



**OREGON PARKS AND RECREATION DEPARTMENT  
OCEAN SHORE PERMIT APPLICATION**

**SAND ALTERATION**

**FOR OFFICIAL USE ONLY**

OPRD PERMIT #	2998
APPLICATION DATE:	11/17/2021
DATE POSTED:	11/24/2021
COORDINATOR:	R Parker
60 DAY DATE DUE:	1/16/2022

**Section 1. Proposed Project**

**Project type:**

Fill                                       Removal                                       Alteration

**Project Purpose:** (Check all that apply)

Dune Management Plan Implementation  
 Dune Grading                                       Foredune Restoration                                       Watercourse Relocation  
 Dune Enhancement                                       Habitat Creation/Restoration                                       Other:

*Provide a brief description of the project:*

Foredune grading to perform ongoing maintenance/access preservation along a 500' section of dune within City of Manzanita City Limits. 8 properties involved, 7 property owners. Approximately 10,000 cubic yards of excess dune sand will be spread on upper open beach to a depth of 2-3'.

Estimated project start date:                                      3/1/22                                      Estimated project completion date:                                      4/1/22

**Section 2. Applicant Information**

Multiple tax lot project                                       Single tax lot project

Agent	Jon Reimann, JPR Consulting			Owner				
Mailing address	14512 NW Oak Shadow Court			Mailing address				
City	Portland	State	OR	Zip	97229	City	State	Zip
Phone	(503) 730-8604	Fax				Phone	Fax	
Email	jonreimann0@gmail.com			Email				

**Section 3. Property Location and Information**

City/town                                      Manzanita                                      County                                      Tillamook  
 Local dune management plan sub-unit designation (i.e. Management Unit (MU) G, or District 5A)      City Ord. 95-6

**Current use** (Check all that apply)

Residential                                       Commercial/Industrial                                       Public  
 Vacant (Unbuilt)                                       Other (Explain)

List the names, situs and mailing addresses of oceanfront landowners with property boundaries common to those of the property or properties described in the application.

Name	Property situs address	Mailing address
Sandra and Randall Roedl	8830 Spindrift Lane Manzanita OR 97130	PO Box 43 Manzanita, OR 97130
Julie and Robert Strasser	3N1032BD07300 Manzanita, OR 97130 (vacant)	1500 SW 5th Ave. Ste# 2503 Portland, OR 97201

#### Section 4. Project Justification and Impacts

*Explain why is this project necessary?*

Implementing adopted City Code that allows periodic maintenance of beach dunes (ORD. 95-9). We obtained approval from the City October, 2021. See attached Findings Memo from the City.

*Attach additional pages as necessary*

*Describe all potential impacts:*

Temporary disruption of beach access #16, 17, 18 for 2 to 3 days in order to complete the grading work. Temporary disruption of upper open beach along the sub areas frontage to the open beach (approx. 550-600' x 150').

*Attach additional pages as necessary*

*List measures that will be taken to minimize the impacts identified above:*

Signs will be posted one week ahead of the project at the beginning of each beach access describing the work to be completed and the amount of time for the disruption. The contractor we are using, Jiffy Construction (Dick Ewan) has completed multiple dune grading projects in the area and will have operators on-site to answer any questions of beach goer's during the grading operation. A property owner representative for our sub area will also be available the majority of the project operation to observe the work being completed and will be available to also answer any questions from concerned beach visitors.

*Attach additional pages as necessary*

#### Section 5. Project Details

The total volume of sand that will be altered (cubic yards): 13,200

*List of all equipment to be used:*

D8 bull dozer and possibly a smaller D4 bull dozer for fine grading on the open beach grading.

*Attach additional pages as necessary*

*Provide a detailed dune stabilization plan, if required:*

All exposed areas will be replanted with European Beach Grass at an average spacing of 18" on center, with a tighter spacing on slopes exceed a 3:1 ratio.

Ferris Landscaping (Rennie Ferris) will be the contractor completing the replanting.

*Attach additional pages as necessary*

#### Section 6. Additional Permit Requirements

List agency and type of permit required:

Army Corp of Engineers 404 DA permit

DEQ 401 WQC Permit

No additional agency permit required

**Section 7. Signature Requirement**

The application is hereby made for the ocean shore alteration described within this application. I certify that I am familiar with the information contained in this application, and, to the best of my knowledge and belief, this information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed alteration.

I understand that the granting of an OPRD permit does not release me from obtaining any additional permits from any/all local, state, and/or federal agencies that may be required before commencing the project.

I understand that the payment of required OPRD processing fee does not guarantee the issuance of an approved permit.



11-15-21

Agent/Owner Signature

Date

**PROPERTY OWNER INFORMATION AND AUTHORIZATION FORM COMPLETED AND ATTACHED**  Yes  No

**Property Owner Information and Authorization Form** *(Use additional pages as necessary)*

**Agent:**

Map and Tax Lot #	Property Owner Name	Mailing Address	Phone and Email	Signature of Authorization
		SEE ATTACHED PROPERTY OWNER FORMS SIGNED AND DATED		

***By signing this page you are certifying you are familiar with the information contained in the application and to the best of your knowledge and belief, the information is true, complete and accurate.***



**SPINDRIFT TO HORIZON FOREDUNE VIEW GRADING  
PARTICIPANT AGREEMENT and COST PROPOSAL**

August 22, 2021

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**PROPOSED PARTICIPANTS:**

*Dean and Jennifer Pappas*  
800 S. Grand Avenue  
Pasadena CA. 91105  
Beach Tax Lot #70001 (Unit 1)

Agreed to \_\_\_\_\_  
(include date) 8-23-21

*Noma Hanlon and Gail Snow*  
2130 NW 29th Ave  
Portland, OR. 97210-3034  
Beach Tax Lot #70002 (Unit 2)

Agreed to: \_\_\_\_\_

*John and Cynthia Tonges*  
16895 NW Walker Road  
Beaverton, OR 97006  
Beach Tax Lot #5700 (Vacant Lot)

Agreed to: \_\_\_\_\_

*Jim Dow and Natalie Meacham*  
7536 NE Jade Lane  
Bainbridge Island, WA 98110  
Beach Tax Lot # 5802

Agreed to: \_\_\_\_\_  
(include date)

*Dave and Debbie Craig*  
850 Cedar Street  
Lake Oswego, OR 97034  
Beach Tax Lot # 5801

Agreed to: \_\_\_\_\_  
(include date)

**JPR CONSULTING**

14512 N.W. Oak Shadow Court Portland, OR 97229 ■ 503-730-8604 ■ [jonreimann0@gmail.com](mailto:jonreimann0@gmail.com)

**SPINDRIFT TO HORIZON FOREDUNE VIEW GRADING  
PARTICIPANT AGREEMENT and COST PROPOSAL**  
August 22, 2021

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(include date)

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(include date)

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# SPINDRIFT TO HORIZON FOREDUNE VIEW GRADING PARTICIPANT AGREEMENT and COST PROPOSAL

