802.3'	
(N) STRUCTURE HEIGHT:	195.0' AGL	
(N) GROUND LEASE AREA:	5625 SQ FT	
(N) IMPERVOUIS AREA	34492.0 SQ FT	
OCCUPANCY:	U	
GROUP:	II-B	

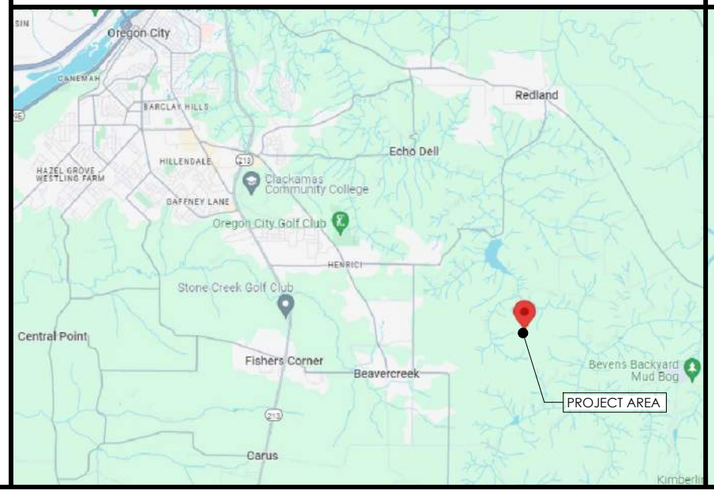
DRIVING DIRECTIONS

FROM PORTLAND INTERNATIONAL AIRPORT:

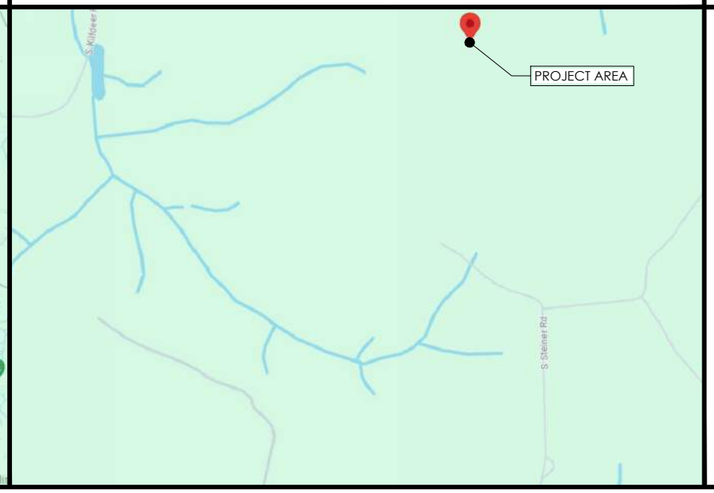
1. GET ON I-205 S FROM NE AIRPORT WAY
2. MERGE ONTO I-205 S
3. USE THE RIGHT LANE TO TAKE EXIT 10 TO MERGE ONTO OR-213 S TOWARD MOLALLA
4. MERGE ONTO OR-213 S
5. USE THE LEFT 2 LANES TO TURN LEFT ONTO S BEAVERCREEK RD
6. STAY STRAIGHT ONTO S STEINER RD

TOTAL MILES: 25.4 MILES

VICINITY MAP



LOCALIZED MAP



GOVERNING CODES

2022 OREGON STRUCTURAL SPECIALITY CODE

2023 OREGON ELECTRICAL SPECIALTY CODE

2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE

2022 OREGON MECHANICAL SPECIALTY CODE

2022 OREGON FIRE CODE

2021 INTERNATIONAL BUILDING CODE

A.D.A. COMPLIANCE
INSTALLATION IS UNMANNED / NOT FOR HUMAN HABITATION. HANDICAP ACCESS IS NOT REQUIRED PER A.D.A.

811 Know what's below. Call before you dig.

CAPITAL DESIGN SERVICES
1910 4th Ave. E, PMB 196
Olympia, WA 98506
360.915.6750
www.capitaldesignservices.com

DRAWN BY:	CL
CHECKED BY:	CL

DRAWING VERSION

VER.	DATE	DESCRIPTION
1	06/12/24	PRELIM LU DRAWINGS
2	08/05/24	FINAL LU DRAWINGS

LICENSER

PROJECT INFORMATION

US-OR-5128
GOAT YOGA
18133 S. STEINER RD
BEAVERCREEK, OR 97004

SHEET TITLE

TITLE SHEET

SHEET NO.

T1.0

LEGAL DESCRIPTION

THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER, THE SOUTH HALF OF THE NORTHWEST QUARTER, AND THE SOUTHWEST QUARTER OF SECTION 19, TOWNSHIP 3 SOUTH, RANGE 3 EAST OF THE WILLAMETTE MERIDIAN, CLACKAMAS COUNTY, OREGON.

EASEMENTS

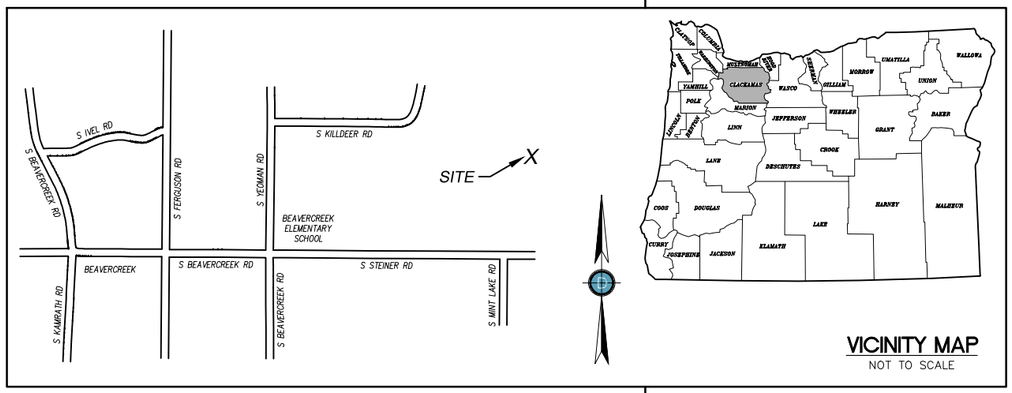
△# CORRESPONDS WITH ITEM NUMBER IN TITLE REPORT

THE FOLLOWING EASEMENTS FROM THE REFERENCED TITLE REPORT MAY CONTAIN SUFFICIENT INFORMATION TO BE DEPICTED ON THE PLAN. OTHER EASEMENTS OR ENCUMBRANCES, IF ANY, MAY AFFECT THE PROPERTY, BUT LACK SUFFICIENT INFORMATION TO BE SHOWN.

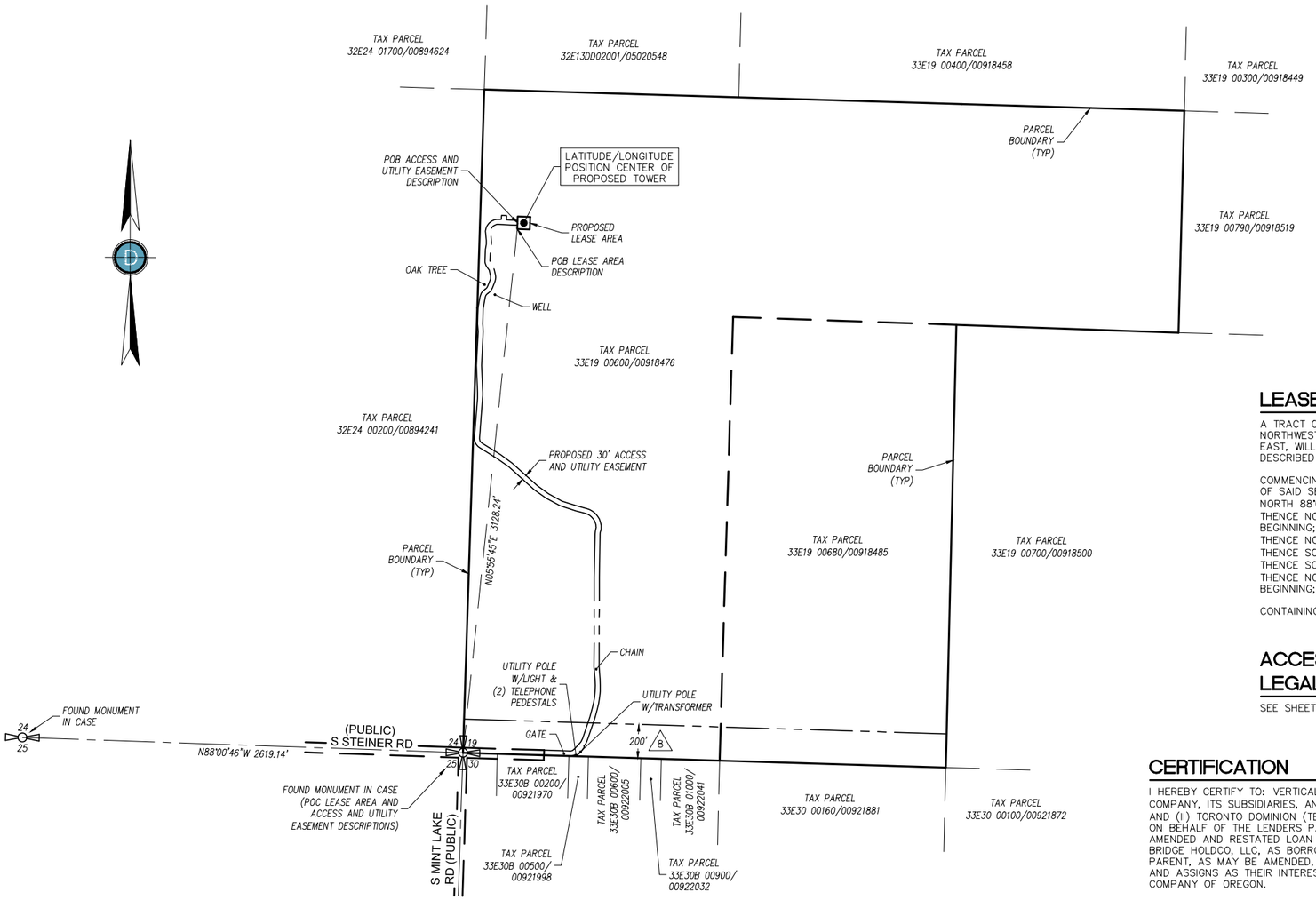
△8 ELECTRIC TRANSMISSION LINES EASEMENT, RECORDED JANUARY 1, 1915 IN BOOK 139, PAGE 16, CLACKAMAS COUNTY, OREGON.
--AFFECTS THE SOUTH 200 FEET OF PROPERTY, SHOWN.

NOTES

1. TITLE COMMITMENT ISSUED BY TOWER TITLE & CLOSING, FILE NO. VTB-164767-C, EFFECTIVE DATE DECEMBER 4, 2023, ISSUING AGENT IS FIDELITY NATIONAL TITLE COMPANY OF OREGON.
2. FEE OWNER: UNNAMED TRUSTEE OF THE LUKAS-HANNAH IRREVOCABLE TRUST.
3. DEED RECORDING NO. 94-05472, CLACKAMAS COUNTY, OREGON.
4. FIELD WORK CONDUCTED IN MAY 2024.
5. BASIS OF BEARING: OREGON STATE PLANE COORDINATE SYSTEM, NORTH ZONE (NAD83/91).
6. UNDERGROUND UTILITIES SHOWN HEREON, IF ANY, WERE DELINEATED FROM SURFACE EVIDENCE AND/OR UTILITY COMPANY RECORDS. CRITICAL LOCATIONS SHOULD BE VERIFIED PRIOR TO DESIGN AND CONSTRUCTION.
7. FEMA DESIGNATION: ZONE 'X' (AREA OF MINIMAL FLOOD HAZARD), FIRM MAP NUMBER 41005C0315D, EFFECTIVE DATE JUNE 17, 2008.
8. AT THE TIME OF THIS SURVEY, THERE WERE NO VISIBLE ENCROACHMENTS AFFECTING THE LEASE AREA.
9. THE LEASE AREA AND ACCESS AND UTILITY EASEMENT LIE ENTIRELY WITHIN THE PARENT PARCEL.



VICINITY MAP
NOT TO SCALE



SITE LOCATION
SCALE 1"=400'

LEASE AREA LEGAL DESCRIPTION

A TRACT OF LAND LOCATED IN THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 19, TOWNSHIP 3 SOUTH, RANGE 3 EAST, WILLAMETTE MERIDIAN, CLACKAMAS COUNTY, OREGON, DESCRIBED AS FOLLOWS:

COMMENCING AT A FOUND MONUMENT AT THE SOUTHWEST CORNER OF SAID SECTION 19, FROM WHICH A FOUND MONUMENT BEARS NORTH 88°00'46" WEST, 2619.14 FEET;
THENCE NORTH 05°55'45" EAST, 3128.24 FEET TO THE POINT OF BEGINNING;
THENCE NORTH 01°50'39" EAST, 75.00 FEET;
THENCE SOUTH 88°09'21" EAST, 75.00 FEET;
THENCE SOUTH 01°50'39" WEST, 75.00 FEET;
THENCE NORTH 88°09'21" WEST, 75.00 FEET TO THE POINT OF BEGINNING;

CONTAINING 5,625 SQUARE FEET, MORE OR LESS.

ACCESS AND UTILITY EASEMENT LEGAL DESCRIPTION

SEE SHEET SV3

CERTIFICATION

I HEREBY CERTIFY TO: VERTICAL BRIDGE REIT, LLC, A DELAWARE LIMITED LIABILITY COMPANY, ITS SUBSIDIARIES, AND THEIR RESPECTIVE SUCCESSORS AND/OR ASSIGNS; AND (II) TORONTO DOMINION (TEXAS) LLC, AS ADMINISTRATIVE AGENT, FOR ITSELF AND ON BEHALF OF THE LENDERS PARTIES FROM TIME TO TIME TO THAT CERTAIN SECOND AMENDED AND RESTATED LOAN AGREEMENT DATED JUNE 17, 2016 WITH VERTICAL BRIDGE HOLDCO, LLC, AS BORROWER, AND VERTICAL BRIDGE HOLDCO PARENT, LLC, AS PARENT, AS MAY BE AMENDED, RESTATED, MODIFIED OR RENEWED, THEIR SUCCESSORS AND ASSIGNS AS THEIR INTERESTS MAY APPEAR; AND FIDELITY NATIONAL TITLE COMPANY OF OREGON.

KEVIN J. WALKER, PLS #81283 — DATED: 6/04/24

LEGEND

- SUBJECT BOUNDARY LINE
- RIGHT-OF-WAY CENTERLINE
- RIGHT-OF-WAY LINE
- ADJACENT BOUNDARY LINE
- SECTIONAL BREAKDOWN LINE
- EASEMENT LINE

SITE INFORMATION

TAX PARCEL NO.	33E19 00600/00918476 33E19 00680/00918485
SITE ADDRESS	18133 S STEINER RD BEAVERCREEK, OR 97004
SITE CONTACT	CHRIS LAIRD
PHONE NUMBER	512-914-8035
ZONING	TBR (TIMBER DISTRICT) (CLACKAMAS COUNTY)
TOTAL LOT AREA	216.80 AC (PARCEL 00600) 79.99 AC (PARCEL 00680)

LATITUDE/LONGITUDE POSITION

COORDINATE DATA AT CENTER OF PROPOSED TOWER:
NAD 83/91
LAT - 45°17'46.86" N
LONG - 122°29'46.44" W
NAVD 88
ELEV= 802.3 FEET

LAT - 45.296350° N
LONG - 122.496233° W

BENCHMARK IS BASED ON ORGN OREGON COORDINATE REFERENCE SYSTEM

ELEVATION DERIVED USING GPS. ACCURACY MEETS OR EXCEEDS 1A STANDARDS AS DEFINED ON THE FAA ASAC INFORMATION SHEET 91:003

SURVEY REFERENCE

1. PARTITION PLAT NO. 1999-008, CLACKAMAS COUNTY, OREGON.
2. RECORD OF SURVEY, RECORDED SEPTEMBER 15, 1994, RECORDING NO. PS-25647, CLACKAMAS COUNTY, OREGON.
3. DEPENDENT RESURVEY GLO-59, JUNE 29, 1984, CLACKAMAS COUNTY, OREGON.
4. PROPERTY SURVEY, RECORDED JULY 20, 1977, RECORDING NO. PS-15042, CLACKAMAS COUNTY, OREGON.
5. PLAT OF MINT LAKE, RECORDED DECEMBER 31, 1973, RECORDED IN BOOK 63, PAGE 16, CLACKAMAS COUNTY, OREGON.

BOUNDARY DISCLAIMER

THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY. SUBJECT AND ADJACENT PROPERTY LINES ARE DEPICTED USING FIELD-FOUND EVIDENCE AND RECORD INFORMATION.

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811 Know what's below. Call before you dig.

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THE TOWERS, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

verizon

CAPITAL DESIGN SERVICES

DUNCANSON
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145 SW 155th Street, Suite 102
Seattle, Washington 98166
Phone 206.244.4141
Fax 206.244.4455

SITE
US-OR-5128
GOAT YOGA
18133 S STEINER RD
BEAVERCREEK, OR 97004
CLACKAMAS COUNTY

FIELD CREW:	DC/AH
FIELD BOOK:	634/100
DRAWN BY:	DAS
JOB #:	99544.2935
DATE:	5/30/2024

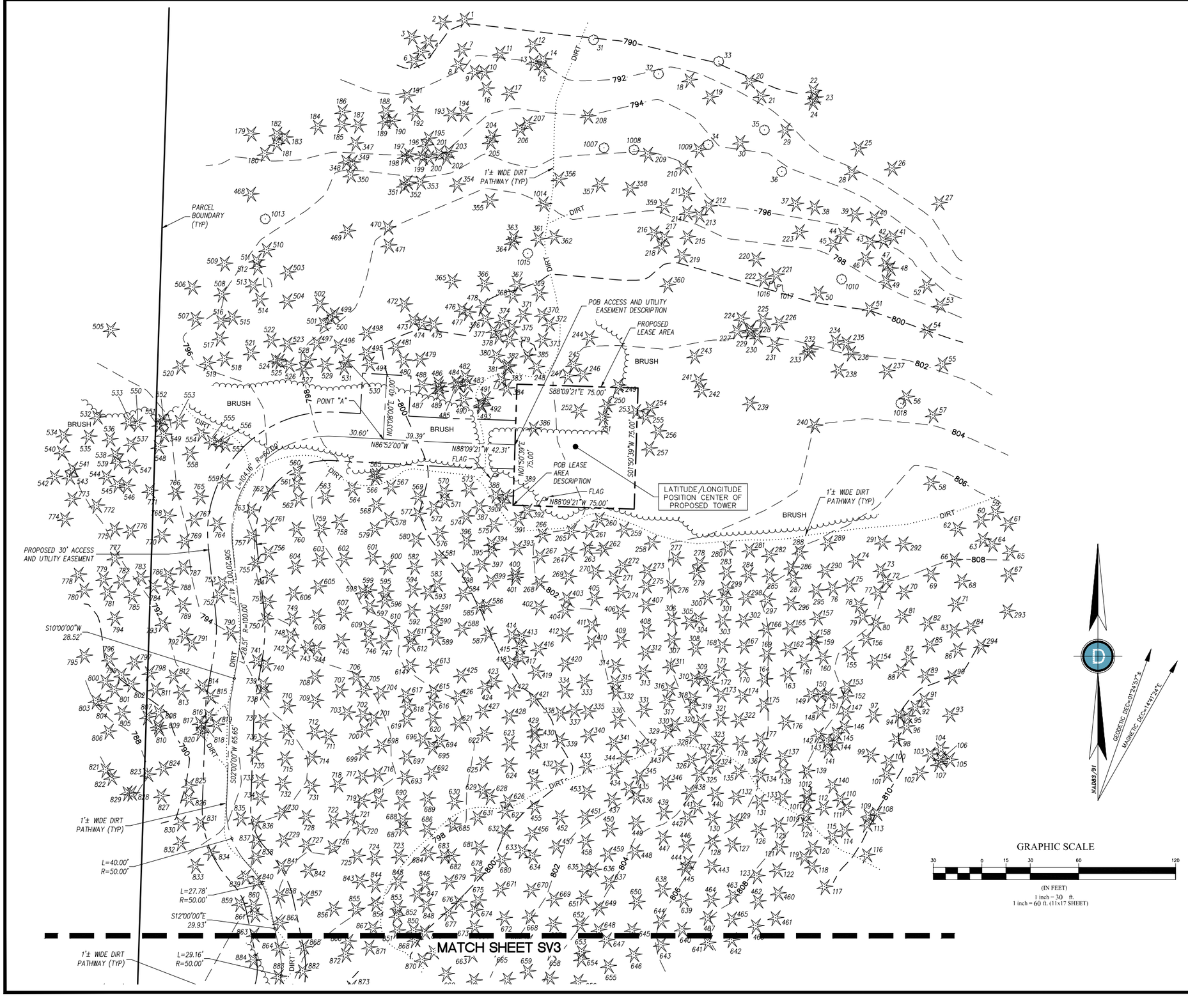
REVISIONS

DATE	DESCRIPTION	BY
-	-	-

REGISTERED PROFESSIONAL LAND SURVEYOR
6/04/24
OREGON
SEPTEMBER 14, 2021
KEVIN J. WALKER
81283
RENEWS: 06/30/24

SHEET TITLE
EXISTING SITE SURVEY
SEC 19, TWP 3 S, RNG 3 E, WM

SHEET NUMBER
SV1



LEGEND

- SUBJECT BOUNDARY LINE
- RIGHT-OF-WAY CENTERLINE
- RIGHT-OF-WAY LINE
- ADJACENT BOUNDARY LINE
- SECTIONAL BREAKDOWN LINE
- EASEMENT LINE
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- LIGHT STANDARD
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- IRRIGATION CONTROL
- CATCH BASIN, TYPE I
- CATCH BASIN, TYPE II
- SIGN
- BOLLARD
- MAIL BOX
- 234.21 — SPOT ELEVATION

