Coos County Land Use Permit Application

SUBMIT TO COOS COUNTY PLANNING DEPT. AT 60 E. SECOND STREET OR MAIL TO: COOS COUNTY PLANNING 250 N. BAXTER, COQUILLE OR 97423. EMAIL PLANNING@CO.COOS.OR.US ***PHONE: 541-396-7770***

DR-21-163

$2186 Beaches + Dunes

FILE NUMBER: ACU-21-088

Date Received: 12/23/21 *Receipt #:* 10517609 *Received by:* MB

13

This application shall be filled out electronically. If you need assistance please contact staff.

If the fee is not included the application will not be processed.

(If payment is received on line a file number is required prior to submittal)

LAND INFORMATION

A. Land Owner(s) Edward A and Lee Riddell

Mailing address: PO Box 1765, Jackson, WY 83001

Phone: 307 690-3980 Email: ed@edwardriddell.com

Township:	Range:	Section:	¼ Section:	1/16 Section:	Tax lots:
29S	15W	1	C	C	1801
Select	Select	Select	Select	Select	

Tax Account Number(s): 2934801

Tax Account Number(s)

Zone: Select Zone Controlled Development (CD)

Please Select

B. Applicant(s) Edward A and Lee Riddell

Mailing address: PO Box 1765, Jsvkdon, WY 83001

Phone: 307 690-3980

C. Consultant or Agent: N/A

Mailing Address

Phone #: Email:

Type of Application Requested

- ☐ Comp Plan Amendment
- ☐ Text Amendment
- ☐ Map - Rezone
- ☑ Administrative Conditional Use Review - ACU
- ☐ Hearings Body Conditional Use Review - HBCU
- ☐ Variance - V
- ☐ Land Division - P, SUB or PUD
- ☐ Family/Medical Hardship Dwelling
- ☐ Home Occupation/Cottage Industry

Special Districts and Services

Water Service Type: City Water

Sewage Disposal Type: On-Site Septic

School District: Bandon

Fire District: Bandon RFPD

Please include the supplement application with request. If you need assistance with the application or supplemental application please contact staff. Staff is not able to provide legal advice. If you need help with findings please contact a land use attorney or contultant.

Any property information may be obtained from a tax statement or can be found on the County Assessor's webpage at the following links: Map Information Or Account Information

D. ATTACHED WRITTEN STATEMENT. With all land use applications, the "burden of proof" is on the applicant. It is important that you provide information that clearly describes the nature of the request and indicates how the proposal complies with all of the applicable criteria within the Coos County Zoning and Land Development Ordinance (CCZLDO). You must address each of the Ordinance criteria on a point-by-point basis in order for this application to be deemed complete. A planner will explain which sections of the Ordinance pertain to your specific request. The information described below is required at the time you submit your application. The processing of your application does not begin until the application is determined to be complete. An incomplete application will postpone the decision, or may result in denial of the request. Please mark the items below to ensure your submittal is complete.

Application Check List: Please make off all steps as you complete them.

I. [X] A written statement of intent, attached to this application, with necessary supporting evidence which fully and factually describes the following: (attached)

1 [X] A complete explanation of how the request complies with the applicable provisions and criteria in the Zoning Ordinance. A planner will explain which sections of the Ordinance pertain to your specific request. You must address each of the Ordinance criteria on a point-by-point basis in order for this application to be deemed complete.

2. [X] A description of the property in question, including, but not limited to the following: size, vegetation, crops grown, access, existing buildings, topography, etc.

3. [X] A complete description of the request, including any new structures proposed.

4. [X] If applicable, documentation from sewer and water district showing availability for connection. (attached)

II. [X] A plot plan (map) of the property. Please indicate the following on your plot plan: (attached)

1. [X] Location of all existing and proposed buildings and structures
2. [X] Existing County Road, public right-of-way or other means of legal access
3. [X] Location of any existing septic systems and designated repair areas
4. [X] Limits of 100-year floodplain elevation (if applicable)
5. [X] Vegetation on the property
6. [X] Location of any outstanding physical features
7. [X] Location and description (paved, gravel, etc.) of vehicular access to the dwelling location

III. [X] A copy of the current deed, including the legal description, of the subject property. Copies may be obtained at the Coos County Clerk's Office. (attached)

I certify that this application and its related documents are accurate to the best of my knowledge. I am aware that there is an appeal period following the date of the Planning Director's decision on this land use action. I understand that the signature on this application authorizes representatives of the Coos County Planning Department to enter upon the subject property to gather information pertinent to this request. If the application is signed by an agent, the owner's written authorization must be attached.

If this application is refereed directly to a hearings officer or hearings body I understand that I am obligated to pay the additional fees incurred as part of the conditions of approval. I understand that I/we are not acting on the county's behalf and any fee that is a result of complying with any conditions of approval is the applicants/property owner responsibility. I understand that conditions of approval are required to be complied with at all time and an violation of such conditions may result in a revocation of this permit. Signatures required below for application processing.

Edward A Riddell — Digitally signed by Edward A Riddell Date: 2021.12.09 17:17:23 -07'00'

Lee Riddell — Digitally signed by Lee Riddell Date: 2021.12.09 17:17:46 -07'00'

ACCESS INFORMATION

The Coos County Road Department will be reviewing your proposal for safe access, driveway, road, and parking standards. There is a fee for this service. If you have questions about these services please contact the Road Department at 541-396-7660.

Property Address: TRS-29S-15W-01CC TL 1801 (Lot 1801 on Gould Ave, Bandon, OR

Type of Access: Public Road Name of Access: Driveway

Is this property in the Urban Growth Boundary? No
Is a new road created as part of this request? No

Required parking spaces are based on the use of the property. If this is for a residential use two spaces are required. Any other use will require a separate parking plan submitted that is required to have the following items:

- Current utilities and proposed utilities;
- Roadmaster may require drawings and specs from the Oregon Standards Specification Manual (OSSC) (current edition).
- The location and design of bicycle and pedestrian facilities shall be indicated on the site plan if this is a parking plan;
- Location of existing and proposed access point(s) on both sides of the road where applicable;
- Pedestrian access and circulation will be required if applicable. Internal pedestrian circulation shall be provided in new commercial, office, and multi-family residential developments through the clustering of buildings, construction of walkways, landscaping, accessways, or similar techniques;
- All plans (industrial and commercial) shall clearly show how the internal pedestrian and bicycle facilities of the site connect with external existing or planned facilities or systems;
- Distances to neighboring constructed access points, median openings (where applicable), traffic signals (where applicable), intersections, and other transportation features on both sides of the property;
- Number and direction of lanes to be constructed on the road plus striping plans;
- All planned transportation features (such as sidewalks, bikeways, auxiliary lanes, signals, etc.); and
- Parking and internal circulation plans including walkways and bikeways, in UGB's and UUC's.

Additional requirements that may apply depending on size of proposed development.

a. Traffic Study completed by a registered traffic engineer.
b. Access Analysis completed by a registered traffic engineer
c. Sight Distance Certification from a registered traffic engineer.

Regulations regarding roads, driveways, access and parking standards can be found in Coos County Zoning and Land Development Ordinance (CCZLDO) Article 7.

By signing the application I am authorizing Coos County Roadmaster or designee to enter the property to determine compliance with Access, Parking, driveway and Road Standards. Inspections should be made by calling the Road Department at 541-396-7660

Coos County Road Department Use Only

Roadmaster or designee: _____

☐ Driveway ☐ Parking ☐ Access ☐ Bonded Date: Receipt #_____

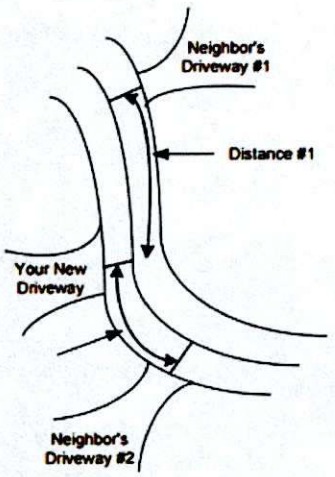
File Number: DR-21-

ADDRESS APPLICATION INFORMATION FILE NUMBER: AD-

ADDRESS OF DRIVEWAY #1 CLOSEST TO YOUR NEW DRIVEWAY: 1505 Gould Avenue

DISTANCE FROM DRIVEWAY #1 TO YOUR NEW DRIVEWAY: 25 feet

Is this driveway on the same side of the road as your Driveway: No



ADDRESS OF DRIVEWAY #2 CLOSEST TO YOUR NEW DRIVEWAY: 1600 Gould Avenue

DISTANCE FROM DRIVEWAY #2 TO YOUR NEW DRIVEWAY: 70 feet

Is this driveway on the same side of the road as your Driveway: Yes

The distance information is important from your new driveway to the closest driveways on either side of you (doesn't matter which side of the road) and what the addresses are to those two driveways. This information is important to include in the formula used to calculate the correct address.

Staff from the County Road Department will place the stake and once the driveway stake has been placed, it must not be moved. If your stake is removed or damaged you may purchase replacements.

Additional Notes or directions:

This lot is in the Sunset City development and all the driveways are already in place. This lot already has a driveway and has previously received a Conditional Use Permit in 2001.

☐ This application is not required.

SANITATION INFORMATION

If this is a request for a recreational, commercial, industrial, vacation rental, manufactured home park, mass or small gathering Coos Health and Wellness, Environmental Health Staff will be reviewing the proposal to ensure the use meets environmental health standards for sanitation and water requirements to serve the facility. If the proposal indicates that you are using a community water system a review may be required. A fee is charged for this service and shall be submitted with the application $83.00. If you have questions about regulations regarding environmental health services please call 541-266-6720. This form is required to be signed off for any type of subdivision, recreational, commercial, industrial, vacation rental, manufactured home park, mass or small gathering.

Water Service Type: Shared/Community Sytem Sewage Disposal Type: On-site septic

Please check ☐ if this request is for industrial, commercial, recreational or home base business use and complete the following questions:

- How many employees/vendors/patrons, total, will be on site?
- Will food be offered as part of the an on-site business?
- Will overnight accommodations be offered as part of an on-site business?
- What will be the hours of operation of the business?

Please check ☐ if the request is for a land division.

Coos County Environmental Health Use Only:

Staff Reviewing Application: _____

Staff Signature: _____

☐ This application is found to be in compliance and will require no additional inspections

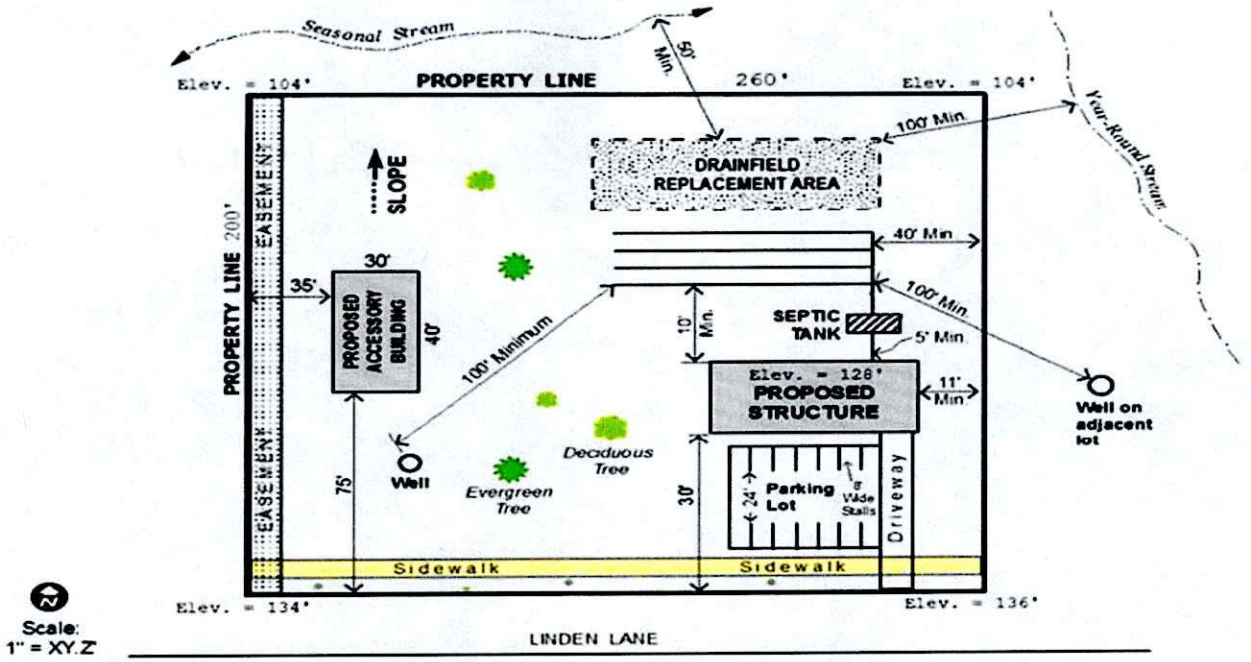
☐ This application is found to be in compliance but will require future inspections

☐ This application will require inspection prior to determining initial compliance. The applicant shall contact Coos Health and Wellness, Environmental Heath Division to make an appointment.

Additional Comments:

Plot Plan
The grid for the plot plan is found on the next page

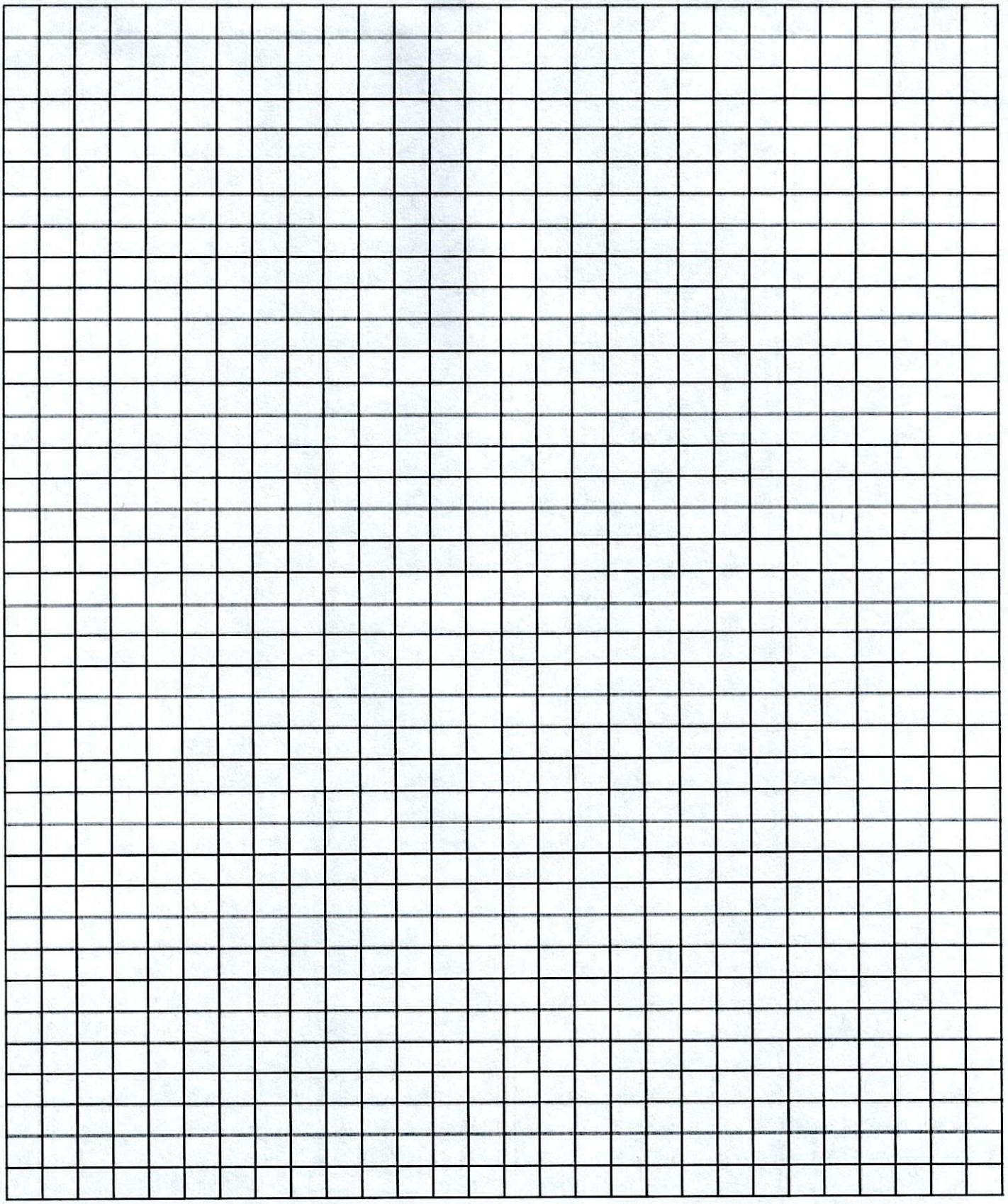
SAMPLE PLOT PLAN



ITEMS THAT MUST BE ON THE PLOT PLAN:
At a minimum, the site plan should provide information on the following items:

- Existing and proposed lot lines, lot or parcel numbers, and acreage/square footage of lots.
- Dimensions of all illustrated features (i.e. all structures, septic systems, driveways, roads, etc.)
- Significant natural features (slopes greater than 20%, geologic hazards, wetlands, drainage ways, rivers, streams, and the general location of existing trees, etc.).
- Existing easements (access, storm drainage, utility, etc.).
- Existing and proposed (structures, outbuildings, septic, etc.) on site and on adjoining properties.
- Existing and proposed road locations including widths, curbs, and sidewalks.
- Existing and proposed driveway approach locations on site, existing driveway approaches on adjoining properties on the same side of the street, and existing driveway approaches across the street from the site.
- Contiguous properties under the same ownership.
- General predevelopment topographical information (minimum 10' contour intervals).
- Location of utilities.
- If redevelopment is viable in the future, a redevelopment plan should be included.
- Preliminary site utility plan.