August 22, 2021

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## PROPOSED PARTICIPANTS:

*Dean and Jennifer Pappas*  
800 S. Grand Avenue  
Pasadena CA. 91105  
Beach Tax Lot #70001 (Unit 1)

Agreed to: \_\_\_\_\_  
(include date)

*Noma Hanlon and Gail Snow*  
2130 NW 29th Ave  
Portland, OR. 97210-3034  
Beach Tax Lot #70002 (Unit 2)

Agreed to: \_\_\_\_\_

*John and Cynthia Tonges*  
16895 NW Walker Road  
Beaverton, OR 97006  
Beach Tax Lot #5700 (Vacant Lot)

Agreed to: \_\_\_\_\_

10/4/21

*Jim Dow and Natalie Meacham*  
7536 NE Jade Lane  
Bainbridge Island, WA 98110  
Beach Tax Lot # 5802

Agreed to: \_\_\_\_\_  
(include date)

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Agreed to: \_\_\_\_\_  
(include date)

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**SPINDRIFT TO HORIZON FOREDUNE VIEW GRADING  
PARTICIPANT AGREEMENT and COST PROPOSAL**  
August 22, 2021

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**PROPOSED PARTICIPANTS:**

*Dean and Jennifer Pappas*  
800 S. Grand Avenue  
Pasadena CA. 91105  
Beach Tax Lot #70001 (Unit 1)

Agreed to: \_\_\_\_\_  
(include date)

*Norma Harlon and Gail Snow*  
2130 NW 29th Ave  
Portland, OR. 97210-3034  
Beach Tax Lot #70002 (Unit 2)

Agreed to: \_\_\_\_\_

*John and Cynthia Tonges*  
16895 NW Walker Road  
Beaverton, OR 97006  
Beach Tax Lot #5700 (Vacant Lot)

Agreed to: \_\_\_\_\_

*Jim Dow and Natalie Meacham*  
7536 NE Jade Lane  
Bainbridge Island, WA 98110  
Beach Tax Lot # 5802

Agreed to: \_\_\_\_\_  
(include date) 9/30/2021

*Dave and Debbie Craig*  
850 Cedar Street  
Lake Oswego, OR 97034  
Beach Tax Lot # 5801

Agreed to: \_\_\_\_\_  
(include date)

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PARTICIPANT AGREEMENT and COST PROPOSAL**  
August 22, 2021

**PROPOSED PARTICIPANTS:**

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Agreed to: \_\_\_\_\_

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7536 NE Jade Lane  
Bainbridge Island, WA 98110  
Beach Tax Lot # 5802

Agreed to: \_\_\_\_\_  
(include date)

*Dave and Debbie Craig*  
~~850 Cedar Street~~ 1008 Spruce St.  
Lake Oswego, OR 97034  
Beach Tax Lot # 5801

Agreed to: \_\_\_\_\_  
(include date)

9/30/21

**JPR CONSULTING**

**14512 N.W. Oak Shadow Court Portland, OR 97229 ■ 503-730-8604 ■ [jonreimann0@gmail.com](mailto:jonreimann0@gmail.com)**

*Jon and Pam Reimann*  
14512 NW Oak Shadow Court  
Portland, OR. 97229  
Beach Tax Lot #6603 & #6601

Agreed to:  10/3/21  
/ (include date)

*Nate Palmer*  
1233 Cherry Ln  
Lake Oswego OR 97034  
Beach Tax Lot #6600 & 6602

Agreed to: \_\_\_\_\_  
(include date)

**JPR CONSULTING**

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SPINDRIFT TO HORIZON FOREDUNE VIEW GRADING  
PARTICIPANT AGREEMENT and COST PROPOSAL  
August 22, 2021  
Page 2 of 3

*Jon and Pam Reimann*  
14512 NW Oak Shadow Court  
Portland, OR. 97229  
Beach Tax Lot #6603 & #6601

Agreed to: \_\_\_\_\_  
(include date)

*Nate Palmer*  
1233 Cherry Ln  
Lake Oswego OR 97034  
Beach Tax Lot #6600 & #6602

Agreed to: \_\_\_\_\_  
(include date)

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**CITY/COUNTY PLANNING DEPARTMENT AFFIDAVIT**

**Property Owner**

Last Reimann | First Jon | MI Patrick

**Property Details**

Township 3 North | Range 10 West ✓ | Section 32 | Subsection BD  
 Tax Lot 5700, 5802, 5801, 6603, 6601, 660, 6602, and 70001/70002 of Subset Map #3

**County**

Clatsop |  Tillamook |  Lincoln |  Lane  
 Douglas |  Coos |  Curry

**Project Type**

Shorefront Protection |  Access/Other Misc. |  Sand Alteration  
 Pipeline/Cable/Conduit |  Natural Product Removal

**Planning Department Certification**  
*(To be completed by local planning official)*

**Part I**

In accordance with Statewide Planning Goal #18, Beaches and Dunes alteration permits for beachfront protective structures may be issued only where development existed on January 1, 1977, or where an exception to this Goal 18 implementation requirement has been approved by the appropriate local jurisdiction. For the purpose of this requirement, the definition of "development" means houses, commercial and industrial buildings, and vacant subdivision lots which are physically improved through the construction of streets and provisions of utilities to the lot.

Above property meets Goal 18 Eligibility?  Yes  No  Not Applicable

**Part II**

*I have reviewed the proposed project application and have determined that:*

- This project is not regulated by the local comprehensive plan and zoning ordinances.
- This project has been reviewed and **is consistent** with the local comprehensive plan and zoning ordinance.
- This project has been reviewed and **is not consistent** with the local comprehensive plan and zoning ordinance.
- The consistency of this project with the local planning ordinance cannot be determined until the following local approvals are obtained:
  - Conditional Use Approval
  - Zone Change
  - Plan Amendment
  - Development Permit
  - Other (Specify) Foredune Grading Permit

Comments: City Staff reviewed applicants proposal and issued staff report and findings memo dated October 28, 2021 acknowledging that the proposed foredune grading plan complies with the provisions of Ordinance 95-6. The approval was conditioned on obtaining all additional permits, as required, from State and/or Federal Agencies.

Leila Aman | City Manager

Local Planning Official Name (Please Print) | Title  
 [Redacted] | 11/16/2021

Signature | Date

**The completed/signed form shall be submitted with the completed Ocean Shore Permit Application**



# Cut/Fill Report

**Generated:** 2021-06-30 14:12:47  
**By user:** jonathanw  
**Drawing:** P:\21664-Manzanita Dune Management\CAD\CD\Xref\P:\21664-Manzanita  
 Dune Management\CAD\CD\Xref\21664-DR-PRESERVATION  
 GRADING.dwg

Volume Summary							
Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
VOL-Preserved Grading	full	1.000	1.000	128475	13199.4	3437.8	9761.5<Cut>

Totals						
			2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Total			128475	13199.4	3437.8	9761.5<Cut>

\* Value adjusted by cut or fill factor other than 1.0

## NOTES TO DICK EWAN:

1. Scrap all existing dune grass and bury in low spots between dune peaks (3,400 cu. yds of fill available – est. dune grass scrap volume – 2,400 cu. yds (128,473 sq. ft. x 0.5’)/27).
2. Spread excess excavation (9,800 cu. yds.) above elevation 6’ with maximum depth of 2’.