NOTE:
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TREE LEGEND

DECIDUOUS TREE
AL12 ← TRUNK DIAMETER (IN)
TYPE

EVERGREEN TREE
DF18
195.2
ST=STUMP
HEIGHT AGL IF MEASURED

AL=ALDER
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DS=DECIDUOUS
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LATITUDE/LONGITUDE POSITION

COORDINATE DATA AT CENTER OF PROPOSED TOWER:
NAD 83/91
LAT – 45°17'46.86" N
LONG – 122°29'46.44" W
NAVD 88
ELEV= 802.3 FEET

LAT – 45.296350° N
LONG – 122.496233° W

NAVD 88

BENCHMARK IS BASED ON ORGN OREGON COORDINATE REFERENCE SYSTEM

ELEVATION DERIVED USING GPS. ACCURACY MEETS OR EXCEEDS 1A STANDARDS AS DEFINED ON THE FAA ASAC INFORMATION SHEET 91-003

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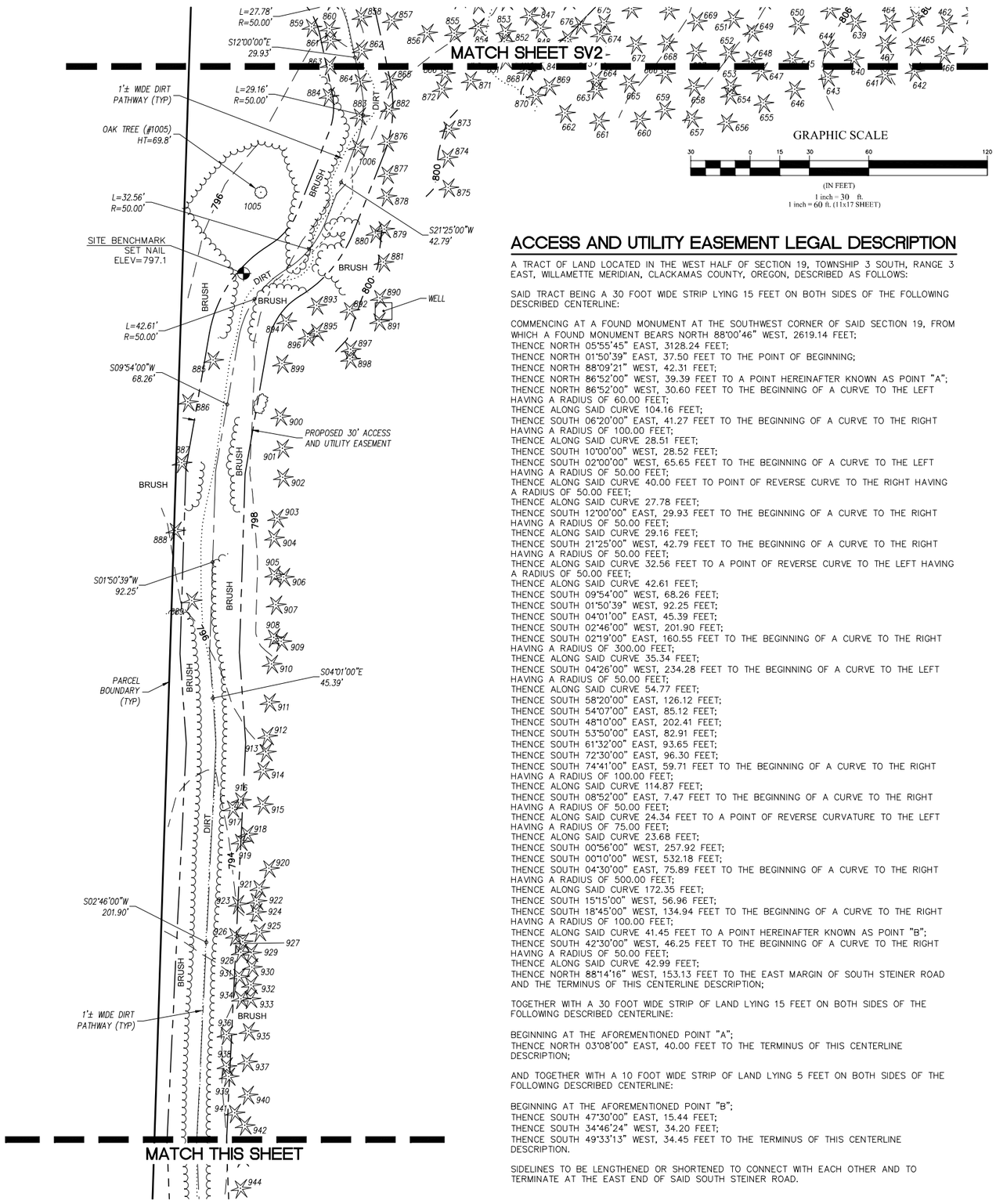


ACCESS AND UTILITY EASEMENT LEGAL DESCRIPTION

A TRACT OF LAND LOCATED IN THE WEST HALF OF SECTION 19, TOWNSHIP 3 SOUTH, RANGE 3 EAST, WILLAMETTE MERIDIAN, CLACKAMAS COUNTY, OREGON, DESCRIBED AS FOLLOWS:

SAID TRACT BEING A 30 FOOT WIDE STRIP LYING 15 FEET ON BOTH SIDES OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT A FOUND MONUMENT AT THE SOUTHWEST CORNER OF SAID SECTION 19, FROM WHICH A FOUND MONUMENT BEARS NORTH 88°00'46" WEST, 2619.14 FEET;
THENCE NORTH 05°55'45" EAST, 3128.24 FEET;
THENCE NORTH 01°50'39" EAST, 37.50 FEET TO THE POINT OF BEGINNING;
THENCE NORTH 88°09'21" WEST, 42.31 FEET;
THENCE NORTH 86°52'00" WEST, 39.39 FEET TO A POINT HEREINAFTER KNOWN AS POINT "A";
THENCE NORTH 86°52'00" WEST, 30.60 FEET TO THE BEGINNING OF A CURVE TO THE LEFT HAVING A RADIUS OF 60.00 FEET;
THENCE ALONG SAID CURVE 104.16 FEET;
THENCE SOUTH 06°20'00" EAST, 41.27 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS OF 100.00 FEET;
THENCE ALONG SAID CURVE 28.51 FEET;
THENCE SOUTH 10°00'00" WEST, 28.52 FEET;
THENCE SOUTH 02°00'00" WEST, 65.65 FEET TO THE BEGINNING OF A CURVE TO THE LEFT HAVING A RADIUS OF 50.00 FEET;
THENCE ALONG SAID CURVE 40.00 FEET TO POINT OF REVERSE CURVE TO THE RIGHT HAVING A RADIUS OF 50.00 FEET;
THENCE ALONG SAID CURVE 27.78 FEET;
THENCE SOUTH 12°00'00" EAST, 29.93 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS OF 50.00 FEET;
THENCE ALONG SAID CURVE 29.16 FEET;
THENCE SOUTH 21°25'00" WEST, 42.79 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS OF 50.00 FEET;
THENCE ALONG SAID CURVE 32.56 FEET TO A POINT OF REVERSE CURVE TO THE LEFT HAVING A RADIUS OF 50.00 FEET;
THENCE ALONG SAID CURVE 42.61 FEET;
THENCE SOUTH 09°54'00" WEST, 68.26 FEET;
THENCE SOUTH 01°50'39" WEST, 92.25 FEET;
THENCE SOUTH 04°01'00" EAST, 45.39 FEET;
THENCE SOUTH 02°46'00" WEST, 201.90 FEET;
THENCE SOUTH 02°19'00" EAST, 160.55 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS OF 300.00 FEET;
THENCE ALONG SAID CURVE 35.34 FEET;
THENCE SOUTH 04°26'00" WEST, 234.28 FEET TO THE BEGINNING OF A CURVE TO THE LEFT HAVING A RADIUS OF 50.00 FEET;
THENCE ALONG SAID CURVE 54.77 FEET;
THENCE SOUTH 58°20'00" EAST, 126.12 FEET;
THENCE SOUTH 54°07'00" EAST, 85.12 FEET;
THENCE SOUTH 48°10'00" EAST, 202.41 FEET;
THENCE SOUTH 53°50'00" EAST, 82.91 FEET;
THENCE SOUTH 61°32'00" EAST, 93.65 FEET;
THENCE SOUTH 72°30'00" EAST, 96.30 FEET;
THENCE SOUTH 74°41'00" EAST, 59.71 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS OF 100.00 FEET;
THENCE ALONG SAID CURVE 114.87 FEET;
THENCE SOUTH 08°52'00" EAST, 7.47 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS OF 50.00 FEET;
THENCE ALONG SAID CURVE 24.34 FEET TO A POINT OF REVERSE CURVATURE TO THE LEFT HAVING A RADIUS OF 75.00 FEET;
THENCE ALONG SAID CURVE 23.68 FEET;
THENCE SOUTH 00°56'00" WEST, 257.92 FEET;
THENCE SOUTH 00°10'00" WEST, 532.18 FEET;
THENCE SOUTH 04°30'00" EAST, 75.89 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS OF 500.00 FEET;
THENCE ALONG SAID CURVE 172.35 FEET;
THENCE SOUTH 15°15'00" WEST, 56.96 FEET;
THENCE SOUTH 18°45'00" WEST, 134.94 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS OF 100.00 FEET;
THENCE ALONG SAID CURVE 41.45 FEET TO A POINT HEREINAFTER KNOWN AS POINT "B";
THENCE SOUTH 42°30'00" WEST, 46.25 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS OF 50.00 FEET;
THENCE ALONG SAID CURVE 42.99 FEET;
THENCE NORTH 88°14'16" WEST, 153.13 FEET TO THE EAST MARGIN OF SOUTH STEINER ROAD AND THE TERMINUS OF THIS CENTERLINE DESCRIPTION;

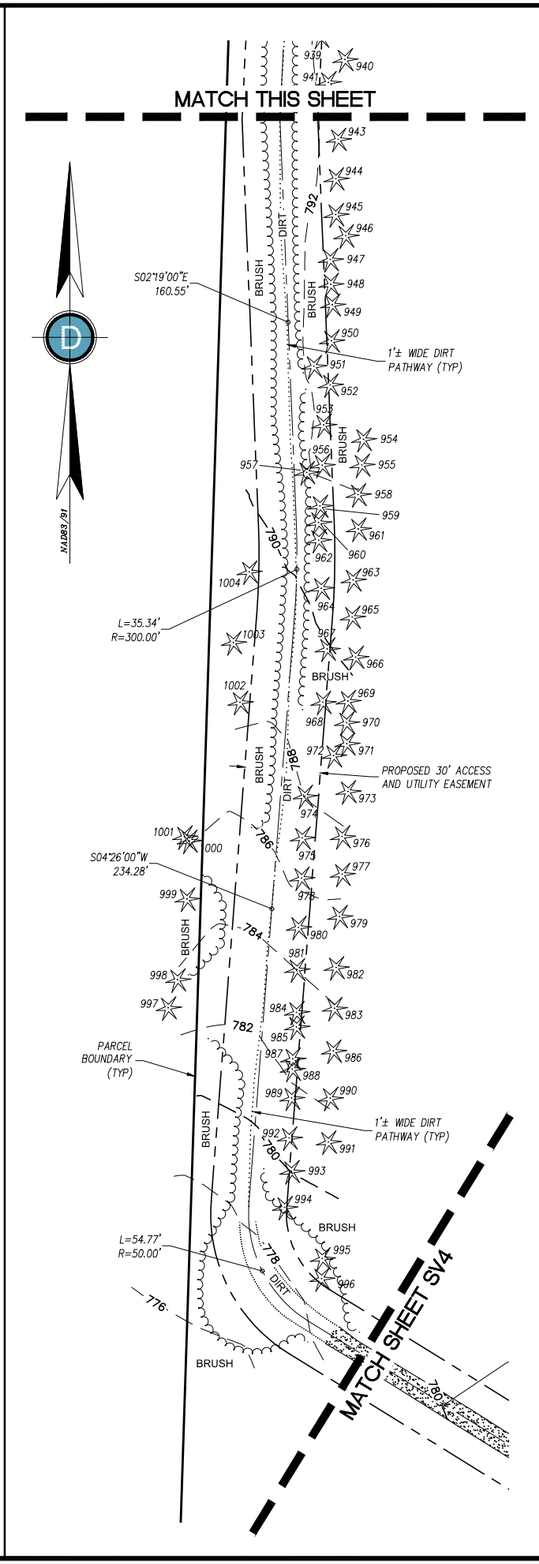
TOGETHER WITH A 30 FOOT WIDE STRIP OF LAND LYING 15 FEET ON BOTH SIDES OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE AFOREMENTIONED POINT "A";
THENCE NORTH 03°08'00" EAST, 40.00 FEET TO THE TERMINUS OF THIS CENTERLINE DESCRIPTION;

AND TOGETHER WITH A 10 FOOT WIDE STRIP OF LAND LYING 5 FEET ON BOTH SIDES OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE AFOREMENTIONED POINT "B";
THENCE SOUTH 47°30'00" EAST, 15.44 FEET;
THENCE SOUTH 34°46'24" WEST, 34.20 FEET;
THENCE SOUTH 49°33'13" WEST, 34.45 FEET TO THE TERMINUS OF THIS CENTERLINE DESCRIPTION.

SIDELINES TO BE LENGTHENED OR SHORTENED TO CONNECT WITH EACH OTHER AND TO TERMINATE AT THE EAST END OF SAID SOUTH STEINER ROAD.



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TREE LEGEND

DECIDUOUS TREE
AL12 — TRUNK DIAMETER (IN)
TYPE

AL=ALDER
MP=MAPLE
DS=DECIDUOUS
MA=MADRONA
OK=OAK
CH=CHERRY

EVERGREEN TREE
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195.2
ST=STUMP
HEIGHT AGL IF MEASURED

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NAVD 88

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SHEET TITLE
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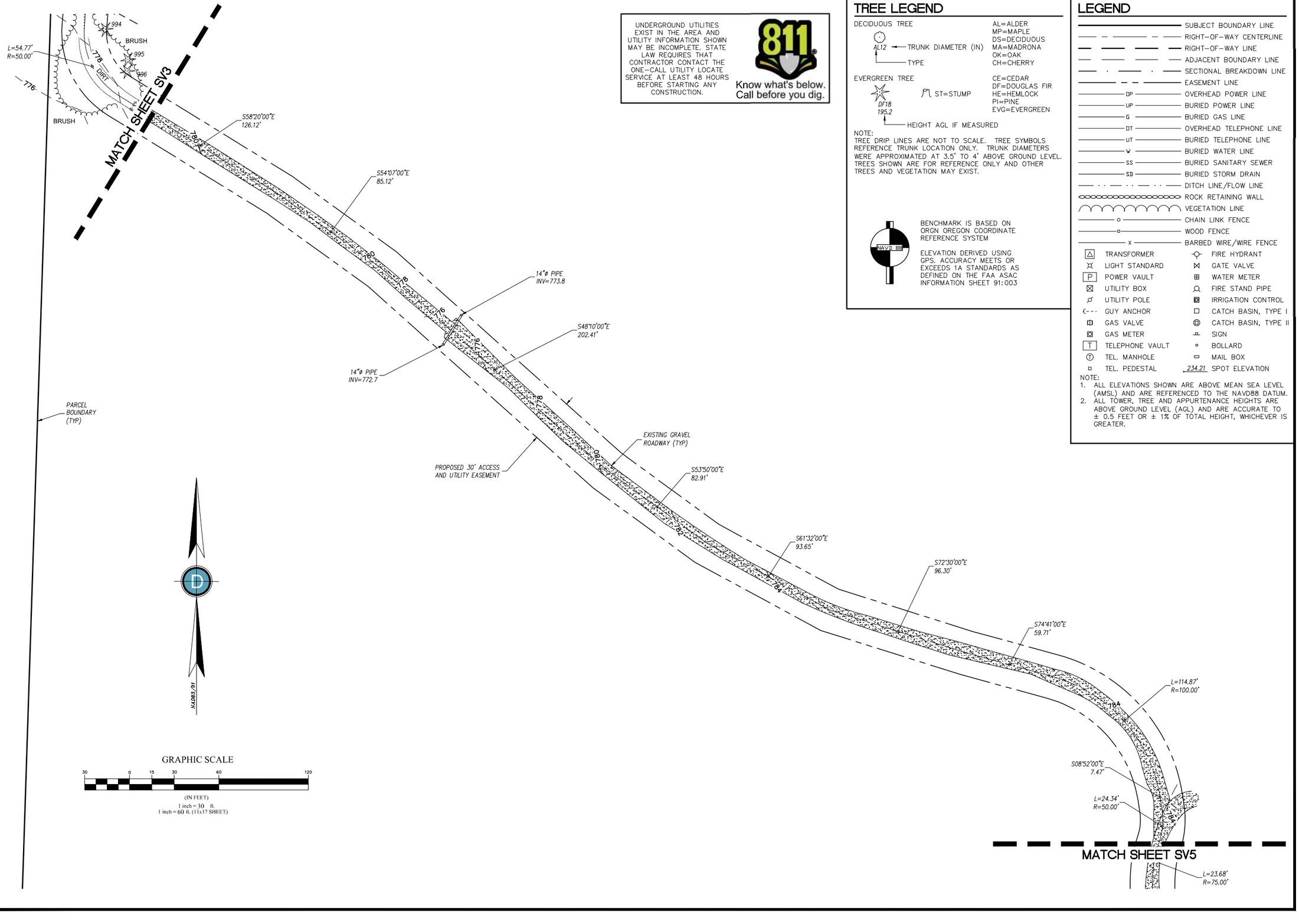
SV3



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

1 inch = 60 ft. (11x17 SHEET)

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AL12 — TRUNK DIAMETER (IN)

TYPE

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EVERGREEN TREE

DF18
195.2

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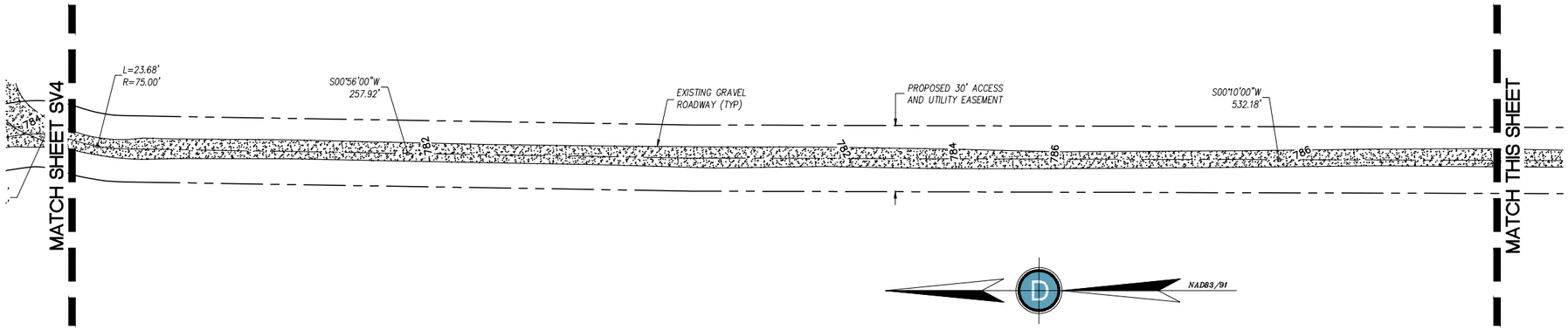

