

**CITY OF FLORENCE
PLANNING COMMISSION
RESOLUTION PC 20 05 CUP 01**

A REQUEST FOR REVIEW OF A PHASE 2 SITE INVESTIGATION REPORT AND ASSOCIATED CONDITIONAL USE PERMIT, FOR EXCAVATION AND BANK STABILIZATION ON THE PROPOSED SITE OF A PLANNED UNIT DEVELOPMENT IN THE MULTIFAMILY RESIDENTIAL DISTRICT.

WHEREAS, application was made by Josh Shafer, on behalf of Stonewood Construction and Corvallis Neighborhood Housing Services dba DevNW, for a Conditional Use Permit required by FCC 10-7-7, FCC 10-1-1-4, FCC 10-1-1-6-3, FCC 10-4-4.

WHEREAS, the Planning Commission/Design Review Board met in a public hearing on February 25, 2020, as outlined in Florence City Code 10-1-1-6-3, to consider the application, evidence in the record, and testimony received, and

WHEREAS, the Planning Commission of the City of Florence, per FCC 10-1-1-6-3 and FCC 10-4-5 finds, based on the Findings of Fact, application, staff recommendation, evidence and testimony presented to them, that the application meets the applicable criteria through compliance with certain Conditions of Approval.

NOW THEREFORE BE IT RESOLVED that the Planning Commission of the City of Florence finds, based on the Findings of Fact and the evidence in record that:

The request for a conditional use permit to excavate and stabilize the sloped embankment on the site for a proposed Planned Unit Development at 15th and Nopal Streets, in the Multifamily Residential District, meets the applicable criteria in Florence City Code and the Florence Realization 2020 Comprehensive Plan with the conditions of approval as listed below.

Conditions of Approval:

The application, as presented, meets or can meet applicable City codes and requirements, provided that the following conditions of approval are met.

1. Approval for shall be shown on:

"A"	Findings of Fact
"B"	Application
"C"	Phase 2 Site Investigation Report
"D"	Site Map
"E"	Vegetation Clearing Area Map
"F"	Geotechnical Report
"G"	Resolutions PC 19 22 PUD 03, 19 23 SUB 04 and 19 25 CUP 08
"H"	2019 Oregon Structural Specialty Code, Appendix J, Grading
"I"	ODOT Standard Detail RD1055
"J"	DOGAMI 2013 Landslide Susceptibility Map
"K"	Testimony: Civil West Engineering
"L"	Reference Testimony: Jonathan Hornung
"M"	Phase 1 Site Investigation Report

Findings of Fact attached as Exhibit "A" are incorporated by reference and adopted in support of this decision.

1. Any modifications to the approved plans or changes of use, except those changes relating to Building Codes, will require approval by the Community Development Director or Planning Commission/Design Review Board.
2. Regardless of the content of material presented, including application text and exhibits, staff reports, testimony and/or discussions, the applicant agrees to comply with all regulations and requirements of the Florence City Code which are current on this date, EXCEPT where variance or deviation from such regulations and requirements has been specifically approved by formal Planning Commission action as documented by the records of this decision and/or the associated Conditions of Approval. The applicant shall submit to the Community Development Department a signed "Agreement of Acceptance" of all conditions of approval prior to issuance of a building permit.
3. Upon encountering any cultural or historic resources during construction, the applicant shall immediately contact the State Historic Preservation Office and the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians. Construction shall cease immediately and shall not continue until permitted by either a SHPO or CTCLUSI representative.
4. The applicant shall follow the recommendations provided by Branch Engineering in their Geotechnical Report dated February 5, 2020 (Exhibit F), including recommendations related to oversight and any subsequent direction by Branch resulting from that oversight.
5. An on-site storm drainage system shall be engineered for this project, and approved by the City prior to issuance of a building permit or construction of parking and access drives.
6. If excavations do encounter the static water table, excavation shall cease and Florence Public Works shall be notified. Resulting dewatering measures (such as utility installation below the water table elevation) shall be approved by the Florence Public Works prior to commencing excavation.
7. The applicant shall submit a grading and erosion plan (bank stabilization plan), including (a) a timeline which incorporates removal, fill, revegetation, irrigation, and drainage plans, and (b) the methodology for devising the plan. This grading and erosion plan shall be submitted prior to any site disturbance.
8. The applicant shall furnish cost estimates and post a performance bond in that amount with the City, to accomplish the proposed excavation and stabilization.
9. The applicant shall include in the Covenants, Conditions and Restrictions for the development that the developer shall be responsible for long range vegetation and maintenance of the bank. (This is in addition to Condition 9 of Resolutions PC 19 22 PUD 03, 19 23 SUB 04 and 19 25 CUP 08, which states, "The applicant shall be required to submit a copy of the Covenants, Conditions and Restrictions for the development prior to the issuance of any relevant building permits. The developer shall be responsible for the maintenance of the common space areas.")
10. The property owner shall record a Covenant of Release which outlines the hazard, restrictions and/or conditions that apply to the property and shall state, "The applicant recognizes and accepts that this approval is strictly limited to a determination that the project as described and conditioned herein meets the land use provisions and development standards of the City Code and Comprehensive Plan current as of this