- Please add any additional Road or parking items from the parking form.



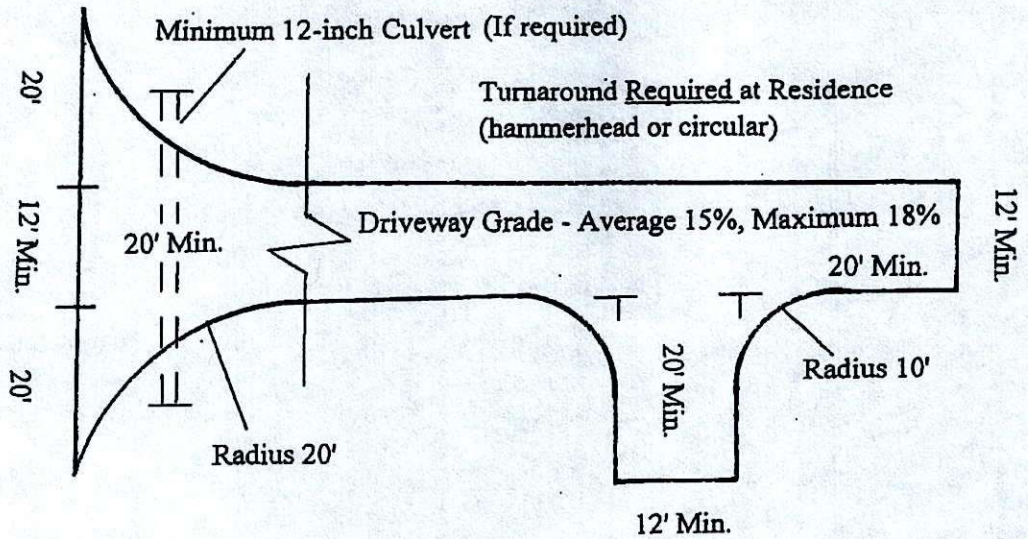
ADDITIONAL DRIVEWAY, ROAD, PARKING STANDARDS
DRIVEWAY STANDARDS DRAWING – SINGLE RESIDENCE

Sight Distance Requirements (at the approach entrance)

- Speed less than 35 mph – 100' both directions
- Speed greater than 35mph – 150' both directions

All Weather Surface – minimum 4 – inches aggregate base or as required by Roadmaster.

Figure 7.1.425



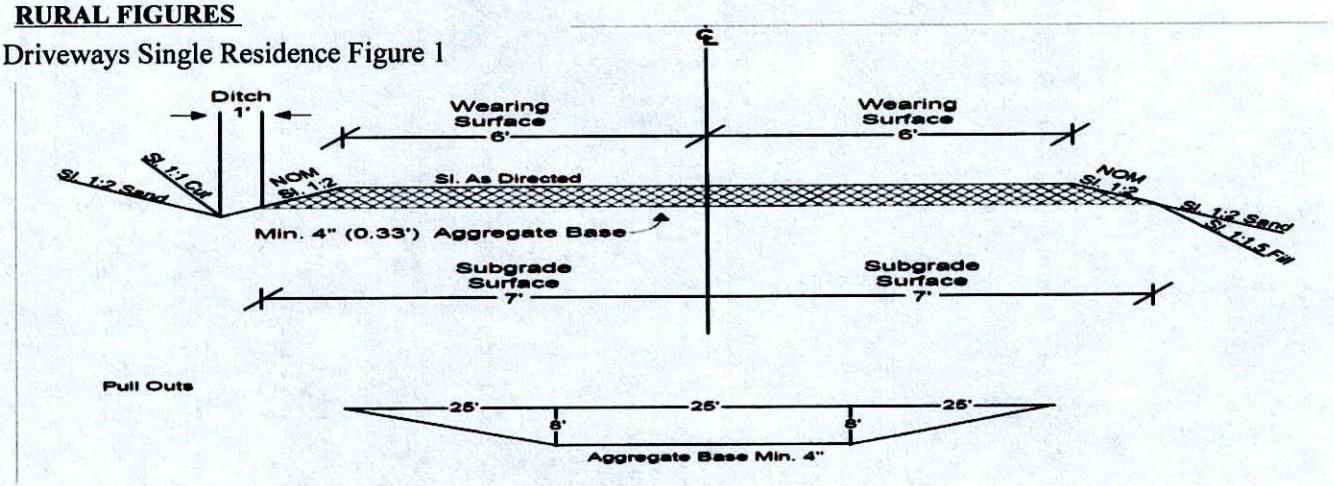
Construct appropriate ditches to prevent water runoff from discharging from the land onto a public road under county jurisdiction. Pursuant to ORS 368.256 the creation of a road hazard prohibited.

If driveway is over 1,000 ft., a pullout is required every 600 ft.

If a driveway cannot meet the maximum 18% grade then a legal agreement may be signed and recorded at the County Clerk's office releasing the County from any liability from such driveway development. This document must be referenced on the property deed to allow future purchasers know that the driveway does meet standard. A sign shall be placed at the bottom of the driveway to warn any users of the driveway that it is not built to standard. Proof must be filed with the Planning and Road Department that the documents have been filed and a sign has been placed. The form located on the following page must be completed, signed and recorded prior to any land use authorizations.

RURAL FIGURES

Driveways Single Residence Figure 1



FORESTRY, MINING OR AGRICULTURAL ACCESS:

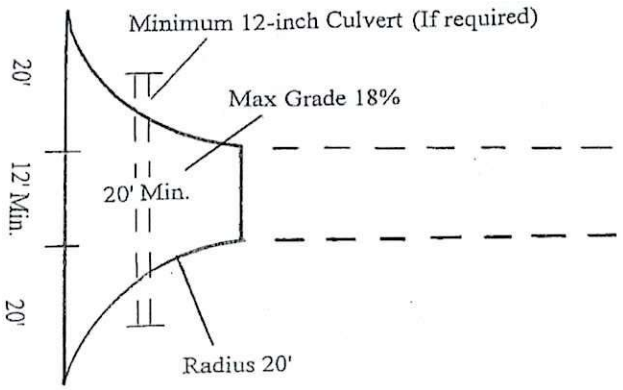
A private road which is created to provide ingress or egress in conjunction with the use of land for forestry, mining or agricultural purposes shall not be required to meet minimum road, bridge or driveway standards set forth in this ordinance, nor are such resource-related roads, bridges or driveways reviewable by the County. However, all new and re-opened forestry, mining or agricultural roads shall meet the access standards listed in this section.

Forestry, Mining or Agricultural Access Standard drawing
Sight Distance Requirements (at the approach entrance)

- Speed less than 35 mph – 100' both directions
- Speed greater than 35 mph – 150' both directions

All Weather Surfaces – minimum aggregate base as required by the Roadmaster
The access will be developed from the edge of the developed road.

Figure 7.1.450

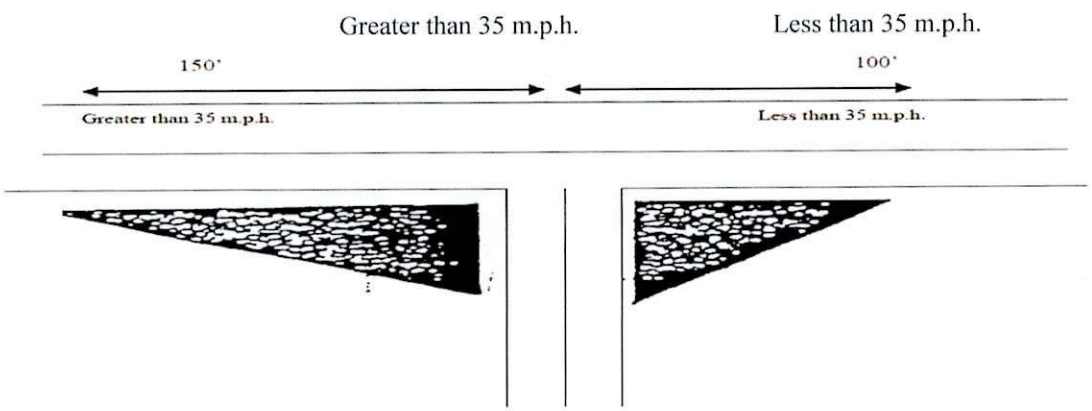


Construct appropriate ditches to prevent water runoff from discharging from the land onto a road under county jurisdiction. Pursuant to ORS 368.256 creation of a road hazard is prohibited.

VISION CLEARANCE TRIANGLE:

The following regulations shall apply to all intersections of streets and roads within all districts in order to provide adequate visibility for vehicular traffic. There shall be no visual obstructions over thirty-six (36) inches in height within the clear vision area established herein. In addition to street or road intersections, the provisions of this section shall also apply to mobile home park, recreational vehicle park, and campground accesses (entrances or exists).

The clear vision area shall extend along the right-of-way of the street for a minimum of 100 feet where the speed limit is less than 35 M.P.H.; and not less than 150 feet where the speed limit is greater than 35 m.p.h. The clear vision area shall be effective from a point in the center of the access not less than 25 feet back from the street right-of-way line.



PARKING STANDARDS

USE	STANDARD
Retail store and general commercial except as provided in subsection b. of this section.	1 space per 200 square feet of floor area, plus 1 space per employee. 1 Bicycle space
Retail store handling bulky merchandise (furniture, appliances, automobiles, machinery, etc.)	1 space per 600 square feet of floor area, plus 1 space per employee. 1 Bicycle space
Bank, general office, (except medical and dental).	1 space per 600 square feet of floor area, plus 1 space per employee. 1 Bicycle space
Medical or dental clinic or office.	1 ½ space per examination room plus 1 space per employee. 1 Bicycle space
Eating or drinking establishment.	1 space per 200 square feet of floor area, plus 1 space for every 4 seats. 1 Bicycle space
Bowling Alley	5 spaces per alley plus 1 space per 2 employees. 1 Bicycle space
Dance hall, skating rink, lodge hall.	1 space per 100 square feet of floor area plus 1 space per 2 employees. 1 Bicycle space
Stadium, arena, theater, race track	1 space per 4 seats or every 8 feet of bench length or equivalent capacity if no seating is provided. 1 Bicycle space
Storage warehouse, manufacturing establishment, or trucking freight terminal	1 space per employee. 1 Bicycle space
Wholesale establishment.	1 space per employee plus 1 space per 700 square feet of patron serving area. 1 Bicycle space
Welfare or correctional institution	1 space per 5 beds for patients or inmates, plus 1 space per employee. 1 Bicycle space
Convalescent hospital, nursing home, sanitarium, rest home, home for the aged.	1 space per 5 beds for patients or residents, plus 1 space per employee. 1 Bicycle space
Church, mortuary, sports arena, theater.	1 space for 4 seats or every 8 feet of bench length in the main auditorium. 1 Bicycle space
Library, reading room.	1 space per 400 square feet of floor area plus 1 space per employee. 1 Bicycle space
Preschool nursery, kindergarten.	2 spaces per teacher; plus off-street loading and unloading facility. 1 Bicycle space per 20 students
Elementary or junior high school.	1 space per classroom plus 1 space per administrative employee or 1 space per 4 seats or every 8 feet of bench length in the auditorium or assembly room whichever is greater. 1 Bicycle space per 10 students
High school	1 space per classroom plus 1 space per administrative employee plus 1 space for each 6 students or 1 space per 4 seats or 8 feet of bench length in the main Auditorium, whichever is greater. 1 Bicycle space per 20 students

Other auditorium, meeting room.	1 space per 4 seats or every 8 feet of bench length. 1 Bicycle space
Single-family dwelling.	2 spaces per dwelling unit.
Two-family or multi- family dwellings.	1 ½ spaces per dwelling unit. 1 bicycle space per unit for buildings with 4 or more units.
Motel, hotel, rooming or boarding house.	1 space per guest accommodation plus 1 space per employee.
Mobile home or RV park.	1 ½ spaces per mobile home or RV site.

Parking lot standards – Use the table above along with the area available to calculate the number of spaces required and determine the type of parking lot that needs to be created. The table below explains the spacing and dimensions to be used.

Minimum Horizontal Parking Widths for Standard Automobiles					
	One-way Parallel	30 deg	45 deg	60 deg	90 deg
Figures	A	B	C	D	E
Single row of Parking					
Parking Aisle	9'	20'	22'	23'	20'
Driving Aisle	12'	16'	17'	20'	24'
Minimum width of module (row and aisle)	21'	36'	39'	43'	44'
Figures #'s	F	G	H	I	J
Two Rows of Parking					
Parking Aisle	18'	40'	44'	46'	40'
Driving Aisle	12'	16'	17'	20'	24'
Minimum width of module (row and aisle)	30'	56'	61'	66'	64'

For figures please see Coos County Zoning and Land Development Ordinance (CCZLDO) § 7.5.175.

Please note: If you are developing in any wetlands or floodplain please contact Department of State Lands to ensure you are not required to obtain a state permit.

STATEMENT OF INTENT

BRIEF FOR RIDDELL BANDON BEACH HOUSE 11.18.2021

FAMILY
Lee and I live alone. We have chosen not to have children and to live our lives creatively. We have made several life changes always in search of discovering new ideas and new sources of inspiration.
We have lived in Jackson Hole since we met there in 1976. We have built three houses and one commercial office building. We love architecture. We love exploring new ways of living and we love being inspired in our daily lives by great architecture.
Life in Jackson Hole is changing. Jackson Hole is getting unbearably crowded in the the summer (our favorite season). Smoke from wildfires in the west seems to be a new reality. We are ready for the inspiration of a new place, specifically on the ocean with it's dramatic changes in weather and light. We don't know at this point whether we will end up with two residences or one. We'll see how we feel about Bandon and Jackson Hole after our Bandon Beach Retreat is built. We probably can't afford to support two houses so we might end up selling our Jackson Hole house. Time will tell . . . . But the Bandon house needs to be adequate to support us living there full time. It's also possible we'll try to keep both by renting one house or the other when we are not there.
We do love having occasional guests both for week long stays and for dinner. So the house should comfortably accommodate that.

SITE
We have specifically chosen an oceanfront lot in Bandon so we can be part of the daily and seasonal changes in light and weather. We will have directly access to the beach and we presume that we will walk on the beach every day with our current or future dog just as we walk in the hills around Jackson every day.