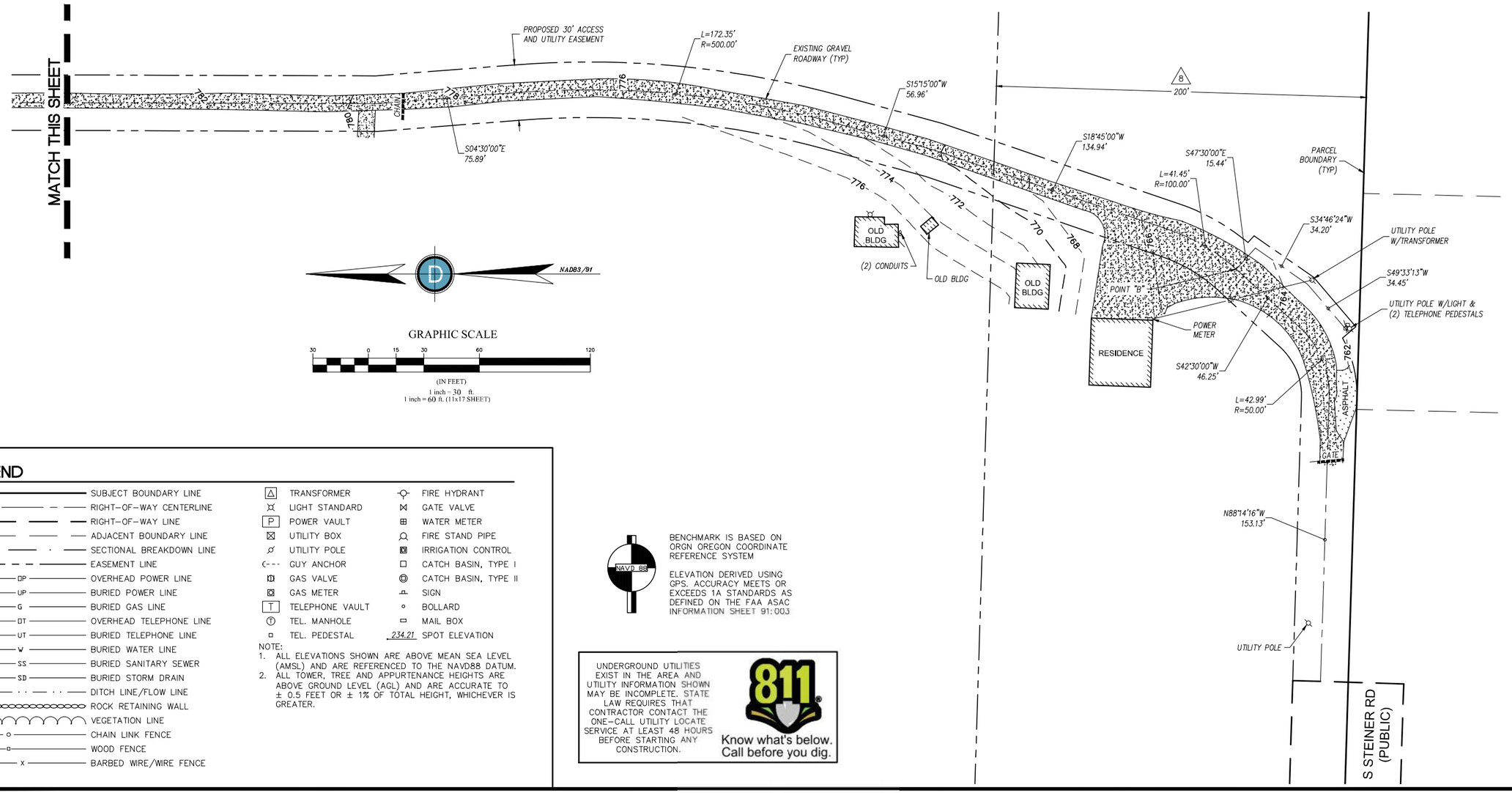

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TREE TABLE

#	TYPE	TRUNK DIA (IN)	DRIPLINE RADIUS (FT)
1	DF	48	
2	DF	20	
3	DF	36	
4	DF	24	
5	DF	20	
6	DF	30	
7	DF	30	
8	DF	20	
9	DF	26	
10	DF	30	
11	DF	26	
12	DF	55	
13	DF	30	
14	DF	10	
15	DF	36	
16	DF	40	
17	DF	36	
18	DF	60	
19	DF	52	
20	DF	24	
21	DF	32	
22	DF	48	
23	DF	54	
24	DF	48	
25	DF	50	
26	DF	42	
27	DF	60	
28	DF	20	58
29	DF	48	
30	DF	40	
31	DS	20	
32	DS	25	
33	DS	20	
34	MP	25	
35	MP	20	
36	MP	40	
37	DF	40	
38	DF	26	
39	DF	52	
40	DF	28	
41	DF	10	
42	DF	28	
43	DF	30	
44	DF	38	
45	DF	28	
46	DF	24	
47	DF	28	
48	DF	36	
49	DF	14	
50	DF	70	
51	DF	56	
52	DF	60	
53	DF	40	
54	DF	42	
55	DF	24	
56	DF	50	
57	DF	50	
58	DF HT=142.5'	86	
59	DF	14	
60	DF	22	
61	DF	12	
62	DF	22	
63	DF	20	
64	DF	20	
65	DF	10	
66	DF	24	
67	DF	20	
68	DF	24	
69	DF	24	
70	DF	22	
71	DF	22	
72	DF	18	
73	DF	20	
74	DFCLUMP	24	
75	DF	20	

#	TYPE	TRUNK DIA (IN)
76	DFCLUMP	28
77	DF	20
78	DF	28
79	DF	8
80	DF	18
81	DF	22
82	DF	22
83	DF	10
84	DF	8
85	DF	24
86	DFCLUMP	22
87	DF	10
88	DF	14
89	DF	30
90	DF	14
91	DF	22
92	DF	20
93	DF	10
94	DF	20
95	DF	10
96	DF	22
97	DF	24
98	DF	21
99	DF	18
100	DF	20
101	DF	14
102	DF	30
103	DF	22
104	DF	14
105	DF	14
106	DF	18
107	DF	21
108	DF	14
109	DF	18
110	DF	20
111	DF	20
112	DF	10
113	DF	24
114	DF	18
115	DF	18
116	DF	18
117	DF	12
118	DF	8
119	DF	10
120	DF	12
121	DF	20
122	DF	24
123	DF	22
124	DF	14
125	DF	24
126	DF	24
127	DF	24
128	DFDEAD	16
129	DF	18
130	DF	17
131	DF	22
132	DF	20
133	DF	20
134	DF	20
135	DF	24
136	DF	24
137	DF	20
138	DF	24
139	DF	22
140	DF	22
141	DF	18
142	DF	15
143	DF	14
144	DF	18
145	DF	24
146	DF	20
147	DF	10
148	DF	10
149	DF	14
150	DF	14

#	TYPE	TRUNK DIA (IN)
151	DF	20
152	DF	14
153	DF	10
154	DF	20
155	DF	24
156	DF	18
157	DF	14
158	DF	8
159	DFCLUMP	20
160	DF	14
161	DF	18
162	DF	14
163	DF	24
164	DF	18
165	DF	24
166	DF	18
167	DF	24
168	DF	26
169	DF	22
170	DF	21
171	DF	16
172	DF	9
173	DF	20
174	DF	22
175	DF	24
176	DF	28
177	DF	8
178	DF	22
179	DFDEAD	20
180	DF	60
181	DF	38
182	DF	28
183	DFCLUMP	100
184	DF	16
185	DF	36
186	DF	60
187	DF	38
188	DF	36
189	DF	40
190	DF	38
191	DF	18
192	DF	36
193	DF	48
194	DF	48
195	DF	48
196	DF	48
197	DF	42
198	DF	42
199	DF	42
200	DF	56
201	DF	60
202	DF	20
203	DF	20
204	DF	38
205	DF	56
206	DF	50
207	DF	22
208	DF	65
209	DF	36
210	DF	38
211	DFCLUMP	48
212	DF	40
213	DF	26
214	DF	24
215	DF	42
216	DF	40
217	DF	26
218	DF	42
219	DF	40
220	DF	48
221	DF	58
222	DF	60
223	DF	48
224	DF	18
225	DF	36

#	TYPE	TRUNK DIA (IN)
226	DF	16
227	DF	60
228	DF	10
229	DF	18
230	DFCLUMP	61
231	DF	48
232	DF	42
233	DF	45
234	DF	38
235	DF	55
236	DF	18
237	DF	60
238	DF	40
239	DF	60
240	DF	50
241	DF	45
242	DF	50
243	DF	43
244	DF	38
245	DF	48
246	DF	12
247	DF	36
248	DFCLUMP	62
249	DF	48
250	DF	24
251	DF	48
252	DF	60
253	DF	64
254	DF	58
255	DF	20
256	DF	40
257	DF HT=95.1'	30
258	DF	30
259	DF	22
260	DF HT=93.9'	30
261	DF	12
262	DF	16
263	DF	16
264	DF	24
265	DF	26
266	DF	24
267	DF	26
268	DF	28
269	DF	24
270	DF	22
271	DF	12
272	DF	20
273	DF	22
274	DF	24
275	DF	20
276	DF	22
277	DF	30
278	DF	28
279	DF	8
280	DF	20
281	DF	28
282	DF	20
283	DF	22
284	DF	22
285	DF	18
286	DF	28
287	DF	18
288	DF	30
289	DF	18
290	DF	28
291	DF	20
292	DF	22
293	DF	20
294	DF	24
295	DF	22
296	DF	24
297	DF	24
298	DF	18
299	DF	24
300	DF	12

#	TYPE	TRUNK DIA (IN)
301	DF	18
302	DF	24
303	DF	18
304	DF	30
305	DF	20
306	DF	20
307	DF	18
308	DF	24
309	DF	10
310	DF	18
311	DF	24
312	DF	24
313	DF	22
314	DF	24
315	DF	22
316	DF	22
317	DF	20
318	DFCLUMP	23
319	DF	20
320	DF	14
321	DF	22
322	DF	24
323	DF	20
324	DF	21
325	DFCLUMP	16
326	DF	20
327	DF	8
328	DF	24
329	DF	22
330	DF	10
331	DF	24
332	DF	24
333	DFCLUMPDEAD	30
334	DFDEAD	26
335	DF	26
336	DF	24
337	DF	12
338	DF	25
339	DF	24
340	DF	20
341	DF	20
342	DF	18
343	DF	26
344	DF	12
345	DF	22
346	DF	22
347	DF	54
348	DF	42
349	DF	16
350	DF	40
351	DF	30
352	DFCLUMP	60
353	DF	52
354	DF	55
355	DF	56
356	DF	60
357	DF	40
358	DF	38
359	DF	20
360	DF	40
361	DF	28
362	DFCLUMP	50
363	DF	14
364	DF	14
365	DF	54
366	DF	24
367	DF	22
368	DF	20
369	DF	55
370	DF	46
371	DF	24
372	DF	22
373	DF	12
374	DF	32
375	DF	18

#	TYPE	TRUNK DIA (IN)	DRIPLINE RADIUS (FT)
376	DF	36	
377	DF	10	
378	DF	8	
379	DF	20	
380	DF	38	
381	DF	16	
382	DF	24	
383	DF	50	
384	DF	24	
385	DF	24	
386	DF	24	
387	DF	8	
388	DF	20	
389	DF	–	
390	DF	14	
391	DF	24	
392	DF	15	
393	DF	24	
394	DF	20	
395	DF	22	
396	DF	22	
397	DF	8	
398	DF	28	
399	DF	16	
400	DF	28	
401	DF	16	
402	DF	21	
403	DF	20	
404	DF	24	
405	DF	22	
406	DF	24	
407	DF	24	
408	DF	22	
409	DF	22	
410	DF	12	
411	DF	20	
412	DF	24	
413	DF	16	
414	DFCLUMP	38	
415	DFCLUMP	20	
416	DF	22	
417	DF	10	
418	DFCLUMP	38	
419	DF	24	10
420	DF	24	
421	DF	22	20
422	DF	22	
423	DF	16	
424	DF	16	
425	DF	24	
426	DF	18	
427	DF	24	12
428	DF	18	
429	DF	18	
430	DF	18	
431	DF	22	
432	DF	22	
433	DF	16	
434	DF	28	
435	DF	8	
436	DF	22	
437	DFCLUMP	26	
438	DF	22	
439	DF	20	
440	DF	20	
441	DFCLUMP	26	
442	DF	20	
443	DF	22	
444	DF	24	
445	DF	22	
446	DF	22	
447	DF	22	
448	DF	24	
449	DF	24	
450	DF	24	

#	TYPE	TRUNK DIA (IN)	DRIPLINE RADIUS (FT)
451	DF	18	
452	DF	20	
453	DF	20	
454	DF	24	20
455	DF	24	
456	DF	22	
457	DF	22	
458	DF	24	
459	DF	22	
460	DF	24	
461	DF	22	
462	DF	18	
463	DF	20	
464	DF	22	
465	DF	18	
466	DF	18	
467	DF	24	
468	DF	60	
469	DF	70	
470	DF	56	
471	DF	60	
472	DF	46	
473	DF	40	
474	DF	32	
475	DF	36	
476	DF	16	
477	DF	26	
478	DF	10	
479	DF	48	
480	DF	62	
481	DF	50	
482	DF	44	
483	DF	16	
484	DF	13	
485	DF	10	
486	DF	18	
487	DF	10	
488	DF	44	
489	DF	54	
490	DF	36	
491	DF	50	
492	DF	36	
493	DF	36	
494	DF	48	
495	DF	52	
496	DF	36	
497	DFCLUMP	58	
498	DF	42	
499	DF	18	
500	DF	18	
501	DF	50	
502	DF	18	
503	DF	48	
504	DF	26	
505	DF	45	
506	DF	65	
507	DF	68	
508	DF	38	
509	DF	60	
510	DF	60	
511	DF	48	
512	DF	40	
513	DF	38	
514	DF	50	
515	DF	48	
516	DF	26	
517	DF	52	
518	DFCLUMP	32	
519	DF	72	
520	DF	42	
521	DF	42	
522	DF	12	
523	DF	30	
524	DF	58	
525	DF	22	

#	TYPE	TRUNK DIA (IN)	DRIPLINE RADIUS (FT)
526	DF	10	
527	DF	12	
528	DF	48	
529	DF	52	
530	DF	40	
531	DF	42	
532	DF	14	
533	DF	14	
534	DF	36	
535	DF	24	10
536	DF	18	8
537	DF	20	20
538	DF	14	
539	DF	20	12
540	DF	16	
541	DF	14	
542	DF	20	15
543	DF	14	
544	DF	20	12
545	DF	10	
546	DF	18	
547	DF	20	
548	DF	24	
549	DF	10	
550	DF	14	10
551	DF	14	
552	DF	14	
553	DF	16	
554	DF	14	
555	DF	14	
556	DF	14	
557	DF	20	18
558	DF	24	10
559	DF	18	18
560	DF	26	20
561	DF	18	
562	DF	20	
563	DF	24	
564	DF	22	15
565	DF	20	
566	DF	18	
567	DF	22	
568	DF	30	
569	DF	18	
570	DF	24	
571	DF	16	
572	DF	8	
573	DF	24	
574	DF	24	
575	DF	24	
576	DF	30	
577	DF	30	
578	DF	28	
579	DF	30	
580	DF	22	
581	DF	20	
582	DF	22	
583	DF	24	
584	DF	26	
585	DF	8	
586	DF	24	
587	DF	24	
588	DF	24	
589	DF	22	
590	DF	10	
591	DF	24	
592	DF	22	
593	DF	10	
594	DF	28	15
595	DF	28	
596	DF	14	
597	DF	26	16
598	DF	22	
599	DF	22	
600	DF	22	

verticalbridge

THE TOWERS, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

verizon

CAPITAL DESIGN SERVICES

DUNCANSON
Company, Inc.
145 SW 155th Street, Suite 102
Seattle, Washington 98166
Phone 206.244.4141
Fax 206.244.4455