Jon P. Reimann, P.E.  
 JPR Consulting  
 14512 NW Oak Shadow Court  
 Portland, OR 97229  
 (503)-730-8604  
 jonreimann0@gmail.com



## *City of Manzanita*

P.O. Box 129, Manzanita, OR 97130-0129  
Phone (503) 368-5343 Fax (503) 368-4145

TO: Leila Aman, City Manager  
FROM: Walt Wendolowski, Contract Planner  
SUBJECT: Dune Grading Permit  
DATE: October 28, 2021

### I. BACKGROUND

- A. APPLICANT: Jon Reimann (representing six property owners).
- B. PROPERTY LOCATION: The application contains a number of lots located adjacent to, or accessed by, Spindrift, Spyglass and Horizon Lanes. The County Assessor places the subject properties within Township 3 North; Range 10 West; Section 32BD; Tax Lots 5700, 5802, 5801, 6603, 6601, 6600, 6602, and 70001/70002 of Subset Map #3.
- C. EXISTING DEVELOPMENT: All lots except Tax Lots 5700 and 6601 contain a single-family home. Public facilities serve the area.
- D. ZONING: The properties are zoned Residential Medium Density Zone (R-2).
- E. REQUEST: The applicant is requesting a Permit for Fore dune Grading.
- F. DECISION CRITERIA: This application will be evaluated against the standards listed in Section 6 and Section 9, of Ordinance 95-6, Fore dune Overlay Zone.

### II. APPLICATION SUMMARY AND FINDINGS

- A. The property owners wish to proceed with a fore dune grading project. The project would shape the fore dune to ensure safe beach access and avoid additional dune encroachment.
- B. Per Ordinance 95-6, the subject area is located within the South Manzanita Management Unit. Section 6 of Ordinance 95-6 states the following:

#### SECTION 6 Outright Uses, South Manzanita Management Unit:

The following uses and activities are permitted outright in the Fore dune Management Overlay Zone's South Manzanita Management Unit, subject to the standards in Section 9.

1. Foredune grading down to a minimum elevation 33 feet NGVD.
2. Sand Transfer within and between management units.
3. Vegetative Stabilization and Sand Collection.
4. Maintenance activities, including remedial grading and foreslope shaping.

**FINDINGS:** The subject area is located within this Management Unit. Based on these provisions, the proposed foreslope shaping is permitted within the Management Unit. All work is required to comply with Ordinance 96-5, Section 9.

**C. Section 9 establishes the View Grading Standards. Each item is reviewed below:**

1. View grading and other foredune management activities is only permitted in the Foredune Management Area and then only as part of an approved management unit subarea plan. A subarea plan shall contain the following elements:
  - a) Description of the proposed work, including identification of a management unit subarea and the scope and timing of activities to be carried out in this subarea;
  - b) Plan view and elevations of existing conditions in the subarea;
  - c) Plan view and elevations of proposed modifications in the subarea; and
  - d) Monitoring and maintenance programs, including provisions pertaining to access management.

The subarea plan shall also identify the individual(s) responsible for supervising the project. The subarea plan shall have the approval of 60% of the property owners in that subarea.

**FINDINGS:** The submitted sub area plan complies with provisions in item a) to d) above. The applicant is responsible for organizing and supervising the project. All owners of affected property (100%) signed the application.

2. The subarea plan must be submitted to the City for administrative review prior to undertaking foredune grading, sand transfer, vegetative stabilization, and sand collection activities in the Foredune Management Overlay Zone. Administrative review of the plan shall be confined to determining consistency with the Manzanita Foredune Management Plan, Management Strategy and compliance with the City's Zoning Ordinance. A fee as determined by the City shall accompany the plan.

**FINDINGS:** The application and review are consistent with this requirement. Available evidence indicates the proposed management plan is consistent with provisions in Ordinance 95-6. This will be verified through State agencies responsible for reviewing the proposal and issuing permits.

3. A qualified professional shall inspect the work area before and after grading to confirm that grading and other measures have been done in compliance with the specifications outlined in the plan. The cost of this professional is the responsibility of the property owners authorizing the works.

FINDINGS: This is listed as a requirement.

4. The dates of implementing the plan shall be between October 1st through April 30th. Final planting shall be done by April 30th.

FINDINGS: As this review was conducted after October 1, 2021, work must be completed by April 30, 2022.

### **III. REQUIREMENTS**

The following requirements apply to this Permit:

- A. The Applicant is advised that the use of the property involved in this application may require additional permits from the City or other local, State or Federal agencies. These agencies include the Oregon Parks and Recreation Department, the Department of State Lands and the US Army Corps of Engineers. The City of Manzanita review process does not take the place of, or relieve the Applicant of responsibility for acquiring such other permits, or satisfy any restrictions or conditions thereon.
- B. The applicant shall submit evidence of approved permits prior to beginning any work within the foredune area. All work will comply with applicable provisions of Section 9, Ordinance 95-6 and requirements of any State or Federal agency permits.
- C. All work shall be completed by April 30, 2022. A copy of any inspection reports shall be submitted to the City of Manzanita and the City shall be notified upon completion of all work.
- D. Compliance with these requirements, and requirements of any agency permits, shall be the sole responsibility of the developer.

**PROJECT LIMITS:**

550' of beach frontage incorporating all property frontage described above plus the frontage of Spindrift Lane, Spyglass Lane, and Horizon Lane.

**PROJECT:**

Implementation of foredune preservation grading to re-establish safe beach front access as per City Ordinance 95-6.

**COSTS:**

Project Coordination (JPR Consulting – Jon Reimann)	\$ 0
Design Plans (3J Consulting)	\$ 20,000
Geologists Certification (Horning or Geo-Design)	\$ 3,000
Regrading of Foredunes (Jiffy Construction)	\$ 36,000
Vegetation Stabilization (Ferris Landscaping)	\$ 22,980
Permit Fees (City, State, Corp of Engineers)	\$ 2,000
<hr/>	
<b>TOTAL COSTS</b>	<b>\$83,980</b>
<b><u>Cost per Participant (\$83,980/8)</u></b>	<b><u>\$10,497.60</u></b>

**JPR CONSULTING**

14512 N.W. Oak Shadow Court Portland, OR 97229 ■ 503-730-8604 ■ [jonreimann0@gmail.com](mailto:jonreimann0@gmail.com)



# Horning Geosciences

808 26th Avenue, Seaside, OR 97138

Ph.FAX: (503)738-3738

Email: [horning@pacifier.com](mailto:horning@pacifier.com)



October 6, 2021

Leila Aman, City Manager  
City of Manzanita  
167 S 5th St  
P.O. Box 129  
Manzanita, OR 97130-0129

RE: Professional services for compliance and certification report; Spindrift Lane to Horizon Lane Foredune Sub-area; City of Manzanita, Tillamook County, Oregon

Dear Leila:

I have been engaged by Jon Reimann, PE, who represents the homeowner's group for the above-referenced dune management sub-area, to provide a compliance and certification report for their upcoming 500-ft-long dune grading program. The report will be completed once the grading has been completed. The excavator will notify Horning Geosciences of completion before beach grass planting, in order to allow corrections to the grading elevation if too much sand has been removed.