FEELINGS
We want our Bandon house to inspire us creatively and mentally. We've lived in Jackson Hole for 45 years and being inspired by a new place is part of our motivation. We want to wake up every day and be inspired by the weather and light. We hope that inspiration will invigorate our creativity and continue to inspire our joy for living. We have lived now in two architecturally significant houses and we know for sure that good architecture inspires daily living.

AESTHETICS
We love modern architecture. We love its simplicity of line and the way it infuses light into your life. Less is definitely more for us. But the "less" needs to be transformative. I have always wanted a Phillip Johnson/Mies Van Der Rohe glass house and we have yet to pull it off. I would love it if every major room in the house had full glass views of the sea. I am very inspired by the living room, dining room, kitchen and master bedroom of the Cutler house. Having a glass curtain wall like that in every major room in the house would be incredible.

NEEDS
I've done a lot of thinking about this and I've even come up with some initial thoughts about room sizes and program. Here are my thoughts.
I've broken the program down into "areas" which reflect our lifestyle.
Module 1- Living room, dining room, kitchen (open plan) - 35'x20' (700 sq ft) (w/ocean views)

Module 2- Master bedroom, closet, bathroom - 15'x20' (300 sq ft) (w/ocean views)
Module 1&2 are the spaces we'll actually live in on a daily basis. Waking up to expansive views of the ocean and living with those views throughout the day would be amazing. Would be nice if these spaces were connected.

Module 3-Guest bedroom, guest closet, bathroom 15'x20' and laundry room (300 sq ft) Should have easy access but privacy from the central living space.

Module 4-One car garage (we may try to live with just one car) with expansive storage along both walls and mechanical space for water heater and in floor heat boiler and controls. 15'x20' (280 sq ft) (w/ocean views) Would be nice if the garage could open into the studio and provide a large extra workspace for projects if the car is pulled out, especially if the garage also has glass curtain wall on the west.
Module 5-Daylight painting and photography studio, gallery and workspace 20'x20" (400 sq ft) The shared studio could be as small as 15x20 leaving 5x20 for additional storage space or perhaps an entry/gallery.

Module 6-Entry, stairs, elevator, powder room (5'x27') (135 sq ft)

As with every house we've had we tend to accumulate stuff. When we move we do a major cleansing. We'll need to do this with the Bandon house. That said you can never have enough storage space.

RESOURCE USE
We'd love to be an energy efficient has possible, but only if it is economically feasible. If there is a way to incorporate solar energy in this project it would be wonderful, but I doubt we can afford it. That said I would like to be as green as possible. We don't think active cooling is necessary in Bandon. The month with the highest average daytime temps in Bandon is August with average daily highs of 65.

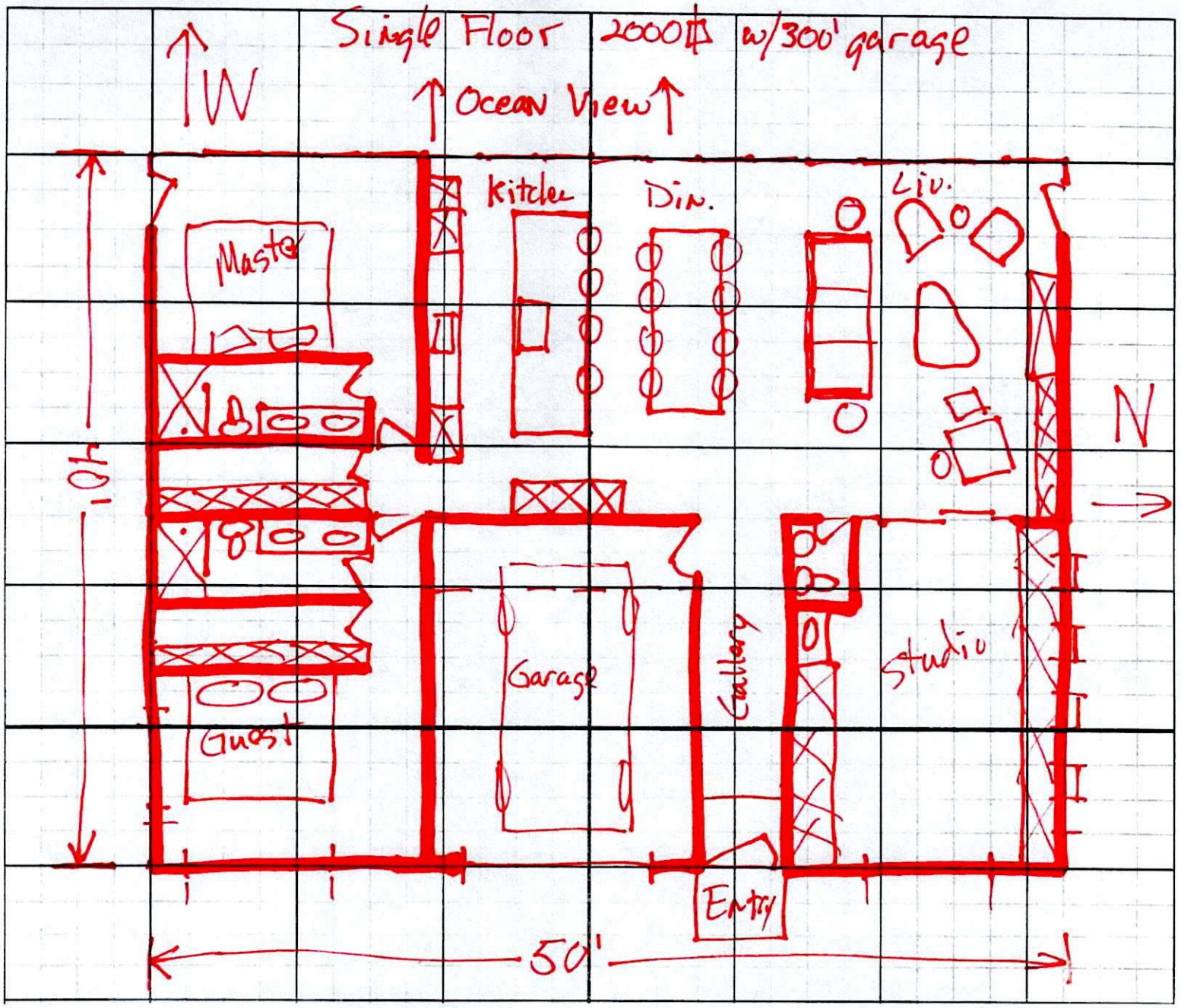
HEALTH
Air quality on the Pacific Coast is one of the things that attracts us. Westerly ocean breezes provide some of the best air quality in the US. After not seeing blue skies for almost 2 1/2 months this summer in JH, that's a big attraction. We like to find a way to allow fresh air into the house through opening windows, but still respect the needs to meet wind loads. Apparently the system in the Cutler house accomplishes this.

INVESTMENT
The NEEDS section above adds up to 2100 sq ft. (400 sq ft of which is garage and entry/ stairs). We hope we can build that house for around $600/sq ft. We really want to make that our goal. Harmon Construction who did the Cutler house said it was finished last year for $500/ ft but would likely cost $600/ft now.

OTHER THOUGHTS
MODULE 1-2 total 1000 sq ft.
MODULES 3,4,5 also total 1000 sq ft.
MODULE 6 (ENTRY) is 100-135 sq ft.
It might be interesting to stack these two units and have a western facade be entirely a glass curtain wall.

It might be really cool to have part of the curtain wall operable so it could be opened up to the sea on select days. Probably not practical given that we probably need design for very high westerly winds.

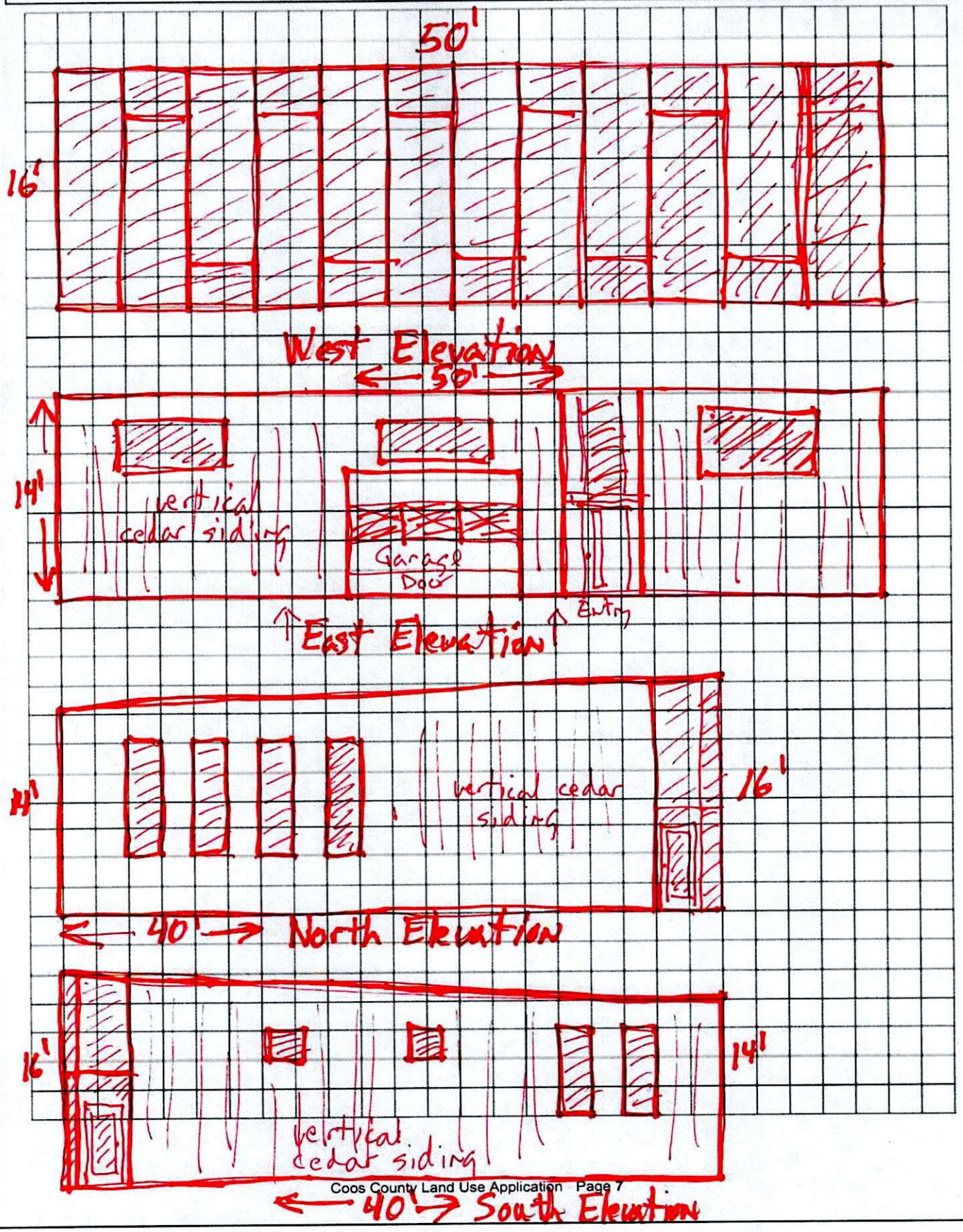
FLOOR PLAN AND ELEVATIONS


MASTER
Single Floor 2000 ft² w/300' garage
W
Ocean View
Kitchen
Din.
Liv.
Master
Guest
Garage
Gallery
Studio
Entry
N
40'
50'

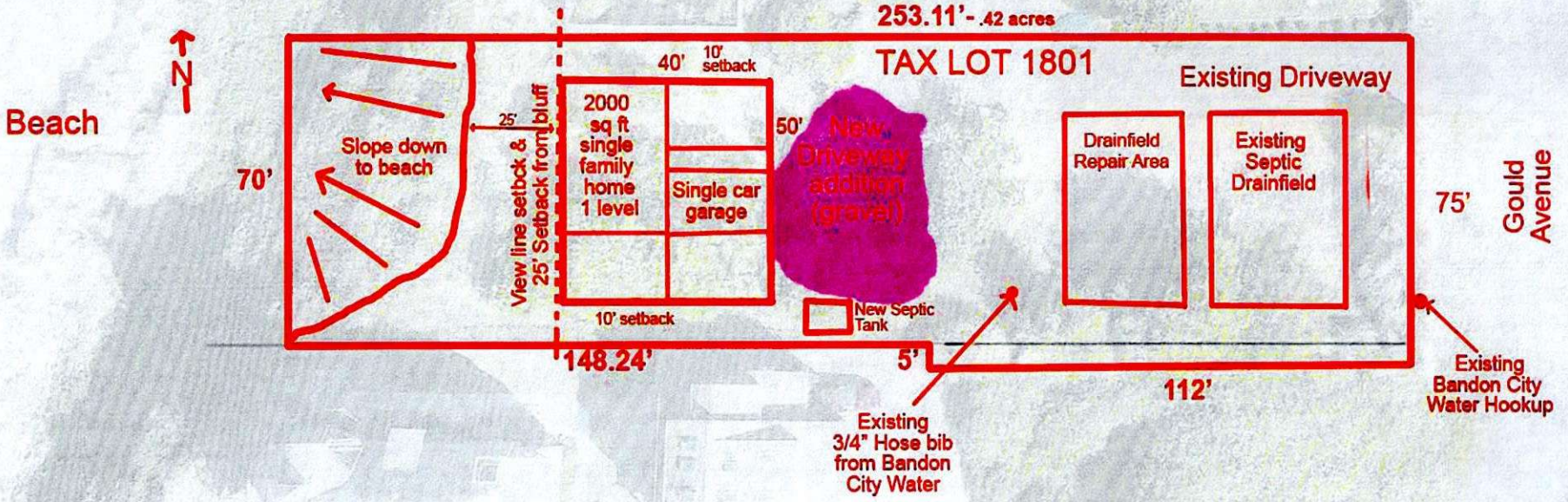
Floor Plan

95% Original 14 scale

Elevations



LOT BOUNDARIES & FEATUERES (red)



