Tillamook County

DEPARTMENT OF COMMUNITY DEVELOPMENT
BUILDING, PLANNING & ON-SITE SANITATION SECTIONS

1510 – B Third Street
Tillamook, Oregon 97141
www.tillamookcounty.gov
503-842-3408

Land of Cheese, Trees and Ocean Breeze

Neskowin Coastal Hazard Area Permit #851-24-000098-PLNG: Wombwell/Alfonso

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

NOTICE OF ADMINISTRATIVE REVIEW
Date of Notice: October 14, 2024

Notice is hereby given that the Tillamook County Department of Community Development is considering the following:

#851-24-000098-PLNG: A request for approval of a Neskowin Coastal Hazard Area Permit for the removal of a tree, on a property located within the Unincorporated Community Boundary of Neskowin, zoned Neskowin Low Density Residential (NeskR-1) and within the Neskowin Coastal Hazards Overlay (Nesk-CH) Zone. The subject property is accessed via South Beach Road and designated as Tax Lot 4800 of Section 35DA in Township 5 South, Range 11 West of the Willamette Meridian, Tillamook County, Oregon. The applicant is Adam Alfonso and the property owner is Daen Wombwell and Grace Barnard.

Notice of the application, a map of the subject area, and the applicable criteria are being mailed to all property owners within 250 feet of the exterior boundaries of the subject parcel for which the application has been made and other appropriate agencies at least 14 days prior to this Department rendering a decision on the request.

Written comments received by the Department of Community Development prior to 4:00p.m. on October 28, 2024, will be considered in rendering a decision. Comments should address the criteria upon which the Department must base its decision. A decision will be rendered no sooner than October 29, 2024.

A copy of the application, along with a map of the request area and the applicable standards/criteria for review are available for inspection on the Tillamook County Department of Community Development website: https://www.tillamookcounty.gov/commdev/landuseapps and is also available for inspection at the Department of Community Development office located at 1510-B Third Street, Tillamook, Oregon, 97141.

If you have any questions about this application, please contact Melissa Jenck, CFM, Senior Planner at 503-842-3408 x 3301 or by email: melissa.jenck@tillamookcounty.gov.

Sincerely,

Melissa Jenck, CFM, Senior Planner

Sarah Absher, CFM, Director

Enc. Applicable Ordinance Standards/Criteria
Maps

TCLUO SECTION 3.570(4)(e): A decision to approve a Neskowin Coastal Hazard Area Permit shall be based upon findings of compliance with the following standards:

(A) The proposed development is not subject to the prohibition of development on beaches and certain dune forms as set forth in subsection (8) of this section;

(B) The proposed development complies with the applicable requirements and standards of subsections (6), (7), (8), and (10) of this section;

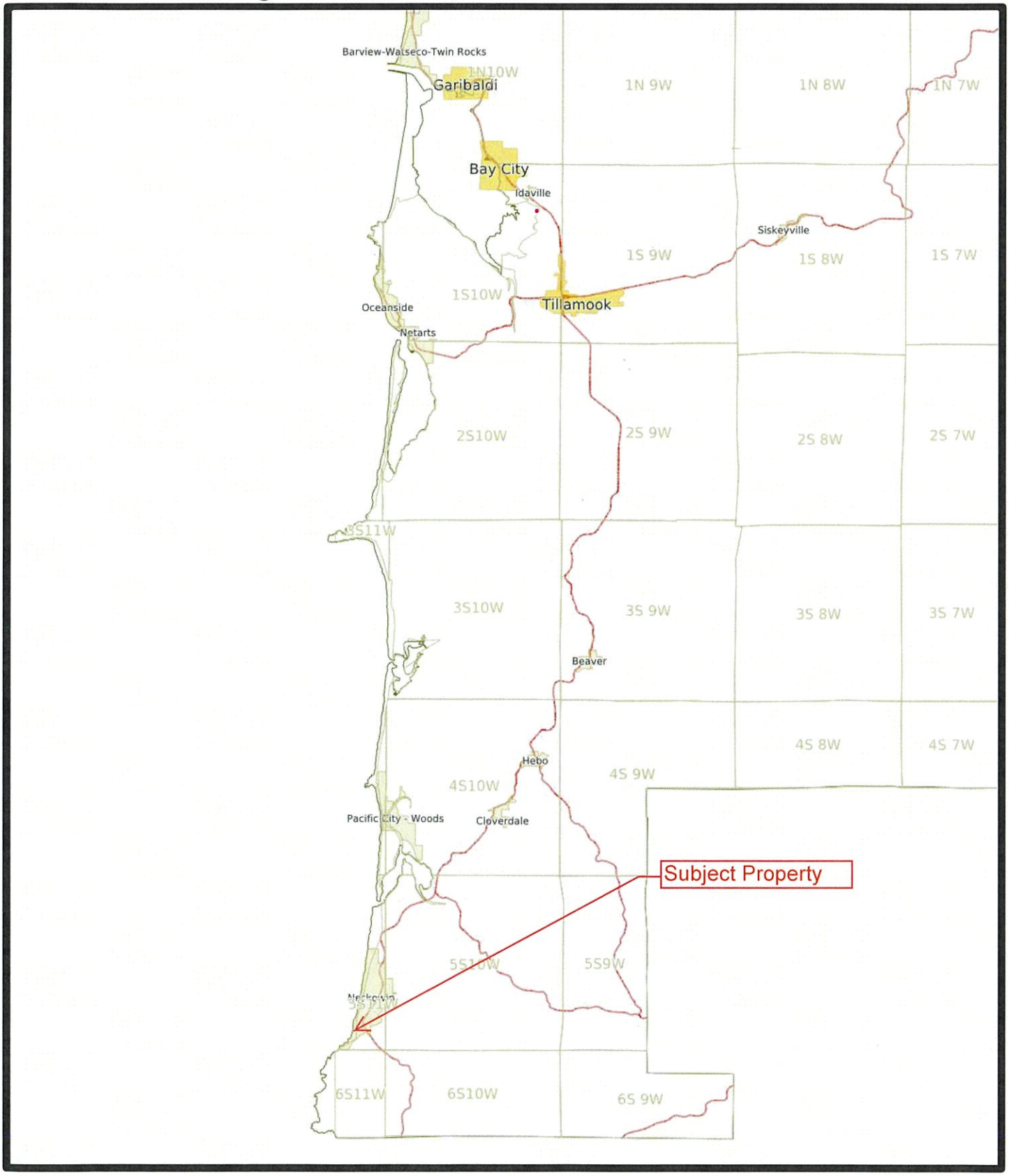
(C) The geologic report conforms to the standards for such reports set forth in subsection (5) of this section;

(D) The development plans for the application conform, or can be made to conform, with all recommendations and specifications contained in the geologic report; and

(E) The geologic report provides a statement that, in the professional opinion of the engineering geologist, the proposed development will be within the acceptable level of risk established by the community, as defined in subsection (5)(c) of this section, considering site conditions and the recommended mitigation.

EXHIBIT A

Vicinity Map



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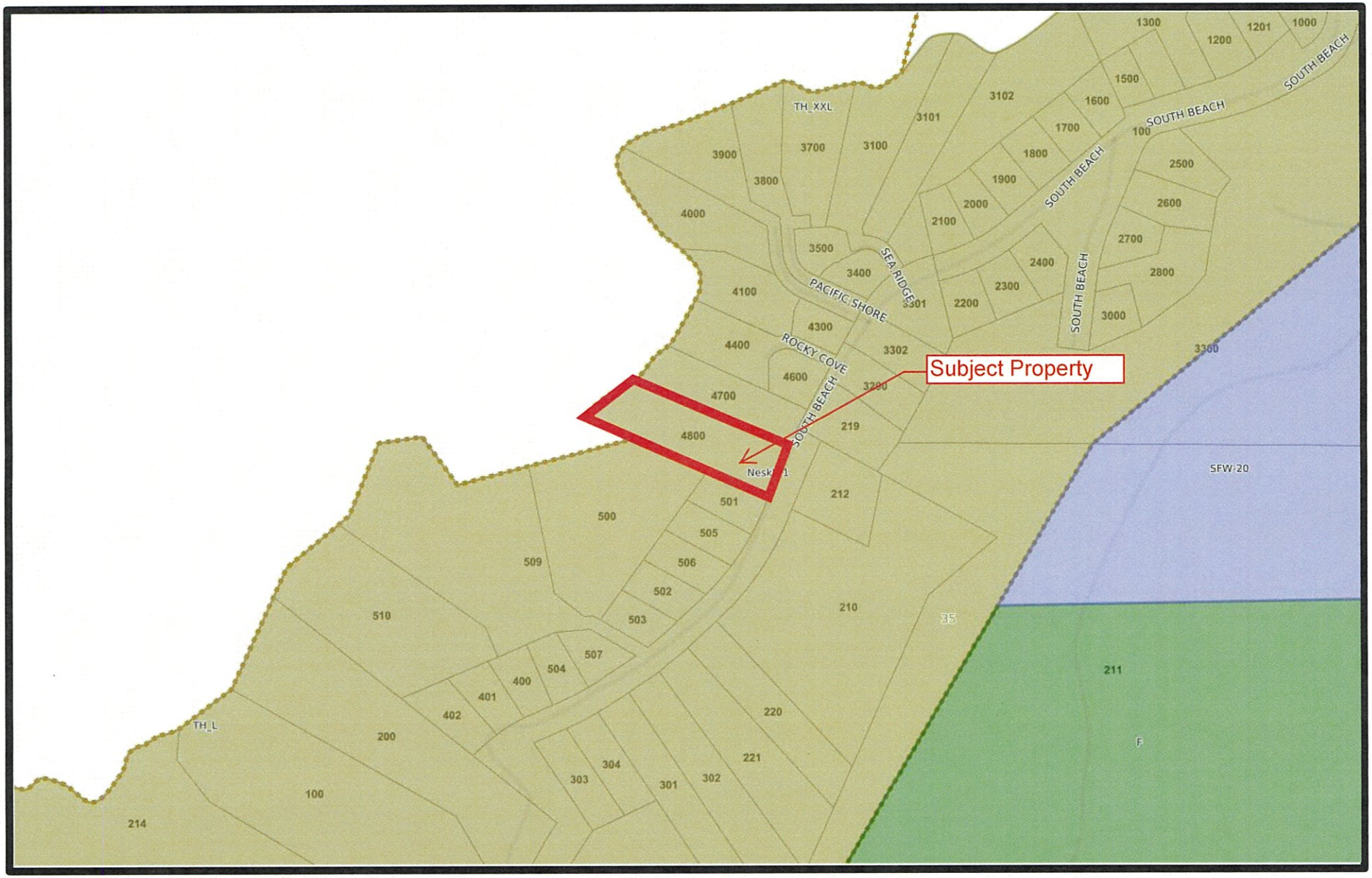
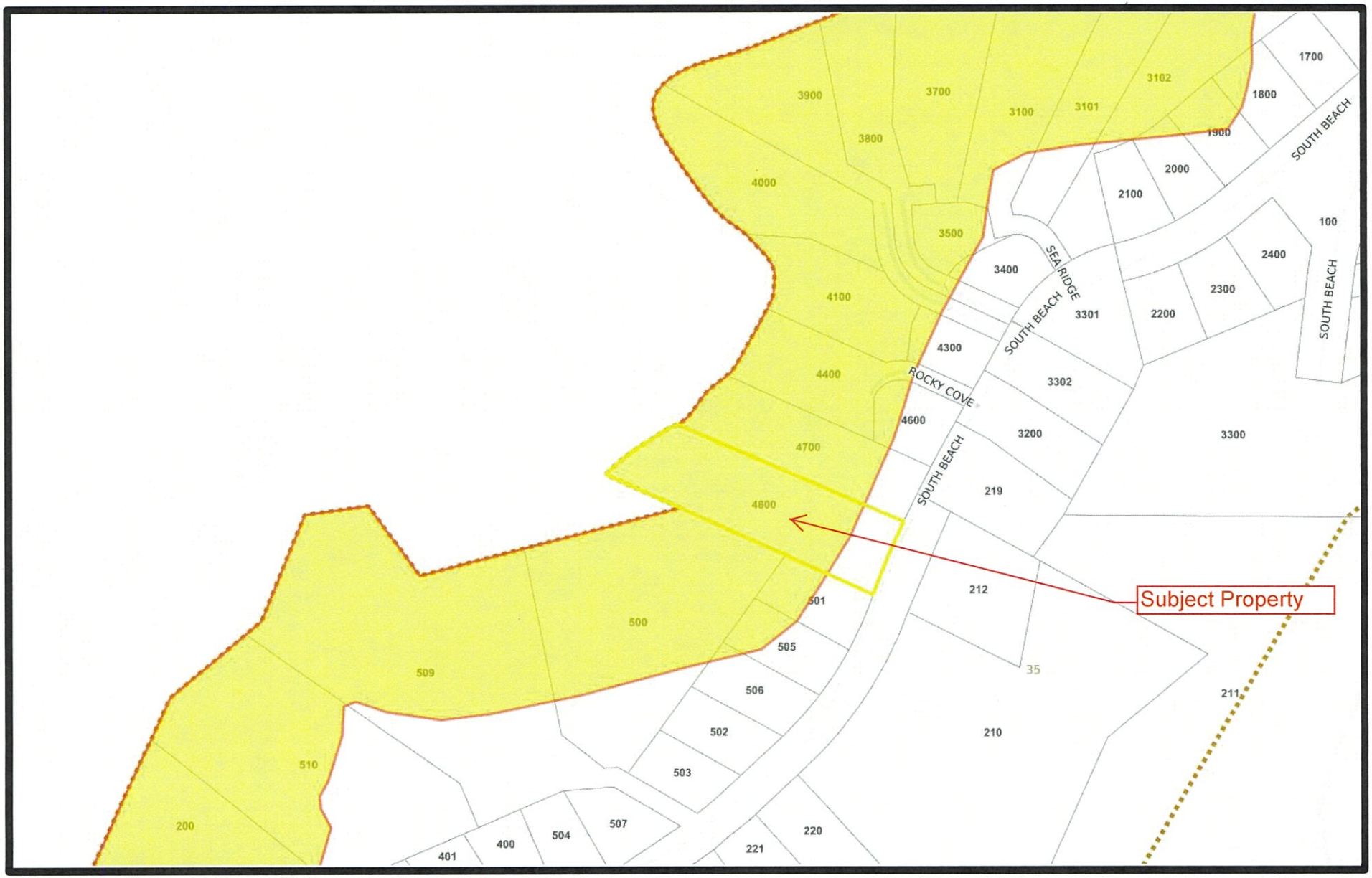
Zoning Map