I have spoken with the excavation team, led by Dick Ewan of Jiffy Excavation, about the methodology he intends to use, and I can confirm that distances from the fronts of homes have been staked by Mr. Reimann. The distances correlate with the edges of benches that have been graded into the foredune.

The primary crestline bench stands at 36-38 ft NGVD and will not be excavated, as it has not received significant new sand since it was replanted with European beach grass years ago.

The next bench is the secondary crestline, and it is scheduled to be excavated down to 26-32 ft NGVD. This bench has been covered variably by sand that has accumulated to various heights, locally to as much as 40 ft NGVD. The excavator strategy is to grade this area at a 3% slope westward to an elevation of 26 ft. NGVD at 480' from the home foundation line of this sub-area, as shown on Figure 3.1 and 3.2 of the Preservation Grading Plan prepared by 3J Consulting dated 9/2/2021. Some low areas will be filled with excess sand. The above elevations will be confirmed by JPR Consulting and Jiffy Construction before the excavation commences. The existing European beach grass shall be stripped and buried in the low spots of the dunes and/or in excavated depressions. All graded areas will be replanted with European Beach Grass.

Approximately 9,800 cubic yards of excess sand will be spread on the open beach between 4-10 ft. NGVD along the 500' length of the sub-areas ocean frontage to a depth of 2-3'.

Because the highest part of the active foredune on the west side of this lower bench stands as high as 40 ft NGVD, the cut will be over 10 ft high in places. The excavators understand that they need to bevel the cut bank back to the north and south, on either side of the excavated corridor to slopes no steeper than 2H:1V (100 percent). The toe of this beveled slope may coincide with the excavation boundary, or it may begin within the excavated area, depending on the economies of sand removal and instruction by the homeowners. The lands north and south of the excavated area lie within the jurisdiction of Oregon State Parks.

I am confident that the methods intended to guide the excavation will meet compliance standards, provided that they are followed. Results will be addressed in the forthcoming report.

Please feel free to call or write if you have questions.

Thomas S. Homing, RG, CEG  
Chief Geologist, Homing Geosciences

*cc: Jon Reimann, PE, Homeowner.  
Representative  
Dick Ewan, Jiffy Excavators  
Rennie Ferris,  
Ferris Landscaping*

**Windward-Glenesslin Sub Area  
City of Manzanita  
Tillamook County, Oregon  
8-19-21**

**SUBAREA PLAN – 550’ SEGMENT**

**1.0 PROJECT DESCRIPTION**

The applicant seeks City approval of a Foredune Grading Permit to perform on-going maintenance/preservation of the beach dunes within the Windward-Glenesslin Sub Area Plan (January, 1997) as allowed under City of Manzanita Ordinance No. 95-6. The proposed dune system maintenance/preservation also incorporates elements of the recently adopted Cannon Beach Ordinance 20-3.

Grading work has not been completed since 2013 in this sub area. During that time, around 2016-17, the then acting City Manager, Jerry Taylor, raised concerns regarding reduced beach width from increased westward dune growth, especially during the winter high tides. This has become an ever-growing concern, including safety concerns with beach pedestrians getting trapped between winter high tide, and the erosion occurring along the existing dunes west edge. See attached pictures taken in January and February, 2021 showing the level of erosion occurring, including the safety issue with a shear wall created at public beach access locations (Beach access 17 is shown in the first photo). This is also occurring north and south of Beach Access #17 (and all up and down the Oregon Coast as per recent correspondence with Oregon State Parks).







In the past, winter high tides had removed the excess sand from dune grading operations to the original design toe of Foreslope (page 6, Winward-Glenesslin Subarea Plan, January 1997, 275' from west foundation line). A combination of changing winter storm strengths, "ramping" of the excess sand vs. transfer to low tide during view grading, and re-vitalized European beach grass within the "rooted ramping", has caused the "unintended dune expansion" (excerpts are from the 2017 Dune Monitoring Report, Horning Geosciences, May 5, 2017).

Subsequent discussions and meetings with the City included a City Council work session presentation by Dr. Scott Burns, Emeritus of Geology and Past-Chair of the Department of Geology at Portland State University, in January of 2018. In addition, the Manzanita Neah-Kah-Nie Dunes Management Association had retained the services of Tom Horning, Horning Geosciences, to provide consulting to address the City's concerns.

Tom completed the attached May 5, 2017 annual dune report documenting the Dune Growth concern and the recommendation that "all future dune grading remove the sand ramps and move all of the sand and grass roots into the surf."

Recent email exchanges with Jay Sennewald, Oregon State Parks, confirmed that any transfer of sand into the surf cannot obstruct public access to the beach, and any request for a temporary closure of the beach in the sub area would likely result in a permit denial.

Recent email exchanges with Dan Cary, SPWS, Senior Aquatic Resource Coordinator Columbia, Clatsop and Tillamook Counties, Aquatic Resource Management Program, Oregon Department of State Lands confirmed jurisdiction boundaries as follows:

1. The Oregon Parks and Recreation Department (OPRD) has jurisdiction on activities on the beach from the statutory vegetation line down to the extreme low water.
2. Above that DSL can have jurisdiction on wetlands and streams if they exist. Neither wetland nor streams exist within our project boundary.

Recent email exchanges with Matt Hunter, Marine Resources Program Manager with Oregon Department of Fish and Wildlife for our region confirmed a policy of not allowing placing more than up to 20” of material out onto the open beach, due to potential damage to the razor clam population. Further discussions with Matt and his department have yielded an understanding that they are acceptable with allowing placement of excess dune sand in a specific area as described further in this application.

Recent phone calls and emails exchanges with Kinsey Friesen, U.S Army Corp of Engineers, Tillamook, Polk, Marion, and Yamhill County Project Manager, has confirmed that approval from the USACE will be required as we will be “discharging” excess dune sand between the Mean High Water Line and the High Tide Line (404 DA). There will also be a 404 Certification required from DEQ in association with the 404 DA permit fro USACE. .

It is with the above understanding that the applicant has prepared the following approach that we feel provides a balance of grading and re-vegetation in this sub-area section that can be used throughout the Windward-Glenesslin Sub Area as well as within the South Manzanita Management Unit (Beach Drive – Glenesslin Lane).