date. This approval makes no judgment or guarantee as to the functional or structural adequacy, suitability for purpose, safety, maintainability, or useful service life of the project.”

ADOPTED BY THE FLORENCE PLANNING COMMISSION/DESIGN REVIEW BOARD the XXth day of February, 2020

[Insert Name, Insert Title]
Florence Planning Commission

DATE

**STAFF REPORT & FINDINGS OF FACT
FLORENCE COMMUNITY DEVELOPMENT DEPARTMENT
Planning Commission
Exhibit "A"**

Public Hearing Date: February 25, 2020 **Planner:** Hailey Sheldon

Date of Report: February 18, 2020

Application: PC 20 05 CUP 01 – Phase 2 Site Investigation Report with Conditional Use Permit

Related Files: DevNW Airport Road Preliminary PUD, Tent. Subdivision, & Conditional Use Permit (PC 19 22 PUD 03, 19 23 SUB 04, 19 25 CUP 08)

I. PROPOSAL DESCRIPTION

Proposal: Application for review of a Phase 2 Site Investigation Report and associated request for a Conditional Use Permit.

Applicant: Stonewood Construction
935 Oak Street
Eugene, OR 97401

Applicant's Representative: Josh Shafer, Stonewood Construction
Renee Clough, Branch Engineering

Property Owners: Corvallis Neighborhood Housing Services dba DevNW

Location: Undeveloped property on the southwest corner of 15th and Nopal Streets.
Map # 18-12-27-10 Taxlot 15400

Site Characteristics:

	Use(s)	Zoning	Comp. Plan Designation	Streets / TSP Classification
Site	Northern Portion: Former Senior Center Site (Demolished). Southern Portion: Forested Slope	Multi-Family Residential	High Density Residential	N/A
North	Mobile and Manufactured Homes, Single-Family Dwellings, the Boys & Girls Club	Mobile Home / Manufactured Home Residential, Multi-Family Residential, and Commercial	High Density Residential	15 th Street (Collector)

South	Vacant Forested Land and Vacant Portion of Office Building (Old Hospital)	Multi-Family Residential	Commercial	Proposed Driveway/Parking Lot
East	Keener Place Phase 1 (Single-Family Attached Dwellings)	Multi-Family Residential	High Density Residential	Nopal Street (Local)
West	Single-Family Dwellings	Restricted Residential	Low Density Residential	Proposed Driveway/Parking Lot

II. NARRATIVE

The application submitted is a request for review of the Phase 2 Site Investigation Report and associated Conditional Use Permit for the proposed DevNW Planned Unit Development on 15th and Nopal. The Planning Commission approved a Preliminary Planned Unit Development Plan and Tentative Subdivision for this proposed development in November of 2019. This application for review of the Phase 2 Site Investigation Report is pursuant to the Planning Commission's November determination that a Phase 2 Site Investigation Report, geotechnical report, and bank stabilization plan are required, prior to development, given the slopes and soils present on an embankment along the southern border of the property.