SITE
US-OR-5128
GOAT YOGA
18133 S STEINER RD
BEAVERCREEK, OR 97004
CLACKAMAS COUNTY

FIELD CREW:	DC/AH
FIELD BOOK:	634/100
DRAWN BY:	DAS
JOB #:	99544.2935
DATE:	5/30/2024

REVISIONS

DATE	DESCRIPTION	BY
–	–	–

REGISTERED
PROFESSIONAL
LAND SURVEYOR

6/04/24

OREGON
SEPTEMBER 14, 2021
KEVIN J. WALKER
81283

RENEWS: 06/30/24

SHEET TITLE
EXISTING SITE SURVEY
SEC 19, TWP 3 S, RNG 3 E, WM

SHEET NUMBER
SV6

TREE TABLE

#	TYPE	TRUNK DIA (IN)	DRIPLINE RADIUS (FT)
601	DF	28	
602	DF	26	20
603	DF	20	15
604	DF	24	
605	DF	26	
606	DF	24	16
607	DF	8	
608	DF	26	
609	DF	14	
610	DF	10	
611	DF	24	15
612	DF	18	
613	DF	22	16
614	DF	28	20
615	DF	20	
616	DF	10	
617	DF	22	
618	DF	10	
619	DF	20	
620	DF	22	15
621	DF	24	10
622	DF	20	
623	DF	24	
624	DF	18	
625	DF	30	15
626	DF	26	
627	DF	12	
628	DF	10	
629	DF	20	
630	DF	24	
631	DF	20	
632	DF	24	
633	DF	20	
634	DF	22	
635	DF	24	
636	DF	18	
637	DF	22	
638	DF	24	
639	DF	18	
640	DF	30	
641	DF	22	
642	DF	24	
643	DF	30	
644	DF	21	
645	DF	22	
646	DF	14	
647	DF	22	
648	DF	18	
649	DF	18	
650	DF	28	
651	DF	24	
652	DF	21	
653	DF	22	
654	DF	14	
655	DF	22	
656	DFDEAD	20	
657	DF	22	
658	DF	24	
659	DF	21	
660	DFCLUMP	28	
661	DF	26	
662	DF	22	
663	DF	24	
664	DFCLUMP	34	
665	DFCLUMP	40	
666	DF	20	
667	DF	22	
668	DF	22	
669	DF	22	
670	DF	22	
671	DF	26	
672	DF	20	
673	DF	26	
674	DF	20	
675	DF	24	
676	DF	18	
677	DF	20	
678	DF	18	
679	DF	24	
680	DF	26	
681	DF	24	
682	DF	26	
683	DF	12	
684	DF	30	20
685	DF	22	
686	DF	22	
687	DF	24	
688	DF	14	
689	DF	22	
690	DF	16	
691	DF	22	
692	DF	26	
693	DF	24	
694	DF	18	
695	DF	26	
696	DF	14	
697	DF	24	
698	DF	18	
699	DF	22	
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703	DF	18	
704	DF	24	
705	DF	22	
706	DF	20	
707	DF	24	
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709	DF	20	
710	DF	24	
711	DF	18	
712	DF	24	
713	DF	18	20
714	DF	24	15
715	DF	20	
716	DF	18	
717	DF	18	
718	DF	24	15
719	DF	20	
720	DF	21	
721	DF	10	
722	DF	20	
723	DF	24	
724	DF	22	
725	DF	24	
726	DF	20	
727	DF	24	
728	DF	24	
729	DF	26	
730	DF	18	10
731	DF	20	
732	DF	24	
733	DF	24	
734	DF	22	20
735	DF	26	17
736	DF	24	20
737	DF	26	15
738	DF	26	15
739	DF	14	
740	DF	26	
741	DF	20	
742	DF	24	
743	DF	9	
744	DF	24	
745	DF	22	
746	DF	22	
747	DF	18	
748	DF	24	20
749	DF	18	
750	DF	26	20
751	DF	24	
752	DF	18	20
753	DF	20	20
754	DF	20	15
755	DF	26	20
756	DF	21	
757	DF	26	18
758	DF	18	10
759	DF	26	15
760	DF	24	
761	DF	24	
762	DF	28	15
763	DF	28	20
764	DF	30	15
765	DF	18	10
766	DF	24	20
767	DF	24	15
768	DF	18	
769	DF	24	
770	DF	18	18
771	DF	20	12
772	DF	20	
773	DF	18	20
774	DF	26	18
775	DF	24	20
776	DF	18	10
777	DF	18	
778	DF	20	15
779	DF	25	20
780	DF	18	20
781	DF	14	
782	DF	24	12
783	DF	16	
784	DF	24	15
785	DF	10	
786	DF	20	10
787	DF	26	20
788	DF	10	
789	DF	18	8
790	DF	26	20
791	DF	18	20
792	DF	20	15
793	DF	14	
794	DF	14	12
795	DF	20	
796	DF	30	20
797	DF	18	15
798	DF	22	
799	DF	25	
800	DF	18	8
801	DFCLUMP	14	
802	DF	18	
803	DF	10	
804	DF	18	
805	DFCLUMP	30	
806	DF	28	12
807	DF	16	
808	DFDEAD	20	
809	DF	25	12
810	DF	20	10
811	DF	18	
812	DFDEAD	20	
813	DF	16	15
814	DF	18	20
815	DF	18	10
816	DF	14	10
817	DF	10	
818	DF	12	
819	DFDEAD	16	
820	DF	18	12
821	DF	22	10
822	DF	16	
823	DF	14	
824	DF	21	15
825	DF	22	10
826	DF	20	10
827	DF	24	12
828	DF	20	
829	DF	30	20
830	DF	8	
831	DF	18	8
832	DF	28	10
833	DF	22	
834	DF	20	15
835	DF	26	15
836	DF	22	
837	DF	24	15
838	DFDEAD	18	
839	DF	28	20
840	DF	24	10
841	DF	24	20
842	DF	20	
843	DF	24	
844	DF	24	
845	DF	18	
846	DF	26	
847	DF	20	
848	DF	14	
849	DF	22	
850	DF	10	
851	DF	18	
852	DF	16	
853	DF	22	
854	DF	22	
855	DF	18	
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859	DF	30	15
860	DF	15	
861	DF	22	15
862	DF	20	10
863	DF	19	15
864	DF	20	10
865	DF	22	10
866	DF	24	
867	DF	18	
868	DF	10	
869	DF	14	
870	DF	24	
871	DF	22	
872	DF	20	
873	DF	24	20
874	DF	28	18
875	DF	26	20
876	DF	22	20
877	DF	19	
878	DF	22	10
879	DF	28	20
880	DF	12	10
881	DFDEAD	16	
882	DF	26	12
883	DF	20	
884	DF	24	15
885	DFCLUMP	24	30
886	DF	20	10
887	DF	32	20
888	DF	16	10
889	DF	14	10
890	DF	22	15
891	DF	22	10
892	DF	20	10
893	DF	25	20
894	DFCLUMP	40	15
895	DF	18	10
896	DF	20	15
897	DF	20	15
898	DF	22	
899	DF	30	20
900	DF	30	15
901	DF	24	15
902	DF	20	10
903	DF	24	20
904	DF	26	20
905	DF	20	25
906	DF	21	
907	DF	24	25
908	DF	24	20
909	DF	20	
910	DF	24	20
911	DF	28	25
912	DF	26	
913	DF	20	25
914	DF	22	25
915	DF	12	
916	DF	22	25
917	DF	26	15
918	DF	21	
919	DF	24	20
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921	DF	22	20
922	DF	12	
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926	DF	18	15
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928	DF	8	
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930	DF	20	20
931	DF	14	10
932	DF	24	15
933	DF	26	
934	DF	10	20
935	DF	16	
936	DF	30	25
937	DF	18	
938	DF	22	15
939	DF	12	
940	DF	20	
941	DF	24	25
942	DF	22	20
943	DF	20	25
944	DF	20	20
945	DF	20	20
946	DF	14	
947	DF	28	25
948	DF	26	30
949	DF	20	25
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951	DF	22	25
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955	DF	18	
956	DF	22	20
957	DF	18	20
958	DF	15	
959	DF	16	15
960	DF	18	25
961	DF	20	
962	DF	14	20
963	DF	22	20
964	DF	12	
965	DF	16	12
966	DF	16	
967	DF	9	
968	DF	12	
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972	DF	14	20
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984	DF	12	20
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989	DF	20	25
990	DF	18	
991	DF	20	
992	DF	22	25
993	DF	14	20
994	DF	17	15
995	DF	12	11
996	DF	12	15
997	DF	60	40
998	DF	40	
999	DF	24	
1000	DF	40	25
1001	DF	16	
1002	DF HT=135.0'	60	25
1003	DF	48	
1004	DF	50	20
1005	OK	74	
1006	DF	22	15
1007	MP	30	
1008	MP	18	
1009	DF	36	
1010	MPCLUMP	60	
1011	DF	8	
1012	DF	20	
1013	MP	18	
1014	DF	26	
1015	MP	10	
1016	ST	60	
1017	ST	55	
1018	MP	40	
1019	DF	14	

verticalbridge

THE TOWERS, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

verizon

CAPITAL DESIGN SERVICES

DUNCANSON
Company, Inc.
145 SW 155th Street, Suite 102
Seattle, Washington 98166
Phone 206.244.4141
Fax 206.244.4455

SITE

US-OR-5128
GOAT YOGA

18133 S STEINER RD
BEAVERCREEK, OR 97004
CLACKAMAS COUNTY

FIELD CREW:	DC/AH
FIELD BOOK:	634/100
DRAWN BY:	DAS
JOB #:	99544.2935
DATE:	5/30/2024

REVISIONS

DATE	DESCRIPTION	BY
-	-	-

REGISTERED
PROFESSIONAL
LAND SURVEYOR

6/04/24

OREGON
SEPTEMBER 14, 2021
KEVIN J. WALKER
81283

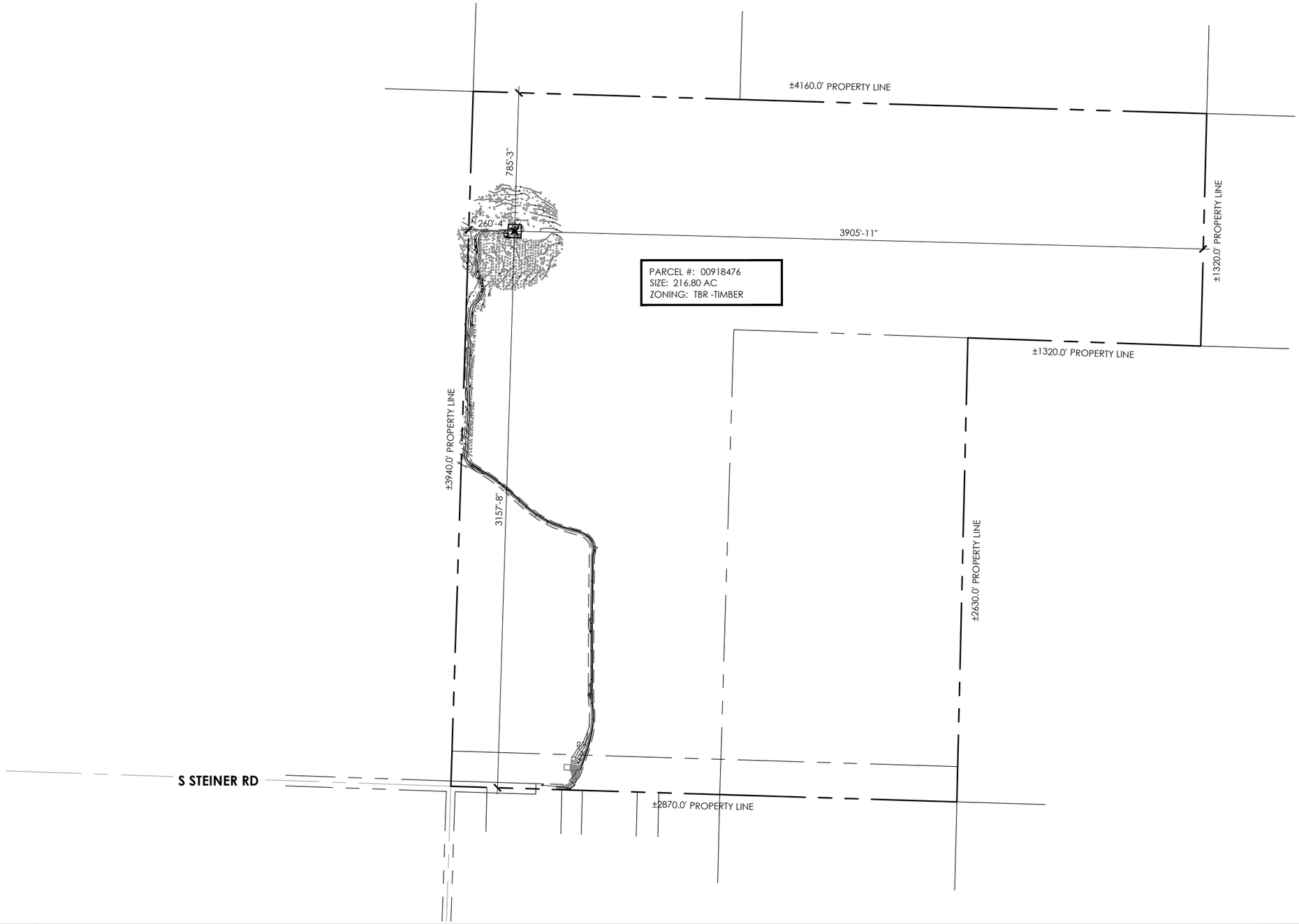
RENEWS: 06/30/24

SHEET TITLE
EXISTING SITE SURVEY
SEC 19, TWP 3 S, RNG 3 E, WM

SHEET NUMBER
SV7

NOTES:

1. THESE DRAWINGS ARE GENERATED FROM MULTIPLE SOURCES INCLUDING, BUT NOT LIMITED TO; GIS MAPS, AERIAL MAPS, PHOTOS, IMAGES, AND TOPOGRAPHIC SURVEY (IF PROVIDED).



1 PARCEL PLAN

11 X 17 SCALE: 1" = 600'-0"
22 X 34 SCALE: 1" = 300'-0"

0' 300' 600' 1200'

verticalbridge

verizon

CAPITAL DESIGN SERVICES
1910 4TH AVE. E, PMB 196
OLYMPIA, WA 98506
360.915.6750
WWW.CAPITALDESIGNSERVICES.COM

DRAWN BY:	CL
CHECKED BY:	CL

DRAWING VERSION

VER.	DATE	DESCRIPTION
1	06/12/24	PRELIM LU DRAWINGS
2	08/05/24	FINAL LU DRAWINGS

LICENSER

PROJECT INFORMATION

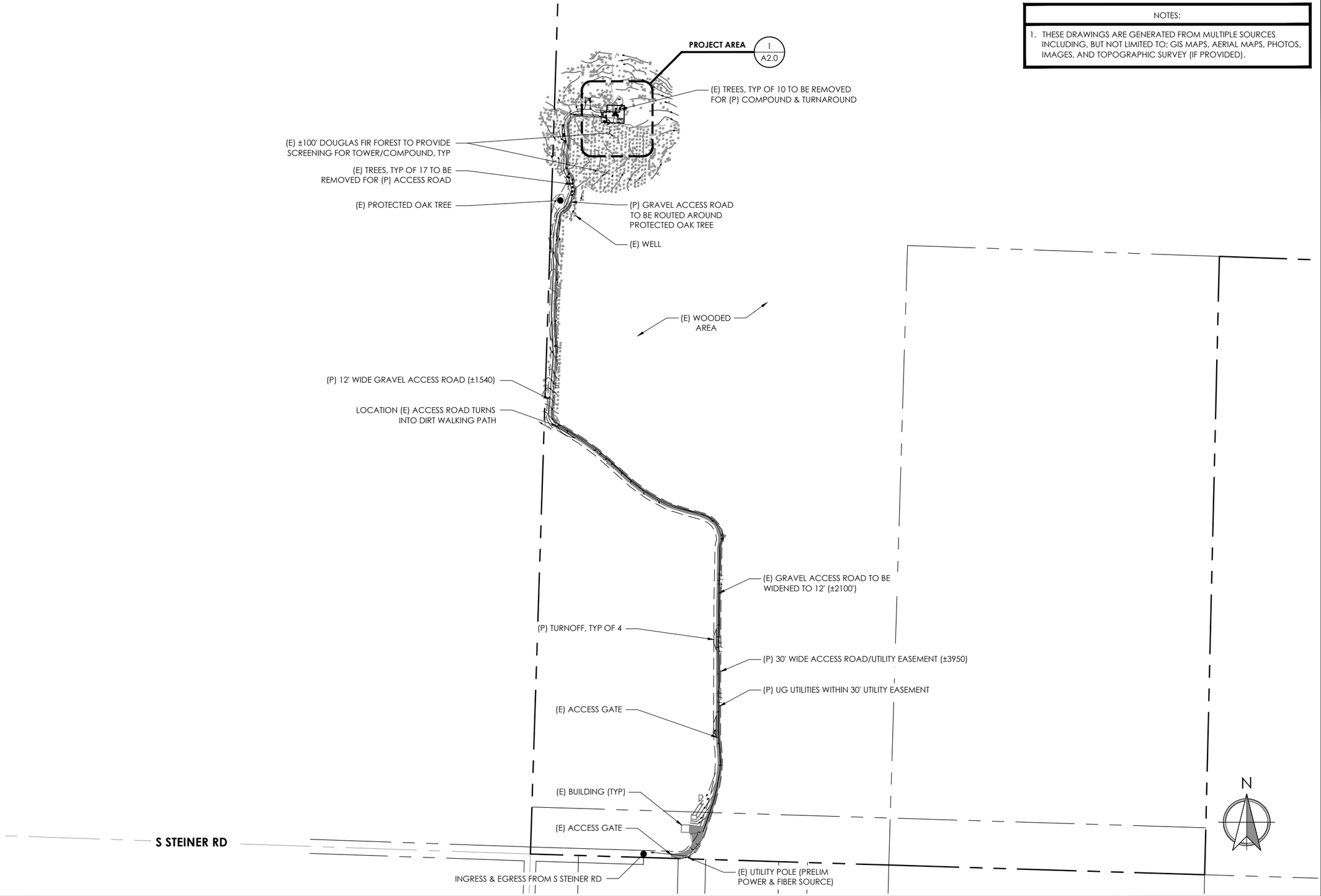
US-OR-5128
GOAT YOGA
18133 S. STEINER RD
BEAVERCREEK, OR 97004

SHEET TITLE

PARCEL PLAN

SHEET NO.

A1.0



NOTES:

1. THESE DRAWINGS ARE GENERATED FROM MULTIPLE SOURCES INCLUDING, BUT NOT LIMITED TO; GIS MAPS, AERIAL MAPS, PHOTOS, IMAGES, AND TOPOGRAPHIC SURVEY (IF PROVIDED).

DRAWN BY:	CL
CHECKED BY:	CL

DRAWING VERSION

VER.	DATE	DESCRIPTION
1	06/12/24	PRELIM LU DRAWINGS
2	08/05/24	FINAL LU DRAWINGS

LICENSER

PROJECT INFORMATION

US-OR-5128
GOAT YOGA
18133 S. STEINER RD
BEAVERCREEK, OR 97004

SHEET TITLE

OVERALL SITE PLAN

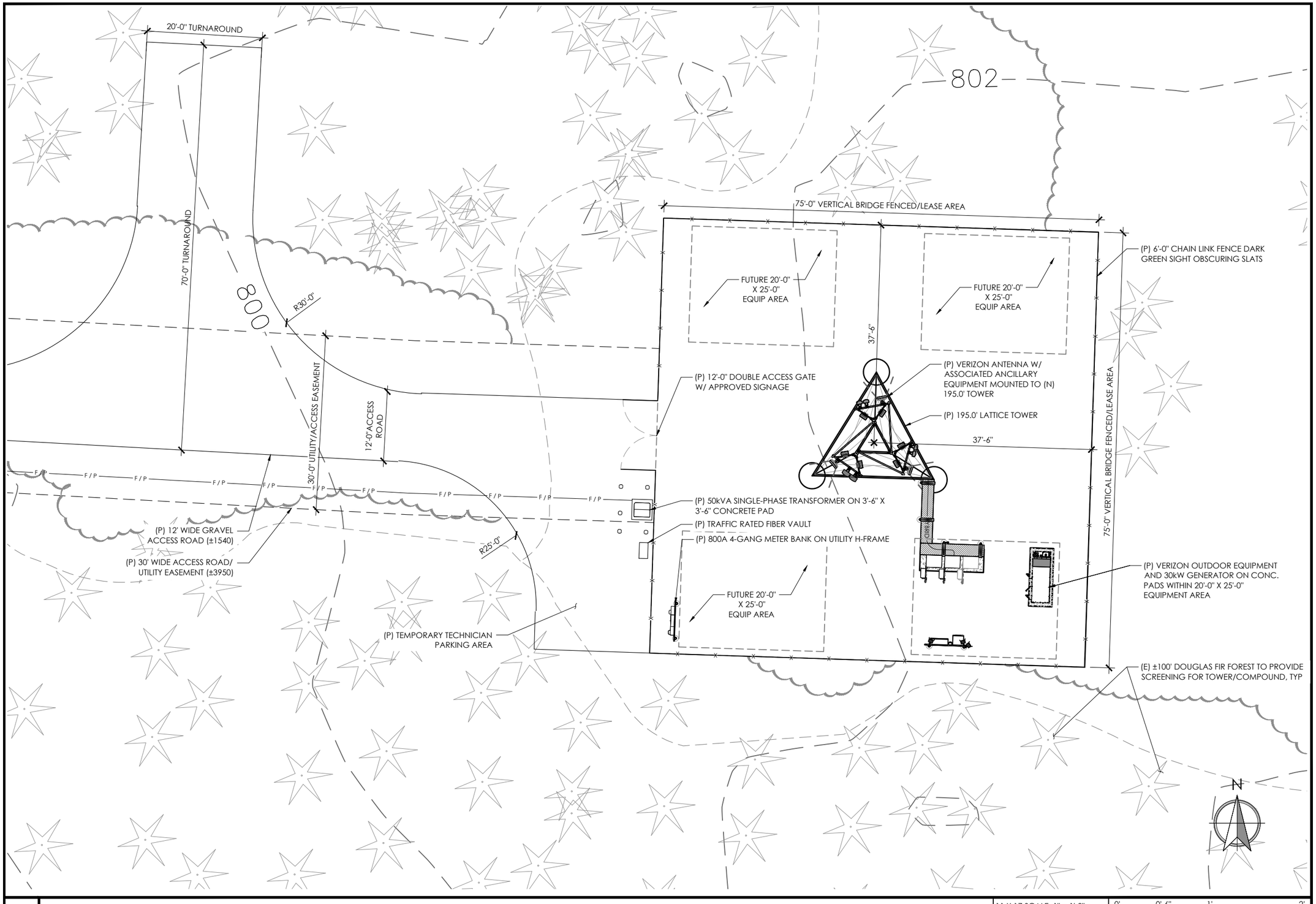
SHEET NO.