## 2.0 SUBAREA PLAN DETAILS

### 2.1 EXISTING CONDITIONS

The attached existing conditions plan (Appendix 1) details the results of an aerial drone survey of the dunes within the project area (flown February 22, 2021). The Map includes all existing property boundaries of the homesites fronting the subarea. The west foundation line is shown in red. Also shown are the specific elements of the design foredune as described in the January 1997 Windward Glenesslin Subarea Plan:

	<u>Elevation</u>	<u>Location</u>
Foundation Footings	33 feet NGVD	@ 0 feet
Primary Crest	33 feet	150 feet
Secondary Crest (Hummocks)	25 feet	225 feet
Toe of Foreslope	20 feet	275 feet

The following table shows the difference in existing elevations of the foredune between 2013 and 2021.

### DUNE GROWTH TABLE (LAST 8 YEARS)

	<u>Elevation as of 2013**</u>	<u>Elevation as of 2021</u>	<u>Difference</u>
Primary Crest*	33'	33'	No Change
Secondary Crest (Hummocks)	29-30'	32-34'	3-4' Increase
Toe of Foreslope	30'	30'-34'	0'-4' Increase

\* Primary Crest 75' further west per 2013 Certification Report

\*\* Elevations from Survey Completed by JPR Consulting in April of 2013 (pre and post grading)

Horning's 2013 Certification Report predicted a vertical growth rate of the dunes to be 12 to 24 inches per year stating a prediction of "7 to 15 feet of dune growth will be reached in about 5 to 11 years."

As shown in the table above, this portion of the dune did not see the degree of growth Horning had predicted. For the most part, the dune has maintained its shape, in this area since the last dune grading project.

The drone survey shows 2 distinct steep dunes developing on the most westerly end of the dune system (west of the design Toe of Foreslope). A low area or valley separates the 2 steep dunes. Elevations range in this area from 22'-40'.

## **2.2 FOREDUNE PRESERVATION GRADING PLAN**

### **2.21 GRADING TO 1997 DESIGN FOREDUNE SECTION**

Appendix 2 shows proposed finish grades consistent with the 1997 design foredune applied to the existing conditions survey. The calculated volume of sand transfer required to re-establish this section totals 99,505 cubic yards. Excavation depths range from 12 to 20 deep.

The proposed method of sand transfer would be to load sand into dump trucks and distribute in diagonal rows or "swash bars" as far out during low tide as is manageable and appropriate. This operation would be completed daily until all sand has been transferred.

A preliminary cost estimate was prepared by K&E Excavating showing the cost of sand transfer to low tide would be in the range of \$6,80 per cubic yard. This would put the total excavation cost at over \$680,000, not including revegetation costs. In addition, State Parks would most likely deny our request for an Ocean Shores Alteration Permit, as discussed above in the project description.

Considering the above permitting and economic challenges, the applicant proposes more of a selective/preservation grading approach which more specifically addresses dune erosion and beach access challenges. This approach is allowable under the approved sub-area plan (page 6, paragraph 2 and 3 - "selective grading").

The easterly portion of the Foredune has maintained a stable cross section and vegetated cover, as stated in the existing conditions Section 2.1. It is the westerly 200'-250' of the existing dune that has created the erosion and access issues to the beach and along the beach.

### **2.22 SELECTIVE/PRESERVATION GRADING PLAN**

The applicant proposes the following Grading Plan for review and approval under City of Manzanita Ordinance 96-6.

As shown on Figure 3, applicant proposes to complete the following:

1. Scrap all existing European Dune Grass into the low spot between the two dune peaks and then shape the fore dune in this area to elevation as shown on the attached grading plan and cross section. The attached volume report shows that approximately 3,400 cubic yards of fill volume is available between the 2 dune peaks. This area will be used to bury the existing dune grass.
2. The excess sand after grading (approximately 9,000 to 10,000 cubic yards) will be spread evenly seaward of the existing foredune slope along the frontage of this subarea. The sand will be spread to a depth of 2'-3' deep. We have confirmed with State's Marine Resources Manager (Matt Hunter) that this area is acceptable to spread to the proposed depths as we are staying above beach elevation 4'-6', where potential razor clam habitat may exist (see copy of email exchange in appendix).
3. Re-Plant all disturbed areas with European Beach Grass consistent with the standards of the 1997 sub area plan.
4. Perform this Selective/Preservation Grading and replanting every 2-3 years for a period of 10-15 years. Applicant will notify the City and State Parks, in writing, during this time frame, before commencing additional preservation grading, and obtain the appropriate permits and approvals.

The estimated total volume of sand moved is 13,200 cubic yards. This volume is consistent with past dune grading operations in this sub area.

We believe this approach to dune grading is more in line with current management practices of managing dune erosion events and steepened beach path access challenges.

We have also included the following documents:

1. Letter from Horning Geosciences documenting that we have retained their services to complete a compliance and certification report.
2. A Participant Agreement Form signed by all property owners agreeing to the foredune grading plan and cost proposal. Section 9 (3.) of 95-6 requires "approval of 60% of the property owners in that subarea". As shown, we have 100% approval.

A completed City of Manzanita Foredune Grading Permit Application is attached with this narrative and exhibits.

We formally request approval of our Permit Application with the following proposed Conditions:

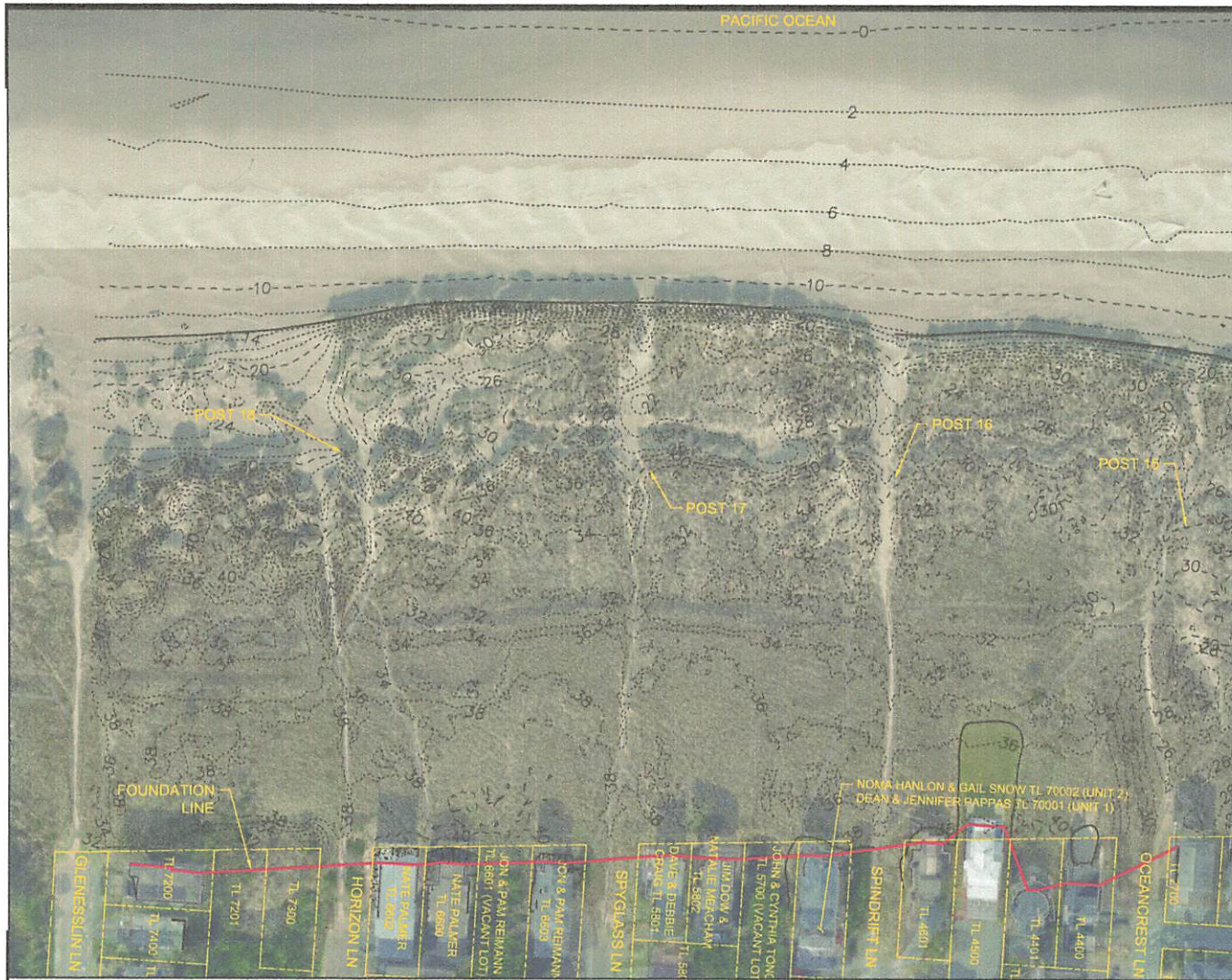
1. Obtain State Parks Ocean Shore Alteration Permit.
2. Obtain written approval from Army Corp of Engineers (404 DA) and the associated DEQ 404 WQC permit.
3. Provide monitoring of the grading and planting operations by a certified professional including submittal of a compliance and certification report.
4. Submit evidence, in writing, that all conditions of the State and Army Corp permits/approvals have been addressed in a satisfactory manner to the respective jurisdictions.

## 2.0 PLANS AND REPORTS

*The following attachments have been included with this Sub Area Plan Application.*

Appendix No.	Description of Attachments included in Subarea Plan (550' Segment)
1	Figure 1. Existing Conditions Map
2	Figure 2. Grading Plan Applying 1997 Foredune Design Section
3	Figure 3. Selective/Preservation Grading Plan
4	Volume Report
5	Professional Services Letter from Horning Geosciences dated P
6	Participant Agreement Form Signed by all property owners
7	City of Manzanita Application Review Memo dated 10/28/21





### EXISTING LEGEND

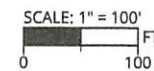
	BUILDING
	CONCRETE HATCH
	BUILDING OVERHANG/DECK
	EDGE OF PATHWAY
	PROPERTY LINE
	MAJOR CONTOUR
	MINOR CONTOUR
	LANDSCAPE
	FOUNDATION LINE

### EXISTING CONDITIONS

THIS PLAN HAS BEEN PREPARED FOR ILLUSTRATIVE PURPOSES ONLY AND SHOWS THE EXISTING CONDITIONS OF THE SITE PRIOR TO CONSTRUCTION. INFORMATION SHOWN ON THIS PLAN WAS DEVELOPED FROM A TOPOGRAPHIC SURVEY PROVIDED BY S&F LAND SERVICES, DATED MARCH 11, 2021. NOT ALL SURFACE FEATURES OR UTILITIES MAY BE SHOWN. NO WARRANTY OR GUARANTEE IS EXPRESSED OR IMPLIED.

### SURVEYOR NOTES

1. FIELD WORK WAS COMPLETED ON 02/22/2021
2. RECTIFIED ORTHOPHOTOGRAPHY AND PHOTOGRAMMETRIC MAPPING (PERFORMED BY AN ASPRS CERTIFIED PHOTOGRAMMETRIST) WAS UTILIZED TO OBTAIN PLANIMETRIC AND ELEVATION/SURFACE DATA (EXCLUDING BOUNDARIES) WHERE GROUND MEASUREMENTS ARE NOT OTHERWISE NECESSARY TO LOCATE THOSE FEATURES TO AN APPROPRIATE AND ACCEPTABLE ACCURACY. AERIAL PHOTOGRAPHY WAS COLLECTED USING A DJI PHANTOM 4 PRO UAV WITH 80/80 FORWARD AND SIDE OVERLAP ON 02/22/2021.
3. TAX LOT LINES ARE SHOWN FOR REFERENCE PURPOSES ONLY. NO BOUNDARY WORK HAS BEEN DONE.