III. NOTICES & REFERRALS

Notice: On February 5, 2020, notice was mailed to surrounding property owners within 300 feet of the property, and posted on site. Notice was published in the Siuslaw News on February 19, 2020.

At the time of this report, the City had received no public comments on the proposal.

Reference: Pertinent to this request: see Exhibit K for verbatim comment by neighbor Jonathan Hornung, 1370 Mulberry Ln, expressing concern regarding the clearing of the southern embankment (the subject of this review). Mr. Hornung's comment was submitted on the preliminary PUD and tentative subdivision proposal.

Referrals: Referrals were sent to the City of Florence Public Works and the City's engineer of record, Civil West.

For the original proposal for tentative subdivision and PUD, referrals were sent to Florence Public Works Department, Oregon Department of Transportation, Siuslaw Valley Fire and Rescue, and Heceta Water People's Utility District.

At the time of this report, the City had received referral comments on the proposal for Phase 2 Site Evaluation Report review from the following:

Sean Lloyd, PE: Civil West Engineering

Civil West, the City's Engineer of Record, conducted a peer review of the application, and concluded that "the documents are well prepared and well

designed” and that “the requirements identified by the Site Investigation Report Phase 2 [code] have been largely satisfied.” However, they note that while the criteria for the investigation report have been met, the application is lacking “complete location mapping and actual work specifications for all initial, temporary, or maintenance stabilization plans proposed.” These concerns are addressed in the findings below, and conditioned accordingly. See Exhibit K for verbatim comments from Civil West.

IV. APPLICABLE REVIEW CRITERIA

Florence City Code:

Title 10: Zoning Regulations

Chapter 1: Zoning Administration, Section 1-6-3

Chapter 4: Conditional Uses, Sections 3 and 5 through 11

Chapter 7: Special Development Standards, Section 2, 3, 6, and 7

V. RELEVANT CONDUCTIONS OF APPROVAL OF TENTATIVE PLAT & PRELIMINARY PUD (RESOLUTIONS PC 19 22 PUD 03, 19 23 SUB 04, AND 19 25 CUP 08)

- 5. The applicant shall be required to submit a Phase 2 Site Evaluation Report, a geotechnical report, and a detailed bank stabilization plan prior to receiving any relevant building permit.
- 6. The applicant shall maintain a 10-foot vegetated buffer along the south-western perimeter of the development (from the trash enclosure to the 15th Street entrance).
- 9. The applicant shall be required to submit a copy of the Covenants, Conditions and Restrictions for the development prior to the issuance of any relevant building permits. The developer shall be responsible for the maintenance of the common space areas.
- 12. The applicant shall update their landscaping plan to include the species, sizes and locations throughout the development, including in the proposed rain gardens and parking areas.
- 13. Specifications for soil at the time of planting, irrigation and anticipated planting schedule shall be furnished by the applicant prior to any site disturbance, final PUD, final plat, and /or with each associated building permit.
- 14. An irrigation plan is required prior to final PUD approval.

V. PROPOSED FINDINGS

Code criterion are listed in **bold**, with staff response beneath. Only applicable criteria have been listed.

FLORENCE CITY CODE

TITLE 10: CHAPTER 1: ZONING ADMINISTRATION

10-1-1-6-3: TYPE III REVIEWS – QUASI-JUDICIAL LAND USE HEARINGS:

A. Hearings are required for Type III (quasi-judicial) land use matters requiring Planning Commission review. Type III applications include, but are not limited to:

7. Conditional Use Permits

The applicant's request is for review of a Phase 2 Site Investigation Report, which FCC 10-7-7 Review and Use of Site Investigation Reports stipulates requires Planning Commission review and a Conditional Use Permit.