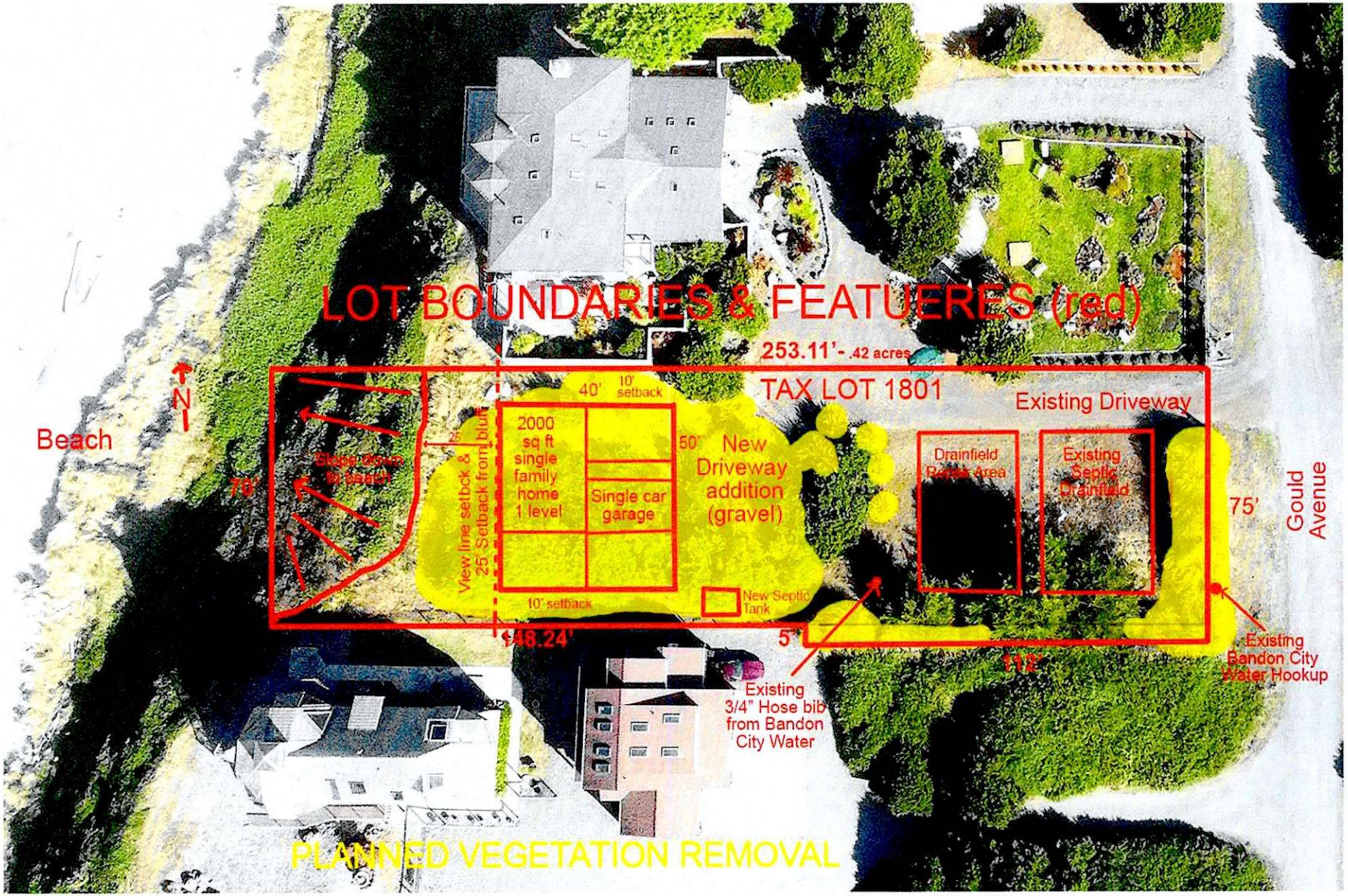

LOT BOUNDARIES & FEATUERES (red)
253.11' - .42 acres
TAX LOT 1801
Existing Driveway
N
Beach
Slope Down to Beach
70'
40'
10' setback
2000 sq ft single family home (new)
Single car garage
New Driveway addition (gravel)
New Septic Tank
Drainfield Reserve Area
Existing Septic Drainfield
75'
Gould Avenue
148.24'
5'
110'
Existing Bandon City Water Hookup
Existing 3/4" Hose bib from Bandon City Water
NEW DRIVEWAY ADDITION (gravel)


LOT BOUNDARIES & FEATUERES (red)
253.11' - .42 acres
TAX LOT 1801
Existing Driveway
N
Beach
Slope down to beach
70'
40'
10' setback
2000 sq ft single family home (new)
Single car garage
New Driveway addition (gravel)
Drainfield Repair Area
Existing Septic Drainfield
75'
Gould Avenue
New Septic Tank
148.24'
5'
112'
Existing Bandon City Water Hookup
Existing 3/4" Hose bib from Bandon City Water

PLOT PLAN

su□□or□in□ □e□□il


LOT BOUNDARIES & FEATUERES (red)
253.11' - .42 acres
TAX LOT 1801
Existing Driveway
N
Beach
40'
10' setback
2000 +/- s.f. single family home (new)
single car garage
Stone down to beach
70'
30' (New Driveway addition (gravel)
Drainfield Repair Area
Existing Septic Drainfield
75'
Gould Avenue
New Septic Tank
148.24'
5'
112'
Existing Bandon City Water Hookup
Existing 3/4" Hose bib from Bandon City Water
100 - YEAR FLOODPLAIN ON LOT


LOT BOUNDARIES & FEATUERES (red)
253.11'- .42 acres
TAX LOT 1801
Existing Driveway
N
Beach
Slope down to beach
70'
25' Setback from bluff
View line setback &
40'
10' setback
2000 sq ft single family home 1 level
Single car garage
50'
New Driveway addition (gravel)
10' setback
New Septic Tank
Drainfield Repair Area
Existing Septic Drainfield
75'
Gould Avenue
148.24'
5'
112'
Existing Bandon City Water Hookup
Existing 3/4" Hose bib from Bandon City Water
PLANNED VEGETATION REMOVAL


LOT BOUNDARIES & FEATUERES (red)
253.11'- .42 acres
TAX LOT 1801
Existing Driveway
N
Beach
Slope down to beach
70'
40'
10' setback
2000 sq ft single family home (new)
single car garage
New Driveway addition (gravel)
Drainfield Repair Area
Existing Septic Drainfield
75'
Gould Avenue
New Septic Tank
148.24'
5'
112'
Existing Bandon City Water Hookup
Existing 3/4" Hose bib from Bandon City Water
PLANNED GORSE REMOVAL


LOT BOUNDARIES & FEATUERES (red)
253.11'- .42 acres
TAX LOT 1801
Existing Driveway
N
Beach
40
10' setback
2000 sq ft single family home (1 level)
Single car garage
New Driveway addition (gravel)
Drainfield Repair Area
Existing Septic Drainfield
Slope down to beach
70'
75'
Gould Avenue
New Septic Tank
148.24'
5'
112'
Existing Bandon City Water Hookup
Existing 3/4" Hose bib from Bandon City Water
VEGETATION TO REMAIN

COASTAL SHORELINE BOUNDARY REVIEW

Costal Shoreland Boundary Review – This requires a site plan to address all criteria.

SEE NOTATIONS IN RED BELOW

a. Uses allowed within the Coastal Shoreland Boundary: This strategy recognizes: (1) that Coos County's rural shorelands are a valuable resource and accordingly merit special consideration; and (2) that Statewide Planning Goal #17 places strict limitations on land divisions within coastal shorelands.

   i. Uses within the Coastal Shoreland Boundary: Coos County shall manage its rural areas within the "Coastal Shorelands Boundary" of the ocean, coastal lakes and minor estuaries through implementing ordinance measures that allow the following uses:**

      f) single family residences on existing lots, parcels, or units of land when compatible with the objectives and implementation standards of the Coastal Shorelands goal, and as otherwise permitted by the underlying zone; or This application falls under this category.

   ii. **A site plan and design review** is only necessary when required in Coos County Comprehensive Plan Volume I Part 3 § 3.5: Structures associated with the above uses, with the exception of farm and forest uses, shall only be permitted after an Administrative Conditional Use Review or higher review addressing the criteria and requirements of this subsection below and upon a finding that such uses do not otherwise conflict with the Special Development Considerations and Overlay Zones found in this Ordinance.

      a) Site Review and Approval Criteria.

      Construction, site development and landscaping shall be carried out in substantial accord with the plans, drawings, sketches and other documents as approved.

      Nothing in this subsection shall be construed to prevent ordinary repair, maintenance and replacement of any part of the building or landscaping which does not involve a substantial change from the purpose and objectives of this section. Proposed "substantial changes" shall be submitted to the Planning Director for approval.

      All variances from the site development criteria which are deemed necessary by the applicant shall be requested pursuant to ARTICLE 5.3.

      These standards are intended to provide a frame of reference for the applicant to the development of a site and building plans as well as a method of review. These standards shall not be regarded as inflexible requirements, nor do they advocate any particular architectural style, for they are intended to encourage creativity,

invention and innovation. The following standards shall be utilized in reviewing the plans, drawings, sketches and other documents required under for this review:

1. Landscaping
    a. The landscape shall be such to minimize soil erosion and lessen the visual impact;. See recommendatins of attached geotechnical study.
    b. Any grade changes shall be in keeping with the general appearance of neighboring developed areas. No grade changes are anticipated.
2. Structures
    a. Proposed structures shall be related harmoniously to the terrain and to existing buildings in the vicinity that have a visual relationship to the proposed buildings; Structure will be lower than the houses on both adjoining lots. We anticipate about a 16' height. See attached Plot Plan
    b. The achievement of such relationship may include the enclosure of space in conjunction with other existing buildings or other proposed buildings and the creation of focal points with respect to avenues of approach, terrain features or other buildings. See above.
3. Drives, Parking and Circulation
    With respect to vehicular and pedestrian circulation, including walkways, interior drives and parking, special attention shall be given to the location and number of access points, general interior circulation, separation of pedestrian and vehicular traffic, and arrangement of parking areas that are safe and convenient and must comply with the standards found in Chapter VII. The Roadmaster is responsible for determining compliance with this subsection. Existing roadways and driveways are already provided in the subdivision. There is an existing driveway on the lot and only a small additional to that driveway is planned to connect to the new structure. See attached Plot Plan
4. Surface Water Drainage
    Special attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties, the public storm drainage system, or create environmental problems. Soil is porous sandy soil and all drainage will be prepared as per the attached geotechnical study which is attached to this requet.
5. Utility Service
    a. Whenever feasible, electric, telephone and other utility lines shall be underground; All utilities are available at the site. All utilities are below ground and will be extended to the proposed building below ground.
    b. Any utility installations remaining above ground shall be located so as to have an harmonious relation to neighboring properties and the site; No above ground utility installations
    c. The proposed method of sanitary sewage disposal from all buildings shall be indicated. Septic tank and drain field as per all

properties in this subdivision. Drain field exists and will be utilized. A new septic tank will be installed.

b) Application Submittal and Review Procedure.
   1. Submission of Documents - A prospective applicant for a building or other permit who is subject to site design review shall submit the following to the County Planning Director:
      a. A site plan, drawn to scale, shows the proposed layout of all structures and other improvements; See attached Plot Plan.
      b. A landscape plan, drawn to scale, showing the location of existing trees proposed to be retained on the site, the location and design of landscaped areas, the varieties and sizes of trees and plant materials to be planted on the site, other pertinent landscape features, and irrigation systems required to maintain trees and plant materials; Only low growing grasses are planned in additional to the small pines and large cypress which already exists. See attached Plot Plan.
      c. Architectural drawings or sketches, drawn to scale, including floor plans, in sufficient detail to permit computation of yard requirements and showing all elevations of the proposed structures and other improvements as they will appear on completion of construction; Architectural sketches are provided, construction documents and working plans will be provided before commencement of contruction.
      d. Specifications as to type, color and texture of exterior surfaces of proposed structures including reflective surfaces of solar collectors; No solar panels are planned. West facing side of house will be low reflectance glass, plus smaller windows on north, south and east.
      e. An application request which shall include: Conditional Use Permit application of which this is a part includes all the information requested below.
         1) Name and address of applicant;
         2) Statement of applicant's legal interest in the property (owner, contract purchaser, lessee, renter, etc.) and a description of that interest, and in case the applicant is not the owner, verification of the owner's consent;
         3) Address and legal description of the property;
         4) Statement explaining the intended request;
         5) The required fee; and Fee to be paid online with this submission.
         6) Any other materials or information as may be deemed necessary to assist in evaluation of the request. The request will be made prior to deeming the application complete. However, if this review is before the hearings body they may request for additional information to ensure compliance.

2. Threshold Standard. The Planning Director has the discretion to waive part or all of the site plan requirements if, in the Director's judgment, the proposed development is "de minimis" in extent to the existing development. N/A

WILDFIRE SUBMITTAL

4.11.132 Natural Hazards (Balance of County Policy 5.11)

Coos County has inventoried the following ***hazards:***

- *Flood Hazard*
  - *Riverine flooding*
  - *Coastal flooding*
- *Landslides and Earthquakes*
  - *Landslide Susceptiblitiy*
  - *Liquefaction potential*
- *Tsunamis*
- *Erosion*
  - *Riverine streambank erosion*
  - *Coastal*
    - *Shoreline and headlands*
    - *Wind*
- *Wildfire* ***SEE NOTATIONS IN RED BELOW***

f. Wildfires: Coos County shall promote protection of property from risks associated with wildfires. New development or substantial improvements shall, at a minimum, meet the following standards, on parcels designated or partially designated as "High" or "Moderate" risk on the Oregon Department of Forestry 2013 Fire Threat Index Map for Coos County or as designated as at-risk of fire hazard on the 2015 Coos County Comprehensive Plan Natural Hazards Map:

1. *The dwelling shall be located within a fire protection district or shall be provided with residential fire protection by contract. If the dwelling is not within a fire protection district, the applicant shall provide evidence that the applicant has asked to be included within the nearest such district or is provided fire protection by contract.* ***Tax Lot 1801 is in the Bandon Rural Fire Protection District and receives the same service as properties with the Bandon City limits. This Tax Lot is subject to an additional mill levy on its annual property tax bill which supports the Bandon Rural Fire Protection District***

2. *When it is determined that these standards are impractical the Planning Director may authorize alternative forms of fire protection that shall comply with the following:* ***Fire Hydrants are located in the neighborhood to serve this lot.***
   a. *The means selected may include a fire sprinkling system, onsite equipment and water storage or other methods that are reasonable, given the site conditions, as established by credible documentation approved in writing by the Director;*
   b. *If a water supply is required for fire protection, it shall be a swimming pool, pond, lake, or similar body of water that at all times contains at least 4,000 gallons per dwelling or a stream that has a continuous year round flow of at least one cubic foot per second per dwelling;*
   c. *The applicant shall provide verification from the Water Resources Department that any permits or registrations required for water diversion or storage have been obtained or that permits or registrations are not required for the use; and*
   d. *Road access shall be provided to within 15 feet of the water's edge for firefighting pumping units. The road access shall accommodate the turnaround of firefighting equipment during fire season. Permanent signs shall be posted along the access route to indicate the location of the emergency water source.*

3. *Fire Siting Standards for New Dwellings: Fire hydrants provide in neighborhoos. Plus there is a 3/4" hose bib on the property which is connected to Bandon City water system.*
    a. *The property owner shall provide and maintain a water supply of at least 500 gallons with an operating water pressure of at least 50 PSI and sufficient ¾ inch garden hose to reach the perimeter of the primary fuel-free building setback.*
    b. *If another water supply (such as a swimming pool, pond, stream, or lake) is nearby, available, and suitable for fire protection, then road access to within 15 feet of the water's edge shall be provided for pumping units. The road access shall accommodate the turnaround of firefighting equipment during the fire season. Permanent signs shall be posted along the access route to indicate the location of the emergency water source.*

4. *Firebreak: See attached Plot Plan for vegetation and firebreak. There will be no vegetation other than low-growing native grasses in the vicinity of the house. Most of the existing vegation is being removed and gorse removal will be undertaken on the western bluff. A large cypress tree on the south east corner of the lot will remain and trimmed to achieve a "bonsai" type of look. A few small pines will also remain and be trimmed as "bonsai" pines.*
    a. *A firebreak shall be established and maintained around all structures, including decks, on land owned or controlled by the applicant for a distance of at least 30 feet in all directions. Firebreak materials will be utilized between the structure and the adjoining property lines inside the setbacks.*
    b. *This firebreak will be a primary safety zone around all structures. Vegetation within this primary safety zone may include mowed grasses, low shrubs (less than ground floor window height), and trees that are spaced with more than 15 feet between the crowns and pruned to remove dead and low (less than 8 feet from the ground) branches. Accumulated needles, limbs and other dead vegetation should be removed from beneath trees. Acknowledged and planned.*
    c. *Sufficient garden hose to reach the perimeter of the primary safety zone shall be available at all times. This is existing on property*
    d. *The owners of the dwelling shall maintain a primary fuel-free break area surrounding all structures and clear and maintain a secondary fuel-free break on land surrounding all structures that is owned or controlled by the owner in accordance with the provisions in "Recommended Fire Siting Standards for Dwellings and Structures and Fire Safety Design Standards for Roads" dated March 1, 1991, and published by Oregon Department of Forestry and shall demonstrate compliance with Table 1. No vegetation other than low growing grasses will be with 10 feet of the house. Set backs from the adjoining property lines is 10' See attaches Plot Plan*

Table 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*

e. *All new and replacement structures shall use non-combustible or fire resistant roofing materials, as may be approved by the certified official responsible for the building permit. New house will have PVC roof with gravel ballast. Siding will be unstained cedar siding.*

f. *If a water supply exceeding 4,000 gallons is suitable and available (within 100 feet of the driveway or road) for fire suppression, then road access and turning space shall be provided for fire protection pumping units to the source during fire season. This includes water supplies such as a swimming pool, tank or natural water supply (e.g. pond). See notes about fire hydrants*

g. *The structure shall not be sited on a slope of greater than 40 percent. Structure is on flat ground*

h. *If the structure has a chimney or chimneys, each chimney shall have a spark arrester. There will be no chimneys or wood burining fireplaces. Only a gas fireplace with an small exhaust vent is planned.*

i. *Except for private roads and bridges accessing only commercial forest uses, public roads, bridges, private roads, and driveways shall be constructed so as to provide adequate access for firefighting equipment. Confirmation shall be provided from the Coos County Road Department or local fire protection district that these standards have been met. N/A Structure is in a planned, existing subdivision with coverage by the Bandon Rural Fire Protection District.*

5. *Wildfires inside urban growth boundaries. Certain areas inside urban growth boundaries may present special risks and may be made subject to additional or different standards and requirements jointly adopted by a city and the county in the form of code requirements, master plans, annexation plans, or other means. N/A*

PREVIOUS CONDITIONAL USE PERMIT

Coos County Planning Department
Coos County Courthouse Annex, Coquille, Oregon 97423
Mailing Address: Planning Department, Coos County Courthouse, Coquille, Oregon 97423
(541) 396-3121 Ext.210
FAX (541) 396-2690 / TDD (800) 735-2900

PATTY EVERNDEN **PLANNING DIRECTOR**

NOTICE OF PLANNING DIRECTOR'S DECISION

July 19, 2001

FILE #	:	ACU-01-19
APPLICANT	:	Donald & Susan Broyles
LEGAL DESCRIPTION	:	T.29, R.15, S.01CC, TL#1900
ZONE/ACREAGE	:	Controlled Development-10 (CD-10)/approximately 0.24 acre
GENERAL LOCATION/ACCESS	:	South of Bandon via Gould Road
REQUEST	:	To allow a dwelling within a "Beach and Dune Limited Suitability for Development Area"
REVIEW CRITERIA	:	Appendix I Policy 5.10 of the Coos County Zoning and Land Development Ordinance (CCZLDO)

Dear Adjacent Property Owner and Planning Commissioners:

Notice is hereby given that the Planning Director has approved the above referenced conditional use application request. A copy of the application, all documents and evidence relied upon by the applicant, the applicable criteria and staff report are available for inspection at the Planning Department and copies will be provided for a reasonable fee of $.25 per page. You may also check out these documents for a deposit equaling $.25 per page and take them to copy elsewhere. Upon return of the documents, your deposit will be refunded.