08-25-2021

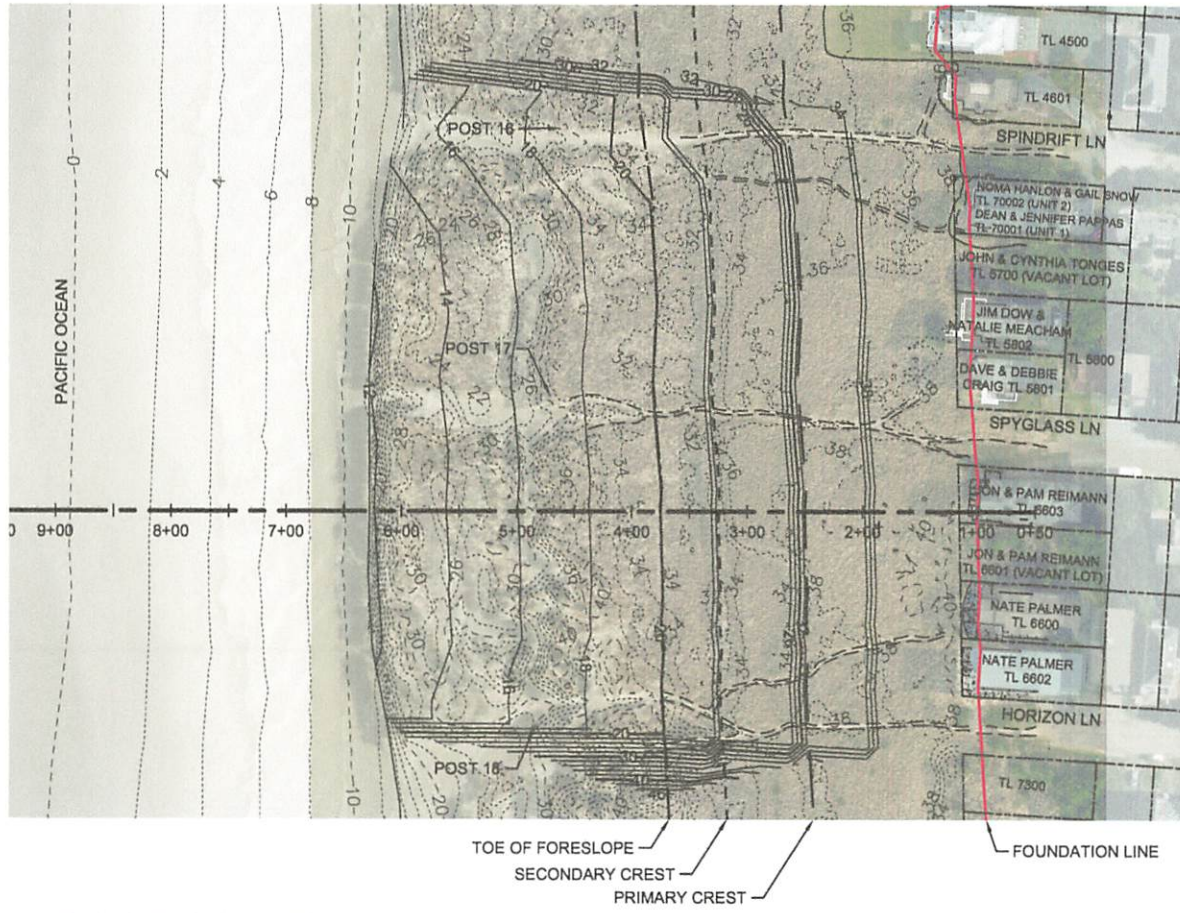
## MANZANITA FOREDUNE MANAGEMENT PLAN

WINDWARD - GLENESSLIN SUB-AREA

FIGURE 1: EXISTING CONDITIONS PLAN

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**GRADING LEGEND**

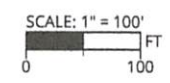
- 10----- EXISTING MAJOR CONTOUR
- .....8..... EXISTING MINOR CONTOUR
- 10————— PROPOSED MAJOR CONTOUR
- 8————— PROPOSED MINOR CONTOUR

**DUNE GRADING**

DUNE GRADING OPTION 1, CONSISTING OF 3 TIERS (20', 25', 33') YIELDS A NET CUT OF APPROXIMATELY 99,505 C.Y. DISTURBED AREA: 256,100 S.F. (5.9 AC)

**VERTICAL DATUM**

VERTICAL: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) CONVERTED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29) BY SUBTRACTING 3.51 FEET FROM THE NAVD88 ELEVATION.



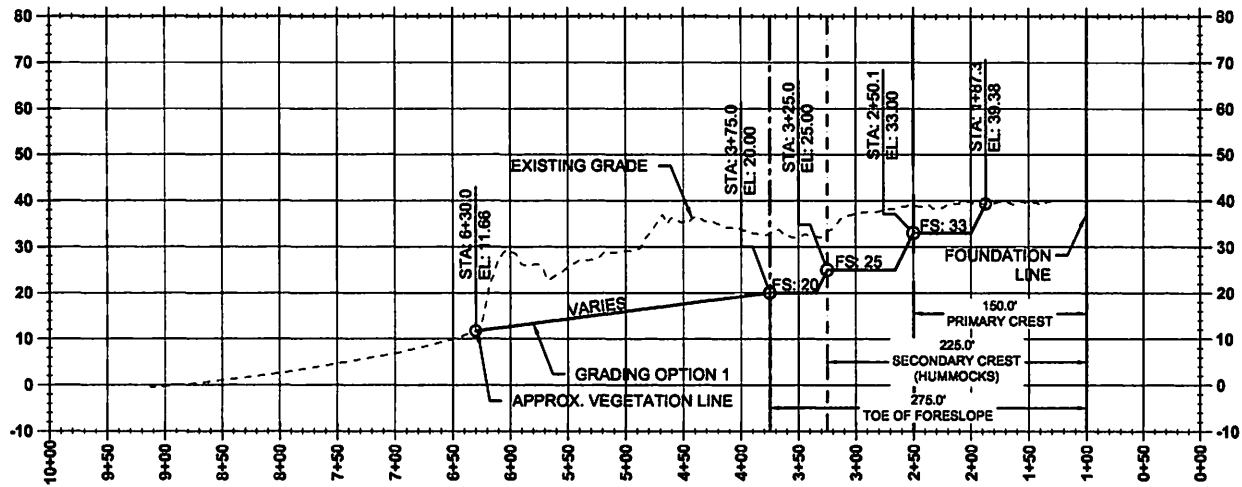
08-25-2021

**MANZANITA FOREDUNE MANAGEMENT PLAN**

WINDWARD - GLENESSLIN SUB-AREA

FIGURE 2.1: GRADING PLAN APPLYING 1997 FOREDUNE DESIGN SECTION

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CIVIL ENGINEERING · WATER RESOURCES · COMMUNITY PLANNING



**DUNE TYPICAL PROFILE**  
 (STA: 0+00 - STA: 10+00)  
 SCALE: 1" = 100' H; 1" = 25' V

**GENERAL NOTE**

DURING CONSTRUCTION IN SAND AREAS SLOPES SHOULD NOT BE EXCAVATED TO STEEPNESS OF GREATER THAN 30 DEGREES (1.75:1). THIS IS THE NATURAL ANGLE OF REPOSE FOR SAND AND EXCAVATIONS WITH SLOPES GREATER THAN THIS ARE HIGHLY SUBJECT TO SLUMPING.

**VERTICAL DATUM**

VERTICAL: NORTH AMERICAN VERTICAL DATUM OF 1888 (NAVD88)  
 CONVERTED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29)  
 BY SUBTRACTING 3.51 FEET FROM THE NAVD88 ELEVATION.