B. Notification of Hearing:

- 1. At least twenty (20) days prior to a Type III (quasi-judicial) hearing, notice of hearing shall be posted on the subject property and shall be provided to the applicant and to all owners of record of property within 100 feet of the subject property, except in the case of hearings for Conditional Use Permits, Variance, Planned Unit Development and Zone Change, which notice shall be sent to all owners of record of property within 300 feet of the subject property.**
 - a. Notice shall also be provided to the airport as required by ORS 227.175 and FCC 10-21-2-4 and any governmental agency that is entitled to notice under an intergovernmental agreement with the City or that is potentially affected by the proposal. For proposals located adjacent to a state roadway or where proposals are expected to have an impact on a state transportation facility, notice of the hearing shall be sent to the Oregon Department of Transportation.**
 - b. For a zone change application with two or more evidentiary hearings, notice of hearing shall be mailed no less than ten (10) days prior to the date of the Planning Commission hearing and no less than ten (10) days prior to the date of the City Council hearing.**
 - c. For an ordinance that proposes to rezone property, a notice shall be prepared in conformance with ORS 227.186 and ORS 227.175(8).**
 - d. Notice shall be mailed to any person who submits a written request to receive notice.**
 - e. For appeals, the appellant and all persons who provided testimony in the original decision.**
- 2. Prior to a Type III (quasi-judicial) hearing, notice shall be published one (1) time in a newspaper of general circulation. The newspaper's affidavit of publication of the notice shall be made part of the administrative record.**

Notice of the public hearing was posted on the subject property on February 5, 2020. On February 5, 2020, notice was mailed to all property owners within 300 feet of the property. Notice was also published within the Siuslaw News one time on February 19, 2020. These criteria are met.

C. Notice Mailed to Surrounding Property Owners - Information provided:

- 1. The notice shall:**
 - a. Explain the nature of the application and the proposed use or uses which could be authorized;**

- b. List the applicable criteria from the ordinance and the plan that apply to the application at issue;
- c. Set forth the street address or other easily understood geographical reference to the subject property;
- d. State the date, time and location of the hearing;
- e. State that failure of an issue to be raised in a hearing, in person or by letter, or failure to provide sufficient specificity to afford the decision maker an opportunity to respond to the issue precludes further appeal based on that issue;
- f. State that application and applicable criteria are available for inspection at no cost and will be provided at reasonable cost;
- g. State that a copy of the staff report will be available for inspection at no cost at least 7 days prior to the hearing and will be provided at reasonable cost;
- h. Include a general explanation of the requirements for submission of testimony and the procedure for conduct of hearings.
- i. Include the name of a local government representative to contact and the telephone number where additional information may be obtained.

The provided notice contained all of the information listed in FCC 10-1-1-6-3-C. These criteria are met.

D. Hearing Procedure: All Type III hearings shall conform to the procedures of Florence City Code Title 2, Chapters 3 and 10.

E. Action by the Planning Commission:

- 1. At the public hearing, the Planning Commission shall receive all evidence deemed relevant to the issue. It shall then set forth in the record what it found to be the facts supported by reliable, probative and substantive evidence.
- 2. Conclusions drawn from the facts shall state whether the ordinance requirements were met, whether the Comprehensive Plan was complied with and whether the requirements of the State law were met.
- 3. In the case of a rezoning request, it shall additionally be shown that a public need exists; and that the need will be best served by changing the zoning of the parcel of land in question.
- 4. There is no duty upon the Planning Commission to elicit or require evidence. The burden to provide evidence to support the application is upon the applicant. If the Planning Commission determines there is not sufficient evidence supporting the major requirements, then the burden has not been met and approval shall be denied.

The Planning Commission held a public hearing on February 25, 2020, which met the standards of FCC 2-3 and FCC 2-10. These criteria are met.