The decision may be appealed to the Coos County Hearings Body pursuant to Article 5.8 of the Ordinance within 15 days of the date notice of decision is mailed. Therefore, appeals filed after August 3, 2001, are not timely and will not be considered. The decision will not be final until the period for filing an appeal has expired. This decision cannot be appealed directly to the Land Use Board of Appeals under ORS.197.830.

Detailed information about the appeal process, filing fees and additional information may be obtained by contacting Staci Courtright, Planner, at (541) 396-3121 or 756-2020, Extension 210.

Sincerely,
COOS COUNTY PLANNING DEPARTMENT

Judy Norris

Judy Norris, Office Manager
JN/dd

SEPTIC SYSTEM STATEMENT OF COMPLETION

72049
Control No.

$ 990.00
Fee

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT NO. 603-182

[X] New Construction   [ ] Repair   [ ] Other ______

Permit Issued To	Don Broyles	29	15	01CC	1801/29348.01	Coos
	(Property Owner's Name)	(Township)	(Range)	(Section)	(Tax Lot / Acct. No.)	(County)

Gould Rd.	Bandon	Del Cline, R.S.	09/05/2003
(Road Location)	(City)	(Issued by - Signature)	(Date Issued)

PERMITS ARE NOT TRANSFERABLE

ALL WORK TO CONFORM TO OREGON ADMINISTRATIVE RULES, CHAPTER 340. WORK SHALL BE DONE BY PROPERTY OWNER OR BY LICENSED SEWAGE DISPOSAL SERVICE. (MAKE NO CHANGES IN LOCATION OR SPECIFICATIONS WITHOUT WRITTEN APPROVAL)

SPECIFICATIONS

EXPIRATION DATE 09/05/2004   TYPE OF SYSTEM BOTTOMLESS SAND FILTER

Design Sewage Flow 450 Gallons/Day

Tank Volume 1,500 Gallons   Disposal Trenches [ ]   Seepage Bed(s) [ ]   ______ Square Feet

Maximum Depth 24 inches.   Minimum Depth 12 inches.   ______ Linear Feet

Equal [ ]   Loop [ ]   Serial [ ]   Pressurized [X]   Minimum Distance Between Trenches ______.

Total Rock Depth ______ inches.   Below Pipe ______ inches.   Above Pipe ______ inches.   [ ] Rake Sidewall

Special Conditions (Follow Attached Plot Plan) SEE REVERSE FOR INSTRUCTIONS AND INSPECTIONS.

PRE-COVER INSPECTION REQUIRED — CONTACT DEQ 269-2721

CERTIFICATE OF SATISFACTORY COMPLETION

As-Built Drawing with Reference Locations: Sand filter tank

Installer: Joe Bulldoe / Roto Rooter

Final Insp. Date: 10-13-05

[X] Inspected By: Del Cline

[ ] Issued by Operation of Law

[ ] Pre-cover inspection waived pursuant to OAR 340, Division 71

9-18-03 2:30 SF Box 18x20
9-25-03 2:30 sand & liner in position & sand placed and distribution pipe in place
10-16-03 1:45 squirt test good 5+ ft
1-13-05 2:00 tank pump test extension cord 64"; sand & alarm not yet covered
10-13-05 System complete

This Certificate of Satisfactory Completion is valid for a period of 5 years for connection of the system to the facility for which it was constructed. After the 5 year period, rules for Authorization Notices or Alteration Permits apply, as outlined in OAR 340-071-0205 and 340-071-0210, which includes paying a fee.

In accordance with Oregon Revised Statute 454.665, this Certificate is issued as evidence of satisfactory completion of an on-site sewage disposal system at the location identified above.

Issuance of this Certificate does not constitute a warranty or guarantee that this on-site disposal system will function indefinitely without failure.

Del Cline RS	On-Site Treatment	10-14-05	CB-CR
(Authorized Signature)	(Title)	(Date)	(Office)

DEQ/WQ—121—(R 1/94)

Oregon
John A. Kitzhaber, Governor

Department of Environmental Quality
Western Region Coos Bay Office
381 N 2nd Street
Coos Bay, OR 97420
(541) 269-2721
FAX (541) 269-7984

Donald & Suzanne Broyles
13805 SW 248th St.
Homestead, FL 33032

April 6, 2011

RE: WQ/SS-Coos County
29-15-01CC-1801/29348.01
54196 Gould – Bandon, OR
Sand Filter Pumping

A final inspection of the sand filter system serving the above referenced property was done on June 13, 2005.

To maintain the integrity of the Sand Filter system serving your residence, it is highly recommended that you open up the septic tank and check to see if it needs to be pumped. We recommend that this be done every 48 months. If the surface scum layer is 6-8 inches thick then it should be pumped. We have no record of the septic tank being pumped.

If the tank has not been pumped since 2005 it is highly recommended that you have it checked to see if it needs to be pumped at this time. If it needs to be pumped please submit a copy of the receipt so we can update our records.

Thank you for your response.

Sincerely,

Geri Sledd

Geri Sledd
Administrative Specialist

GS:gs

E:SFPump2

DEQ-DC1

Michael K. Renaldo and Sheri M. Renaldo

GRANTEE'S NAME:
Edward Riddell and Lee Riddell

AFTER RECORDING RETURN TO:
Order No.: 360621037869-LS
Edward Riddell and Lee Riddell, as tenants by the entirety
PO Box 1765
Jackson, WY 83001

SEND TAX STATEMENTS TO:
Edward Riddell and Lee Riddell
PO Box 1765
Jackson, WY 83001

APN: 2934801
Map: 29S1501CC01801
V/L .42 acre Gould Avenue, Bandon, OR 97411

SPACE ABOVE THIS LINE FOR RECORDER'S USE

STATUTORY WARRANTY DEED

Michael K. Renaldo and Sheri M. Renaldo, as tenants by the entirety, Grantor, conveys and warrants to **Edward Riddell and Lee Riddell, as tenants by the entirety**, Grantee, the following described real property, free and clear of encumbrances except as specifically set forth below, situated in the County of Coos, State of Oregon:

PARCEL 1:

Lots 6, 7 and 8, Block 23, Original Plat of Sunset City, Coos County, Oregon. Together with vacated alley that would inure to said property by operation of law.

PARCEL 2:

That portion of the Southwest quarter of the Southwest quarter of Section 1, Township 29 South, Range 15 West of the Willamette Meridian, Coos County, Oregon, as established by the Circuit Court of Coos County in August 1911, lying West of the alley running North and South through Block 23, Sunset City, Coos County, Oregon; South of Beach Street, extended Westerly; and North of Juno Street, extended Westerly.

EXCEPTING THEREFROM, that portion sold under Contract of Sale , more particularly described as follows: Beginning at a point on the West line of Section 1, Township 29 South, Range 15 West of the Willamette Meridian, Coos County, Oregon, which is North 0° 26' West 851.57 feet from the Southwest corner of said Section 1, which such point is also the point of intersection of the West line of said Section 1 with the North line of Juno Street, Sunset City, Coos County, Oregon, extended Westerly; thence North 88° 54' East along the North line of Juno Street 133.45 feet to the West line of the alley fronting Block 23 of Sunset City; thence North along the West line of such alley 50 feet; thence South 88° 54' West 133.45 feet, more or less, to the West line of said Section 1; thence South along such Section line 50 feet to the place of beginning.

ALSO EXCEPTING, that portion lying North of the South line of Lot 5, Block 23, Sunset City, Coos County, Oregon, if extended Westerly to the Section line of Section 1, Township 29 South, Range 15 West of the Willamette Meridian, Coos County, Oregon.

ALSO EXCEPTING THE FOLLOWING: Beginning at a point on the West boundary of the alley running through Block 23 in the the Plat of Sunset City, Coos County. Oregon, said point being located North 00° 55' 18" West 50.00 feet from the North line of Juno Street in said Sunset City; thence South 89° 04" 42" West 148.72 feet to the West line of Section 1, Township 29 South, Range 15 West of the Willamette Meridian, Coos County, Oregon; thence North along said Section line 30.02 feet; thence North 89° 04' 42" East 148.24 feet to the West line of said alley through Block 23; thence South 00° 55' 18" East 30.00 feet to the point of beginning.

ALSO EXCEPTING, any portion of said premises lying below the ordinary high water line of the Pacific Ocean.

THE TRUE AND ACTUAL CONSIDERATION FOR THIS CONVEYANCE IS NINE HUNDRED THIRTY-FIVE THOUSAND AND NO/100 DOLLARS **($935,000.00)**. (See ORS 93.030).

Any adverse claim based on the assertion that any portion of the subject land has been removed from or brought within the subject land's boundaries by the process of accretion or reliction or any change in the location of Pacific Ocean.

Any adverse claim based on the assertion that any portion of the subject land has been created by artificial means or has accreted to such portions so created, or based on the provisions of ORS 274.905 through 274.940.

Any adverse claim based on the assertion that any portion of the subject land is now or at any time has been below the ordinary high water line of Pacific Ocean.

Rights of public and of governmental bodies in that portion of the subject land lying below the mean high water line of the Pacific Ocean and lying within the ocean shore and the dry sand area as declared under the provisions of ORS 390.605 through 390.770 and as found in Thornton v. Hay, 254 Or 584, 462 P2d 671 (1969).

Rights of the public, riparian owners and governmental bodies in that portion of the subject land lying in wetlands.

Deed restriction as disclosed by Warranty Deed including the terms and provisions thereof,

Recording Date:	September 18, 2020
Recording No:	2020-09211
Between:	Donald E. Broyles, Jr. and Suzanne C. Broyles
And:	Michael K. Renaldo and Sheri M. Renaldo, as tenants by the entirety

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.

IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

Dated: 11/9/2021

Michael K. Renaldo

Sheri M. Renaldo

State of Oregon
County of Jackson

This instrument was acknowledged before me on 11/9/2021 by Michael K. Renaldo and Sheri M. Renaldo.

Notary Public - State of Oregon

My Commission Expires: 11/18/2022

OFFICIAL STAMP
ROBIN DEE FUSMER
NOTARY PUBLIC-OREGON
COMMISSION NO. 976970
MY COMMISSION EXPIRES JUNE 18, 2022

GEOTECH REPORT

Cascadia Geoservices, Inc.
190 6th Street
PO Box 1026
Port Orford, Oregon 97465
D. 541-332-0433
C. 541-655-0021
Email: info@cascadiageoservices.com
www: CascadiaGeoservices.com

Geotechnical Site Evaluation

Gould Avenue Property
Bandon, Oregon 97411
T29S, R15W, Sec 01CC, Tax Lot 1801

Mr. Edward Riddell
PO Box 1765
Jackson, Wyoming 83001
Sent via email: ed@edwardriddell.com

November 29, 2021
CGS Project No. 21123

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INTRODUCTION

Cascadia Geoservices, Inc. (CGS) is pleased to provide you with this Geotechnical Site Evaluation report which summarizes our evaluation of a portion of your property located in Bandon, Oregon (see Figure 1, Location Map). We understand that you have recently purchased the subject property and are requesting that CGS evaluate the site and provide you with an opinion as to the geotechnical suitability of the site for residential development. This report summarizes our project understanding and site investigation, including subsurface explorations, and provides our conclusions and recommendations for developing the site.

PROJECT UNDERSTANDING AND DESCRIPTION

Our understanding is based on telephone and email correspondence with both you and your real estate broker beginning on October 1, 2021, and on a site visit on October 5, 2021. Our understanding is further based on our review of an approved Conditional Use Application (ACU-01-19) submitted to Coos County on July 19, 2001, to site a residential dwelling on the site, and as part of that application, a Geologic Hazard Evaluation Report submitted by others,[1] dated December 12, 1994. Our understanding is further based on a second site visit on October 19, 2021, at which time a geologic reconnaissance of the site was done and three exploratory test pits were completed.

As a requirement of the earlier approved Conditional Use Application, the county adopted recommendations by the Oregon State Parks Department and the earlier Geologic Hazard Evaluation Report and set a minimum setback requirement of 25.0 feet from the break-in-slope above the sea cliff for a future residential dwelling. We understand that this minimum setback requirement is still in effect. We further understand that you are proposing to construct a new residential structure on the site and plan to abide by this setback requirement.

Under Coos County's Land Use Ordinance Chapter IV, Beaches and Dunes (Policy 5.10), the site has been classified as having "limited suitability" for development. This classification requires that, prior to development, the applicant must submit a report

[1] Geologic Hazard Evaluation of Property for Homesite Development, December 12, 1994. Prepared for Don and Suzanne Broyles, 13805 SW 248th Street, Homestead, Florida 33032, by Terra Firma Geologic Services, Gold Beach, Oregon.

prepared by a qualified registered and licensed geologist or engineer, which evaluates the adverse effects, if any, of the proposed development and provides stabilization and maintenance plans to stabilize the site. We address these items in this report.

We understand that you are proposing to develop the site with a wood-framed residential structure and that you have no plans for excavations over four feet deep (except possibly for utility trenches) and no planned fills over four feet thick. As of the date of this report, CGS has not been provided with construction documents or with a site plan. Further, at the time that we did the test pits, the location of the proposed structure was not staked out on the ground.

BEACH AND DUNE INVENTORY

Based on a review of the Coos County Map Atlas, Tax Lots 1801 has been classified, in accordance with Goal 18 eligibility inventory, as "not eligible for protection." The sand dunes on the site are classified as younger, stabilized dunes, in accordance with USDA findings. This agrees with our site evaluation. Coos County has inventoried the site and surrounding area and has classified the site as having "limited suitability" for development. We note that the site is within the Sunset City Subdivision and is zoned Controlled Development 10 (CD-10), and that adjoining parcels to the north and south have been developed with residential structures.