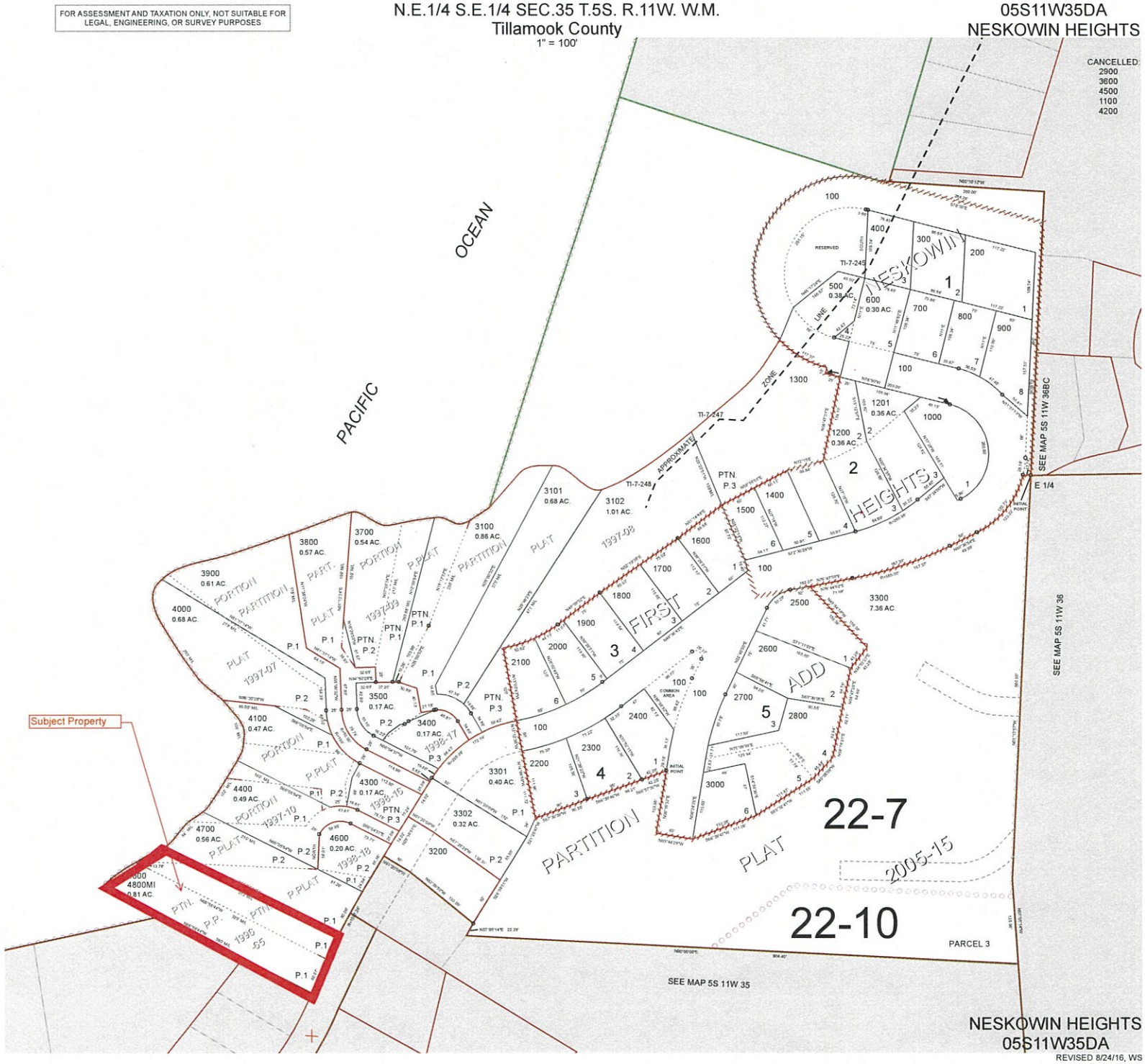


Generated with the GeoMOOSE Printing Utilities

Nesk-CH Overlay Map



Generated with the GeoMOOSE Printing Utilities


FOR ASSESSMENT AND TAXATION ONLY, NOT SUITABLE FOR LEGAL, ENGINEERING, OR SURVEY PURPOSES
N.E.1/4 S.E.1/4 SEC.35 T.5S. R.11W. W.M.
Tillamook County
1" = 100'
05S11W35DA
NESKOWIN HEIGHTS
CANCELLED:
2900
3600
4500
1100
4200
OCEAN
PACIFIC
Subject Property
22-7
22-10
PARCEL 3
SEE MAP 5S 11W 36BC
SEE MAP 5S 11W 36
SEE MAP 5S 11W 35
NESKOWIN HEIGHTS
05S11W35DA
REVISED 8/24/16, WS

Tillamook County
2024 Real Property Assessment Report
Account 251079

Map	5S1135DA04800	**Tax Status**	Assessable
Code - Tax ID	2209 - 251079	**Account Status**	Active
		Subtype	NORMAL
Legal Descr	See Record		
Mailing	WOMBWELL, DAEN & BARNARD, GRACE 6604 CROWN FOREST DR PLANO TX 75024	**Deed Reference #**	2021-6857
		Sales Date/Price	08-09-2021 / $439,000
		Appraiser	ROBERT BUCKINGHAM

Property Class	100	**MA**	**SA**	**NH**
RMV Class	100	09	OF	986

Site	Situs Address	City
	50400 SOUTH BEACH RD	COUNTY

Value Summary

Code Area		RMV	MAV	AV	RMV Exception	CPR %
2209	Land	437,580		Land	0	
	Impr	0		Impr	0	
Code Area Total		437,580	293,920	293,920	0	
Grand Total		437,580	293,920	293,920	0	

Land Breakdown

Code Area	ID #	RFPD	Ex	Plan Zone	Value Source	Trend %	Size	Land Class	Trended RMV
2209	0			NESKR-1	Market	117	0.81 AC		437,580
					Code Area Total		0.81 AC		437,580

Improvement Breakdown

Code Area	ID #	Year Built	Stat Class	Description	Trend %	Total Sqft	Ex%	MS Acct	Trended RMV

Exemptions / Special Assessments / Notations

Code Area 2209

Fire Patrol	Amount	Acres	Year
■ FIRE PATROL NORTHWEST	18.75	0.81	2024
Fire Patrol	**Amount**	**Acres**	**Year**
■ FIRE PATROL SURCHARGE	0.00		2024

Comments 9/18/02 AC & VAL CHG AFTER LLADJ W/TLS 4500 & 4700. PROP IS NOW EFFECTIVE OCEAN FRONT. CHGD RMV LAND & "HOOD". MAV BAL. LR 5/18/05 Code change due to Annexation by the Neskowin Regional Sanitary Authority. dv 04/22/14 Reappraised land; tabled land. RBB

National Flood Hazard Layer FIRMette

FEMA

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainag areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represe an authoritative property location.

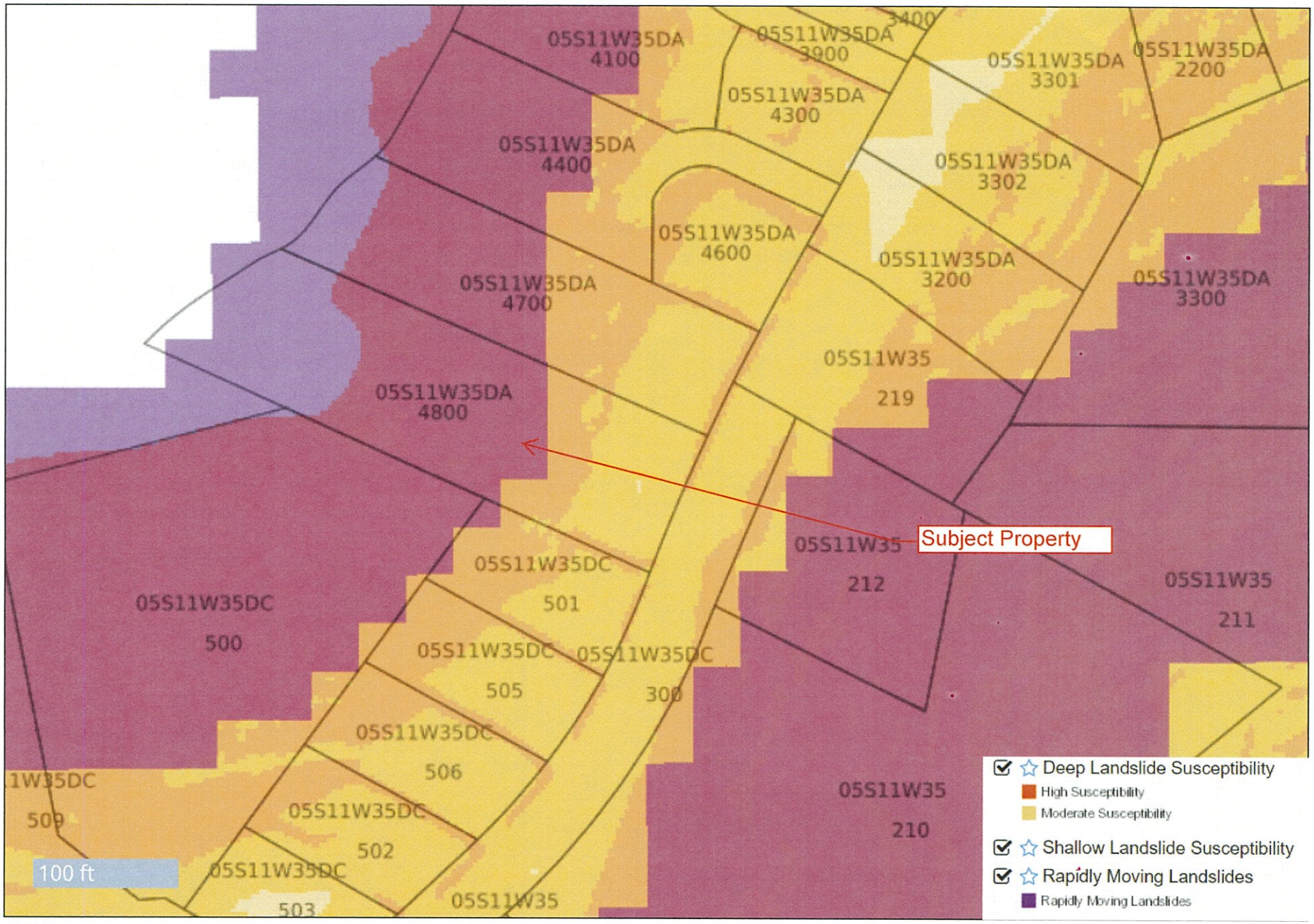
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/13/2024 at 12:49 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