TITLE 10: CHAPTER 4: CONDITIONAL USES

10-4-3: USE PERMIT PREREQUISITE TO CONSTRUCTION: When a conditional use permit is required by the terms of this Title, no building permit shall be issued until the conditional use permit has been granted by the Planning Commission, and then only in accordance with the terms and conditions of the conditional use permit. Conditional use permits may be temporary or permanent.

10-4-4: APPLICATIONS: The application for a conditional use permit shall be made in writing to the Planning Commission by the owner of the land in consideration or his agent, duly authorized in writing. [...]

10-4-5: PUBLIC HEARING AND NOTICE: The Planning Commission shall hold at least one public hearing on each conditional use permit application.

10-4-6: ACTION: The Planning Commission shall make specific findings for granting or denying a conditional use permit in accordance with the general criteria and/or conditions of Section 10-4-9 of this Title.

FCC 10-7-7 Review and Use of Site Investigation Reports stipulates that if hazards are found to exist (which in this case, the Planning Commission determined the slope and soils on Subject Property pose a potential hazard) a Phase II report and a Conditional Use Permit shall be required. And that if a Phase II Site Investigation Report is required, the Phase II conclusions shall be submitted for Planning Commission review.

In this case, the application requirements for a Conditional Use Permit are redundant, as that information was submitted and reviewed by the Planning Commission during the November 2019 review of the original application for a conditional use permit, tentative subdivision, and preliminary Planned Unit Development plan.

The public hearing and notice required for the Conditional Use Permit do apply, and have been met (and described above, in the findings related to section 10-1-1-6-3 Type 3 Reviews).

TITLE 10: CHAPTER 7: SPECIAL DEVELOPMENT STANDARDS

10-7-2: IDENTIFICATION OF WETLANDS AND RIPARIAN AREAS AND POTENTIAL PROBLEM AREAS: At minimum, the following maps shall be used to identify wetlands and riparian areas and potential problem areas:

[...]

B. "Soils Map", Florence Comprehensive Plan Appendix 7.

[...]

10-7-3: DEVELOPMENT STANDARDS FOR POTENTIAL PROBLEM AREAS: The following standards shall be applied to development in potential problem areas unless an approved Phase I Site Investigation Report or an on-site examination shows that the condition which was identified in the Comprehensive Plan or Overlay Zoning Map does not in fact exist on the subject property. These standards shall be applied in addition to any standards required in the Zoning Districts, Comprehensive Plan, and to any requirements shown to be necessary as a result of site investigation. Where conflicts or inconsistencies exist between these Development Standards, City Code, and the Comprehensive Plan, the strictest provisions shall apply unless stated otherwise.

[...]

- H. Yaquina Soils and Wet Areas (except significant wetlands and riparian areas identified in the 2013 Wetland and Riparian Inventory, as amended): In areas with seasonal standing water, construction of a drainage system and/or placement of fill material shall be required according to plans prepared by a registered engineer and approved by the City. (Amended Ord. 10, Series 2009)**

The soil type on Subject Property triggered a Phase 1 Site Investigation Report by the applicant. According to *Map C, Appendix 7, Florence Realization 2020 Comprehensive Plan, Natural Resources Conservation Service Soils Map*, the soil type on Subject Property is Waldport fine sand; it is 12-30% slopes on the southern approximately two-thirds of the property. The Map stipulates that this soil type on this degree of slope is unsuitable or conditionally suitable for development, and that a site investigation report is required before development is permitted.