Based on our site evaluation and on our experience working in this region, it is our opinion that the proposed development will not have an adverse impact on either the site or adjacent areas. Further, it is our opinion that because the building site is generally level and the soils well drained, there is no need for temporary or permanent stabilization programs and/or maintenance of new and existing vegetation other than those typically incorporated into residential landscaping. Further, we see no hazards to life, public and private property, or to the natural environment by the proposed development. Finally, it is our professional opinion that the proposed development will not cause excessive destruction of desirable vegetation (including inadvertent destruction by moisture loss or root damage), cause exposure of stable and conditionally stable areas to erosion or modify current air wave patterns leading to beach erosion. If, after development, you decide to reclaim portions of the dune, we recommend that you seek advice from your local Soil Conservation Survey.

SURFACE DESCRIPTION

The site is located within the Klamath Mountain physiographic region of southwestern Oregon and is on an elevated coastal terrace (known locally as the Bandon Bluff), which is bordered on the west by a steep, roughly 35.0-foot-high actively eroding sea cliff. The site is approximately 49.0 feet above mean sea level (AMSL), is 0.42 acres, and is rectangular in shape (see Figure 2, Site Map). The site is undeveloped and is moderately to densely vegetated with gorse, native coastal shrubs, and some conifer trees. The building site is level-to-very-gently-sloping to the west. The site was observed to be well drained during our site visit.

The site is in an area which is principally residential and is bordered on the north, east, and south by developed residential properties, and on the west by the sea cliff. The site is accessed from the east via Gould Avenue and a gravel driveway.

The subject property appeared stable at the time of our site visit, with no ground cracks, areas of settlement, fresh earthen scarps, or landslides observed.

Based on work done by others,[2,3] native soils at the site consist of sandy loam (8E—Bullards sandy loam, 30 to 50 percent slopes). Underlying these soils are surficial deposits of Quaternary marine terrace deposits, which consist of unconsolidated-to-semi-consolidated marine sand, silt, clay, and gravel. These overlie bedrock of Late Mesozoic Sixes River mélange. Bedrock is exposed in outcrop at the base of the sea cliff below but is not exposed on the building site. This assemblage of soils and rocks has been elevated due to regional tectonic forces associated with the Cascadia Subduction Zone.

SUBSURFACE EXPLORATIONS

In order to analyze the soils at the site, CGS observed the excavation of three test pits during our October 19, 2021 site visit. The test pits were excavated by Natural Origins LLC of Bandon, Oregon, to depths of 3.5 to 4.5 feet below ground surface (bgs) at three locations. The test pits were logged by a member of our staff from our southern Oregon

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[2] United States Department of Agriculture (USDA). Natural Resource Conservation Service Web Soil Survey, retrieved from http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

[3] Thomas J. Wiley, et. al, (2014). Geologic map of the southern Oregon coast between Port Orford and Bandon, Curry and Coos Counties, Oregon. Oregon Department of Geology and Mineral Industries (DOGAMI) open-file report O-14-0.

coast office. A dynamic cone penetrometer (DCP),[4] pocket penetrometer, and hand tools were used by CGS to test the relative hardness of the surficial soils in the test pits. Soil samples from the test pits were collected and stored in moisture-proof plastic bags and transported to our lab. Upon completion, the test pits were refilled with uncompacted excavated material. The locations of the test pits were determined using GPS and are shown on Figure 2, Site Map. Detailed logs for the test pits are included at the end of this report in Attachment 1.

Subsurface Conditions Encountered

The material encountered in the test pits was similar. Test pits TP-1 and TP-2 were excavated on the western portion of the site, approximately 10.0 to 20.0 feet from the break-in-slope of the sea cliff, and TP-3 was excavated near the center of the site, approximately 125.0 feet east of the break-in-slope of the sea cliff. The material encountered in the test pits consisted of tannish brown fine sand. The fine sand encountered was loose and became medium dense, tannish orangish brown, and strongly cemented at 4.0 feet bgs in TP-1 and TP-2, and 2.0 feet bgs in TP-3. Some light-and-dark-gray sand was encountered in TP-2 above the medium-dense fine sand. The soil encountered in the test pits showed good horizontal and vertical continuity on the site.

Based on mapping by others,[3] we interpret these sands to be part of the Quaternary marine terrace deposits.

Our analysis of the subsurface conditions on the site is based on the soil encountered in our borings and is summarized as follows:

> **Fine Sand (Quaternary Marine Terrace Deposits):** Encountered in all the test pits. Consisted of loose, tannish brown fine sand that was moist. Became medium dense and strongly cemented at 4.0 feet bgs in TP-1 and TP-2 and at 2.0 feet bgs in TP-3.

[4] The dynamic cone penetrometer (DCP) test uses a 15 lb. steel mass falling 20 inches to strike an anvil to penetrate a 1.5-inch-diameter, 45-degree (vertex angle) cone that has been seated in the bottom of a hand-augered hole. The penetrometer is used to determine a penetration resistance relationship with the standard penetration resistance of virgin soils. The penetration rate (PR) is the average number of blows needed to advance the cone a distance of 1 inch.

LABORATORY ANALYSIS

Select samples were packaged in moisture-proof bags and transported to our laboratory where they were classified in general accordance with the Unified Soil Classification System, Visual-Manual Procedure. In addition, select samples were analyzed, where applicable, for water content (ASTM D698), percent of fines (ASTM D1140), and Atterberg limits (ASTM D4318). The results are summarized below in Table 1. The Lab Analysis Reports for the samples are provided at the back of this report as Attachment 2.

Table 1: Laboratory Testing Results

Sample ID	Test Pit / Depth (feet)	Type of Soil	Water Content (%)	Fines (%)	USCS Symbol[5]
SS-3	TP-1 / 4.5	Fine Sand	11.0	1.0	SP
SS-5	TP-2 / 4.0	Fine Sand	10.0	1.0	SP
SS-7	TP-3 / 2.0	Fine Sand	8.0	2.0	SP

Our lab analysis indicates that the fine sands have a minor percentage of fines and are poorly graded, and that the sand has a low water content.

Our analysis and recommendations are based on the following physical properties of the soils encountered, which are listed below in Table 2.

Table 2: Physical Properties of Soil

Type of Soil	Depth below Surface (feet)	N-Value	Effective Unit Weight (pcf)	Drained Friction Angle, φ' (degrees)
Fine Sand	0 to 4.0	7-10	95.0-125.0	36.0

GROUNDWATER

Groundwater was not encountered in any of our test pits. Further, there was no seepage or caving detected in any of the test pits. Our review of water-well cards for

[5] Classification symbols are estimated based on visual observation.

the area[6] indicates that groundwater levels are generally less than 15.0 feet bgs. We anticipate that the primary groundwater table is near the underlying contact with bedrock, which we infer is between 15 and 20 feet bgs. We infer that water levels will rise during periods of sustained rainfall and that perched groundwater will form within the surficial sands above confining layers of clay and/or bedrock. Based on the topography, we anticipate that the hydraulic gradient is to the west towards the Pacific Ocean.

GEOLOGIC HAZARDS

Based on a review of Oregon HazVu: Statewide Geohazards Viewer, the sea cliff west of the site and the top of the bluff adjacent to the sea cliff have been identified by the State as being susceptible to moderate-to-very-active coastal erosion. Coastal erosion on the Bandon Bluff is well documented and is a significant geologic hazard, causing localized landslides along the edges of the sea cliff. Because of this coastal erosion hazard, the sea cliff and top of the bluff have both been identified by the State as having a high likelihood of future landslides.

Oregon's Department of Geology and Mineral Industries (DOGAMI), in concert with others, has begun monitoring rates of erosion along parts of the Oregon coastline. The department has identified chronic coastal hazards such as mass wasting of sea cliffs and recession of coastal bluffs caused by wave attack and geologic instability. This process is known as bluff retreat.

Beach profiles surveyed by DOGAMI using GPS provide a measure of offshore wave energy, which is reflected in accretion of sediments on the beach during the summer and erosion of sediments in winter. These data allow profiling of the beach and a determination as to past bluff erosion and retreat rates. A beach profile taken 930.0 feet north of the site, which was initially surveyed in April 1998 and most recently in February 2009, indicates that approximately 80.0 feet of sand has been deposited at the base of the sea cliff during the 11 years between surveys. The profile indicates that accretion of sediments at the base of the sea cliff has occurred since 1998 at various rates. We conclude, based on our site observations, that wind deposition has been the prevailing form of sediment transport. The cliff-backed beach where the survey was

[6] Oregon Water Resources Department well report query, viewed online at https://apps.wrd.state.or.us

conducted is similar in elevation and geologic setting as that of the sea cliff west of the subject property.

Haystack Rock, a sea stack west of the site, provides natural protection from wave action as it dissipates the wave energy, which lessens erosion at the base of the sea cliff. Further, wind erosion of the sands is lessened by dense vegetated cover. Based on this, it is our opinion that this rate of deposition is representative of what we are seeing along the sea cliff west of the subject property. Please note that erosion of Oregon's coastal bluffs is expected to intensify in the future along its beaches due to diminishing beach sediments which provide buffering during winter storms. Future wave attack will be more destructive due, in part, to long-term rises in mean sea level and warmer oceans which will cause more intense storms associated with climate cycles such as El Niño.

A review of the State Landslide Inventory Database (Oregon HazVu)[7] indicates that the site is not part of an identified landslide, earthflow, or debris-flow complex. Further, the state has identified the slopes and portions of the west side of the site as having a moderate susceptibility to future landslides.

A review of LIDAR mapping for the area[8] indicates that the building site is an elevated level terrace. Further, arcuate-shaped features and settlement on the sea cliff can be observed on the LIDAR mapping. As such, the LIDAR imagery for the slopes and site is smooth and regular. Based on our LIDAR review, there are no landforms associated with geologic hazards, including landslides, on the building site; however, the arcuate-shaped features and settlement that can be observed on the sea cliff via LIDAR imagery indicate that the slope could be potentially unstable and that there may be features associated with geologic hazards, including landslides, on the site.

Based on a review of U.S. Geological Survey maps,[9] there are not geologically young fault systems within ½ mile of the subject property. As with other folds and faults located

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[7] (HazVu). Oregon Department of Geology and Mineral Industries (DOGAMI) Statewide Geohazards Viewer. Viewed at https://www.oregongeology.org

[8] LIDAR is an aerial imagery technology that penetrates the vegetative cover by measuring distance by measuring the amount of time it takes for light to travel from a light-emitting source to an object and back to a sensor.

[9] U.S. Geological Survey (USGS), Quaternary Faults Web Mapping Application, viewed at https://earthquake.usgs.gov

in the Cascadia forearc, it is suspected that great megathrust earthquakes along the Cascadia Subduction Zone will cause future rupture and displacement on these faults.

SEISMIC DESIGN CRITERIA

Our seismic design parameters are based on Site Class D – Stiff Soil. The subject property is located in an area that is highly influenced by regional seismicity due to the proximity to the Cascadia Subduction Zone (CSZ). Seismic design criteria, in accordance with the ASCE[10] 7-16 (IBC-12[11]), are summarized in Table 3 below.

Table 3: ASCE 7-16 (IBC-12) Seismic Design Parameters

Seismic Design Parameters	Short Period	1 Second
Maximum Credible Earthquake Spectral Acceleration	S_s = 2.021 g	S_1 = 0.969 g
Site Class	D – Stiff Soil	
Site Coefficient	F_a = 1.0	F_v = null
Adjusted Spectral Acceleration	S_{MS} = 2.021 g	S_{M1} = null
Design Spectral Response Acceleration Parameters	S_{DS} = 1.347 g	S_{D1} = null
Peak Ground Acceleration	PGA = 1.008 g	

Liquefaction

Liquefaction occurs when loosely packed, water-logged granular sediments lose their strength in response to strong ground shaking. Liquefaction occurring beneath buildings and other structures can cause major damage during earthquakes. Liquefaction potential was assessed based on the information obtained from our test pits and using the parameters suggested in Youd & Andrus, et al., 2001.[12] According to our seismic analysis, the site will experience a peak ground acceleration (PGA) during a design seismic event of 1.008 g. Further, groundwater was not observed in our test pits. Based on the inferred depth of groundwater and the consistency of the fine sandy soils

[10] American Society of Civil Engineers

[11] 2012 International Building Code

[12] Youd, T. L., Andrus, I. M., et al., 2001. Resistance of Soils: Summary Report from the 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils. ASCE, Journal of Geotechnical and Geoenvironmental Engineering, v. 127, no. 10, pp. 817-833.

encountered in our test pits, it is our opinion that the liquefaction potential for the site is low.

Tsunamis

Based on recent mapping and modeling done by the state of Oregon,[13] the site is within the Tsunami Inundation Zone and may be inundated during a tsunami generated by a local-source (Cascadia Subduction Zone) moment magnitude (Mm) earthquake of 9.0 g or greater. Because of this, we strongly recommend that you check local resources and the state of Oregon's Department of Geology and Mineral Industries (DOGAMI) Tsunami Resource Center[14] for current information regarding tsunami preparedness and emergency procedures.

SETBACK

The 2017 Oregon Residential Specialty Code,[15] Section R.403.1.9.1 (code) requires that buildings adjacent to descending slope surfaces be founded in firm material with an embedment and setback from the slope surface sufficient to provide vertical and lateral support for the footing without detrimental settlement. When determining setbacks, the code recommends a minimum setback of at least the smaller of H/3 and 40 feet for descending slopes and the smaller of H/2 and 15 feet from ascending slopes.[16] For slopes steeper than 100 percent, the setback shall be measured from an imaginary plane 45 degrees to the horizontal projected upward from the toe of the slope. We provide our setback recommendations in our **DISCUSSION AND RECOMMENDATIONS** section of this report.

DISCUSSION AND RECOMMENDATIONS

Based on our surface and subsurface investigation, it is our opinion that the proposed building site is suitable to site a single-family residence. Further, the use of a conventional shallow foundation is feasible, provided that you prepare the building site in accordance with our recommendations.

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[13] Local-source (Cascadia Subduction Zone) Tsunami Inundation Map, Bandon, Oregon. State of Oregon Department of Geology and Mineral Industries online at http://www.oregongeology.org

[14] Viewed online at www.oregongeology.org

[15] Oregon Residential Specialty Code, 2017, State of Oregon, viewed at http://ecodes.biz

[16] H = the height of the slope

We recommend that the upper 3.0 feet of loose fine sand encountered in our test pits be removed from beneath the building footprint, including 5.0 feet around the building footprint, and be replaced with approved structural fill and recompacted. The structural fill should be placed in 9-inch lifts and compacted to at least 95 percent of the maximum dry density, as determined by ASTM D1557.

All footings should be designed for an allowable bearing pressure of 1,500 pounds per square foot (psf). The weight of the footing and overlying backfill can be disregarded in calculating footing sizes. The recommended allowable bearing pressure applies to the total of dead plus long-term-live loads, and this bearing pressure may be doubled for short-term loads such as those resulting from wind or seismic forces. For footings in contact with native soils, use a coefficient of friction equal to 0.20 when calculating resistance to sliding.

Based on CGS's estimates, total post-construction settlement is estimated to be less than one (1) inch, with post-construction differential settlement of less than 0.5 inches over a 50-foot span.

All surfaces with building foundations or pavement areas should be prepared in accordance with these recommendations. Continuous wall and isolated spread footings should be at least 2 and 3 feet wide, respectively. The bottom of exterior footings should be at least 18 inches below the lowest adjacent exterior grade. The bottom of interior footings should be established at least 12 inches below the base of the floor slab.

Lateral loads on footings can be resisted by passive earth pressure on the sides of the structures and by friction at the base of the footings. An allowable passive earth pressure of 263 pounds per cubic foot (pcf) may be used for footings confined by native soils and new structural fills. Adjacent floor slabs, pavements, or the upper 12-inch depth of adjacent, unpaved areas should not be considered when calculating passive resistance.

A CGS engineering geologist (or their representative) should confirm suitable bearing conditions and evaluate all footing subgrades prior to the forming of the footings. Observations should also confirm that loose or soft material, organics, roots, unsuitable

fill, and old topsoil zones are removed. You should anticipate some deepening of the excavations if deeper soft material is uncovered.