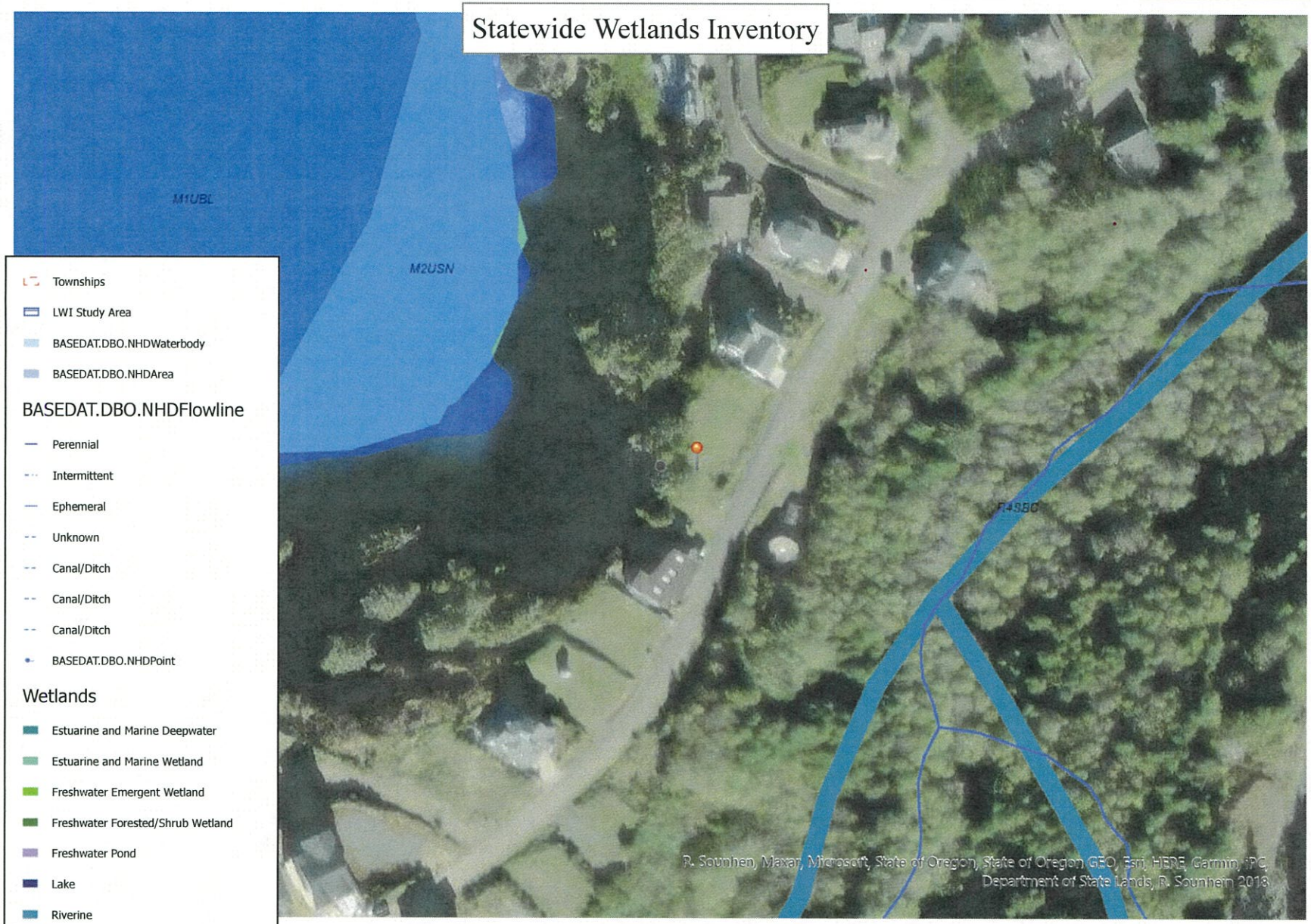
Hazard Map

Oregon Coastal Atlas



Printed 10 / 12 / 2024

Statewide Wetlands Inventory



- Townships
- LWI Study Area
- BASEDAT.DBO.NHDWaterbody
- BASEDAT.DBO.NHDArea

BASEDAT.DBO.NHDFlowline

- Perennial
- Intermittent
- Ephemeral
- Unknown
- Canal/Ditch
- Canal/Ditch
- Canal/Ditch
- BASEDAT.DBO.NHDPoint

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine
- SWI Agate-Winlo Soils
- SWI Predominantly Hydric Soil Map Units

https://www.oregon.gov/dsl/WW/Pages/SWI.aspx

1:2,257

0 0.01 0.03 0.05 0.08 0.1 mi

The Statewide Wetlands Inventory (SWI) represents the best data available at the time this map was published and is updated as new data becomes available. In all cases, actual field conditions determine the presence, absence and boundaries of wetlands and waters (such as creeks and ponds). An onsite investigation by a wetland professional can verify actual field conditions.

N

Date: 10/12/2024

State of Oregon
Department of State Lands
775 Summer Street, NE, Ste 100
Salem, OR 97301-1279

EXHIBIT B

Tillamook County Department of Community Development
1510-B Third Street. Tillamook, OR 97141 / Tel: 503-842-3408 Fax: 503-842-1819
www.co.tillamook.or.us

PLANNING APPLICATION

OFFICE USE ONLY
Date Stamp: FEB 15 2024 Counter-ss. emailed 2/15/24
☐Approved ☐Denied
Received by: SS
Receipt #: 136128
Fees: 1,365.00
Permit No: 851-24-000098-PLNG

Applicant ☐ *(Check Box if Same as Property Owner)*
Name: Adam Alfonso Phone: 541-639-7006
Address: 7455 SW Bridgeport Rd #240
City: Tigard State: OR Zip: 97224
Email: Adam@WinsomeConstruction.com

Property Owner
Name: Daen Wambvell Phone: 214-563-0885
Address: 6604 Crown Forest Dr.
City: Plano State: TX Zip: 75024
Email: DWambvell@NiWCorp.Com

Request: Dangerous tree Removal w/N Coastal Hazard Overlay line

Type II	Type III	Type IV
☐ Farm/Forest Review	☐ Appeal of Director's Decision	☐ Appeal of Planning Commission Decision
☐ Conditional Use Review	☐ Extension of Time	☐ Ordinance Amendment
☐ Variance	☐ Detailed Hazard Report	☐ Large-Scale Zoning Map Amendment
☐ Exception to Resource or Riparian Setback	☐ Conditional Use (As deemed by Director)	☐ Plan and/or Code Text Amendment
☐ Nonconforming Review (Major or Minor)	☐ Ordinance Amendment	
☐ Development Permit Review for Estuary Development	☐ Map Amendment	
☐ Non-farm dwelling in Farm Zone	☐ Goal Exception	
☐ Foredune Grading Permit Review		
☒ Neskowin Coastal Hazards Area		

Location:
Site Address: 50400 South beach Rd, Neskowin OR 97149
Map Number: 5S (Township) 11 (Range) 35DA (Section) 4600 (Tax Lot(s))

Clerk's Instrument #: _____

Authorization
This permit application does not assure permit approval. The applicant and/or property owner shall be responsible for obtaining any other necessary federal, state, and local permits. The applicant verifies that the information submitted is complete, accurate, and consistent with other information submitted with this application.

Property Owner Signature (Required) — Date: 2-15-24
Applicant Signature — Date: 2-15-24

Earth Engineers, Inc.

2411 Southeast 8th Avenue • Camas • WA 98607
Phone: 360-567-1806
www.earth-engineers.com

February 4, 2024

Winsome Construction, LLC
117 5th Street
McMinnville, Oregon 97128
Attention: Adam Alfonso, Superintendent

phone: (541) 639-7006
E-mail: adam@winsomeconstruction.com

Subject: **Geotechnical Visual Reconnaissance**
Proposed Wombwell-Barnard Single Family Residence
Tax Lot 4800, South Beach Road
Neskowin, Tillamook County, Oregon
EEI Report No. 21-157-9

Dear Mr. Alfonso:

Per your request, **Earth Engineers, Inc. (EEI)** has completed a geotechnical visual reconnaissance report for the tree removal at the lot currently under construction referenced above. You authorized our amendment to the scope of services outlined in EEI Proposal No. 21-P269 which was originally authorized by Phillip Morin on July 29, 2021, by signing EEI Proposal No. 21-P269-A1 on January 5, 2024.

PROJECT BACKGROUND INFORMATION

Briefly, we understand that Tillamook County is requiring an additional geotechnical report that addresses removal of a single Sitka spruce tree at the crest of the bluff, as a supplement to the Arborist Report issued by David Hunter dated December 13, 2023, referencing and certifying the conditions of the removed tree. The purpose of our assessment was to comment on slope stability following the tree removal on the site. As an amendment to our original scope of work, EEI's scope of services was to perform a visual reconnaissance on the site to observe the current conditions, review the Arborist Report, and preparation of this letter report that includes our observations and recommendations.

Additionally, we have received and reviewed the following document via e-mail:

- **"DDH 23/702 Visual Tree Assessment 50400 South Beach Road Neskowin, OR 97149" prepared by David D. Hunter, Consulting Arborist, dated December 13, 2023.**

SITE OBSERVATIONS AND RECOMMENDATIONS

The following is a summary of our visual reconnaissance performed by EEI Senior Geologist Rittel, R.G., on January 11, 2024. Approximately 30 minutes was spent on the property, walking and viewing the area where the tree was removed. The following is a summary of our observations.

1. Based on the areas that we could observe, there did not appear to have been any areas of substantial recent erosion on the property, and there were no apparent signs of slope instability on the parcel where the tree was removed (Photo 1). The slope generally lacked any mature trees and appears to be composed of weathered bedrock and colluvium and was generally well-drained, dense and rocky.

2. The Arborist report prepared by David D. Hunter noted that the tree before removal was observed to have a 10 percent trunk lean due to the canopy being top heavy (limb dieback) to the east in the direction of the residence currently under construction. Additionally, the tree was observed to have brown butt rot and the stump base was swollen as further evidence of root disease. The arborist also noted that areas nearby have a known history of brown butt rot failures.

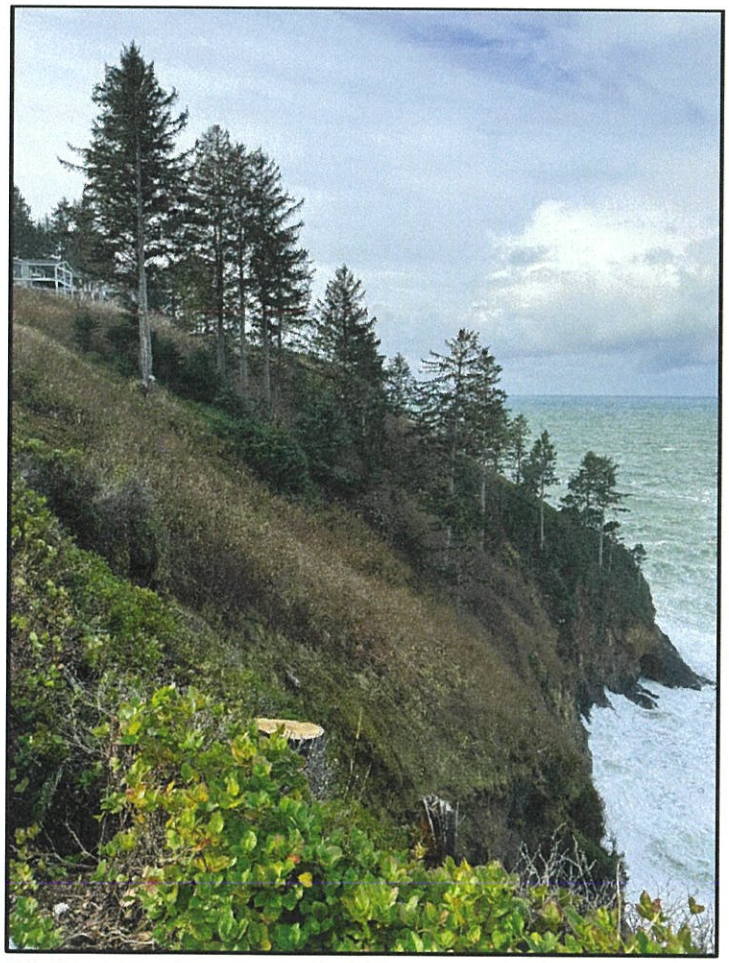


Photo 1: View of the stump of the removed Sitka spruce. View is looking south toward the Pacific Ocean.

CONCLUSIONS

Broadly, EEI typically recommends that maintaining trees on slopes is beneficial for slope stability. Because saturated soil is often a trigger of slope instability, mature trees typically help stabilize steep slopes due to their impact on the soil water regime (e.g., tree canopies serve to dissipate water falling onto slopes, and root systems can act as "pumps" to control groundwater). In addition, the trees reinforce the soil through their root systems. Usually removing vegetation such as large trees from a slope may subject the slope area to increased erosion potential and may increase susceptibility to landsliding.