The applicant completed and submitted their Phase 1 Site Investigation Report with their application for preliminary PUD and tentative subdivision approval. (Exhibit M)

10-7-6: SITE INVESTIGATION REPORTS (SIR):

- A. Areas identified in Section 2 and 3 above, are subject to the site investigation requirements as presented in "Beach and Dune Techniques: Site Investigation Reports by Wilbur TERNYK" from the Oregon Coastal Zone Management Association's Beaches and Dunes Handbook for the Oregon Coast (OCZMA Handbook), Appendix 18 of the Florence Comprehensive Plan as modified by the City of Florence. No development permit (such as building permit or land use permit) subject to the provisions of this Title may be issued except with affirmative findings that:**

- 1. Upon specific examination of the site utilizing a Phase I Site Investigation Report (the checklist from the OCZMA Handbook, as modified by the City of Florence), it is found that the condition identified on the "Hazards Map" or "Soils Map" or "Beaches and Dunes Overlay Zone" or other identified problem area does not exist on the subject property; or**
- 2. As demonstrated by the Phase II Site Investigation Report that harmful effects could be mitigated or eliminated through, for example, foundation of structural engineering, setbacks or dedication of protected natural areas.**

Site investigation requirements may be waived where specific standards, adequate to eliminate the danger to health, safety and property, have been adopted by the City. This exception would apply to flood-prone areas, which are subject to requirements of the National Flood Insurance Program and other problem areas which may be adequately protected through provisions of the Building Code.

The approval of the applicant's request for preliminary PUD and tentative subdivision was conditioned, in part, on the completion of a Phase 2 Site Investigation Report; the purpose of the Phase 2 SIR is to determine if the hazards which triggered the Phase 1 SIR can be mitigated or eliminated through engineering.

The applicant commissioned Branch Engineering to complete a geotechnical report and a Phase 2 Site Investigation Report of Subject Property (Exhibits F and C).

Branch Engineering concluded that, based on their field observations, subsurface explorations, and data analyses, that the site is suitable for the proposed development *provided that the recommendations included in their geotechnical report are incorporated into the design and construction of the project*. Those recommendations are discussed in detail below.

Note: Branch includes this disclaimer in their geotechnical report: “our field explorations only represent a very small portion of the site. Should loose or unsuitable soils extend to a depth greater than that described herein, or areas of distinct soil variation be discovered, this office shall be notified to perform site observation and additional excavation may be required.”

Branch’s geotechnical report includes recommendations for oversight/approval/site visits by the Geotechnical Engineer or their representative. These include but are not limited to: the approval of fill area(s) and fill material(s) prior to placement, periodic visits to the site to verify and document lift thickness, source material, and compaction, and upon any excavations encountering the static water table (these oversight recommendations are also included in the findings below related to 10-7-7-B Required Certifications and Inspections).

Condition 4: The applicant shall follow the recommendations provided by Branch Engineering in their Geotechnical Report dated February 5, 2020 (Exhibit F), including recommendations related to oversight and any subsequent direction by Branch resulting from that oversight.

- B. Permit Fee: A fee to offset the cost of time required to investigate and prepare Findings may be set by Council Resolution.**
- C. General Requirements for Phase II Site Investigation Reports shall include at least the following information. Additional information, commensurate with the level of hazard and site conditions shall be submitted.**
 - 1. Identification of potential hazards to life, proposed development, adjacent property, and the natural environment which may be caused by the proposed development.**

To identify potential hazards on site, Branch Engineering did the following:

- Dug five exploratory test pits, to a maximum depth of 6.7-feet below ground surface (BGS), to determine soil composition.
- Conducted four Falling Head Infiltration Tests, to determine soil infiltration rates.
- Reviewed the following literature:
 - United States Department of the Interior Geological Survey (USGS) 2017 Mercer Lake, Oregon Quadrangle Map and the 2017 Florence, OR Quadrangle Map.
 - The Lane County area Web Soil Survey, United States Department of Agricultural (USDA) Natural Resources Conservation Service (NRCS).
 - The USGS Geologic Map of Oregon, (USGS 1991, Walker & MacLeod).
 - The Oregon Department of Water Resources Well Logs from nearby locations.
 - The DOGAMI online hazard view for the subject site vicinity.

The potential hazards identified by Branch Engineering include: surface soil types unsuitable for development, areas of visible water erosion, invasive species, and approximately six large dead or dying trees.