A1.1

1 OVERALL SITE PLAN

11 X 17 SCALE: 1" = 400'-0"
22 X 34 SCALE: 1" = 200'-0"

0' 200' 400' 800'



1 ENLARGED SITE PLAN

11 X 17 SCALE: 1" = 1'-0"
22 X 34 SCALE: 2" = 1'-0"

0' 0'-6" 1' 2'

vertical bridge

verizon

CAPITAL DESIGN SERVICES
1910 4TH AVE. E, PMB 196
OLYMPIA, WA 98506
360.915.6750
WWW.CAPITALDESIGNSERVICES.COM

DRAWN BY:	CL
CHECKED BY:	CL

DRAWING VERSION

VER.	DATE	DESCRIPTION
1	06/12/24	PRELIM LU DRAWINGS
2	08/05/24	FINAL LU DRAWINGS

LICENSER

PROJECT INFORMATION

US-OR-5128
GOAT YOGA
18133 S. STEINER RD
BEAVERCREEK, OR 97004

SHEET TITLE

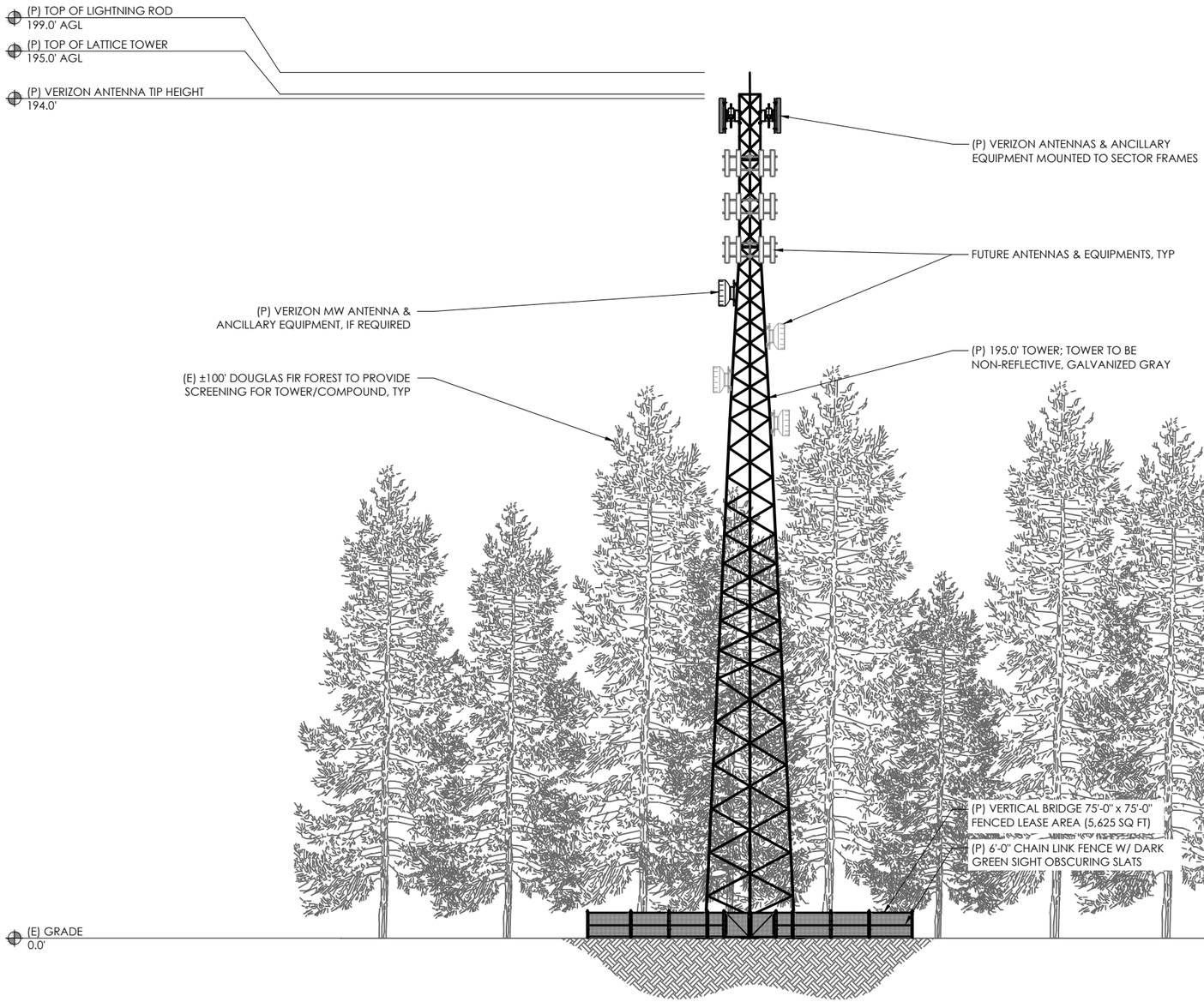
ENLARGED SITE PLAN

SHEET NO.

A2.0

NOTES:

1. THE PROJECT CM / PM TO VERIFY ANY REQUIRED PAINTING REQUIREMENTS FOR PROPOSED TOWER, ANTENNAS, ANCILLARY EQUIPMENT, CABLES, AND HARDWARE PRIOR TO ORDERING / INSTALLING EQUIPMENT.
2. NEW OR REPLACEMENT ANTENNA MOUNTS SHALL COMPLY WITH NSTD-445 STANDARDS AS REQUIRED BY VERIZON.
3. IF REQUIRED, 5G ANTENNAS TO BE WRAPPED IN 3M HYDROPHOBIC MMW WRAP OR APPROVED EQUAL TO MATCH EXISTING (BY OTHERS).



1 WEST ELEVATION

11 X 17 SCALE: 1" = 1'-0"
22 X 34 SCALE: 2" = 1'-0"

0' 0'-6" 1' 2'

vertical bridge

verizon

CAPITAL DESIGN SERVICES
1910 4th Ave. E, PMB 196
Olympia, WA 98506
360.915.6750
www.capitaldesignservices.com

DRAWN BY:	CL
CHECKED BY:	CL

DRAWING VERSION

VER.	DATE	DESCRIPTION
1	06/12/24	PRELIM LU DRAWINGS
2	08/05/24	FINAL LU DRAWINGS

LICENSER

PROJECT INFORMATION

US-OR-5128
GOAT YOGA
18133 S. STEINER RD
BEAVERCREEK, OR 97004

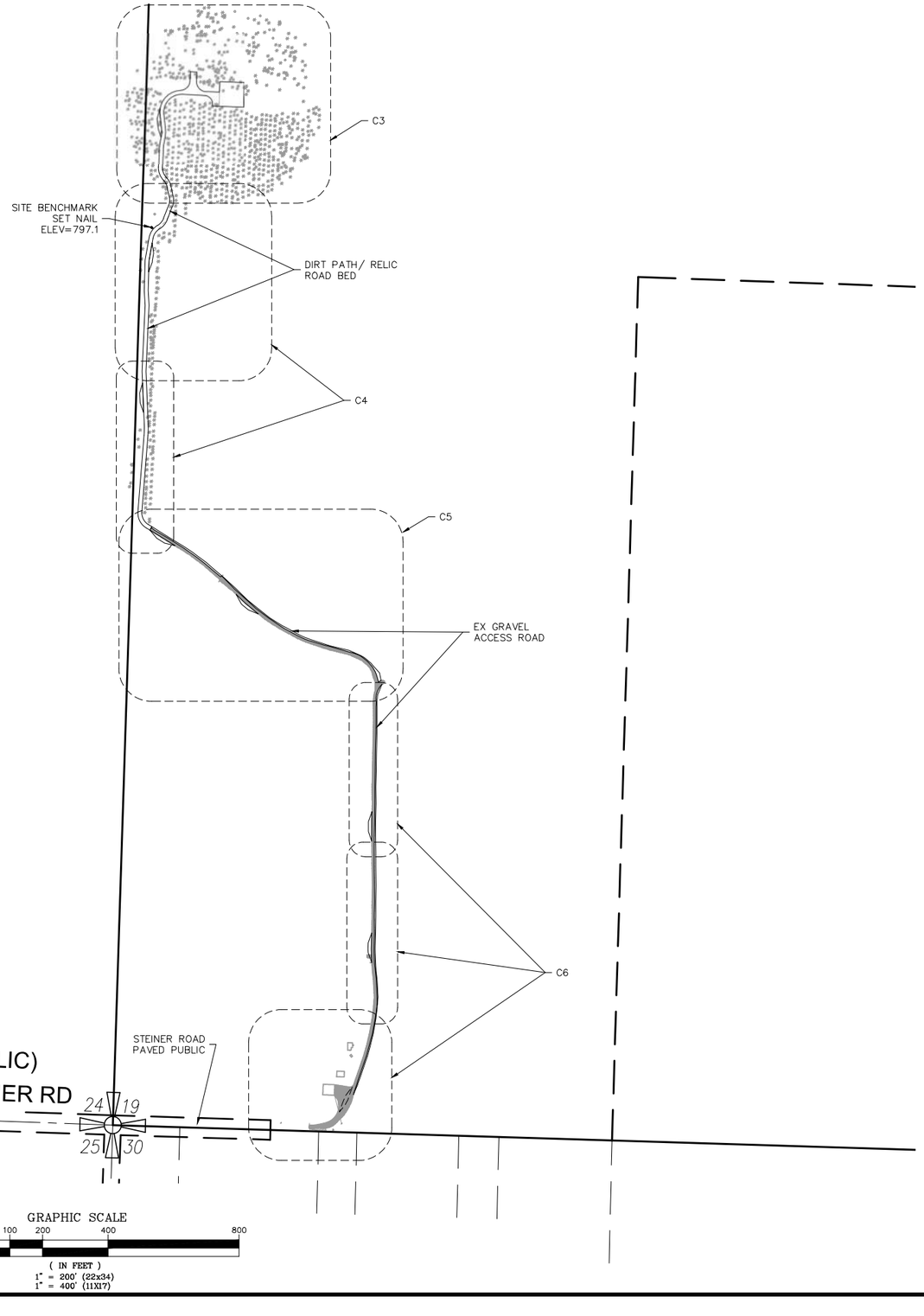
SHEET TITLE

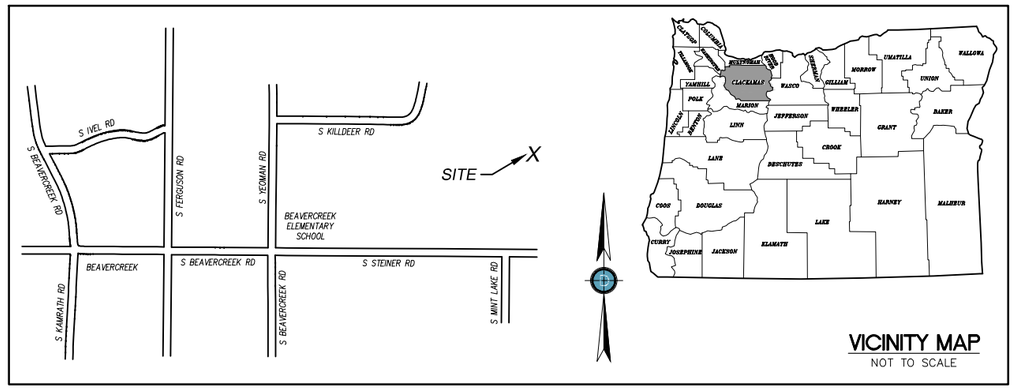
ELEVATIONS

SHEET NO.

A3.0

VERTICAL BRIDGE - US-OR-5128 GOAT YOGA





CONTACT INFORMATION

APPLICANT	VERTICAL BRIDGE 750 PARK OF COMMERCE DRIVE, SUITE 200 BOCA RATON, FL 33487
GROUND OWNER	LUKAS HANNAH IRREVOCABLE TRUST/ VANPORT TIMBER
ARCHITECT/ ENGINEER	CAPITAL DESIGN SERVICES, LLC 1910 4TH AVE E, PMB 196 OLYMPIA, WA 98506 BRANDON CLOWER PH: 971.979.0075
CIVIL ENGINEER/ SURVEYOR	DUNCANSON COMPANY, INC. 145 SOUTHWEST 155TH STREET, #102 SEATTLE, WA 98166 CONTACT: HAROLD DUNCANSON HAROLDD@DUNCANSONCO.COM 206-244-4141

SITE INFORMATION

SITE ADDRESS	18133 S. STEINER RD BEAVERCREEK, OR 97004
COUNTY	CLACKAMAS
TAX LOT NUMBER	00918476
LATTITUDE	45° 17'46.86"N (45.296350° N)
LONGITUDE	122° 29'46.44"W (-122.496233° W)
PROPERTY OWNERS	LUKAS HANNAH IRREVOCABLE TRUST/ VANPORT TIMBER
ZONING	TBR - TIMBER
TOTAL LOT AREA	±216.8 AC
DISTURBED AREA	±55,000 SF
IMPERVIOUS AREA	±37,900 SF

SHEET INDEX

REFERENCE INFORMATION

SITE PLAN PROVIDED BY CAPITAL DESIGN SERVICES, VERSION 1, DATED 06/12/2024.

NAVD 88

BENCHMARK IS BASED ON ORGN OREGON COORDINATE REFERENCE SYSTEM

ELEVATION DERIVED USING GPS. ACCURACY MEETS OR EXCEEDS 1A STANDARDS AS DEFINED ON THE FAA ASAC INFORMATION SHEET 91:003

UNDERGROUND UTILITIES EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY BE INCOMPLETE. STATE LAW REQUIRES THAT CONTRACTOR CONTACT THE ONE-CALL UTILITY LOCATE SERVICE AT LEAST 48 HOURS BEFORE STARTING ANY CONSTRUCTION.

811 Know what's below. Call before you dig.

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THE TOWERS, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

verizon

CAPITAL DESIGN SERVICES

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Company, Inc.
145 SW 155th Street, Suite 102
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SITE
US-OR-5128
GOAT YOGA
18133 S STEINER RD
BEAVERCREEK, OR 97004
CLACKAMAS COUNTY

FIELD CREW:	DC/AH
FIELD BOOK:	634/100
DRAWN BY:	DLS
JOB #:	99544.2935
DATE:	7/25/2024

REVISIONS

DATE	DESCRIPTION	BY
-	-	-

REGISTERED PROFESSIONAL ENGINEER
18070PE
SEP 19, 1997
HAROLD M. DUNCANSON
RENEWS: 12/31/25

SHEET TITLE
CIVIL COVER SHEET
SEC 19, TWP 3 S, RNG 3 E, WM

SHEET NUMBER
C1

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THESE PLANS AND THE APPLICABLE PROVISIONS OF THE CLACKAMAS COUNTY ROADWAY STANDARDS. IMPROVEMENTS DEPICTED ON THESE PLANS ARE IN CONFORMANCE WITH COUNTY LAND USE ACTION CASEFILE Z042207-07-C/Z0423-07-D.
2. IN ORDER TO PROTECT UNDERGROUND FACILITIES, EXCAVATORS PERFORMING THE WORK SET FORTH ON THESE PLANS MUST COMPLY WITH THE PROVISIONS OF ORS 757.557 (REQUIRES CONTRACTOR TO NOTIFY THE OREGON UTILITY NOTIFICATION CENTER AT LEAST 48 HOURS, BUT NO MORE THAN 10 BUSINESS DAYS, PRIOR TO ANY EXCAVATION).
3. THE LOCATION OF EXISTING UTILITIES SHOWN ON THE PLANS IS APPROXIMATE AND SHOWN FOR INFORMATION PURPOSES ONLY. THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED PRIOR TO COMMENCING CONSTRUCTION. NOTIFY ENGINEER AND DTD, ENGINEERING OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. ADDITIONAL UNDERGROUND UTILITIES MAY EXIST.
4. VERTICAL DATUM: 33.92' (NAVD 88).
5. TOPOGRAPHIC SURVEY BY: KEVIN WALKER OF DUNCANSON COMPANY, INC. DATED 2/7/07.
6. TRENCHES WITHIN THE RIGHTS-OF-WAY SHALL BE BACKFILLED WITH LOW STRENGTH CONTROLLED DENSITY FILL (CDF) WHEN:
   - TRENCHES ARE WITHIN THE ROADWAY OF ALL ARTERIALS AND COLLECTOR CLASSIFIED ROADS;
   - THE AFFECTED ROADWAY SURFACE IS NEWER THAN FIVE (5) YEARS FROM THE TIME OF THE LAST OVERLAY, WITHOUT REGARD TO THE ROADWAY CLASSIFICATION;
   - DEEMED NECESSARY BY THE COUNTY ROAD OFFICIAL.

   WHEN TRENCHES ARE EXEMPT FROM USE OF CDF THE ROADWAY TRENCH SHALL BE BACKFILLED WITH AN APPROVED GRANULAR MATERIAL CONFORMING TO ODOT/APWA CLASS B SPECIFICATIONS.
   SEE SECTION 311 AND 312 OF THE CLACKAMAS COUNTY UTILITY REGULATION FOR SPECIFICATIONS, LOCATED WITHIN COUNTY CODE.
7. TRENCHES OUTSIDE OF RIGHTS-OF-WAY MAY BE BACKFILLED IN ACCORDANCE WITH NATIVE MATERIAL AND COMPACTION SPECIFICATIONS FOR ODOT/APWA CLASS A BACKFILL.
8. VEGETATION AND TOPSOIL ARE TO BE STRIPPED TO MINERAL EARTH (AND INSPECTED BY THE COUNTY) PRIOR TO PLACEMENT OF FILL OR BASE MATERIALS.
9. IN ADDITION TO ANY REQUIRED COMPACTION TESTING, THE COUNTY REQUIRES A PROOF ROLL WITH A FULLY LOADED 10-YARD DUMP TRUCK TO CHECK SUBGRADE COMPACTION PRIOR TO PLACEMENT OF ROCK SUBBASE AND AGAIN AT THE COMPLETION OF THE PLACEMENT OF THE BASE ROCK PRIOR TO PAVING THE FIRST LIFT OF ASPHALT CONCRETE.
10. ASPHALTIC CONCRETE MIX IS TO BE BATCHED FROM A MIX FORMULA APPROVED BY OSHD FOR MATERIAL USED. PAVING CONTRACTOR SHALL PROVIDE A CERTIFICATE OF COMPLIANCE FROM ASPHALT PAVEMENT PLANT.
11. SUBSEQUENT SETTLEMENT OR CRACKING OF FINISHED SURFACE WITHIN THE WARRANTY PERIOD SHALL BE CONSIDERED TO BE A FAILURE OF THE SUBGRADE AND REPAIRED AT NO COST TO THE COUNTY AND IN A MANNER ACCEPTABLE TO THE COUNTY.
12. THE CONTRACTOR SHALL CONTROL TRAFFIC THROUGH THE PROJECT SITE IN CONFORMANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND OREGON SUPPLEMENTS. THE CONTRACTOR SHALL, AT ALL TIMES, MAINTAIN LOCAL ACCESS FOR EMERGENCY VEHICLES, BUSINESSES, BUSES, AND HOMEOWNERS ALONG THE PROJECT SITE.
13. THE CONTRACTOR AND/OR SUB-CONTRACTOR SHALL HAVE A MINIMUM OF ONE (1) SET OF APPROVED CONSTRUCTION PLANS ON THE JOB SITE AT ALL TIMES DURING THE CONSTRUCTION PHASES.
14. CONTRACTOR SHALL REMOVE AND DISPOSE OF TREES, STUMPS, BRUSH, ROOTS, TOPSOIL AND OTHER MATERIAL ENCOUNTERED DURING THE CONSTRUCTION OF THE ROADWAY AND WHERE INDICATED ON THE PLANS. MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, REGIONAL AND STATE REGULATIONS AT FACILITIES AUTHORIZED TO ACCEPT SUCH MATERIAL. CONTACT THE CLACKAMAS COUNTY COMMUNITY ENVIRONMENT SECTION AT 503-742-4400 FOR DISPOSAL OPTIONS.
15. CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL EARTHWORK, TRENCH BACKFILL AND ROAD CONSTRUCTION COMPACTION TESTS, AND GEOTECHNICAL REVIEWS WITH THE SOILS TESTING LAB AS REQUIRED FOR ACCEPTANCE OF PROJECT WORK BY CLACKAMAS COUNTY.
16. CONTRACTOR SHALL CAREFULLY MAINTAIN BENCHMARKS, PROPERTY CORNERS, MONUMENTS, AND OTHER REFERENCE POINTS PURSUANT TO ORS 209.140 AND ORS 209.150. IF SUCH POINTS ARE DISTURBED OR DESTROYED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND PAY FOR THEIR REPLACEMENT BY EMPLOYING A PROFESSIONAL LAND SURVEYOR TO RESET PROPERTY CORNERS & OTHER SUCH MONUMENTS.
17. EXCESS EXCAVATED MATERIAL SHALL BE HAULED AND DISPOSED OF AT SITES PROVIDED BY THE OWNER AND APPROVED PURSUANT TO A CLACKAMAS COUNTY GRADING PERMIT. FILL SITES SHALL BE LEVELED AND GRADED TO DRAIN. THE CONTRACTOR SHALL CORRECT ANY FILL RELATED CONDITIONS.
18. AT THE PRECONSTRUCTION MEETING, PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL PRESENT A LIST OF SUBCONTRACTORS, A PROJECT SCHEDULE, A TRAFFIC CONTROL PLAN AND A LIST OF AT LEAST THREE PEOPLE, WITH PHONE NUMBERS, RESPONSIBLE FOR MAINTAINING TRAFFIC CONTROL DURING NON-WORK PERIODS.
19. FINAL CLEANUP - PRIOR TO FINAL ACCEPTANCE AND PAYMENT, THE CONTRACTOR SHALL CLEAN THE WORK SITE AND ADJACENT AREAS OF ANY DEBRIS, DISCARDED ASPHALTIC CONCRETE MATERIAL OR OTHER ITEMS DEPOSITED BY THE CONTRACTOR'S PERSONNEL DURING THE PERFORMANCE OF THIS CONTRACT.
20. THE LOCATION OF ABOVE GROUND IMPROVEMENTS (EXISTING AND PROPOSED) SHALL NOT CONFLICT WITH THE REQUIRED SIDEWALK WIDTHS, ROADWAY IMPROVEMENTS, AND REQUIRED SIGHT DISTANCE.