However, in the case of the subject property, we recommend that the removal of this tree will have no substantive negative overall impact on erosion susceptibility or slope stability. The leaning and top-heavy tree (if it had been allowed to remain intact) was susceptible to being wind-blown, with potential to fall downslope along with the connected root ball – resulting in denuded, erodible soil. This outcome would negatively affect slope stability more so than allowing the cut stump and root system to remain in place. And while unrelated to slope stability, failure to remove the tree could result in the tree falling eastward in impacting the structure, and removal of the tree is beneficial for other reasons unrelated to slope stability.

The decaying root systems should provide strength for some time (typically 5 years or more, depending on tree species and size), while the new trees establish their root systems. Furthermore, based on the limited extent of tree removal (i.e. removal of a single tree on parcel experiencing root rot and lean) and because this stump and roots will remain in place (opposed to allowing the tree to naturally die and/or fall), we recommend that the impacts to slope stability from the tree removal will be minimal provided that the slope is subsequently replanted with trees as soon as possible.

It should be noted that the stump could be flush cut at the ground surface, but we recommend that under no circumstances should the subsurface portion of stumps or root mass be removed. We also recommend replacing the removed tree with new vegetation. In terms of vegetation on slopes, we generally recommend all invasive vegetation (such as Scotch Broom, English ivy and Himalayan blackberry) is removed where encountered on the slope and (where possible) that deep-rooted species of native or "native allies" trees and shrubs are densely planted on the slope. Irrigation may be necessary while the root systems become established, especially through the dry summer months. Once established, vegetation usually requires little to no maintenance and little to no irrigation. We generally recommend new trees and shrubs are spaced roughly 3 to 5 feet apart; however, an arborist and landscape designer should be contacted for specific re-planting recommendations and to guarantee successful revegetation of the removed tree.

In summary, provided the recommendations in this report are followed, we recommend that slope stability impacts from the removed tree are unlikely, that potential impacts from denuding of the slope below the residence can be mitigated by leaving the stump in place and revegetating the slope as soon as possible (i.e. in the months following tree removal). In the event that minor localized failures were to occur; they would be minor and unlikely to extend beyond the property boundaries. Excluding the potential for limited localized slope failures and erosion on the referenced slope, we do not foresee any greater adverse impacts that would subject the slope areas on (or adjacent) the property to destabilization.

Note that just because the slopes appear stable at this time and do not show past signs of sliding, slope stability can change over time. Maintenance of vegetation and controlling drainage on the property are both important to maintaining slope stability. In addition, our evaluation of the slopes was based solely on visual observation; we did not perform a subsurface investigation that would better evaluate the slopes. Owning a sloping property inherently carries more risk than a slightly sloping or level property.

LIMITATIONS

The geotechnical recommendations presented in this report are based on the available project information described in this report. If any of the noted information is incorrect, please inform EEI in writing so that we may amend the recommendations presented in this report if appropriate and if desired by the client. EEI will not be responsible for the implementation of its recommendations when it is not notified of changes in the project.

This report has been prepared for the exclusive use of Winsome Construction, LLC for the specific application to the lot Tax Lot 4800, South Beach Road, Neskowin, Tillamook County, Oregon. EEI does not authorize the use of the advice herein nor the reliance upon the report by third parties without prior written authorization by EEI.

We appreciate the opportunity to perform this geotechnical evaluation. If you have any questions pertaining to this report, or if we may be of further service, please contact Adam Reese at 360-567-1806 (office) or 503-502-2726 (cell).

Sincerely,

Earth Engineers, Inc.

Carson Rittel, R.G.
Senior Geologist

Adam Reese, C.E.G., R.G.
Principal Engineering Geologist

DAVID D. HUNTER, CONSULTING ARBORIST

PO Box 324
Forest Grove, OR 97116-0324
CCB # 189453 Metro License # 10648

Cell: (503) 319-0380
ddhunterarborist@aol.com
www.davidhunterarborist.com

December 13, 2023

Adam Alfonso, Site Superintendent adam@winsomeconstruction.com
7455 SW Bridgeport Road, Suite 240
Tigard, OR 97224

RE: Visual Tree Assessment inspection of one Sitka spruce tree on west side property 50400 South Beach Road Neskowin, OR 97149 for tree health and safety after tree removed at beginning of development. This report is for Tillamook County Community Development Department.

Dear Adam Alfonso,

On December 11, 2023 I inspected by Visual Tree Assessment Level 1[i], the Sitka (*Picea sitchensis*) spruce tree on the property that you had a concern about tree due to tree lean at the property area being developed. Tools used: DBH tape, Nikon camera, and photographs of the tree prior to the removal. The tree was removed three weeks prior to my site visit.

The tree was 35" DBH diameter at breast height or 54" above ground level. Tree was approximately 70' tall and the canopy was top heavy to the east. The tree had become a stand-alone tree due to other trees failing and falling down the cliff.
The area nearby has a history of brown butt rot (*Phaeolus schweinitzii*) failure.[1]

I have consulted along the Oregon Coast for over 30 years and am well versed in assessing tree health and tree risks of the coastal trees. Sitka spruce has been seen to have one or a combination of Armillaria, brown butt rot or laminated root rot. I am also Forest Management Committee volunteer with Cascade Pacific Boy Scout Camps and have consulted on the Camp Meriwether-Clark since 1998 which has amazing disease pockets and hazard trees which needed to be addressed.

[1] Field Guide for Hazard-Tree Identification and Mitigation on Developed Sites in Oregon and Washington. USDA Forest Service. Forest Health Protection. Pacific Northwest Region. Portland Or. 2014. R6-NR-TP-021-2013.

DAVID D. HUNTER, CONSULTING ARBORIST

PO Box 324
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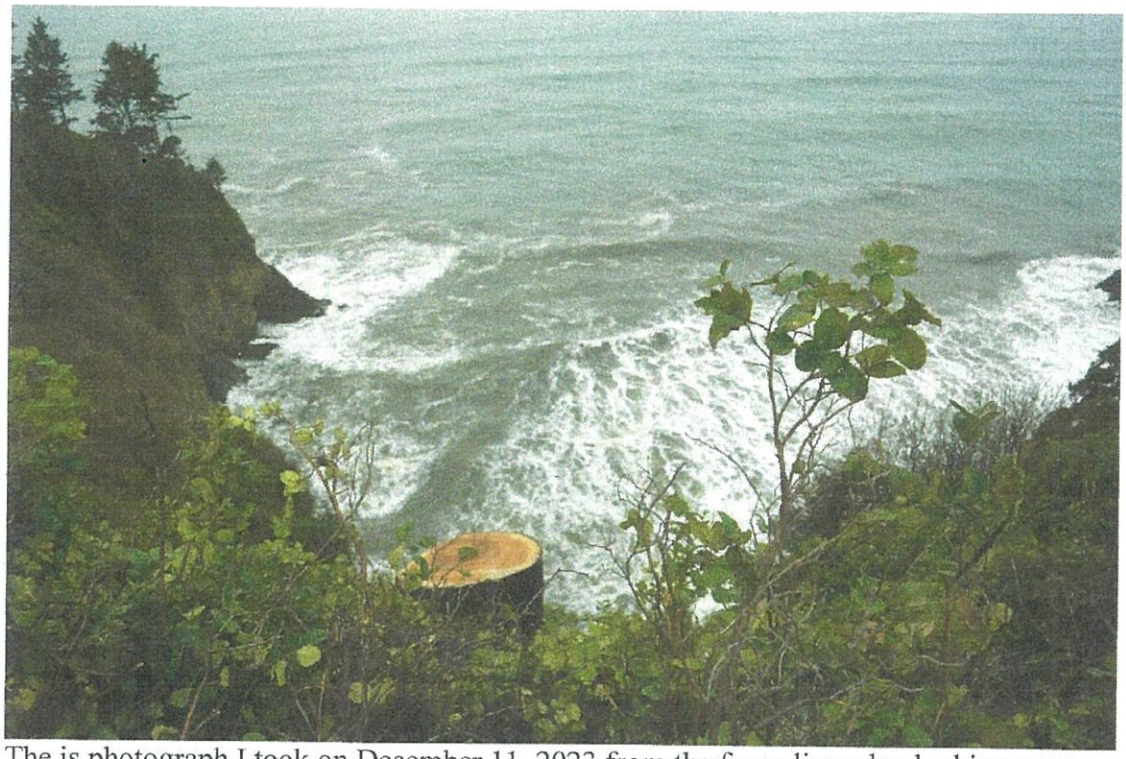
CCB # 189453 Metro License # 10648

Observations



The is photograph I took on December 11, 2023 from the fence line edge looking over the edge at the tree stump. Stump is 20' down slope. To right is open space where tree was prior but failed and took surrounding soil and tree to ocean. The stump at least remains and will hold the soil and slope for many years till the roots rot out.

Looking at the stump the center and to the left of the salal leaf the stump wood is off-colored and darker color which is a sign of brown butt rot. The stump base was also swollen as another sign to the root disease.

I discussed with the tree service Klint Venti what was found in the tree during the removal. The tree had a hard top lean to the east, tip /limb dieback (sign of root disease), decay in the stems cutting in the upper part of the tree, and water cavities where hollows in upper areas allowed water to be stored.

DAVID D. HUNTER, CONSULTING ARBORIST

PO Box 324
Forest Grove, OR 97116-0324
CCB # 189453 Metro License # 10648

View of the tree from the north, trunk lean is east, limb weight is east. Had to have been other trees to the west that failed and are no longer there.

View of the tree from road trunk lean, limb dieback, crown top heavy.

DAVID D. HUNTER, CONSULTING ARBORIST

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View of the tree from the south trunk lean 10 percent, prior defect left stem mid stem left with the white knob on the left.

DAVID D. HUNTER, CONSULTING ARBORIST

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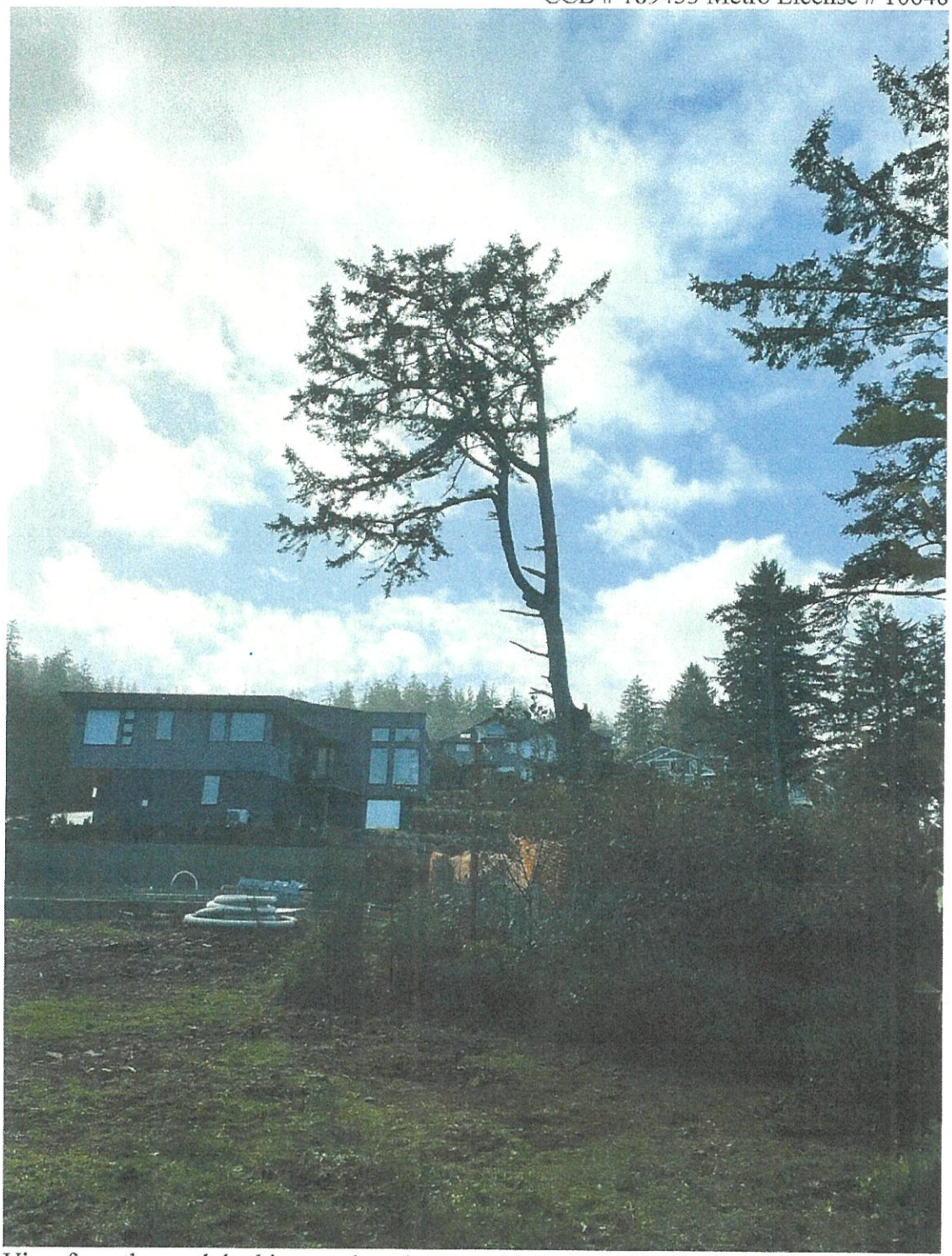

View from the north looking south at the tree with trunk lean, canopy all to east and tip / limb dieback is visible.