2. Mitigation methods for protecting the subject property and surrounding areas from each potential hazard.

Compare Exhibits D and E for maps showing the area of bank stabilization/vegetation removal, in relation to the development area. Note that approximately half of the development area, including 7 of the proposed 12 dwelling units, and the parking lot, are within the vegetation removal/bank cut area. All vegetation within the development area, along with the zone labeled "Bank Stabilization Area" on Exhibit E, is proposed to be removed.

Branch Engineering recommends the following for earthwork in the building foundation areas, roadways and parking areas:

- Earthwork shall be performed in general accordance with the standard of practice as described in the [2019 Oregon Structural Specialty Code, Appendix J, Grading](#) (Exhibit H)
- All areas intended to directly or laterally support structures or roadways should be stripped of vegetation, organic soil, unsuitable fill, and/or other deleterious material.
- Once subgrade is exposed (which is expected to be loose to medium dense sand) the recommended subgrade preparation is as follows:
 - Foundation subgrade preparation:
 - In areas of foundation footings, organic topsoil and loose sand shall be removed to consistently medium dense sand, either for the placement of foundational forms or structural fill.
 - Upon excavation to suitable subgrade, the subgrade shall be wetted and rolled with a vibratory smooth drum roller with a minimum weight of 6,500 lbs until no additional visual settlement of the subgrade is detected.
 - Conventional strip and spread footings may be used for the foundation system.
 - Foundation footings shall be placed at least 5-feet from the competent face of downward slopes below footings.
 - If footings are not constructed immediately upon subgrade preparation, the subgrade should be covered with a minimum of 4-inches of compacted aggregate to mitigate wind and water erosion.
 - After construction of footings, the perimeter of the footings shall be protected from erosion to mitigate undermining of footings.
 - Pavement subgrade preparation:
 - Existing vegetation, topsoil, previously placed fill, and areas of loose soil be removed to consistent subgrade material as described above.
 - The expected depth of excavation to this subgrade material is approximately 12 to 16-inches, which may increase to approximately 5-feet in areas of previously placed fill.

- Upon excavation to suitable subgrade, the subgrade shall be wetted and rolled with a vibratory smooth drum roller until no additional visual settlement of the subgrade is detected.
- Fill placed to raise pavement subgrade elevations shall be placed on suitable subgrade, and conform to the engineered fill recommendations (below).
- A minimum of 8-inches of compacted aggregate be placed on the subgrade in light vehicle pavement areas.
 - Heavy construction traffic will require additional aggregate thickness, a minimum of 12-inches, to mitigate rutting of the subgrade.

Branch Engineering recommends the following regarding cutting and filling slopes:

- Temporary slopes may be excavated up to 1.5:1 (H:V) in steepness.
- Permanent slopes shall not exceed 2:1.
- Cut and/or fill slopes shall be compacted to their outer edge by either (a) back rolling or (b) being over built and cut to grade.
- Areas of structural fill placement shall be stripped of organic material, loose soil, and subgrade.
- All engineered fill placed on the site shall consist of homogenous material and be free of organics or other deleterious materials.
 - The sand present on the site is acceptable for use as engineered fill upon removal of any organic material.
- The fill shall be moisture conditioned within 2% +/- of optimum moisture content and compacted in lifts with loose lift thickness not exceeding 8- inches with appropriate equipment for the fill material.
- Sloped areas in excess of 20% shall be properly keyed and benched horizontally into competent material as the fill height progresses. Proof-rolling or hand-probing of the subgrade may be required to assess competence.
- The recommended compaction level for engineered fill is 90% of ASHTO T-180/ASTM 1557-D (modified Proctor) unless otherwise specified. Compaction shall be measured by testing with nuclear densometer ASTM D-6938, or D-1556 sand cone method. If compaction testing by nuclear densometer is not possible due to the nature of the approved fill material, proof rolling with a fully loaded 10 CY dump truck observed by the Geotechnical Engineer or designated representative shall be conducted.
- Foundations shall be placed at least 5 lateral feet from the face of slope or outside a 1:1 plane projected from the toe of slope; whichever is greater.