We understand that the western perimeter foundation will be set back 25.0 feet from the break-in-slope along the sea cliff. We recommend that this be a minimum setback. And we recommend that, upon completion, the building pad be graded to provide positive drainage away from the structure and away from the sea cliff west of the homesite.

Floor Slabs

Satisfactory subgrade support for reinforced building floor slabs can be obtained from the subgrade prepared in accordance with our site-preparation recommendations. A minimum of 12 inches of loose, imported granular material should be placed and compacted over the prepared subgrade. Imported granular material should be crushed rock or crushed gravel that is fairly well graded between coarse and fine, contains no deleterious materials, has a maximum particle size of one (1) inch, and has less than 5 percent by weight passing the U.S. Standard No. 200 Sieve.

CONSTRUCTION

Site Preparation

In order to prepare the site, all existing tree or shrub roots should be removed. All organics, roots, or other deleterious material should be transported off site. Deeper excavations and debris removal may be required at the discretion of the engineering geologist.

As discussed, we recommend that the upper 3.0 feet of loose fine sand encountered in our test pits be removed from beneath the building footprint, including 5.0 feet around the building footprint, and be replaced with approved structural fill and recompacted. The structural fill should be placed in 9-inch lifts and compacted to at least 95 percent of the maximum dry density, as determined by ASTM D1557.

The fill used to rebuild the pad should meet the specifications of Selected Granular Backfill in accordance with Oregon Standards for Specifications for Construction[17]. The imported granular material should be crushed rock or crushed gravel and sand or

[17] Oregon Standards for Specifications for Construction, 2021. Oregon Department of Transportation. Viewed online at https://www.oregon.gov

approved sand that is fairly well graded between coarse and fine sand and contains no deleterious materials. Material that is encountered in the excavation that does not meet these criteria should not be used and should be disposed off-site. The granular fill should be placed in 9-inch lifts and compacted to at least 95 percent of the maximum dry density, as determined by ASTM D1557. Compaction should be checked using either a nuclear gauge or Sand Cone Test, as determined by ASTM D1556, and by a proof-roll. Please contact our office for additional assistance with this.

A CGS engineering geologist (or their representative) should confirm suitable bearing conditions and evaluate all footing subgrades. Observations should also confirm that loose or soft materials, organics, unsuitable fill, and old topsoil zones are removed. Localized deepening of footing excavations may be required to penetrate any deleterious materials.

Probing

Following site preparation and prior to forming the foundation, the exposed excavated surface and the footing or slab subgrade should be evaluated by probing. A member of our geotechnical staff should carry out the probing. Soft or loose zones identified during the field evaluation should be compacted to an unyielding condition or be excavated and replaced with structural fill.

Excavation

Subsurface conditions at the project site show that the upper fill is predominantly very-loose-to-medium-dense sand. Excavations in these soils may be readily accomplished with conventional earthwork equipment.

Trench cuts in native materials should stand vertical to a depth of approximately four feet, provided no groundwater seepage is present in the trench walls, with the understanding that some sloughing may occur. The trenches should be flattened to 1.5H:1V if excessive sloughing occurs or seepage is present.

Groundwater was not encountered in our test pits. If shallow groundwater is observed during construction, use of a trench shield (or other approved temporary shoring) is recommended for cuts that extend below groundwater seepage or if vertical walls are desired for cuts deeper than four feet. If shoring or dewatering is used, CGS recommends that the type and design of the shoring and dewatering systems be the

responsibility of the contractor, who is in the best position to choose systems that fit the overall plan of operation. These excavations should be made in accordance with applicable Occupational Safety and Health Administration and State regulations.

DRAINAGE

Surface and Groundwater

We recommend that the site be graded to prevent ponding and to provide positive drainage away from the proposed structure. Further, we recommend that surface drains be tightlined to provide drainage away from the slope west of the house site.

Wet-Weather/Wet-Soil Conditions

If construction occurs during wet weather, we recommend that a thin layer of compacted, crushed rock be placed over the footing subgrades to help protect them from disturbance due to foot traffic and the elements.

The soils at the site may be susceptible to disturbance during the wet season. Trafficability or grading operations within the exposed soils may be difficult during or after extended wet periods or when the moisture content of the soils is more than a few percentage points above optimum. Soils disturbed during site-preparation activities, or soft or loose zones identified during probing, should be removed and replaced with compacted structural fill.

CONSTRUCTION OBSERVATIONS

Satisfactory pavement and earthwork performance depends on the quality of construction. Sufficient monitoring of the contractor's activities is a key part of determining that the work is completed in accordance with the construction drawings and specifications. We recommend that a representative from CGS be retained to observe general excavation, stripping, fill placement, footing subgrades, and subgrades and base rock for floor slabs and pavements.

Subsurface conditions observed during construction should be compared with those encountered during the subsurface explorations. Recognition of changed conditions requires experience; therefore, qualified personnel should visit the site with sufficient frequency to detect whether subsurface conditions change significantly from those anticipated.

LIMITATIONS

Cascadia Geoservices, Inc.'s (CGS) professional services are performed, findings obtained, and recommendations prepared in accordance with generally accepted principles and practices for engineering geologists. No other warranty, express or implied, is made. The Customer acknowledges and agrees that:

1. CGS is not responsible for the conclusions, opinions, or recommendations made by others based upon our findings.
2. This report has been prepared for the exclusive use of the addressee, and their agents, and is intended for their use only. It is not to be photographed, photocopied, or similarly reproduced, in total or in part, without the expressed written consent of the Customer and Cascadia Geoservices, Inc.
3. The opinions, comments, and conclusions presented in this report are based upon information derived from our literature review, historical topographic map and aerial photograph review, and on our site observations. The scope of our services is intended to evaluate soil and groundwater (ground) conditions within the primary influence or influencing the proposed development area. Our services do not include an evaluation of potential ground conditions beyond the depth of our explorations or agreed-upon scope of our work. Conditions between or beyond our site observations may vary from those encountered.
4. Recommendations provided herein are based in part upon project information provided to CGS. If the project information is incorrect or if additional information becomes available, the correct or additional information should be immediately conveyed to CGS for review.
5. The scope of services for this subsurface exploration and report did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous substances in the soil, surface water, or groundwater at this site.
6. If there is a substantial lapse of time between the submission of this report and the start of work at the site, if conditions have changed due to natural causes or construction operations at or adjacent to the site, or if the basic project scheme is significantly modified from that assumed, this report should be reviewed to determine the applicability of the conclusions and recommendations. Land use, site conditions (both on and off site), or other factors may change over time and

could materially affect our findings. Therefore, this report should not be relied upon after two years from its issue, or in the event that the site conditions change.

7. The work performed by the Consultant is not warrantied or guaranteed.
8. There is an assumed risk when building on marginal ground, sites subject to flooding, or adjacent to bluffs, sea cliffs, or on steep ground.
9. The Consultant's work will be performed to the standards of the engineering and geology professions and will be supervised by licensed professionals. Attempts at improving marginal ground, sites subject to flooding, or adjacent to bluffs, sea cliffs, or on steep ground supporting the Customer's property may, through acts of God or otherwise, be temporary and that marginal ground, sites subject to flooding, or adjacent to bluffs, sea cliffs, or on steep ground may continue to degrade over time. The Customer hereby waives any claim that they may have against CGS for any claim, whether based on personal injury, property damage, economic loss, or otherwise, for any work performed by CGS for the Customer relating to or arising out of attempts to stabilize the marginal ground, sites subject to flooding, or bluffs, sea cliffs, or steep ground located at the Customer's property identified hereunder. It is further understood and agreed that continual monitoring of the Customer's property may be required, and that such monitoring is done by sophisticated monitoring instruments used by CGS. It is further understood and agreed that repairs may require regular and periodic maintenance by the Customer.
10. The Customer shall indemnify, defend, at the Customer's sole expense, and hold harmless CGS, affiliated companies of CGS, its partners, joint ventures, representatives, members, designees, officers, directors, shareholders, employees, agents, successors, and assigns (Indemnified Parties) from and against any and all claims for bodily injury or death, damage to property, demands, damages, and expenses (including but not limited to investigative and repair costs, attorney's fees and costs, and consultant's fees and costs) (hereinafter "Claims") which arise or are in any way connected with the work performed, materials furnished, or services provided under this Agreement by CGS or its agents.

PROFESSIONAL QUALIFICATIONS

To review our professional qualifications, please visit our website at www.CascadiaGeoservices.com.

Sincerely,

Cascadia Geoservices, Inc.

Eric Oberbeck, RG/CEG
Expires June 1, 2022

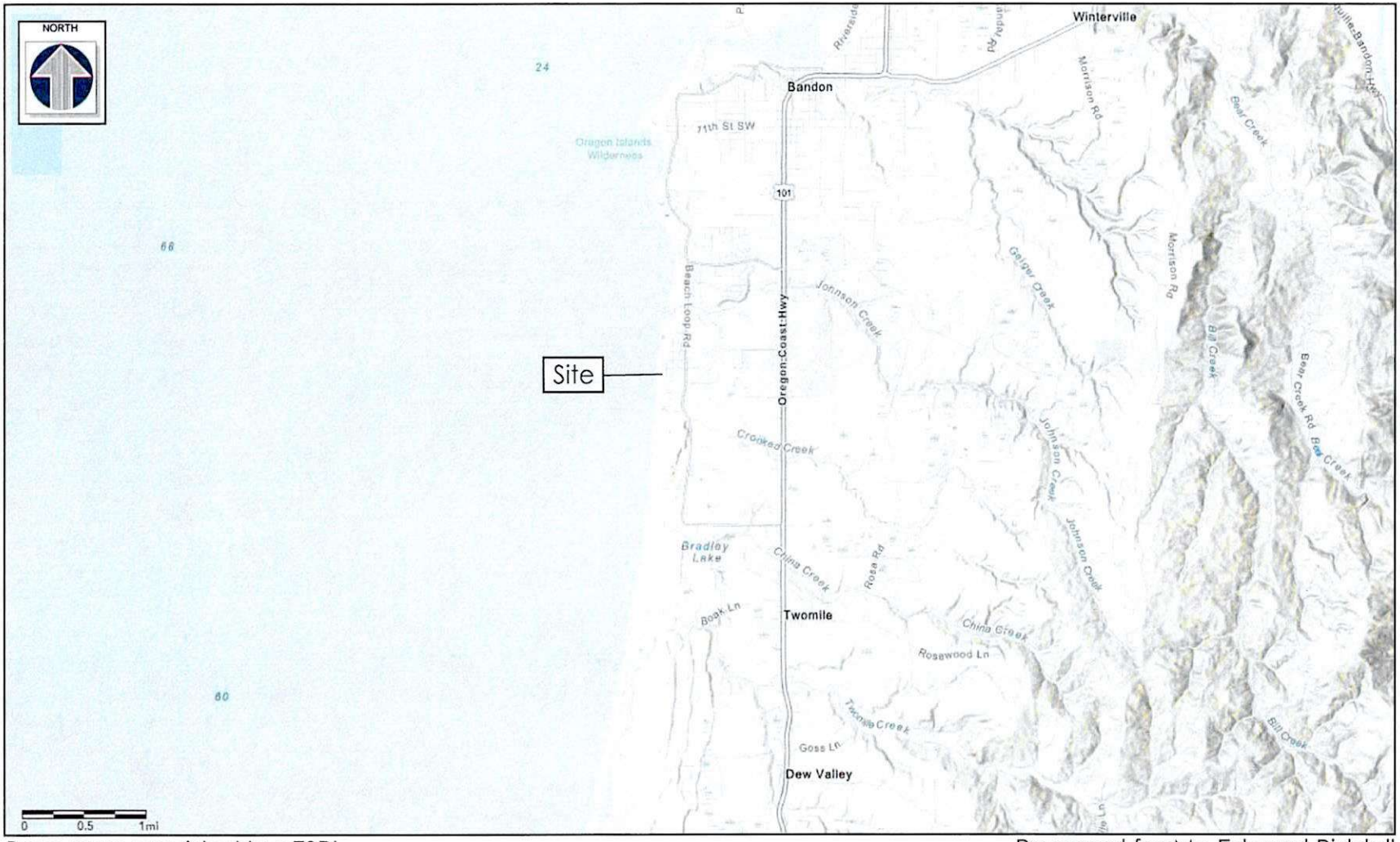
Adam Fulthorpe, Staff Geologist

FIGURES

Figure 1, Location Map
Figure 2, Site Map

ATTACHMENTS

Attachment 1 – Summary Test Pit Logs
Attachment 2 – Lab Analysis Reports



Base map provided by: ESRI

Prepared for Mr. Edward Riddell

CASCADIA Geoservices — Geologists and Engineers	Project: 21123 November 2021	**Location Map** Geotechnical Site Evaluation Gould Avenue Property, Bandon, Oregon 97411 T29S R15W Sec 01CC, Tax Lot 1801	**Figure 1**

Prepared for Mr. Edward Riddell

CASCADIA Geoservices Geologists and Engineers	Project: 21123 November 2021	**Site Map** Geotechnical Site Evaluation Gould Avenue Property, Bandon, Oregon 97411 T29S R15W Sec 01CC, Tax Lot 1801	**Figure 2**

FIELD CLASSIFICATIONS

SOIL DESCRIPTION FORMAT	
(1) consistency,	(9) structure,
(2) color,	(10) cementation,
(3) grain size,	(11) reaction to HCL,
(4) classification name [secondary PRIMARY additional];	(12) odor,
(5) moisture,	(13) groundwater seepage,
(6) plasticity of fines,	(14) caving,
(7) angularity	**(15) (unit name and/or origin),**
(8) shape,	

Note: Bolded items are the minimum required elements for a soil description.

1. CONSISTENCY - COARSE-GRAINED

TERM	SPT (140-LB. HAMMER)[1]	D & M SAMPLER (140-LB. HAMMER)[1]	DYNAMIC CONE PENETROMETER PENETRATION RATE SAMPLER (DCP)[4,5,6]	FIELD TEST (USING ½-INCH REBAR)
Very loose	0 – 4	0 – 11	0 – 2	Easily penetrated when pushed by hand
Loose	4 – 10	11 – 26	2 – 5	Easily penetrated several inches when pushed by hand
Medium dense	10 – 30	26 – 74	6 – 31	Easily to moderately penetrated when driven by 5 lb. hammer
Dense	30 – 50	74 – 120	32 – 42	Penetrated 1-foot with difficulty when driven by 5 lb. hammer
Very dense	>50	>120	>43	Penetrated only few inches when driven by 5 lb. hammer

1. CONSISTENCY - FINE-GRAINED

TERM	SPT (140-LB. HAMMER)[1]	D & M SAMPLER (140-LB. HAMMER)[1]	DYNAMIC CONE PENETROMETER PENETRATION RATE SAMPLER (DCP)[5,6]	POCKET PEN.[2]	TORVANE[3]	FIELD TEST
Very soft	<2	<3	<2	<0.25	<0.13	Easily penetrated several inches by fist
Soft	2 – 4	3 – 6	2 – 3	0.25 – 0.5	0.13 – 0.25	Easily penetrated several inches by thumb
Medium stiff	5 – 8	7 – 12	4 – 7	0.50 – 1.0	0.25 – 0.5	Can be penetrated several inches by thumb with moderate effort
Stiff	9 – 15	13 – 25	8 – 16	1.0 – 2.0	0.5 – 1.0	Readily indented by thumb but penetrated only with great effort
Very stiff	16 – 30	26 – 65	17 – 27	2.0 – 4.0	1.0 – 2.0	Readily indented by thumbnail
Hard	>30	>65	>28	>4.0	>2.0	Difficult to indent by thumbnail

1 Standard penetration resistance (SPT N-value); Dames and Moore (D & M) sampler, number of blows/ft. for last 12" and 30" drop. Unconfined
2 compressive strength with pocket penetrometer; in tons per square foot (tsf).
3 Undrained shear strength with torvane (tsf).
4 Up to maximum medium-size sand grains only.
5 Dynamic cone penetration resistance; number of blows/inch.
6 Reference: George F. Sowers et. al. "Dynamic Cone for Shallow In-Situ Penetration Testing of In-Situ Soils, ASTM STP 399, ASTM, , pg. 29. 1966.