DAVID D. HUNTER, CONSULTING ARBORIST

PO Box 324
Forest Grove, OR 97116-0324
CCB # 189453 Metro License # 10648

View of tree from northeast tip dieback and top heavy is visible.

Recommendations

I recommend that the stump remain in place to help hold the steep cliff area. If new trees seed in, I recommend allowing them to grow and hold the soil and slope.

I certify that all of the statements in the foregoing arborist report are correct to the best of my knowledge and are made in good faith.

Questions, please give me a call.
Sincerely,

David D. Hunter
ASCA Registered Consulting Arborist # 408
USFS Health and Hazard Tree Inspector Trained
ISA Certified Arborist # PN-1068A
ISA Tree Risk Assessor Qualified
Professional Forester/ Professional Plant Appraiser

[i] Tree Risk Assessment Manual 2nd Edition. International Society of Arboriculture. 2017.

Earth Engineers, Inc.

2411 Southeast 8th Avenue • Camas • WA 98607
Phone: 360-567-1806
www.earth-engineers.com

May 1, 2024

Winsome Construction, LLC
117 5th Street
McMinnville, Oregon 97128
Attention: Adam Alfonso, Superintendent

phone: (541) 639-7006
E-mail: adam@winsomeconstruction.com

Subject: **Geotechnical Visual Reconnaissance**
Proposed Wombwell-Barnard Single Family Residence
Tax Lot 4800, South Beach Road
Neskowin, Tillamook County, Oregon
EEI Report No. 21-157-9

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Per your request, **Earth Engineers, Inc. (EEI)** has completed a geotechnical visual reconnaissance report for the tree removal at the lot currently under construction referenced above. You authorized our amendment to the scope of services outlined in EEI Proposal No. 21-P269 which was originally authorized by Phillip Morin on July 29, 2021, by signing EEI Proposal No. 21-P269-A1 on January 5, 2024.

1.0 PROJECT BACKGROUND INFORMATION

Briefly, we understand that Tillamook County is requiring an additional geotechnical report that addresses removal of a single Sitka spruce tree at the crest of the bluff, as a supplement to the Arborist Report issued by David Hunter dated December 13, 2023, referencing and certifying the conditions of the removed tree. The purpose of our assessment was to comment on slope stability following the tree removal on the site. As an amendment to our original scope of work, EEI's scope of services was to perform a visual reconnaissance on the site to observe the current conditions, review the Arborist Report, and preparation of a geologic hazard report that satisfies the requirements of Tillamook County Land Use Ordinance, Section 3.57, 4d, 4e, and 5.

Additionally, we have received and reviewed the following document via e-mail:

- **"DDH 23/702 Visual Tree Assessment 50400 South Beach Road Neskowin, OR 97149" prepared by David D. Hunter, Consulting Arborist, dated December 13, 2023.**

2.0 SITE CONDITIONS

2.1 Site Location and Description

The project site is located at Tax Lot 4800 (Map 5S-11-35 DA) along South Beach Road in Neskowin, Tillamook County, Oregon. The property is oceanfront, and sits atop of a sea cliff approximately one mile south of Neskowin. The property location relative to surrounding features is provided in Figure 1 below.

The 0.81-acre property is generally rectangular in shape (approximately 100 feet wide by 350 feet long) and is bordered by South Beach Road to the east, residential properties to the north and south, and the Pacific Ocean the west, as shown below in Figure 1.

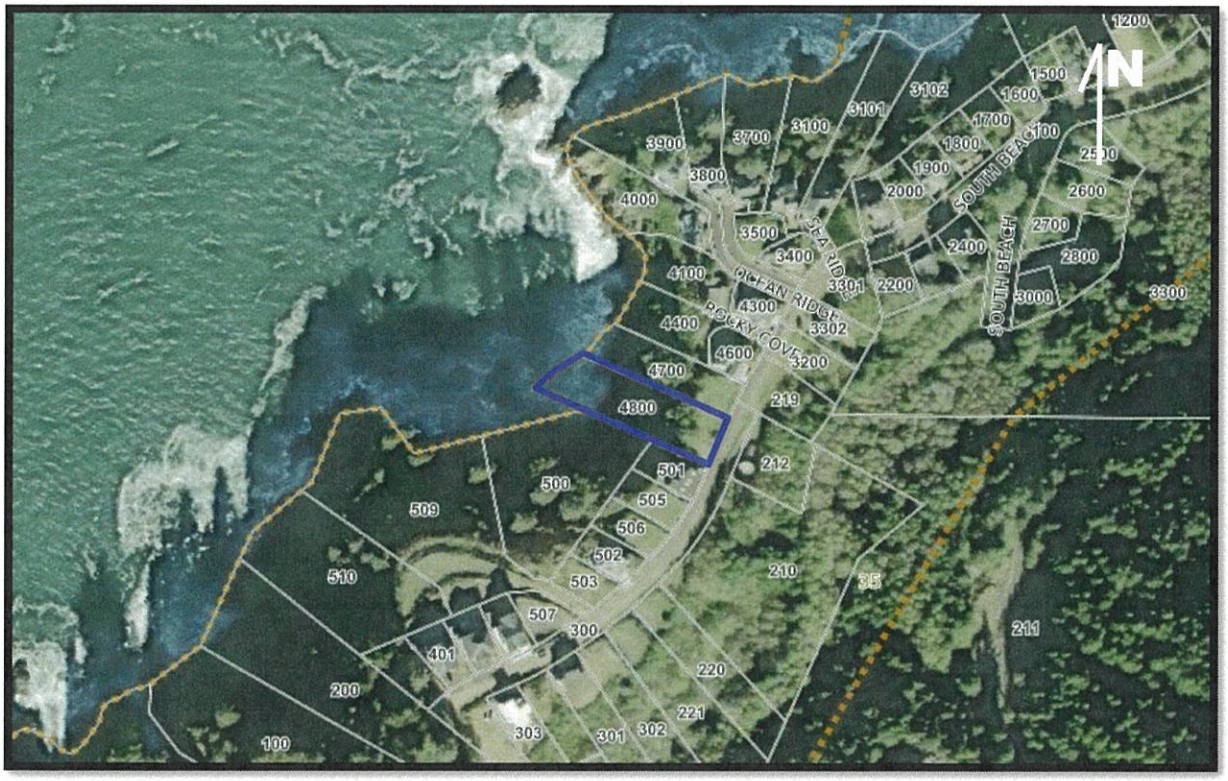

Figure 1: Property location, outlined in blue (base image source: http://tillamookcountymaps.co.tillamook.or.us/).

Along the approximately 100-foot property frontage along South Beach Road, the subject lot includes a narrow, relatively flat and unvegetated building lot ranging in width from approximately 60 to 70 feet (as measured from the west edge of South Beach Road to the top of the cliff slope). This buildable portion of the site is at an elevation of approximately 260 feet above the Pacific Ocean beach below. Below the site to the west, the upper vegetated elevations (i.e. uppermost 20 to 40 feet) of the bluff slopes steeply at approximately 1H:1V (Horizontal: Vertical), then transitions to a near-vertical to vertical face to the rocky shoreline. There is no shoreline access from the property and no beach except during extreme low tides. See Figure 2 below for a Google Earth view of the site atop the sea cliff from the west. See Photo 1 and 2 below for the existing site conditions, see Figure 4 for site map showing vegetated and unvegetated areas of the bluff.

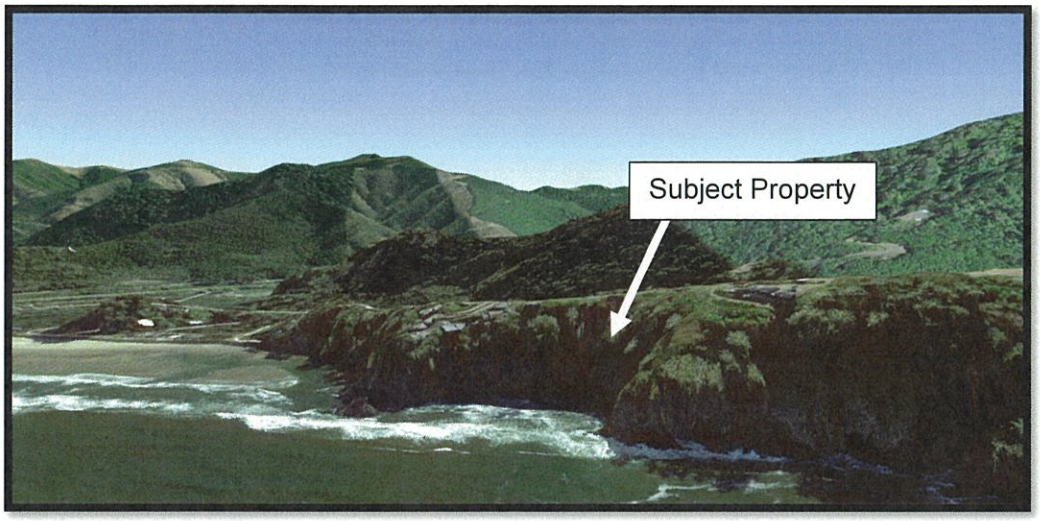

Figure 2: Google Earth view of the property looking east.

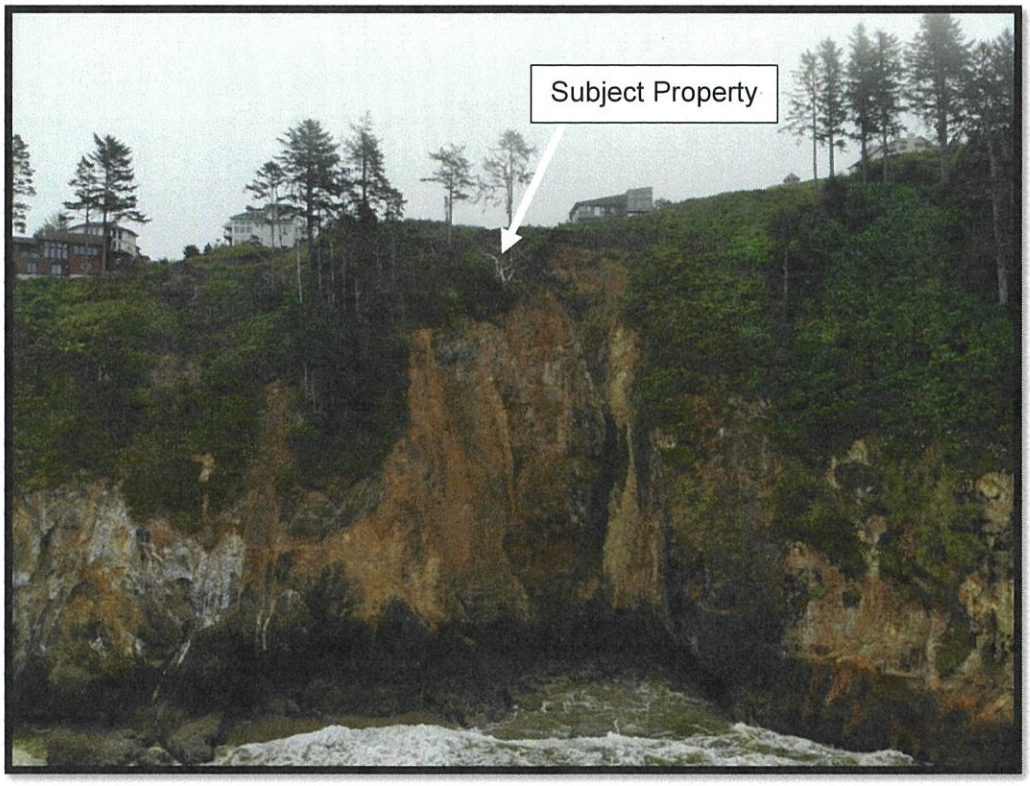

Photo 1: Current conditions of the subject property, looking east. The proposed structure will be located photo left of the grey structure at the top of the unvegetated portion of the cliff face.