P:\21864-MANZANITA DUNE MANAGEMENT\CAD\21864-VICINITY MAP.DWG

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**VICINITY MAP**  
**MANZANITA FOREDUNE MANAGEMENT PLAN**

**FIG. 3.1**



## DUNE GRADING

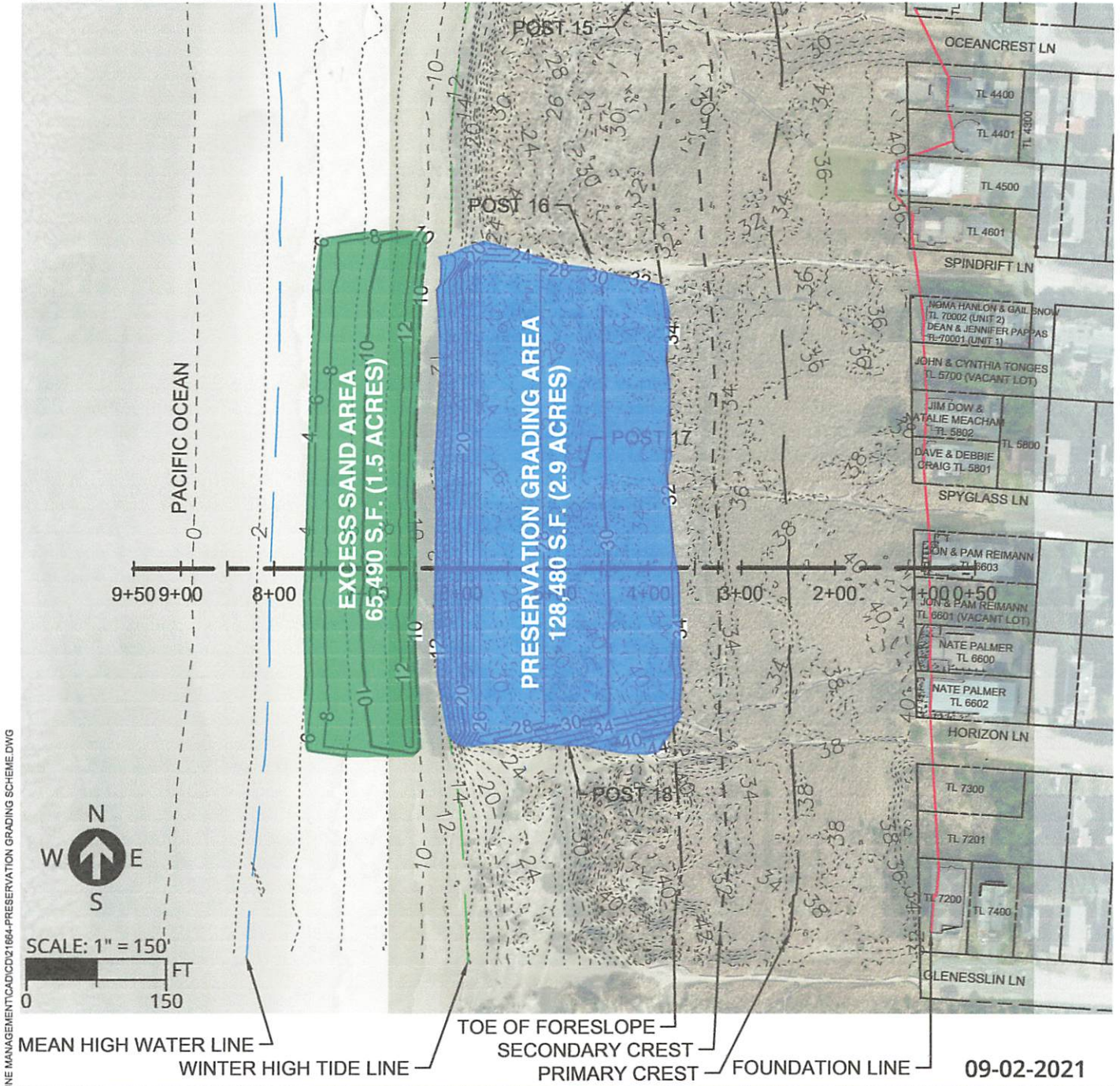
DUNE GRADING PLAN, ZERO TIERS.  
 YIELDS A NET CUT OF APPROXIMATELY 9,760 C.Y.  
 DISTURBED AREA: 128,480 S.F. (2.9 AC)  
 EXCESS SAND PLAN, ZERO TIERS.  
 YIELDS A NET FILL OF APPROXIMATELY 6,870 C.Y.  
 DISTURBED AREA: 65,490 S.F. (1.5 AC)

## GRADING LEGEND

---	10	---	EXISTING MAJOR CONTOUR
---	8	---	EXISTING MINOR CONTOUR
---	10	---	PROPOSED MAJOR CONTOUR
---	8	---	PROPOSED MINOR CONTOUR

## VERTICAL DATUM

VERTICAL: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)  
 CONVERTED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929  
 (NGVD 29) BY SUBTRACTING 3.51 FEET FROM THE NAVD88 ELEVATION.



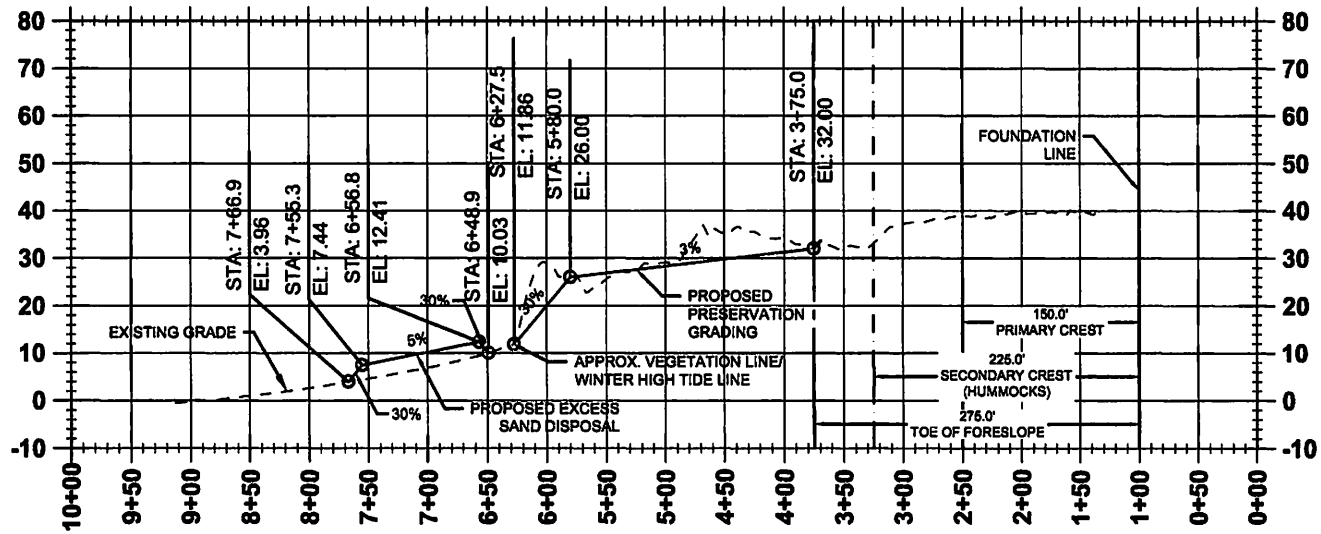
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**PRESERVATION GRADING PLAN**  
**MANZANITA FOREDUNE MANAGEMENT PLAN**

**FIG 3.2**

P:\121664-MANZANITA DUNE MANAGEMENT\CAD\CD\121664-PRESERVATION GRADING SCHEME.DWG

08-25-2021



**DUNE TYPICAL PROFILE**

(STA: 0+00 - STA: 10+00)  
SCALE: 1" = 150' H; 1" = 38' V

**GENERAL NOTE**

DURING CONSTRUCTION IN SAND AREAS SLOPES SHOULD NOT BE EXCAVATED TO STEEPNESS OF GREATER THAN 30 DEGREES (1.75:1). THIS IS THE NATURAL ANGLE OF REPOSE FOR SAND AND EXCAVATIONS WITH SLOPES GREATER THAN THIS ARE HIGHLY SUBJECT TO SLUMPING.

**VERTICAL DATUM**

VERTICAL: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) CONVERTED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29) BY SUBTRACTING 3.51 FEET FROM THE NAVD88 ELEVATION.