GRADING NOTES

1. FILLS IN LOT AREAS SHALL BE COMPACTED TO 90 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY ASTM TEST D1557-91, METHOD A, OR AN APPROVED EQUIVALENT. THE APPLICANT SHALL BE RESPONSIBLE FOR MAKING THE NECESSARY ARRANGEMENTS FOR SUCH TESTING AND FOR SUPPLYING THE RESULTS TO CLACKAMAS COUNTY.
2. ALL FILLS MUST BE PLACED CONSISTENT WITH SECTION 10 OF THE EXCAVATION AND GRADING ORDINANCE. SITE PREPARATION MUST INCLUDE THE REMOVAL OF VEGETATION, NON-COMPLYING FILL, TOPSOIL, OR OTHER UNSUITABLE MATERIAL PRIOR TO PLACEMENT OF THE FILL. FILL SLOPES SHALL NOT EXCEED A GRADE OF TWO HORIZONTAL TO ONE VERTICAL.
3. ALL CUTS SHALL BE MADE CONSISTENT WITH SECTION 9 OF THE EXCAVATION AND GRADING ORDINANCE. NO CUT SHALL EXCEED A GRADE OF TWO HORIZONTAL TO ONE VERTICAL UNLESS APPROVED BEFOREHAND BY THE PROJECT GEOTECHNICAL ENGINEER AND CLACKAMAS COUNTY.
4. APPROPRIATE BENCHING OF FILLS IS REQUIRED FOR FILLS OVER FIVE FEET IN HEIGHT ON SLOPES IN EXCESS OF FIVE HORIZONTAL TO ONE VERTICAL. BENCHING MUST BE DONE IN ACCORDANCE WITH THE APPROVED PLANS. CLACKAMAS COUNTY SHALL INSPECT BENCHES PRIOR TO FILL PLACEMENT.
5. CUT AND FILL SLOPES SHALL BE PROTECTED FROM EROSION. SUCH CONTROL MAY CONSIST OF APPROPRIATE REVEGETATION OR OTHER ACCEPTABLE MEANS AND METHODS. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EARTHWORK OR SITE STRIPPING AS REQUIRED BY THE LOCAL SURFACE WATER MANAGEMENT AUTHORITY.
6. THE CONTRACTOR SHALL COORDINATE WITH COUNTY PERSONNEL BY CALLING 503-742-4700 ANYTIME FOR REQUIRED INSPECTIONS AT THE FOLLOWING STAGES OF CONSTRUCTION:
   A. INSPECTION OF SITE STRIPPING, PRIOR TO FILL PLACEMENT. EROSION CONTROL MEASURE SHALL BE IN PLACE AT THIS TIME.
   B. AFTER THE PLACEMENT OF EACH 300 CUBIC YARDS OF FILL.
   C. IN PREPARATION OF BENCH CONSTRUCTION PRIOR TO FILL PLACEMENT.
   D. AFTER THE MAJORITY OF FILL HAS BEEN PLACED AND IS IN "ROUGH" GRADE PRIOR TO FINAL WHEN FINAL GRADING IS COMPLETED.
   E. DURING FINAL GRADING, PRIOR TO BASE ROCK AND PAVEMENT CONSTRUCTION.
7. THE CONTRACTOR SHALL BE REQUIRED TO COORDINATE RELOCATION (AS NECESSARY) OF EXISTING UTILITIES DUE TO ANY CUT/FILL OPERATIONS. COORDINATION SHALL TAKE PLACE PRIOR TO INITIATION OF WORK.

STREET AND STORM DRAINAGE NOTES

1. STREET AND STORM DRAIN IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CLACKAMAS COUNTY ROADWAY STANDARDS AND THE APPROPRIATE SURFACE WATER DISTRICT. ALL STORM SEWER PIPES SHALL HAVE RUBBER GASKETS, WHICH SHALL PROVIDE A WATER TIGHT CONNECTION.
2. ALL TRENCH EXCAVATION SHALL CONFORM TO THE WATER ENVIRONMENT SERVICES PUBLICATION TITLED CLACKAMAS COUNTY SERVICE DISTRICT NO. 1 - STANDARD SURFACE WATER SPECIFICATION.
3. PIPE BEDDING AND PIPE ZONE SHALL CONFORM TO THE EXCAVATION AND BACKFILL DETAILS, AND SHALL BE 3/4"-0" CRUSHED ROCK.
4. COMPACTION SHALL BE PER ODOT/APWA STANDARD SPECIFICATIONS PART 3. CONTRACTOR TO DETERMINE TYPE OF EQUIPMENT AND THE METHOD USED TO ACHIEVE REQUIRED COMPACTION.
5. TRENCH BACKFILL OUTSIDE OF RIGHT-OF-WAYS OR PAVED AREAS MAY BE EXCAVATED TRENCH MATERIAL. TRENCH BACKFILL IN PAVED AREAS SHALL BE AN APPROVED GRANULAR MATERIAL.
6. MATERIAL IN SOFT SPOTS WITHIN THE ROADWAY SHALL BE REMOVED TO THE DEPTH REQUIRED TO PROVIDE A FIRM FOUNDATION AND SHALL BE REPLACED WITH 1-1/2"-0 CRUSHED ROCK. THE ENTIRE SUBGRADE SHALL BE THOROUGHLY COMPACTED TO 95% AASHTO T-99.
7. CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN SUBGRADE IS COMPLETE AND 24 HOURS PRIOR TO PLACEMENT OF BASE ROCK MATERIAL. CONTRACTOR SHALL ALSO NOTIFY THE ENGINEER 24 HOURS PRIOR TO FINAL PAVING FOR AN INSPECTION OF THE WORK. CLACKAMAS COUNTY REQUIRES A PROOF ROLL WITH A FULLY LOADED 10-YARD DUMP TRUCK TO CHECK SUBGRADE COMPACTION PRIOR TO PLACEMENT OF ROCK SUBBASE AND AGAIN AT THE COMPLETION OF THE PLACEMENT OF THE BASE ROCK PRIOR TO PAVING THE FIRST LIFT OF ASPHALT CONCRETE.
8. PRIVATE STORM WATER DETENTION SYSTEMS ARE NOT PERMITTED IN PUBLIC RIGHT-OF-WAY.

UTILITY NOTES

1. THE CONTRACTOR IS REQUIRED TO OBTAIN A UTILITY PLACEMENT PERMIT FOR UTILITY CONNECTIONS IN THE RIGHT-OF-WAY. CONTACT THE CLACKAMAS COUNTY ENGINEERING DEPARTMENT FOR A UTILITY PLACEMENT PERMIT. CONTACT THE COUNTY AT (503) 742-4400.
2. UTILITY TRENCHING IN CERTAIN CLACKAMAS COUNTY ROADWAYS IS REQUIRED, BY THE UTILITY SECTION OF THE ROAD USE ORDINANCE, TO BE BACKFILLED WITH CONTROLLED DENSITY FILL (CDF). THE PAVEMENT IN THE TRENCH AREA MUST BE SAWCUT PRIOR TO COMMENCING THIS WORK. THE CDF MUST CONFORM TO THE SPECIFICATIONS AS LISTED IN THE COUNTY DEPARTMENT OF TRANSPORTATION OFFICES. STEEL PLATING SHALL NOT BE REMOVED UNTIL CDF IS SET AND READY TO BE PAVED OVER. DEPENDING ON GROUND WATER LEVELS, TEMPERATURES AND THE VARIANCES IN THE FILL MATERIAL, IT COULD TAKE THE CDF ONE TO FOUR DAYS TO SET.
3. COPIES OF THE CDF MATERIAL DELIVERY SLIPS SHALL BE SUBMITTED FOR COUNTY RECORDS. SUBMIT COPIES TO THE ROAD PRESERVATION SECTION, CLACKAMAS COUNTY, 150 BEAVERCREEK RD, OREGON CITY, OR 97045.

RECOMMENDED CONSTRUCTION SEQUENCE

1. FLAG OR FENCE CLEARING LIMITS.
2. INSTALL FILTER FABRIC PROTECTION.
3. GRADE AND STABILIZE CONSTRUCTION ENTRANCE.
4. CLEAR AND GRADE SITE FOR PROJECT DEVELOPMENT.
5. RELOCATE EROSION CONTROL MEASURES OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH EROSION AND SEDIMENT CONTROL STANDARDS.
6. COVER ALL AREAS THAT WILL BE UNWORKED FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON OR TWO DAYS DURING THE WET SEASON WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING OR EQUIVALENT.
7. SEED OR SOD ANY AREAS THAT REMAIN UNWORKED FOR MORE THAN 30 DAYS.
8. STABILIZE ALL AREAS THAT REACH FINAL GRADE WITHIN SEVEN DAYS.
9. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED AND BEST MANAGEMENT PRACTICES REMOVED IF APPROPRIATE.

UNDERGROUND UTILITIES EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY BE INCOMPLETE. STATE LAW REQUIRES THAT CONTRACTOR CONTACT THE ONE-CALL UTILITY LOCATE SERVICE AT LEAST 48 HOURS BEFORE STARTING ANY CONSTRUCTION.

811 Know what's below. Call before you dig.

vertical bridge

THE TOWERS, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

verizon

CAPITAL DESIGN SERVICES

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Company, Inc.
145 SW 155th Street, Suite 102
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Fax 206.244.4455

SITE
US-OR-5128
GOAT YOGA
18133 S STEINER RD
BEAVERCREEK, OR 97004
CLACKAMAS COUNTY

FIELD CREW:	DC/AH
FIELD BOOK:	634/100
DRAWN BY:	DLS
JOB #:	99544.2935
DATE:	7/25/2024

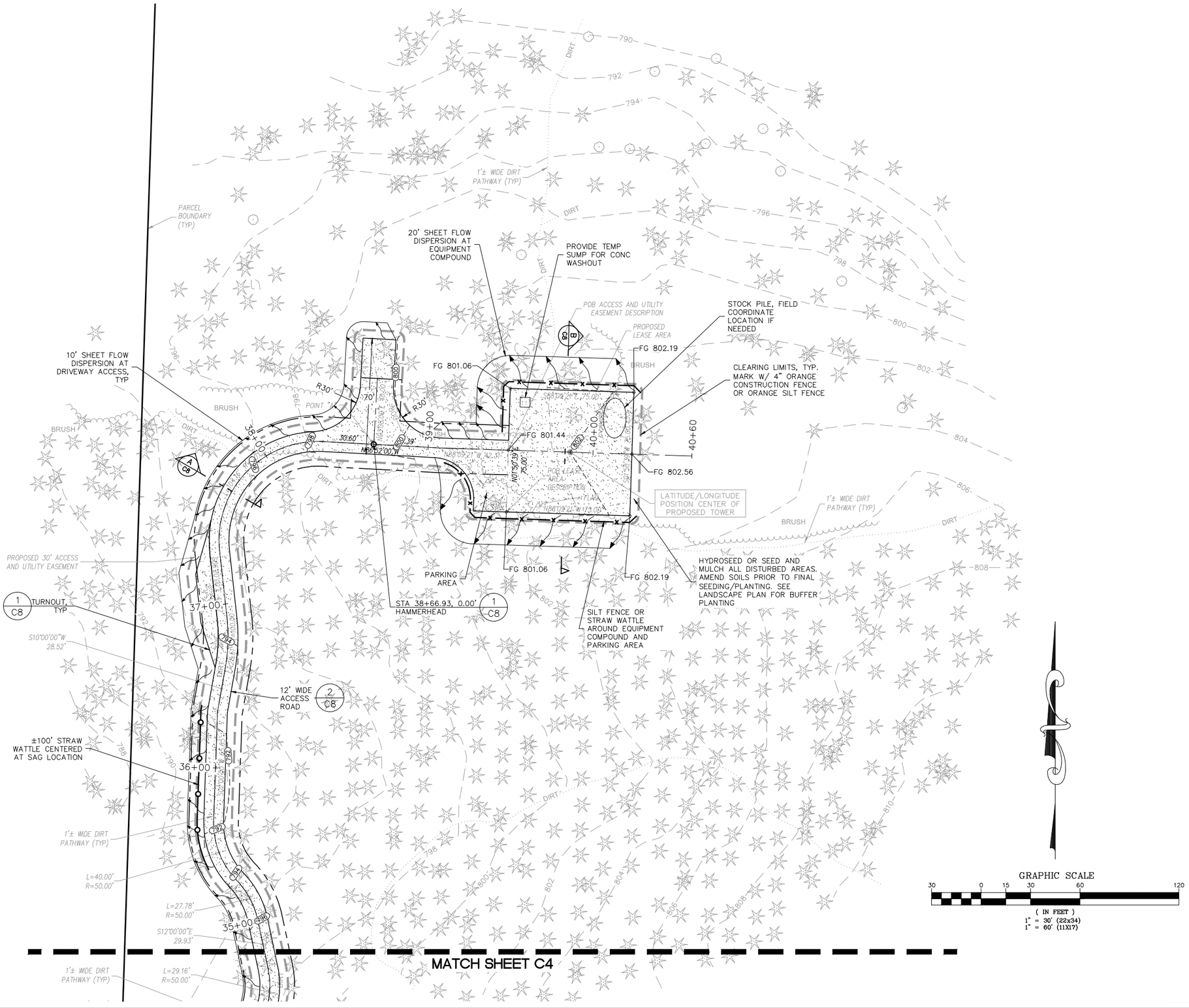
REVISIONS

DATE	DESCRIPTION	BY
-	-	-

REGISTERED PROFESSIONAL ENGINEER
18070PE
SEP 19, 1995
HAROLD M. DUNCANSON
RENEWS: 12/31/25

SHEET TITLE
NOTES
SEC 19, TWP 3 S, RNG 3 E, WM

SHEET NUMBER
C2



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1" = 30' (22x34)

1" = 60' (11X17)

UNDERGROUND UTILITIES EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY BE INCOMPLETE. STATE LAW REQUIRES THAT CONTRACTOR CONTACT THE ONE-CALL UTILITY LOCATE SERVICE AT LEAST 48 HOURS BEFORE STARTING ANY CONSTRUCTION.

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18133 S STEINER RD
BEAVERCREEK, OR 97004
CLACKAMAS COUNTY

FIELD CREW:	DC/AH
FIELD BOOK:	634/100
DRAWN BY:	DLS
JOB #:	99544.2935
DATE:	7/25/2024

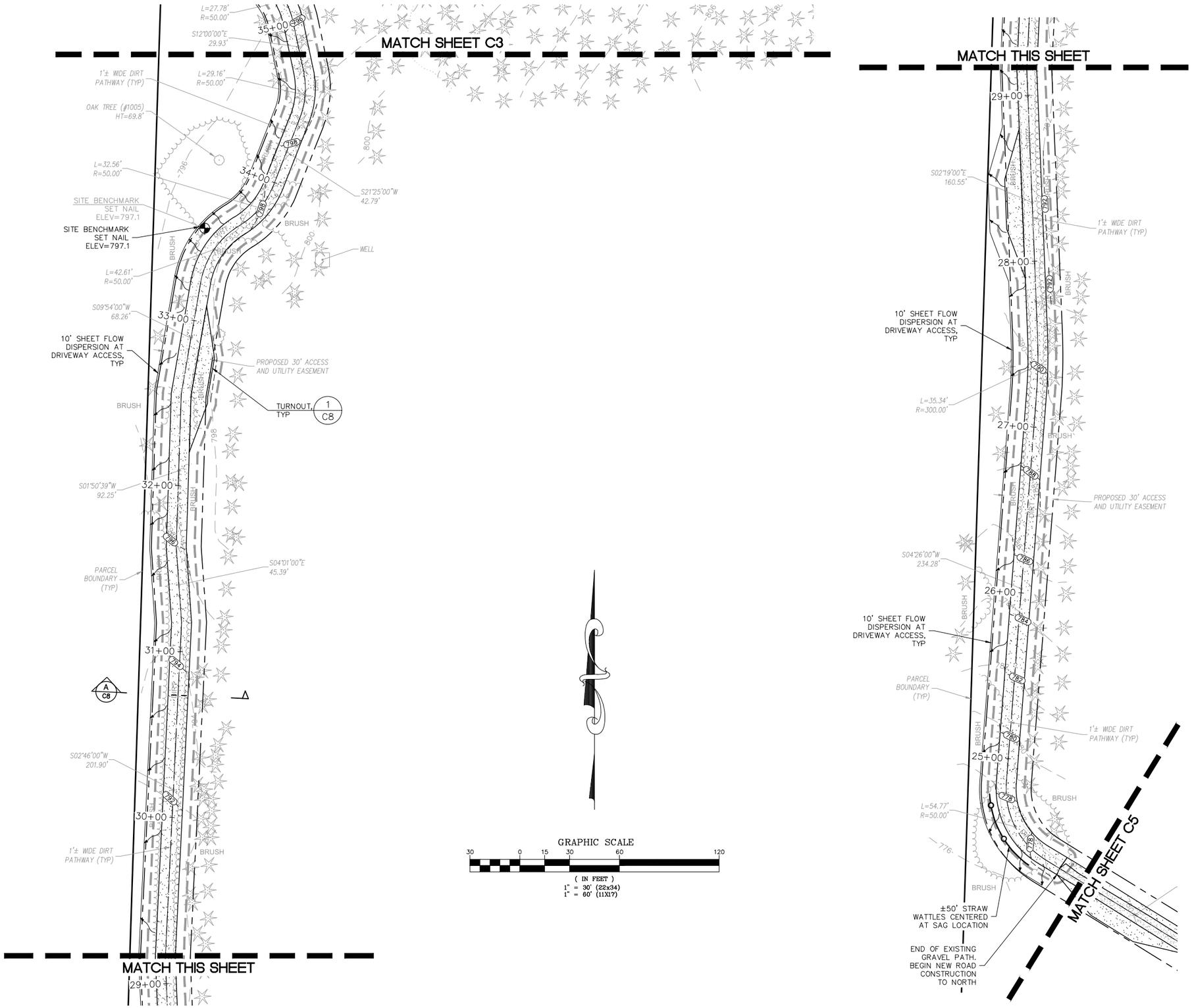
REVISIONS

DATE	DESCRIPTION	BY
-	-	-

REGISTERED PROFESSIONAL ENGINEER
18070PE
SEP 19, 1995
HAROLD M. DUNCANSON
RENEWS: 12/31/25

SHEET TITLE
GRADING, DRAINAGE + ESC PLAN
SEC 19, TWP 3 S, RNG 3 E, WM

SHEET NUMBER
C3



UNDERGROUND UTILITIES EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY BE INCOMPLETE. STATE LAW REQUIRES THAT CONTRACTOR CONTACT THE ONE-CALL UTILITY LOCATE SERVICE AT LEAST 48 HOURS BEFORE STARTING ANY CONSTRUCTION.