2. COLOR

Use common colors. For combinations use hyphens. To describe tint use modifiers: pale, light, and dark. For color variations use adjectives such as "mottled" or "streaked". Soil color charts may be required by client. **Examples:** red-brown; or orange-mottled pale green; or dark brown.

3. GRAIN SIZE

DESCRIPTION		SIEVE*	OBSERVED SIZE
boulders		–	>12"
cobbles		–	3" – 12"
gravel	coarse	¾" – 3"	¾" – 3"
	fine	#4 – ¾"	4.75 mm (0.19") – ¾"
sand	coarse	#10 – #4	2.0 – 4.75 mm
	medium	#40 – #10	0.425 – 2.0 mm
	fine	#200 – #40	0.075 – 0.425 mm
fines		<#200	<0.075 mm

4. CLASSIFICATION NAME

* Use of #200 field sieve encouraged for estimating percentage of fines.

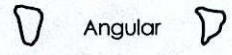
	NAME AND MODIFIER TERMS	CONSTITUENT PERCENTAGE	CONSTITUENT TYPE
Coarse grained	GRAVEL, SAND, COBBLES, BOULDERS	>50%	PRIMARY
	sandy, gravelly, cobbley, bouldery	30 – 50%	secondary
	silty, clayey*	15 – 50%	
	with (gravel, sand, cobbles, boulders)	15 – 30%	additional
	with (silt, clay)*	5 – 15%	
	trace (gravel, sand, cobbles, boulders)	<5%	
	trace (silt, clay)*		
Fine grained	CLAY, SILT*	>50%	PRIMARY
	silty, clayey*	30 – 50%	secondary
	sandy, gravelly		
	with (sand, gravel, cobbles, boulders)	15 – 30%	additional
	with (silt, clay)*		
	trace (sand, gravel, cobbles, boulders)	5 – 15%	
	trace (silt, clay)*		
Organic	PEAT	50 – 100%	PRIMARY
	organic (soil name)	15 – 50%	secondary
	(soil name) with some organics	5 – 15%	additional

* For classification and naming fine-grained soil: dry strength, dilatancy, toughness, and plasticity testing are performed (see Describing Fine-Grained Soil page 2). Confirmation requires laboratory testing (Atterberg limits and hydrometer).

TABLE 1 SOILS
FIELD CLASSIFICATIONS

5. MOISTURE	
TERM	FIELD TEST
dry	absence of moisture, dusty, dry to touch
moist	contains some moisture
wet	visible free water, usually saturated

6. PLASTICITY OF FINES
See "Describing fine-grained Soil" on Page 2.

7. ANGULARITY	
 rounded	 Angular
 subrounded	 Subangular

8. Shape	
TERM	OBSERVATION
flat	particles with width/thickness ratio >3
elongated	particles with length/width ratio >3
flat and elongated	particles meet criteria for both flat and elongated

9. STRUCTURE	
TERM	OBSERVATION
stratified	alternating layers >1 cm thick, describe variation
laminated	alternating layers <1 cm thick, describe variation
fissured	contains shears and partings along planes of weakness
slickensides	partings appear glossy or striated
blocky	breaks into lumps, crumbly
lensed	contains pockets of different soils, describe variation
homogenous	same color and appearance throughout

10. CEMENTATION	
TERM	FIELD TEST
weak	breaks under light finger pressure
moderate	breaks under hard finger pressure
strong	will not break with finger pressure

11. REACTION TO HCL	
TERM	FIELD TEST
none	no visible reaction
weak	bubbles form slowly
strong	vigorous reaction

12. ODOR
Describe odor as organic; or potential non-organic* *Needs further investigation

13. GROUNDWATER SEEPAGE
Describe occurrence (i.e. from soil horizon, fissures with depths) and rate: slow (<1 gpm); moderate (1-3 gpm); fast (>3 gpm)

14. CAVING			
Describe occurrence (depths, soils) and amount with term			
Test Pits	minor (<1 ft³)	moderate (1-3 ft³)	Severe (>3 ft³)

15. (UNIT NAME/ORIGIN)
Name of stratigraphic unit (e.g. Willamette Silt), and/or origin of deposit (Topsoil, Alluvium, Colluvium, Decomposed Basalt, Loess, Fill, etc.).

DESCRIBING FINE-GRAINED SOIL				
	FIELD TEST			
NAME	PLASTICITY (A BELOW)	DRY STRENGTH (B BELOW)	DILATANCY REACTION (C BELOW)	TOUGHNESS OF THREAD (D BELOW)
SILT	non-plastic, low	none, low	rapid	low
SILT with some clay	low	low, medium	rapid, slow	low, medium
clayey SILT	low, medium	medium	slow	medium
silty CLAY	medium	medium, high	slow, none	medium, high
CLAY with some silt	high	High	none	high
CLAY	high	very high	none	high
organic SILT	non-plastic, low	low, medium	slow	low, medium
organic CLAY	medium, high	medium to very high	none	medium, high

A. PLASTICITY	
TERM	OBSERVATION
non-plastic	A 1/8" (3-mm) thread cannot be rolled at any water content.
low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be re-rolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
high	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be re-rolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.

B. DRY STRENGTH	
TERM	OBSERVATION
none	Dry specimen crumbles into powder with mere pressure of handling.
low	Dry specimen crumbles into powder with some finger pressure.
medium	Dry specimen breaks into pieces or crumbles with considerable finger pressure.
high	Dry specimen cannot be broken with finger pressure. Will break into pieces between thumb and a hard surface.
very high	Dry specimen cannot be broken between thumb and a hard surface.

C. DILATANCY REACTION	
TERM	OBSERVATION
none	No visible change in the specimen.
slow	Water appears slowly on surface of specimen during shaking and doesn't disappear or disappears slowly upon squeezing.
rapid	Water appears quickly on the surface of the specimen during shaking and disappears quickly upon squeezing.

D. TOUGHNESS OF THREAD	
TERM	OBSERVATION
low	Only slight hand pressure is required to roll the thread near the plastic limit. The thread and lump are weak and soft.
medium	Medium pressure is required to roll the thread to near the plastic limit. The thread and lump have medium stiffness.
high	Considerable hand pressure is required to roll the thread to near the plastic limit. The thread and lump have very high stiffness.

TABLE 2

KEY TO TEST PIT AND BORING LOG SYMBOLS

SAMPLE NUMBER ACRONYMS/WATER SYMBOLS

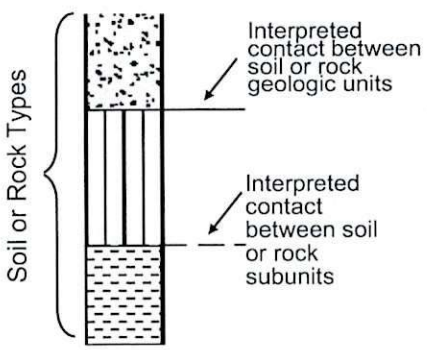
DM - Dames & Moore Sampler
GR - Grab or Bulk Samples
OS - Osterberg (Piston) Sampler
C - Rock Core
SA - Screen Air Sampling
SW - Screen Water Sampling
SS - SPT Standard Penetration Drive Sampler (ASTM D1586)
ST - Shelby Tube Push Sampler (ASTM D1587)

Water Level During Drilling/ Excavation

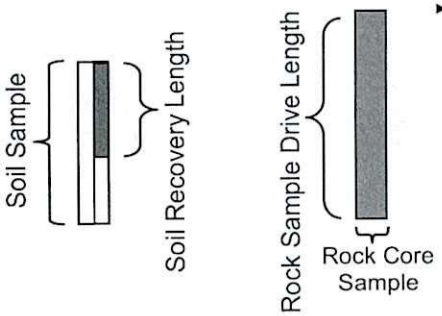
Water Level on Date Measured

LOG GRAPHICS/INSTALLATIONS

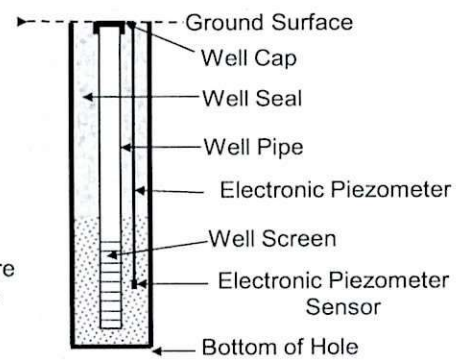
Soil and Rock



Soil and Rock Sampling Symbols



Instrumentation Detail



GEOTECHNICAL FIELD & LABORATORY TESTING/ACRONYM EXPLANATIONS

ATT	Atterberg Limits	OC	Organic Content
AMSL	Above Mean Sea Level	OD	Outside Diameter
BGS	Below ground surface	P200	Percent Passing U.S. Standard No. 200 Sieve
CBR	California Bearing Ratio	PI	Plasticity Index
CON	Consolidation	PL	Plasticity Limit
DCP	Dynamic Cone Penetrometer	PP	Pocket Penetrometer
DD	Dry Density	RES	Resilient Modulus
DS	Direct Shear	SC	Sand Cone
GPS	Global Positioning System	SIEV	Sieve Gradation
HCL	Hydrochloric Acid	SP	Static Penetrometer
HYD	Hydrometer Gradation	TOR	Torvane
kPa	kiloPascal	UC	Unconfined Compressive Strength
LL	Liquid Limit	VS	Vane Shear

ENVIRONMENTAL TESTING/ACRONYM EXPLANATIONS

ATD	At Time of Drilling	ND	Not Detected
BGS	Below ground surface	NS	No Sheen
CA	Sample Submitted for Chemical Analysis	PID	Photoionization Detector Headspace Analysis
HS	High Sheen		
MS	Moderate Sheen	PPM	Parts Per Million

TEST PITS

CASCADIA GEOSERVICES
PROJECT NO: 21123

RIDDEL PROPERTY
GOULD AVENUE
BANDON, OREGON 97411
T29S R15W SEC 01CC TL 1801

Cascadia Geoservices, Inc.
190 6th Street
Port Orford, OR 97465
D. 541-332-0433
C. 541-655-0021

DYNAMIC PENETROMETER (DP or DCP)
STATIC PENETROMETER (SP)
MOISTURE CONTENT (%)
INDEX PROPERTIES (IP)
NUCLEAR DENSITY (ND)
DRY DENSITY (DD)
SIEVE (SIEV)

DEPTH IN FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE/ SAMPLE ID	0 25 50	COMMENTS
TP-1		SURFACE CONDITIONS: Damp					**TP-1**
0.0		Loose, tannish-brown and dark tannish-brown, fine SAND; moist, with roots	0.0				
1.0							
2.0		becomes with no roots		P200 DCPs	SS-1	4 5	W% = 7.0% P200 = 1%
3.0							
4.0		becomes medium dense, tannish-orangish-brown, strong cementation		P200 DCPs	SS-2	8 9	W% = 10.0% P200 = 2%
		QUATERNARY MARINE TERRACE DEPOSITS	4.5	P200 DCPs	SS-3	15 16	W% = 11.0% P200 = 1%
5.0		Final depth 4.5 feet bgs; test pit backfilled with uncompacted excavated material					No groundwater or caving observed to the depth explored

TP-1 Location: Lat: 43.085702 Long: -124. 434450 (See Figure 2); Elevation: 49 feet (Google Earth) Date Completed: 10/16/2021

DEPTH IN FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE/ SAMPLE ID	0 25 50	COMMENTS
TP-2		SURFACE CONDITIONS: Damp					**TP-2**
0.0		Loose, tannish-brown and dark tannish-brown, fine SAND; moist, with roots	0.0				
		becomes with no roots					
1.0							
2.0				P200 DCPs	SS-4	4 5	W% = 7.0% P200 = 1%
3.0		becomes with light and dark grayish-brown					
4.0		becomes medium dense, tannish-orangish-brown, strong cementation		DCPs P200	SS-5	10 11	W% = 10.0% P200 = 1%
		QUATERNARY MARINE TERRACE DEPOSITS	4.5				
5.0		Final depth 4.5 feet bgs; test pit backfilled with uncompacted excavated material					No groundwater or caving observed to the depth explored

TP-2 Location: Lat: 43.085702 Long: -124. 434450 (See Figure 2); Elevation: 49 feet (Google Earth) Date Completed: 10/16/2021

EXCAVATION METHOD: Mini Excavator
EXCAVATED BY: Natural Origins, LLC

LOGGED BY: A. Fulthorpe

ALL EXPLORATIONS-2 PER PAGE RIDDELPROP_TP1-3_101921.GPJ PRINT DATE 10/24/21

TEST PIT

CASCADIA GEOSERVICES
PROJECT NO: 21123

RIDDEL PROPERTY
GOULD AVENUE
BANDON, OREGON 97411
T29S R15W SEC 01CC TL 1801

Cascadia Geoservices, Inc.
190 6th Street
Port Orford, OR 97465
D. 541-332-0433
C. 541-655-0021

DYNAMIC PENETROMETER (DP or DCP)
STATIC PENETROMETER (SP)
MOISTURE CONTENT (%)
INDEX PROPERTIES (IP)
NUCLEAR DENSITY (ND)
DRY DENSITY (DD)
SIEVE (SIEV)

DEPTH IN FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE/ SAMPLE ID	0 25 50	COMMENTS
TP-3		SURFACE CONDITIONS: Damp					TP-3
0.0		Loose, brown, fine SAND; moist, with roots	0.0				
		becomes with no roots					
1.0							
				P200	SS-6	●	W% = 15.0% P200 = 0%
2.0		becomes medium dense, tannish-orangish-brown, strong cementation		P200 DCPs	SS-7	● 16◆◆17	W% = 8.0% P200 = 2%
		QUATERNARY MARINE TERRACE DEPOSITS					
3.0							
		Final depth 3.5 feet bgs; test pit backfilled with uncompacted excavated material	3.5	DCPs		16◆◆17	
4.0							No groundwater or caving observed to the depth explored
5.0							

TP-3 Location: Lat: 43.085702 Long: -124. 434450 (See Figure 2); Elevation: 50 feet (Google Earth) Date Completed: 10/16/2021

EXCAVATION METHOD: Mini Excavator
EXCAVATED BY: Natural Origins, LLC

LOGGED BY: A. Fulthorpe

CASCADIA GEOSERVICES, INC.
Material Laboratory
190 6th St
Port Orford, Oregon 97465
P.541-332-0433

Project No.: 21123
Testing Date: November 15, 2021
Tests Performed: Water Content, Soil Finer Than 75µm
Standards Followed: D2216, D1140
Performed By: AF

Notes:

Water Content (D2216)

Sample Name	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7						
Pan Letter	A	B	C	D	E	F	G						
M_c = Mass of Container, g	1.84	1.85	1.85	1.85	1.86	1.87	1.86						
M_{cms} = Mass of Container and Moist Specimen, g	22.39	27.96	26.89	28.04	33.16	23.21	25.32						
M_{cds} = Mass of Container and Dry Specimen, g	21.04	25.60	24.34	26.28	30.38	20.50	23.49						
M_s = Mass of Oven Dry Specimen = M_{cds} - M_c, g	19.20	23.75	22.49	24.43	28.52	18.63	21.63						
M_w = Mass of Water = M_{cms} - M_{cds}, g	1.35	2.36	2.55	1.76	2.78	2.71	1.83						
w = Water Content = M_w/M_s X 100%	7%	10%	11%	7%	10%	15%	8%						

% Finer Than 75µm (D1140)

Sample Name	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7						
Pan Letter	A	B	C	D	E	F	G						
M_c = Mass of Container, g	1.85	1.85	1.86	1.85	1.85	1.88	1.87						
M_{crs} = Mass of Container and Retained Specimen, g	31.79	34.18	34.59	39.93	41.31	30.87	32.33						
M_s = Mass of Oven Dry Specimen = M_{cds} - M_c, g	19.20	23.75	22.49	24.43	28.52	18.63	21.63						
M_r = Mass of Retained Specimen = M_{crs} - M_c, g	19.10	23.36	22.25	24.12	28.16	18.56	21.21						
% Finer Than 75µm = (M_s - M_r)/M_s X 100%	1%	2%	1%	1%	1%	0%	2%						