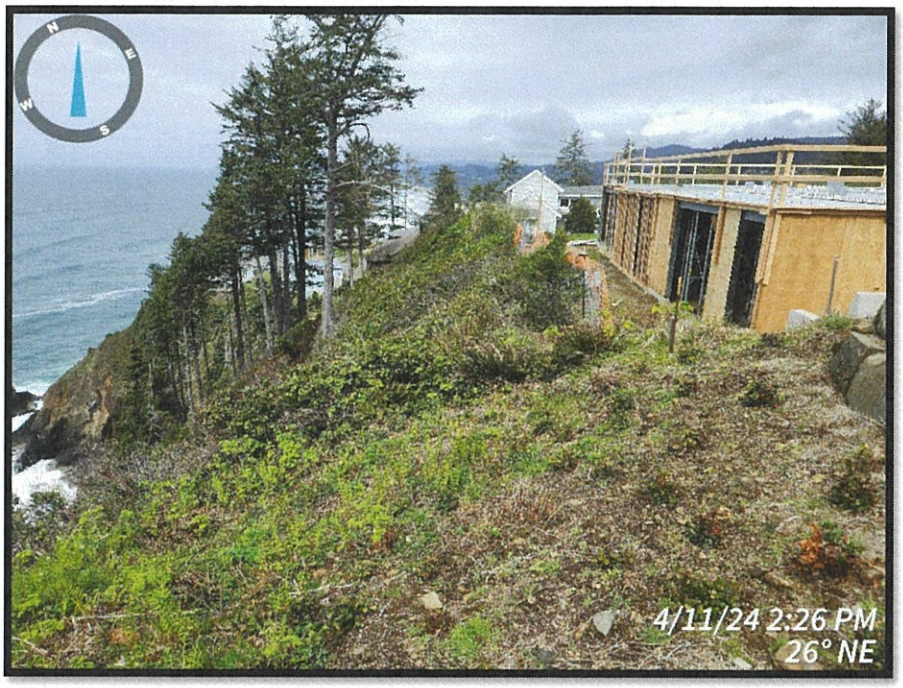

Photo 2: Recent conditions of the subject property, viewed from southwest looking north-northeast.

Photo 3: View of Sitka stump (yellow dashed circle), looking downslope from the head of the bluff, looking west.

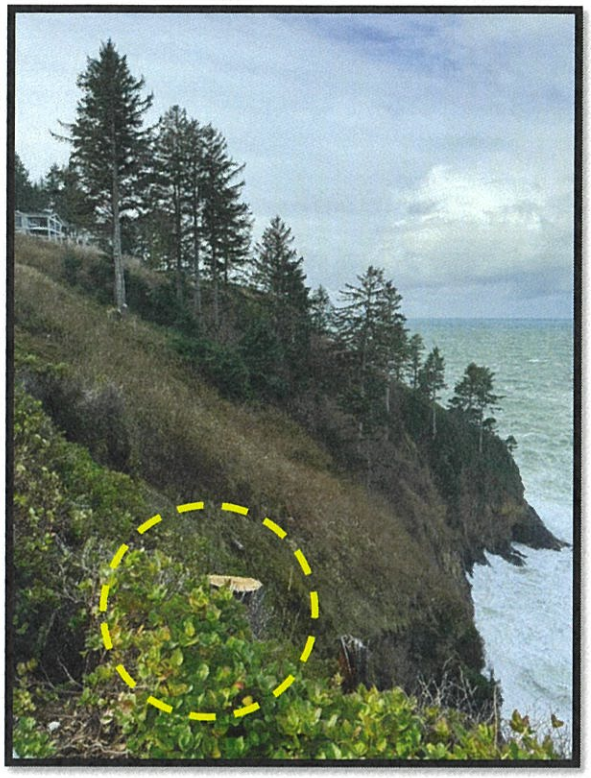

Photo 4: View of the stump of the removed Sitka spruce (yellow dashed circle). View is looking south toward the Pacific Ocean.

Photo 5: View of beach/oceanic basalt outcrops.

3.0 SITE GEOLOGY AND GEOLOGIC HAZARD ASSESSMENT

3.1 Soil Survey

The United States Department of Agriculture (USDA) Soil Survey provides geographical information of the soils in Tillamook County as well as summarizing various properties of the soils. The USDA shows the native soils on the eastern part of the site mapped as Salander-Necanicum complex with 30 to 60 percent slopes, while the western part increases to 60 to 90 percent slopes[1]. This well drained complex is formed on mountain slopes from a parent material of colluvium and residuum derived from igneous rock.

3.2 Geology

The region is underlain by a framework of Miocene aged (23 to 5 million years ago) volcanic rocks and Oligocene (33 to 23 million years ago) to Miocene aged marine sedimentary deposits that have been deposited over a basement rock of Eocene-aged (54 to 33 million years ago) volcanic arc deposits. Overlying this framework are Quaternary–aged (1.8 million years ago to present) marine terrace deposits, beach and dune deposits and landslide deposits.

The project area was mapped by Snavely, Macleod and Minasian (1990) of the U.S. Geological Survey to include the bedrock units of Tchb-Basalt of Cascade Head (Upper Eocene)[2]. The Basalt of Cascade Head is described as subaerial flows of massive to platy basalt that is locally very vesicular. See Figure 3 below for the geologic map of the site location, as currently mapped by the DOGAMI Oregon Geologic Database Compilation 7 (McClaughrey et al. 2023).

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[1] Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/ accessed August 5, 2021.

[2] Snavely, P.D., MacLeod, N.S., and Minasian, D.L., 1990, Preliminary geologic map of the Neskowin quadrangle, Lincoln and Tillamook Counties, Oregon: U.S. Geological Survey, Open-File Report OF-90-413, scale 1:24,000

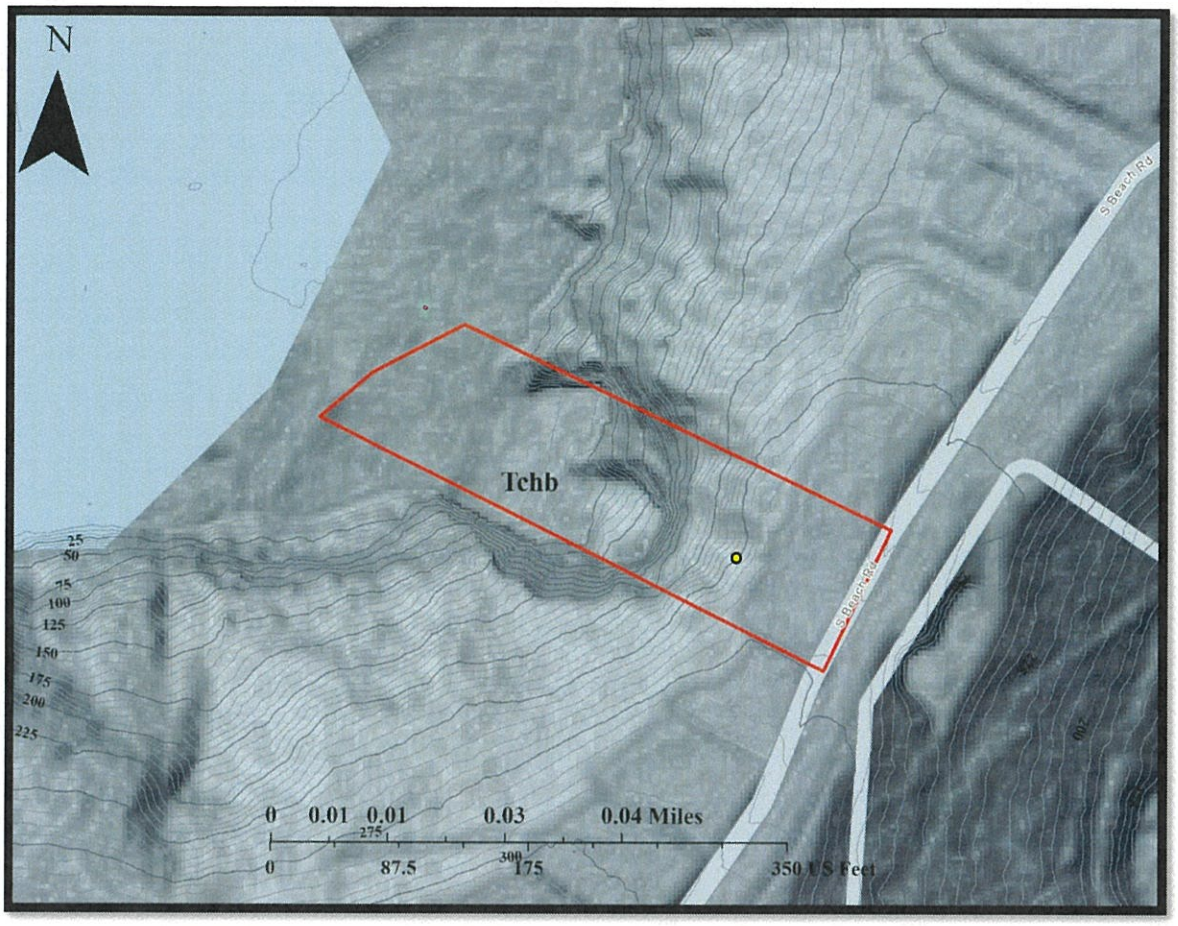

Figure 3: Geologic map of the area (source: DOGAMI OGDC-7). Subject tax lot outlined in red; approximate location of Sitka Spruce notated as a yellow point; Tchb: Tertiary Basalt of Cascade Head; Contour interval = 5 feet

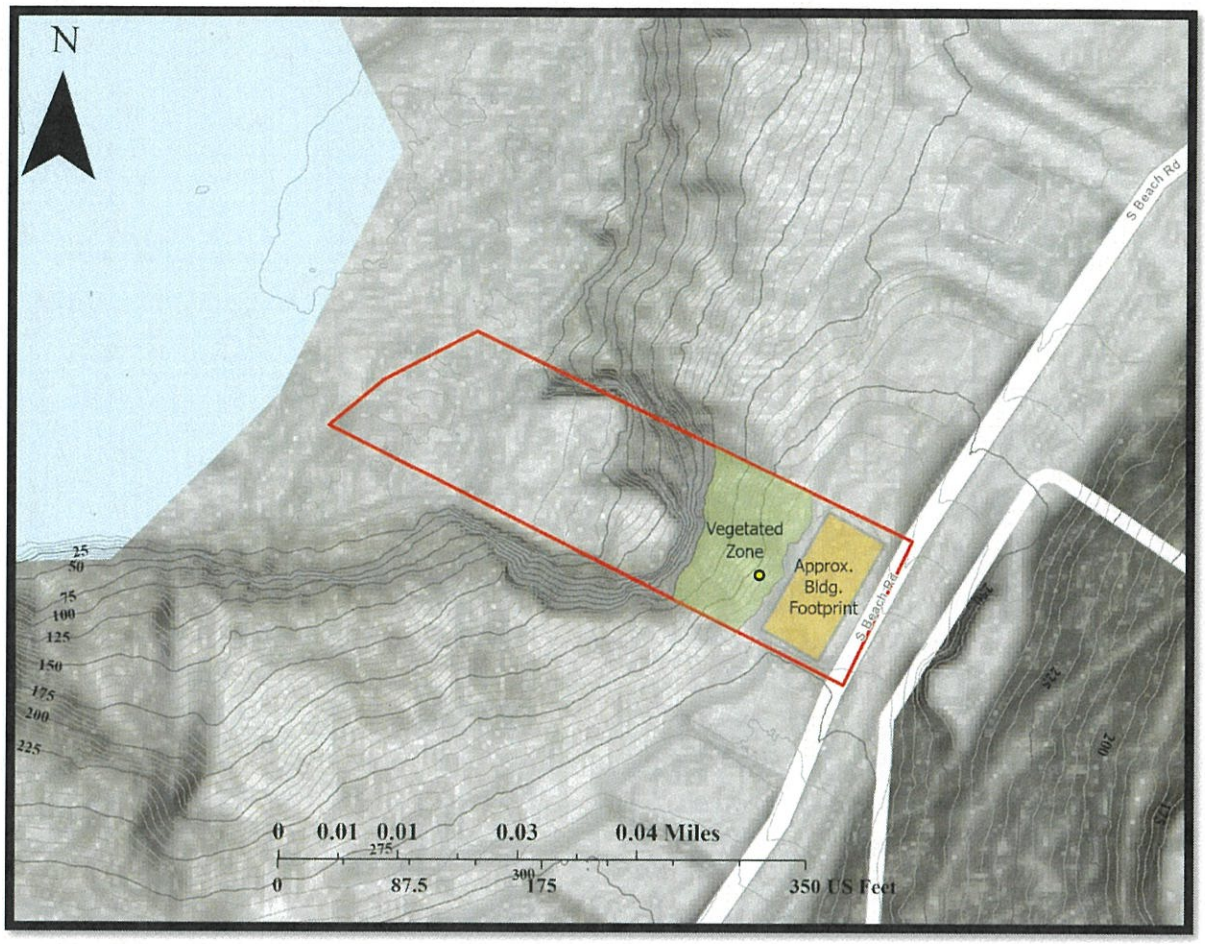

Figure 4: Vegetated Zone and Building Footprint Map. Subject tax lot outlined in red; approximate location of Sitka Spruce notated as a yellow point; Contour interval = 5 feet

3.3 Seismicity

Oregon's position at the western margin of the North American Plate and its location relative to the Pacific and Juan de Fuca plates have had a major impact on the geologic development of the state. The interaction of the three plates has created a complex set of stress regimes that influence the tectonic activity of the state. The western part of Oregon is heavily impacted by the influence of the active subduction zone formed by the Juan de Fuca Oceanic Plate converging upon and subducting beneath the North American Continental Plate off the Oregon coastline.