811 Know what's below. Call before you dig.

verticalbridge

THE TOWERS, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

verizon

CAPITAL DESIGN SERVICES

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Company, Inc.
145 SW 155th Street, Suite 102
Seattle, Washington 98166
Phone 206.244.4141
Fax 206.244.4455

SITE

US-OR-5128
GOAT YOGA

18133 S STEINER RD
BEAVERCREEK, OR 97004
CLACKAMAS COUNTY

FIELD CREW:	DC/AH
FIELD BOOK:	634/100
DRAWN BY:	DLS
JOB #:	99544.2935
DATE:	7/25/2024

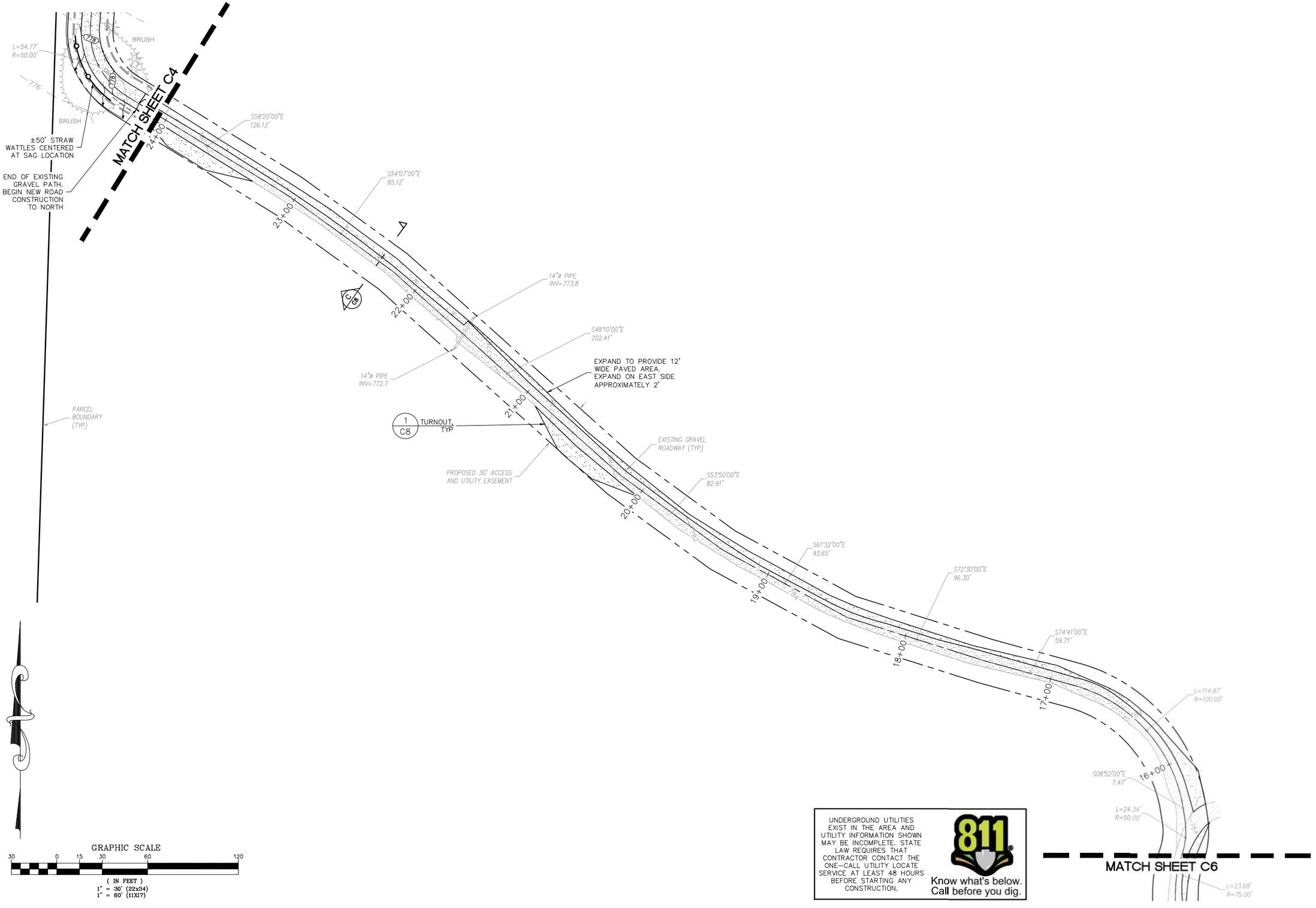
REVISIONS

DATE	DESCRIPTION	BY
-	-	-

REGISTERED PROFESSIONAL ENGINEER
18070PE
SEP 19, 1995
HAROLD M. DUNCANSON
7/25/24
RENEWS: 12/31/25

SHEET TITLE
GRADING, DRAINAGE + ESC PLAN
SEC 19, TWP 3 S, RNG 3 E, WM

SHEET NUMBER
C4



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RENEWS: 12/31/25

SHEET TITLE
GRADING, DRAINAGE + ESC PLAN
SEC 19, TWP 3 S, RNG 3 E, WM

SHEET NUMBER
C5

MATCH SHEET C5

MATCH THIS SHEET

MATCH THIS SHEET

MATCH THIS SHEET

MATCH THIS SHEET

R=50.00'

L=23.68'
R=75.00'

15+00

C
C8

14+00

S00°56'00"W
257.92'

13+00

EXISTING GRAVEL ROADWAY (TYP)

12+00

PROPOSED 30' ACCESS AND UTILITY EASEMENT

11+00

10+00

S00°10'00"W
532.18'

9+00

1
C8
TURNOUT, TYP

8+00

7+00

S04°30'00"E
75.89'

PROPOSED 30' ACCESS AND UTILITY EASEMENT

6+00

L=172.35'
R=500.00'

5+00

EXISTING GRAVEL ROADWAY (TYP)

(2) CONDUITS

OLD BLDG

776

774

S15°15'00"W
56.96'

4+00

772

OLD BLDG

770

1
C8
EXISTING DRIVEWAY TO SERVE AS EQUIVALENT TURNOUT AREA

768

S18°45'00"W
134.94'

RESIDENCE

POST 'B'

3+00

766

POWER METER

L=41.45'
R=100.00'

200'

8

S42°30'00"W
46.25'

S47°30'00"E
15.44'

STABILIZED CONSTRUCTION ENTRANCE

UTILITY POLE

N88°14'16"W
153.13'

L=42.99'
R=50.00'

2+00

764

S34°46'24"W
34.20'

PARCEL BOUNDARY (TYP)

0+00

1+00

ASPHALT

762

S49°33'13"W
34.45'

UTILITY POLE W/LIGHT & (2) TELEPHONE PEDESTALS

UTILITY POLE /TRANSFORMER

S STEINER RD
(PUBLIC)

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1" = 30' (22x34)
1" = 60' (11X17)

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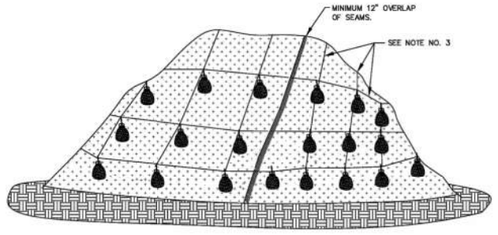
SHEET TITLE
GRADING, DRAINAGE + ESC PLAN
SEC 19, TWP 3 S, RNG 3 E, WM

SHEET NUMBER
C6

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



PLASTIC SHEETING

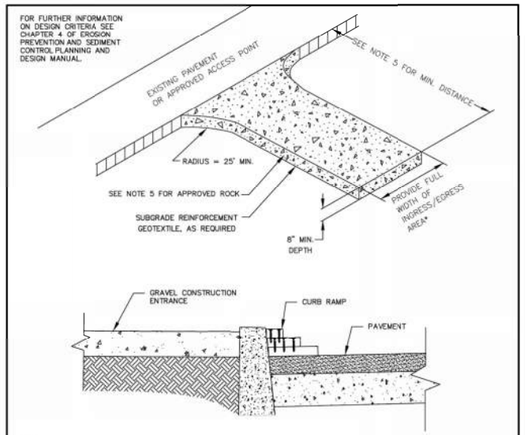
NOTES:

1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. PERIMETER SEDIMENT CONTROL BMP TO BE INSTALLED A MINIMUM OF 3' FROM TOE OF STOCKPILE.
3. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR APPROVED EQUAL ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.
4. PLASTIC TO EXTEND MINIMUM 1' BEYOND TOE OF SLOPE.
5. AS APPROPRIATE, BMP'S SHALL BE INSTALLED TO CONVEY WATER DISCHARGE FROM STOCKPILE AREAS.

PLASTIC SHEETING

DRAWING 4-2 REVISED 10-31-19

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

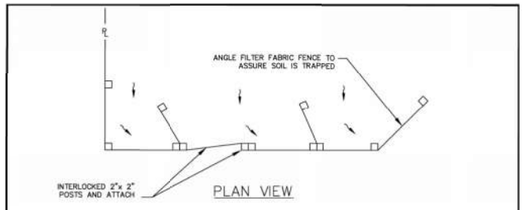


NOTES:

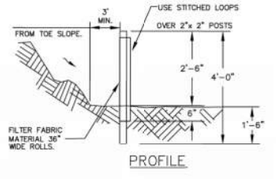
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF- WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. WHERE RUNOFF CONTAINING SEDIMENT LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
5. DIMENSIONS
   SINGLE FAMILY
   20' LONG BY 20' WIDE 8" DEEP OF ¾" MINUS CLEAN ROCK.
   COMMERCIAL/SITE DEVELOPMENT
   50' LONG BY 20' WIDE 3-6" CLEAN ROCK, GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

CONSTRUCTION ENTRANCE

DRAWING NO. 4-11 REVISED 10-31-19



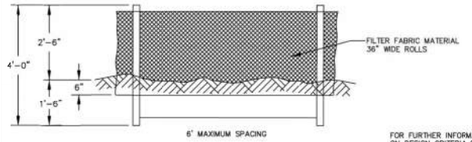
PLAN VIEW



PROFILE

NOTES:

1. SEDIMENT FENCE TO HAVE STITCHED LOOPS AROUND 2" x 2" POSTS.
2. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
3. 2"x 2" FIR, PINE OR STEEL FENCE POSTS.
4. POSTS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
5. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
6. PANELS MUST BE PLACED ACCORDING TO SPACING ON DRAWING NO. 4-28.



FRONT VIEW

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

SEDIMENT FENCE

DRAWING NO. 4-15 REVISED 10-31-19

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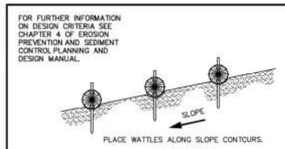
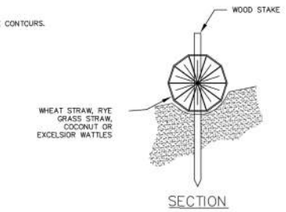
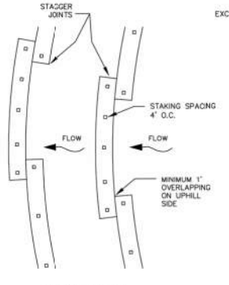


PROFILE



SECTION



PLAN VIEW

NOTES:

1. STAKING SPECIFICATIONS:
   a. 1"X2" WOODEN STAKES
   b. ADDITIONAL STAKES MAY BE INSTALLED ON DOWNHILL SIDE OF WATTLES, ON STEEP SLOPE OR HIGHLY EROSIVE SOILS.
2. SPACING IN ACCORDANCE WITH DETAIL 4-28
3. REMOVE ALL ROCKS, CLODS, VEGETATION OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED WATTLES WILL HAVE DIRECT CONTACT WITH THE SOIL.
4. INSTALL THE WATTLES IN A 2" DEEP TRENCH, INSURING THAT NO GAPS EXIST BETWEEN THE SOIL AND THE BOTTOM OF THE WATTLE. THE ENDS OF ADJACENT WATTLES SHALL BE OVERLAPPED 1 FT. MINIMUM TO PREVENT SEDIMENT PASSING THROUGH THE FIELD JOINT.

WATTLES

DRAWING NO. 4-16 REVISED 10-31-19

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SITE

US-OR-5128 GOAT YOGA

18133 S STEINER RD
BEAVERCREEK, OR 97004
CLACKAMAS COUNTY

FIELD CREW:	DC/AH
FIELD BOOK:	634/100
DRAWN BY:	DLS
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DATE:	7/25/2024

REVISIONS

DATE	DESCRIPTION	BY
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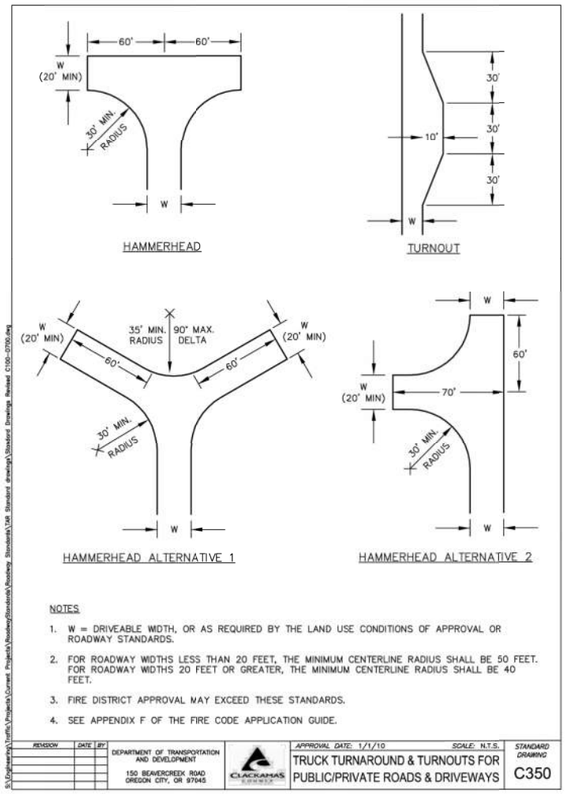
REGISTERED PROFESSIONAL ENGINEER
18070PE
SEP 19, 1997
HAROLD M. DUNCANSON
RENEWS: 12/31/25

SHEET TITLE
DETAILS
SEC 19, TWP 3 S, RNG 3 E, WM

SHEET NUMBER
C7



NOTES

1. W = DRIVEABLE WIDTH, OR AS REQUIRED BY THE LAND USE CONDITIONS OF APPROVAL OR ROADWAY STANDARDS.
2. FOR ROADWAY WIDTHS LESS THAN 20 FEET, THE MINIMUM CENTERLINE RADIUS SHALL BE 50 FEET. FOR ROADWAY WIDTHS 20 FEET OR GREATER, THE MINIMUM CENTERLINE RADIUS SHALL BE 40 FEET.
3. FIRE DISTRICT APPROVAL MAY EXCEED THESE STANDARDS.
4. SEE APPENDIX F OF THE FIRE CODE APPLICATION GUIDE.

REVISION	DATE	BY

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
150 BEAVERCREEK ROAD
OREGON CITY, OR 97045

CLACKAMAS COUNTY

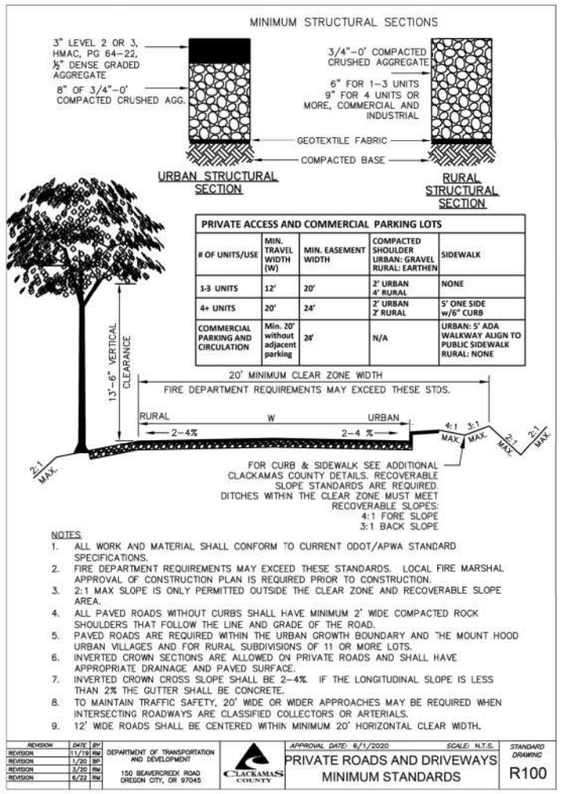
APPROVAL DATE: 1/1/10 SCALE: N.T.S.

TRUCK TURNAROUND & TURNOUTS FOR PUBLIC/PRIVATE ROADS & DRIVEWAYS

STANDARD DRAWING C350

HAMMERHEAD & TURNAROUND DETAIL

1 NOT TO SCALE



PRIVATE ACCESS AND COMMERCIAL PARKING LOTS

# OF UNITS/USE	MIN. TRAVEL WIDTH (W)	MIN. EASEMENT WIDTH	COMPACTED SHOULDER URBAN: GRAVEL RURAL: EARTHEN	SIDEWALK
1-3 UNITS	12'	20'	2' URBAN 4' RURAL	NONE
4+ UNITS	20'	24'	2' URBAN 2' RURAL	5' ONE SIDE w/6" CURB
COMMERCIAL PARKING AND CIRCULATION	Min. 20' without adjacent parking	28'	N/A	URBAN: 5' ADA WALKWAY ALIGN TO PUBLIC SIDEWALK RURAL: NONE

NOTES

1. ALL WORK AND MATERIAL SHALL CONFORM TO CURRENT ODOT/APWA STANDARD SPECIFICATIONS.
2. FIRE DEPARTMENT REQUIREMENTS MAY EXCEED THESE STANDARDS. LOCAL FIRE MARSHAL APPROVAL OF CONSTRUCTION PLAN IS REQUIRED PRIOR TO CONSTRUCTION.
3. 2:1 MAX SLOPE IS ONLY PERMITTED OUTSIDE THE CLEAR ZONE AND RECOVERABLE SLOPE AREA.
4. ALL PAVED ROADS WITHOUT CURBS SHALL HAVE MINIMUM 2' WIDE COMPACTED ROCK SHOULDERS THAT FOLLOW THE LINE AND GRADE OF THE ROAD.
5. PAVED ROADS ARE REQUIRED WITHIN THE URBAN GROWTH BOUNDARY AND THE MOUNT HOOD URBAN VILLAGES AND FOR RURAL SUBDIVISIONS OF 11 OR MORE LOTS.
6. INVERTED CROWN SECTIONS ARE ALLOWED ON PRIVATE ROADS AND SHALL HAVE APPROPRIATE DRAINAGE AND PAVED SURFACE.
7. INVERTED CROWN CROSS SLOPE SHALL BE 2-4%. IF THE LONGITUDINAL SLOPE IS LESS THAN 2% THE GUTTER SHALL BE CONCRETE.
8. TO MAINTAIN TRAFFIC SAFETY, 20' WIDE OR WIDER APPROACHES MAY BE REQUIRED WHEN INTERSECTING ROADWAYS ARE CLASSIFIED COLLECTORS OR ARTERIALS.
9. 12' WIDE ROADS SHALL BE CENTERED WITHIN MINIMUM 20' HORIZONTAL CLEAR WIDTH.

REVISION	DATE	BY
REVISION	11/19	RM
REVISION	1/20	BP
REVISION	3/20	RM
REVISION	6/22	RM

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
150 BEAVERCREEK ROAD
OREGON CITY, OR 97045

CLACKAMAS COUNTY

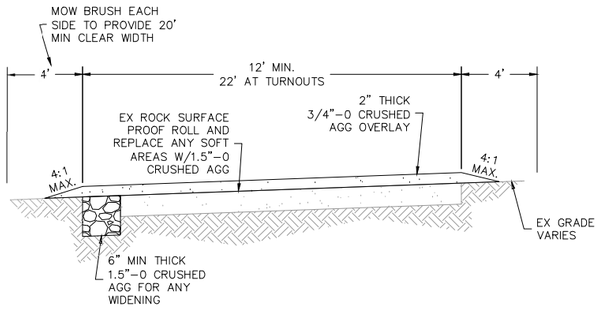
APPROVAL DATE: 6/1/2020 SCALE: N.T.S.