The Cascadia Subduction Zone, located approximately 100 kilometers off of the Oregon and Washington coasts, is a potential source of earthquakes large enough to cause significant ground shaking at the subject site. Research over the last several years has shown that this offshore fault zone has repeatedly produced large earthquakes, on average, every 300 to 700 years. It is generally understood that the last great Cascadia Subduction Zone earthquake occurred about 300 years ago, in 1700 AD. Although researchers do not necessarily agree on the likely magnitude, it is widely believed that an earthquake moment magnitude (M_w) of 8.5 to 9.5 is possible. The duration of strong ground shaking is estimated to be greater than 1 minute, with minor shaking lasting on the order of several minutes.

Additionally, earthquakes resulting from movement in upper plate local faults are considered a possibility. Crustal earthquakes are relatively shallow, occurring within 10 to 20 kilometers of the surface. Oregon has experienced at least two significant crustal earthquakes in the past decade—the Scotts Mills (Mt. Angel) earthquake (M_w 5.6) on March 25, 1993 and the Klamath Falls earthquake (M_w 5.9) on September 20, 1993. Based on limited data available in Oregon, it would be reasonable to assume a M_w 6.0 to 6.5 crustal earthquake may occur in Oregon every 500 years (recurrence rate of 10 percent in 50 years). The USGS Quaternary Fault and Fold Database of the United States does not map any crustal faults in the immediate vicinity of the property; however, a mapped segment of the Cascadia fold and fault belt is located approximately 2 miles offshore to the west of the site.

In accordance with ASCE 7-16 we recommend a Site Class C (very dense soil or soft rock profile with an average standard penetration resistance of 15 to 50 blows per foot) when considering the average of the upper 100 feet of bearing material beneath the surface. This recommendation is based on the SPT blow counts, as well as our local knowledge of the area geology.

3.4 Geologic Hazards

The Oregon Department of Geology and Mineral Resources (DOGAMI) maps various geologic hazards, such as 100-year flooding, earthquake ground shaking, tsunamis, and landslides (Figures 4 through 8).[3] Based on this service, the geologic hazards associated with development of this property include the following:

- Low to very high coastal erosion hazard
- Severe expected shaking from a Cascadia earthquake (estimated magnitude 9.0+/-)
- Very strong expected earthquake shaking
- Moderate to high landslide hazard

It should be noted that liquefaction was not a mapped hazard on or near the property. We recommend that the impacts of coastal erosion, tsunami inundation, landslide hazard, and FEMA floodplain designation do not pertain to Sitka spruce tree removal. Figures 4 through 8 below show mapping of the geologic hazards presented by Oregon's HazVu.

[3] Oregon HazVu: Statewide Geohazards Viewer, available online at: http://www.oregongeology.org/sub/hazvu/ accessed 5/19/2021

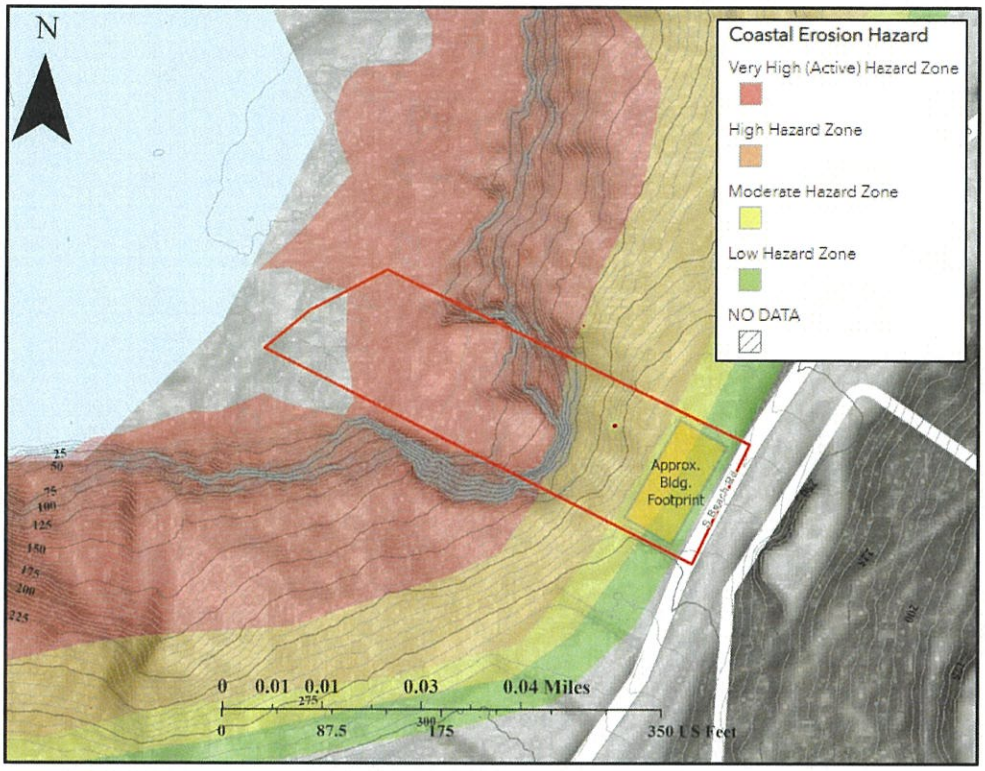

Figure 4: HazVu map showing extent and degree of coastal erosion hazard areas, subject site outlined in red.

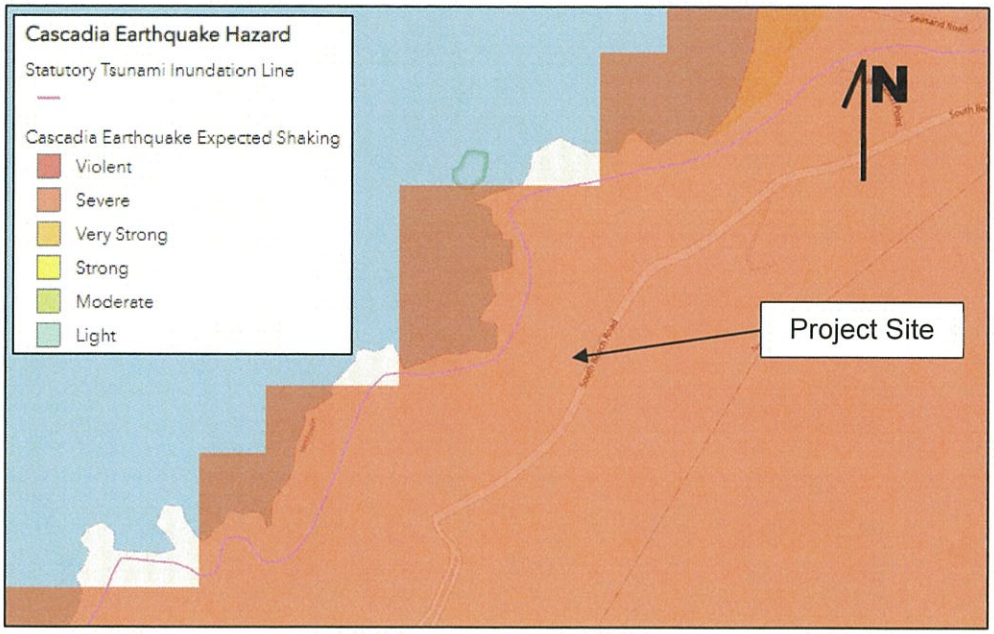

Figure 5: HazVu map showing extent and degree of Cascadia earthquake hazards.

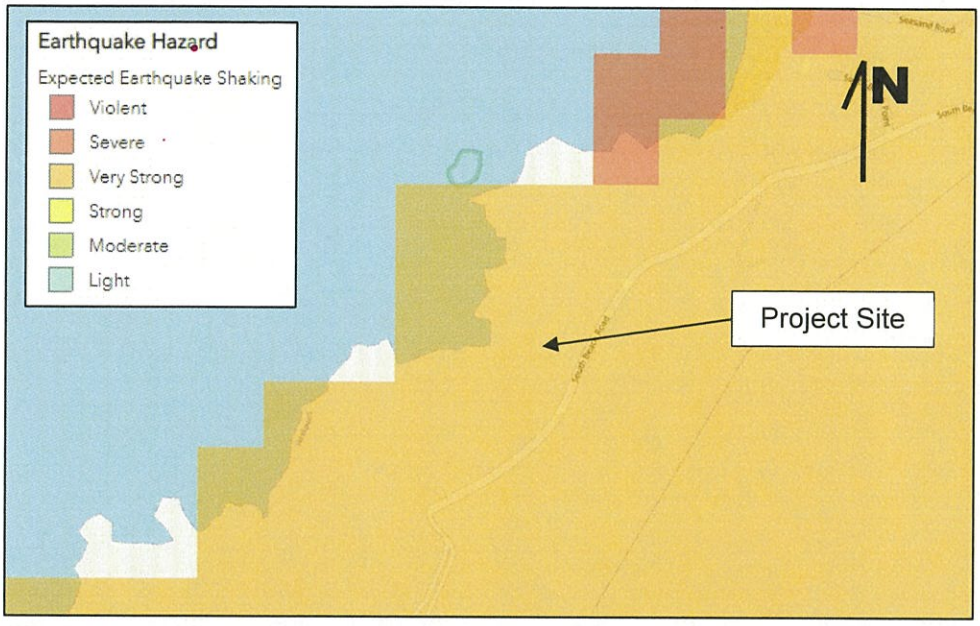

Figure 6: HazVu map showing extent and degree of expected earthquake shaking hazard.

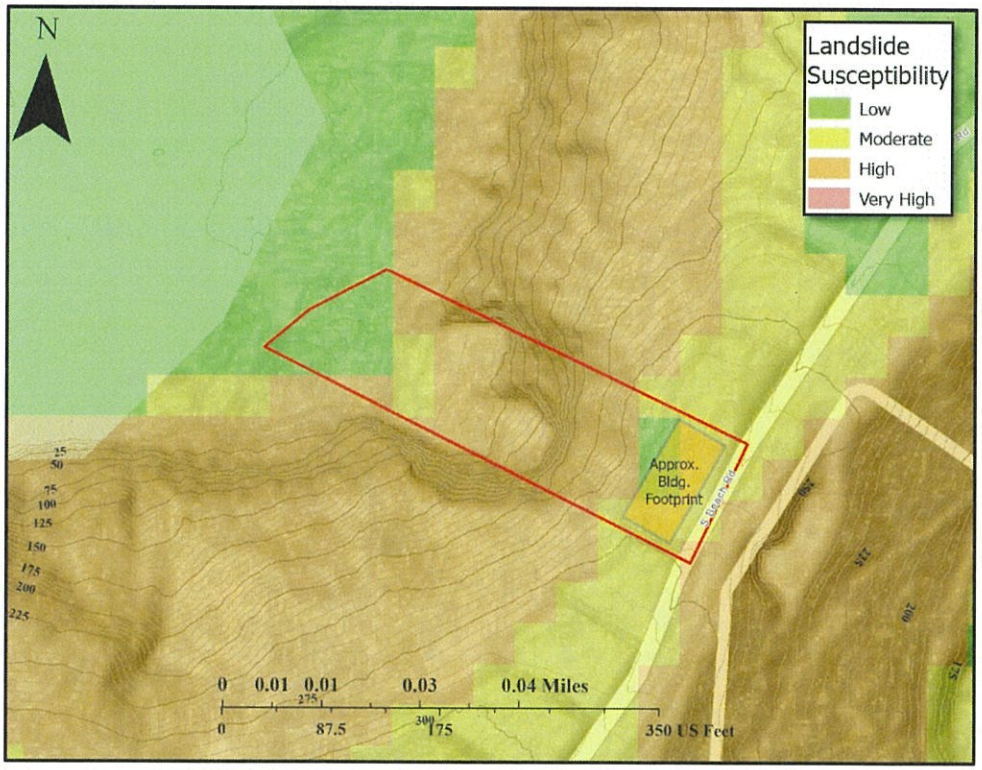

Figure 7: HazVu map showing extent and degree of landslide hazards.