PRIVATE ROADS AND DRIVEWAYS MINIMUM STANDARDS

STANDARD DRAWING R100

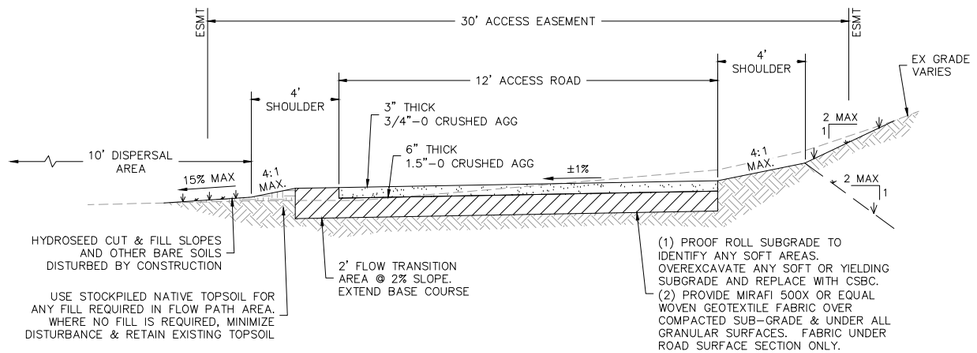
ROAD DETAIL

2 NOT TO SCALE



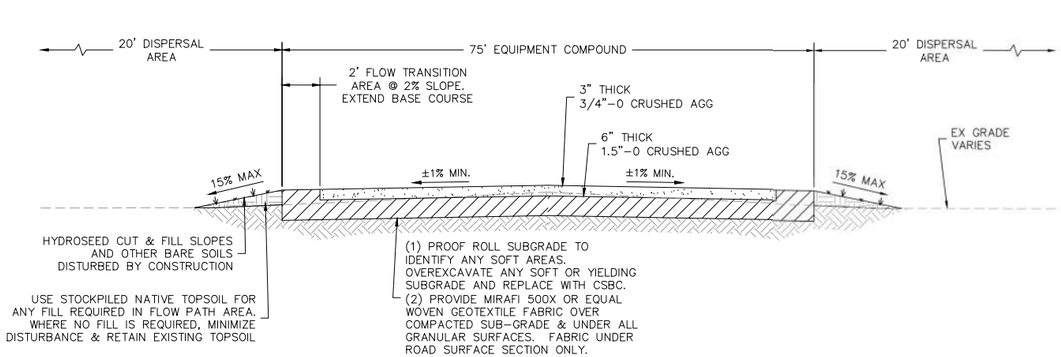
EXISTING ACCESS WIDENING

C NOT TO SCALE



NEW ACCESS

A NOT TO SCALE



EQUIPMENT COMPOUND

B NOT TO SCALE

vertical bridge

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verizon

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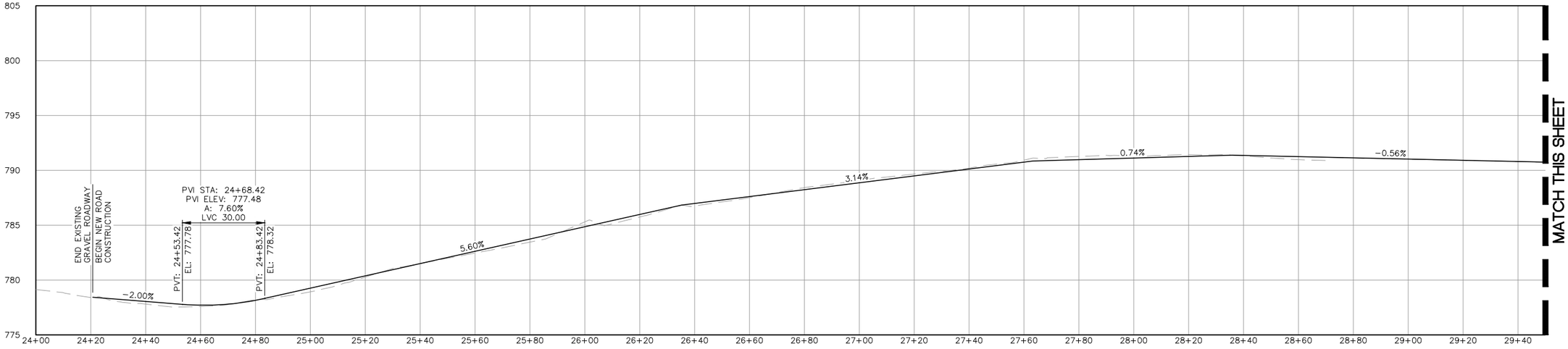

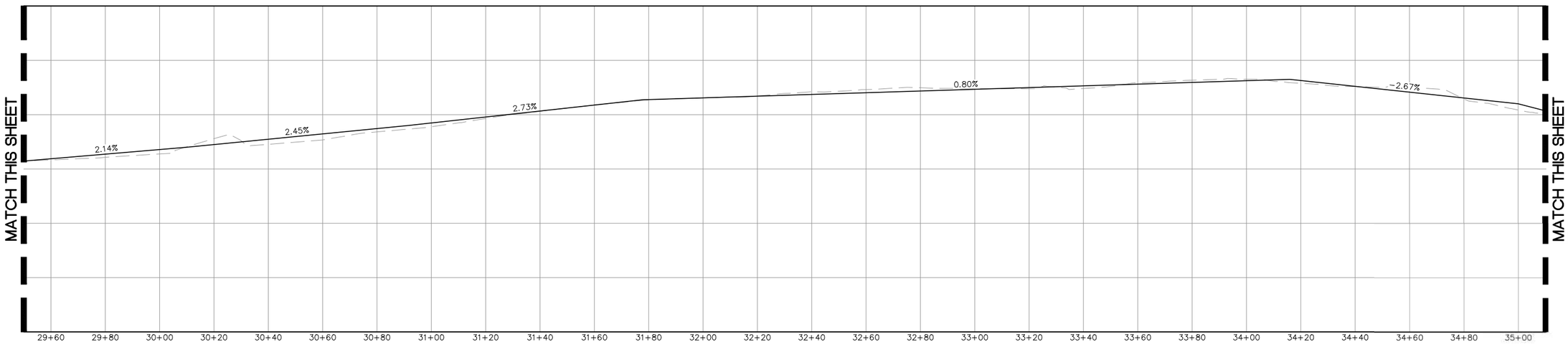

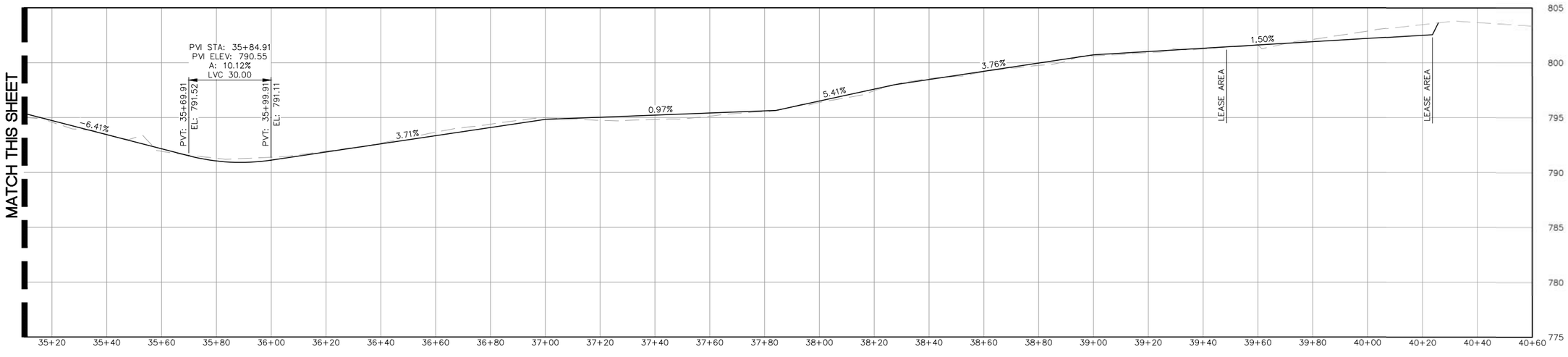

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RENEWS: 12/31/25

SHEET TITLE
NEW DRIVEWAY PROFILE VIEW
SEC 19, TWP 3 S, RNG 3 E, WM

SHEET NUMBER
C9

Planning and Zoning
Department of Transportation and Development

Development Services Building
150 Beavercreek Road | Oregon City, OR 97045

503-742-4500 | zoninginfo@clackamas.us
www.clackamas.us/planning

PRE-APPLICATION CONFERENCE SUMMARY

Permit Type: Conditional Use

File No.: ZPAC0024-24

Proposal: New 195-foot tall telecommunication tower within a 75' x 75' fenced equipment enclosure. The tower will be located near the north of the property

Staff Contact: Melissa Lord, Senior Planner, MLord@Clackamas.us

Applicant: Brandon Clower on behalf of Vertical Bridge

Assessor's Map and Tax Lot No.: 33E19 00600

Site Address: 18133 S Steiner Rd., Beavercreek

Zoning: Timber (TBR)

Pre-Application Conference Date: 4/16/2024 via Zoom.

Date of this Summary: 4/18/2024

Clackamas County is committed to providing meaningful access and will make reasonable accommodations, modifications, or provide translation, interpretation or other services upon request. Please contact us at 503-742-4545 or drenhard@clackamas.us.

503-742-4545: ¿Traducción e interpretación? | Требуется ли вам устный или письменный перевод?
翻译或口译？| Cần Biên dịch hoặc Phiên dịch? | 번역 또는 통역?

I. APPLICABLE ZDO AND COMPREHENSIVE PLAN STANDARDS

a. ZDO Section 406 – Timber (TBR) District:
   i. The subject property is located in the Timber (TBR) zoning district. The proposed use is a wireless telecommunication facility which is a conditional use in the zoning district.
   ii. Wireless telecommunication facilities are subject to Section 835.
   iii. Dimensional standards: Minimum front setback is 30 feet, minimum side setback is 10 feet, minimum rear setback is 30 feet; however, accessory buildings shall have a minimum rear yard setback of 10 feet
      - *See Section 835 for additional setback requirements****

b. ZDO Section 835 –Wireless Telecommunication Facilities: "Level Two Wireless Telecommunication Facility not included in any other category" is a Conditional Use in the Ag/F district
   i. In the Ag/F district, the use is subject to Subsection 406.05(A)(1)
      a. 406.05(A)(1): The use may be allowed provided that:
         - The proposed use will not force a significant change in, or significantly increase the cost of, accepted farming or forest practices on agriculture or forest lands; and
         - The proposed use will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel

      A written response to this subsection must be provided in the application narrative.

   ii. 835.06(D) Standards apply:
      a. (1a) No new tower will be permitted unless no existing support structure can accommodate the proposed antenna. All proposals for new wireless telecommunication facilities must be accompanied by a statement from a qualified person that the necessary telecommunication service cannot be provided by collocation for one or more of the following reasons…
         - *A letter or statement must be provided from a qualified person;*
         - *A clear and evidence-based analysis in response to each subsection (i through v) must be provided.*
         - *Simply re-stating that there are no structures on the subject property that can be connected to is insufficient and does not respond to the criteria.*

      b. (1b through e): *A written (narrative) response to these criteria shall be provided in the submitted application materials. Plans, drawings, construction details and maps may supplement the written response.*

      c. (4) Unless the wireless telecommunication facility is located entirely on a utility pole, it shall be located within an area that is enclosed on all sides. The enclosure shall be a minimum of six feet tall and sight-obscuring.
         - *Fencing/enclosure details must be submitted with the land use application to demonstrate compliance with this criterion.*

      d. (5) Landscaping shall be placed outside of the enclosed area required pursuant to Subsection 835.06(D)(4) and shall include ground cover, shrubs, and trees that are reflective of the natural surrounding vegetation in the area. However, if a portion of

the wireless telecommunication facility is screened from points offsite by a building with a height of at least eight feet, landscaping is not required for the screened area. In addition, Subsection 1009.10 applies.

e. (7) Dimensional Standards of Table 835-2:
   - Maximum height: 250 feet
   - Minimum tower separation: 2,640 feet
   - Minimum front, rear, and side setbacks: The minimum setbacks generally applicable in the subject zoning district, or **a distance equal to the height of the tower**, whichever is greater

c. ZDO Section 1000 – Development Standards:
   i. A site plan must be submitted to demonstrate that the development is not occurring on land with slopes greater than 20%. If development will take place on slopes greater than 20%, Section 1002 applies.
   ii. At a minimum, compliance with Subsections 1005.04 (if proposing outdoor lighting), and 1006.06(C) is required. If proposing water service or onsite wastewater service (septic) to the leading area, compliance with 1006.03 and 1006.05 are required. Compliance with Subsections 1007.01, 1007.02 and 1007.07 is required where applicable to the scope of this project.
   iii. Section 1009 Landscaping applies, in part. The TBR district does not have a minimum landscaping requirement; however, 1009.01 applies. Buffering may be necessary (subsection 1009.04) to mitigate impacts of the Conditional Use. Section 1009.10 applies.
   iv. Section 1015 Parking standards apply in part: For an unmanned facility, at least one parking space that is a minimum of 8.5 feet wide and 16 feet long needs to be available on the property for maintenance vehicle access and turnaround. Parking area can be surfaced with screened gravel or better.
   v. Section 1021 Garbage and Recycling: If a trash enclosure is not proposed, describe in the written project narrative how garbage and recycling will be addressed on this site. For example, will maintenance staff need to take any garbage they have with them?

d. ZDO Section 1203 – Conditional Uses:
   - Submittal requirements provided in Section 1203.02
     a. A signed preliminary statement of feasibility from the surface water management authority is required (Clackamas County Development Engineering)
     b. Vicinity Map showing relationship of proposed use to the surrounding area
     c. Site plan
     d. Existing conditions map, including topographic lines to demonstrate that development is occurring on land with slopes less than 20%
     e. Building/structure profiles

   - General approval criteria provided in Section 1203.03:
     a. A written response is required for each approval criteria. When writing a written response to the review criteria, think critically about each criterion and specifically answer the question of how and why your proposal may/may not meet the standard.

b. Subsection 1203.03(A) states that the proposed use is a Conditional Use in the zoning district; write your responses this this part of the application narrative including ZDO 835 criteria.
c. Subsection 1203.03(D) requires the applicant to define the character of the surrounding area first, then to comment on how the proposed use is consistent within that surrounding area.
d. Subsection 1203.03(E): Forest Policies are in the Comprehensive Plan Chapter 4.

Forest

Forest areas are composed of existing and potential forestlands that are suitable for commercial forest uses. Also included are other forested lands needed for watershed protection, wildlife and fish habitat, and recreation, lands where extreme conditions of climate, soil, and topography require maintenance of vegetative cover, and forested lands in urban and agricultural areas which provide urban buffers, wind breaks, wildlife habitat, scenic corridors, and recreational use.

II. LAND USE PERMITTING PROCESS

a. Land use applications are not conceptual. At the time of submittal, the applicant is expected to be at final design stage for all of the following that apply to the particular proposal: site plan, building elevations/materials, access location/width and frontage improvements. **This is important because most changes after land use approval, except as necessary to comply with conditions of approval, will require a new land use application.**

b. The recommended land use application is:

Conditional Use permit is a "Type III" land use application process, as provided for in Section 1307 of the ZDO. Type III decisions include notice to owners of nearby land, the Community Planning Organization (CPO) if active, service providers (sewer, water, fire, etc.) and affected government agencies, and are reviewed at a public hearing before the County Land Use Hearings Officer. If the application is approved, the applicant must comply with any conditions of approval identified in the decision. The County's decision can be appealed to the Oregon Land Use Board of Appeals (LUBA).

- Application form: https://dochub.clackamas.us/documents/drupal/60589df3-91b7-4dee-a8aa-602bdfeb7226
- Fee: $7,885 ($7,735 + $150)
  - Payable by cash, credit card, or check payable to Clackamas County
    - Credit card payment subject to a 2.75% service fee and must be accompanied by the Credit Card Authorization Form
- Timeline:
  - Completeness review: 30 days; within the first 30 days of the application being submitted the Planning Division will review the application materials to ensure that everything required has been turned in. In the event that there are items missing from the application packet, you will be notified of the specific items missing and information on how you can provide staff with the missing documents/information.
  - Notice period: at least 35 days prior to the first evidentiary hearing the County will send a mailed notice to surrounding property owners within a ½ mile and other reviewing agencies

- Staff report: Planning Division staff will write a staff report and make a recommendation to the Hearings Officer (review authority). This report is available to the public for review at least one week prior to the hearing.
- Public hearing: A public hearing is held with the Hearings Officer for the purpose of receiving testimony regarding the application.
- Decision: The decision authority is the Hearings Officer. The Hearings Officer will issue a decision based on the applicable standards and criteria within 3 weeks of when the record closes. State law generally requires a final County decision issued within 150 days of being deemed complete.

III. MINIMUM LAND USE APPLICATION SUBMITTAL REQUIREMENTS

The submittal requirements are provided in ZDO 1307.07(C) and 1203.02. In addition, review the applicable criteria listed above while preparing your written narrative and other land use application items. It is the applicant's responsibility to clearly demonstrate how a proposal meets all applicable criteria.

IV. AGENCY/DEPARTMENT CONTACT INFORMATION: **This list is provided for the applicant to follow up with relevant service providers, agencies, Community Planning Organization and County staff as needed.*

1. Melissa Lord, Clackamas County Planning and Zoning, 503-742-4504, MLord@Clackamas.us
2. Ken Kent, Development Engineering, KenKen@Clackamas.us, 503-742-4673
3. Clackamas Fire District #1, Valere Liljefelt, 971-282-2059, Valere.Liljefelt@clackamasfire.com
4. Wendi Coryell, Clackamas County System Development Charges and Street Lighting, 503-742-4657, wendicor@clackamas.us
5. Richard Carlson, Clackamas County Building Codes, 503-742-4769, richardcar@clackamas.us
6. Community Planning Organization, Redland – Fischers Mill – Viola, Lance Ward, lancecward@aol.com
   Community Planning Organizations (CPOs) are part of the county's community involvement program. They are advisory to the Board of County Commissioners, Planning Commission and Planning and Zoning Division on land use matters affecting their communities. CPOs are notified of proposed land use actions and decisions on land within their boundaries and may review these applications, provide recommendations or file appeals. You are encouraged to contact the CPO and attend any meeting they may hold to discuss your application.

V. LIST OF ATTACHMENTS

a. Development Engineering

VI. LIMITATIONS AND DISCLAIMERS

Pre-application conferences are advisory and are intended to familiarize applicants with the requirements of the ZDO, provide applicants with an opportunity to meet with staff and discuss proposed projects in detail, and identify standards, criteria, and procedures prior to filing a land use permit application. The pre-application conference is a tool to orient applicants and to assist them in

navigating the land use review process. It is not an exhaustive review that identifies or resolves all potential issues and does not bind or preclude the County from enforcing all applicable regulations or from applying regulations in a manner differently than may have been indicated at the time of the pre-application conference.

The information in this document is introductory and is designed to act as a guide to relevant Zoning and Development Ordinance (ZDO) and Comprehensive Plan standards. This is an initial review and is based on the information submitted by the applicant for the pre-application conference.

Any opinion or advice provided herein is informational only, and is based on any information specifically provided or reasonably available, as well as any applicable regulations in effect on the date the research was conducted. Any opinion or advice provided herein may be revised, particularly where new or contrary information becomes available, or in response to changes to state law or administrative rule, future legislative amendments of the Zoning and Development Ordinance, decisions of courts or administrative tribunals, or quasi-judicial land use decisions.

This is not a land use decision as defined by Oregon Revised Statutes 197.015(10).

CLACKAMAS COUNTY

DAN JOHNSON
DIRECTOR

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
DEVELOPMENT SERVICES BUILDING
150 BEAVERCREEK ROAD OREGON CITY, OR 97045

PRE-APPLICATION INFORMATION FROM DEVELOPMENT ENGINEERING

All information is considered informal, based on current Zoning and Development Ordinance requirements, current Roadway Standards requirements, and current Comprehensive Plan requirements. The information presented here is subject to change as revisions are made to the aforementioned documents and in the formal Conditional Use Process. Prior to the submittal of a Conditional Use application, the applicant is encouraged to contact staff to insure that these pre-application comments reflect the current standards.

PROJECT: ZPAC0024-24 Wireless Tower, 18133 S Steiner Road

LEGAL: 33E19 00600

DATE: April 9, 2024

MEETING DATE: April 16 2024

Engineering staff: Kenneth Kent 503-742-4673
kenken@clackamas.us

1. A **Development Permit** will be required from the Development Engineering prior to initiation of construction. The applicant shall pay the minimum Permit fee deposit ($2,000) for commercial/industrial/multi-family development. The plan review and inspection fee is based upon 8.83 percent of the estimated costs for public street frontage improvements and 5 percent of the estimate costs of the onsite transportation improvements. These plans shall be signed and stamped by a Professional Engineer registered in the State of Oregon or shall comply with requirements acceptable to the Engineering Division.
2. **Access**:

    a. Provide verification of the access easement from SE Steiner Road to the tower site. A minimum access easement width of 20 feet is required.

    b. Roads and parking areas shall be constructed per Standard Drawing R100. A minimum 12-foot wide gravel road is required.

    c. Turnouts are required every 400 feet, per Standard Drawing C350.

    d. The applicant shall provide adequate on site circulation areas for the parking and maneuvering of all vehicles anticipated to use the facility. Parking spaces and drive aisles shall meet the standards of *ZDO* Section 1015 and Roadway Standards Drawings P100/P200.

e. Drainage facilities shall be designed and constructed in conformance with *Clackamas County Roadway Standards* Chapter 4, providing water quality treatment and conveyance to a suitable outfall.

3. Prior to the issuance of a building permit and/or site development, the applicant shall submit to Clackamas County Engineering Office:

   a. Written approval from the Clackamas Fire District #1 for the planned access, circulation, fire lanes and water source supply. The approval shall be in the form of site and utility plans stamped and signed by the Fire Marshal.

   b. Written approval from the Clackamas County Engineering for surface water management facilities and erosion control measures.

   c. A set of street and site improvement construction plans, in conformance with *Clackamas County Roadway Standards* Section 140, to Clackamas County's Engineering Office and obtain written approval, in the form of a Development Permit.