Based on our site reconnaissance and previous subsurface explorations (EEI Report No. 21-157-01, September 2021), we consider the site to have the following geologic hazards:

- Minor shallow soil creep;
- Potential local slope instability associated with loose, near surface soils on the upper portion of the slope;
- Possible slope instability concerns resulting from regional seismic activity.
- Coastal erosion.

Although a major seismic event could cause increased slope erosion, to what degree is not known. We do not believe this property is at any greater risk from this hazard than other existing structures located on coastal bluffs in the area. Given the apparent density of the encountered subsurface soils and the absence of groundwater, we consider the risk of earthquake-induced liquefaction to be low.

We do not consider the site to be in a coastal erosion hazard area since it is located at an elevation of over 260 feet on a headland of dense basalt bedrock. Similarly, we do not consider tsunamis, flooding, and storm surges as hazards for this site.

It is our opinion that the proposed Sitka spruce removal on this property is feasible without a substantive increase in geologic hazard level for the property, subject to the geologic hazard risks outlined above, and the geotechnical engineering recommendations presented later in this report. Primary considerations to maintaining the existing static site slope stability include not removing the stump and root-ball of the Sitka spruce to retain soil stability during the revegetation stage. These recommendations are discussed in more detail in Section 4 below.

Ultimately, owning a home in this area of Neskowin means there is an acceptance of risk by the homeowner that the property is located on a steep cliff along the Oregon coast that is extremely dynamic and can change drastically from year to year.

3.5 Slope Stability

We qualitatively evaluated the slope stability of the site. We do not consider the site slope stability to be at risk of impacts from landsliding or substantial coastal erosion, since it is located at an elevation of over 260 feet on a headland of dense basalt bedrock that is resistive to erosion and sliding. The property appears currently stable when considering shallow slope movement and global, deep-seated landsliding, but the destabilizing effects of the slope due to a major earthquake are unknown.

4.0 SITE OBSERVATIONS AND RECOMMENDATIONS

The following is a summary of our visual reconnaissance performed by EEI Senior Geologist Rittel, R.G., on January 11, 2024. Approximately 30 minutes was spent on the property, walking and viewing the area where the tree was removed. The following is a summary of our observations.

1. Based on the areas that we could observe, there did not appear to have been any areas of substantial recent erosion on the property, and there were no apparent signs of slope instability on the parcel where the tree was removed (Photo 1). The slope generally lacked any mature trees and appears to be composed of weathered bedrock and colluvium and was generally well-drained, dense and rocky.

2. The Arborist report prepared by David D. Hunter noted that the tree before removal was observed to have a 10 percent trunk lean due to the canopy being top heavy (limb dieback) to the east in the direction of the residence currently under construction. Additionally, the tree was observed to have brown butt rot and the stump base was swollen as further evidence of root disease. The arborist also noted that areas nearby have a known history of brown butt rot failures.

3. We recommend that the stump and root-ball of the removed tree remain. Removal of the root-ball would negatively affect slope stability. The root-ball should maintain soil cohesion and slope stability for the next approximately five years or so, thus allowing for establishment of new root systems as the slope revegetates.

4. We recommend replacing the removed Sitka spruce with new vegetation, specifically with deep-rooted native species, to improve long-term slope stability.

5.0 GEOLOGIC HAZARD SUMMARY FINDINGS

Because the site is located within the coast erosion hazard zone defined by Priest and Allan, 2004, we are providing this section of our report to facilitate the review of the anticipated tree removal permit of the site. The following sections of Tillamook County Land Use Ordinance Article 3.500, Section 3.570 (Neskowin Coastal Hazards Overlay Zone), specifically subsection 5 with a focus on subsection 4(d) and 4(e), are addressed below. Note that all of the Site Description items (5(a)(A)(i) through (xi)) have been previously addressed in the report text, or (if not previously addressed) are not applicable or pertinent to this property or review. Items 5(a)(B) through 5(a)(E) are discussed below.

TCLUO Article 3.570 – Neskowin Coastal Hazards Overlay Zone

B. Description of the Fronting Beach

a. <u>Average Summer and Winter Beach Widths</u>

Based on aerial photos between 2020 and 2023 provided on Google Earth, the beach adjacent the subject property site varies in width from approximately 78 to 0 feet wide in the summer, and approximately 0 feet wide in the winter.

b. Median Beach Sediment Grain Size
The median beach sediment grain size is fine- to medium-grained sand, with rounded basalt cobbles at the base of the sea cliff. As previously stated, Peterson and Kingen (2021) indicate a mean grain size of 0.183-mm for the Neskowin area.

c. Summer and Winter Beach Elevations and Average Slopes
The typical beach slopes at this location are essentially flat based on elevations (NAV 88) derived from DOGAMI LiDAR. As typical of the Oregon Coast, the conditions are dynamic and can change substantially is a relatively short period of time, particularly during El Nino and La Nina events.

d. Elevations Above Mean Sea Level of the Beach at the Seaward Edge of the Property During Summer and Winter
Elevations provided by DOGAMI LiDAR show the contact between the beach sea cliff between 20- and 10-feet in elevation (NAVD 88).

e. Rip currents and Embayments
Rip currents are common on this part of the Oregon Coast, and rip embayments regularly set up and form in the Neskowin area. The effects of rip embayments have been particularly severe in areas north of Proposal Rock, with historical impacts of beachfront and property loss. Based on our review of available GoogleEarth satellite imagery (period ranging from 1985 and 2019), it would appear the small bay and sea cliff upon which the property rests are at risk of rip embayments. The current setback of the property, and scope of work involved (tree removal), it is not expected to be a hazard that is applicable to this project.

f. Rock Outcrops and Sea Stacks
Weathered basalt outcrops of Tertiary Cascade Head Basalt at the base of the cliff and within the small bay.

g. Depth of Beach Sand to Bedrock
Bedrock is observable at the coastline during the time our visual reconnaissance. Subsurface investigation of the property in September, 2021 indicates that the depth to bedrock is approximately 10 feet below ground surface upon the building area of the property, as well as in the area of the proposed work (Sitka spruce removal).

3. Analyses of Erosion and Flooding Potential

a. DOGAMI Beach Monitoring Data
Not applicable to this site.

b. Human Activities Affecting Shoreline Erosion

There is no access from the property to the shoreline, which is primarily under water. Human activity is not expected to affect at the shoreline. Removal of the Sitka spruce, assuming geotechnical recommendations are followed, should have minimal to no impact on shoreline erosion.

c. Mass Wasting, Weathering, Landsliding, and Slumping
As previously discussed in this report, the site is not mapped on a known landslide, however, there is clear landslide topography on the site along the bluff slope. It is not anticipated that the Sitka spruce removal will increase this risk, assuming geotechnical recommendations in this report are followed.

d. Wave Runup Beyond Mean Water Elevation
Not applicable to this site.

e. Frequency of Erosion-Inducing Processes
The average erosion rate for coastal bluffs composed of basalt is between 0.1 to 0.2 feet per year (Priest, 2004).

f. Dune-Backed Shoreline Erosion
Not applicable for this site.

g. Bluff-Backed Shoreline Erosion
Not applicable to this site

h. Potential of Sea Level Rise
Pertaining to erosion, we recommend that the relative impacts of potential sea level rise is insignificant based on the site conditions (rock sea cliff) at this location.

i. Estimation of Annual Erosion Rate
The average erosion rate for coastal bluffs composed of basalt is between 0.1 to 0.2 feet per year (Priest, 2004).

4. Assessment of Potential Reactions to Erosion Episodes

a. Legal Restrictions of Shoreline Protective Structures
Shoreline Protective Structure considerations are not pertinent to this scope of work.

b. Potential Reactions to Erosion Events and Future Erosion Control
Based on the geologic hazard conditions at the subject property, potential reactions to erosion events and future erosion control may include vegetation maintenance/management.

c. Annual Erosion Rate
The average erosion rate for coastal bluffs composed of basalt is between 0.1 to 0.2 feet per year (Priest, 2004).

5. Recommendations

a. Safety and Compliance of all Local Requirements
In general, based on our reconnaissance, review of geologic hazard conditions associated with the subject property, and our understanding of the project, we recommend that the proposed project can be performed at an acceptable level of safety and in compliance with local requirements.

b. Preservation of Vegetation and Within Setback Area
We understand that the project includes no changes to the existing grade on or adjacent the subject site, and that vegetation (other than the removal of the single Sitka spruce) will not be impacted (and further, will be preserved and protected during project implementation).

c. Consideration of Local Variance Process to Reduce Building Setback
As noted previously, the proposed property improvements do not include changes to the existing setback, and therefore we recommend that consideration of a setback variance is not applicable to this project.

d. Control and Direction of Stormwater Drainage Away From the Ocean
Removal of the tree does to create any new impermeable surfaces or substantive changes to the local stormwater regime, and therefore consideration of this item is not pertinent to this scope of work.

6.0 CONCLUSIONS

Broadly, EEI typically recommends that maintaining trees on slopes is beneficial for slope stability. Because saturated soil is often a trigger of slope instability, mature trees typically help stabilize steep slopes due to their impact on the soil water regime (e.g., tree canopies serve to dissipate water falling onto slopes, and root systems can act as "pumps" to control groundwater). In addition, the trees reinforce the soil through their root systems. Usually removing vegetation such as large trees from a slope may subject the slope area to increased erosion potential and may increase susceptibility to landsliding.

However, in the case of the subject property, we recommend that the removal of this tree will have no substantive negative overall impact on erosion susceptibility or slope stability. The leaning and top-heavy tree (if it had been allowed to remain intact) was susceptible to being wind-blown, with potential to fall downslope along with the connected root ball – resulting in denuded, erodible soil. This outcome would negatively affect slope stability more so than allowing the cut stump and root system to remain in place. And while unrelated to slope stability, failure to remove the tree could result in the tree falling eastward in impacting the structure, and removal of the tree is beneficial for other reasons unrelated to slope stability.

The decaying root systems should provide strength for some time (typically 5 years or more, depending on tree species and size), while the new trees establish their root systems. Furthermore, based on the limited extent of tree removal (i.e. removal of a single tree on parcel experiencing root rot and lean) and because this stump and roots will remain in place (opposed to allowing the tree to naturally die and/or fall), we recommend that the impacts to slope stability

from the tree removal will be minimal provided that the slope is subsequently replanted with trees as soon as possible.

It should be noted that the stump could be flush cut at the ground surface, but we recommend that under no circumstances should the subsurface portion of stumps or root mass be removed. We also recommend replacing the removed tree with new vegetation. In terms of vegetation on slopes, we generally recommend all invasive vegetation (such as Scotch Broom, English ivy and Himalayan blackberry) is removed where encountered on the slope and (where possible) that deep-rooted species of native or "native allies" trees and shrubs are densely planted on the slope. Irrigation may be necessary while the root systems become established, especially through the dry summer months. Once established, vegetation usually requires little to no maintenance and little to no irrigation. We generally recommend new trees and shrubs are spaced roughly 3 to 5 feet apart; however, an arborist and landscape designer should be contacted for specific re-planting recommendations and to guarantee successful revegetation of the removed tree.

In summary, provided the recommendations in this report are followed, we recommend that slope stability impacts from the removed tree are unlikely, that potential impacts from denuding of the slope below the residence can be mitigated by leaving the stump in place and revegetating the slope as soon as possible (i.e. in the months following tree removal). In the event that minor localized failures were to occur; they would be minor and unlikely to extend beyond the property boundaries. Excluding the potential for limited localized slope failures and erosion on the referenced slope, we do not foresee any greater adverse impacts that would subject the slope areas on (or adjacent) the property to destabilization.

Note that just because the slopes appear stable at this time and do not show past signs of sliding, slope stability can change over time. Maintenance of vegetation and controlling drainage on the property are both important to maintaining slope stability. In addition, our evaluation of the slopes was based solely on visual observation; we did not perform a subsurface investigation that would better evaluate the slopes. Owning a sloping property inherently carries more risk than a slightly sloping or level property.

7.0 LIMITATIONS

The geotechnical recommendations presented in this report are based on the available project information described in this report. If any of the noted information is incorrect, please inform EEI in writing so that we may amend the recommendations presented in this report if appropriate and if desired by the client. EEI will not be responsible for the implementation of its recommendations when it is not notified of changes in the project.

This report has been prepared for the exclusive use of Winsome Construction, LLC for the specific application to the lot Tax Lot 4800, South Beach Road, Neskowin, Tillamook County, Oregon. EEI does not authorize the use of the advice herein nor the reliance upon the report by third parties without prior written authorization by EEI.

We appreciate the opportunity to perform this geotechnical evaluation. If you have any questions pertaining to this report, or if we may be of further service, please contact Adam Reese at 360-567-1806 (office) or 503-502-2726 (cell).

Sincerely,

Earth Engineers, Inc.

Carson Rittel, R.G.
Senior Geologist

Adam Reese, C.E.G., R.G.
Principal Engineering Geologist