In addition, Branch recommends that fill area(s) and fill material(s) be approved by the Geotechnical Engineer prior to placement. And that periodic visits to the site to verify lift thickness, source material, and compaction efforts shall be conducted by the Geotechnical Engineer or designated representative, and documented.

See the findings in this report related to 10-7-6-C-10 Recommendations for Removal, Retention, and Placement of Trees and Vegetation, for Branch's recommendations re: vegetation removal, planting, and bank stabilization.

3. Acceptable development density.

The geotechnical report concludes that, based on their field observations, subsurface explorations, and data analyses: the site is geologic and geotechnically suitable for the proposed development provided that the recommendations of their report are incorporated into the design and construction of the project.

4. Identification of soils and bedrock types.

5. Identification of soil depth.

The geotechnical report includes an identification of soils, bedrock types and soil depth.

The exploratory test pits dug by Branch showed loose to medium density, tan, moist, fine grain sand underlying existing topsoil, or root zones. Sidewall caving was observed as excavation depths increased below approximately 3-feet to 5-feet BGS.

6. Water drainage patterns.

Branch Engineering stated in their report that the alteration of existing grades for this project will likely change drainage patterns, but should not adversely affect adjacent properties.

Branch recommends that final perimeter landscape grades slope away from the foundation, that surface water not be allowed to pond adjacent to foundations.

Condition 5: An on-site storm drainage system shall be engineered for this project, and approved by the City prior to issuance of a building permit or construction of parking and access drives.

Regarding groundwater: no groundwater was observed in the exploratory test pits which were advanced to a maximum of 6.7-feet BGS. Well logs from nearby sites list static water levels at 8.2-feet, 9-feet and 17-feet BGS. The Geotechnical Report states that variations in the depth to water is typical in stabilized dune environments with raised dunal areas and deflation zones with water closer to the surface. Branch Engineering expects that ground water levels (from the regional water table or perched lenses) will fluctuate with the seasons and should be expected to be highest during the late winter and spring months when rainstorms are more intense and frequent, and soils are near saturation. The presence of ground water is not expected to impact the proposed development, provided the recommendations included in their geotechnical report are implemented in the design and construction of the project.

Condition 6: If excavations do encounter the static water table, excavation shall cease and Florence Public Works shall be notified. Resulting dewatering measures (such as utility installation below the water table elevation) shall be approved by the Florence Public Works prior to commencing excavation.

7. Identification of visible landslide activity in the immediate area.

8. History of mud and debris flow.

9. In areas prone to landslide, mudflow and where slopes exceed 25%, reports shall identify the orientation of bedding planes in relation to the dip of the surface slope.

The DOGAMI hazard viewer maps identify the area as a high possibility of landslide due to the existing topography (Exhibit J). However, the existing slopes mapped as a high landslide hazard are planned to be removed or reduced as part of the proposed development. Branch concludes that, if the earthwork recommendations in their geotechnical report are incorporated into design and construction of the project, the risk of landslides impacting the site is low.

10. Recommendations for removal, retention, and placement of trees and vegetation.

Branch Engineering recommends the following regarding bank stabilization and revegetation:

- All slopes shall be protected from erosion by timely placement of vegetation, or other means.
- Runoff should not be allowed to flow down the face of slopes.
- Any cut banks shall be seeded or planted with native material (this can be done by grinding the native plants that will be removed during construction and scattering them along the cut bank).
- Once the area is sufficiently covered in a layer of native material, place Coir Mat 70 from GEI Works across all slopes greater than 2:1, and Coir Mat 40 across all slopes greater than 3:1. Placement of mats should meet manufacturers recommendations.
- Temporary stabilization needs to meet the specifications in ODOT Standard Detail RD1055 if the slope should exceed a slope greater than 3:1 (Exhibit I)

There is no specific recommendation provided for grading or erosion prevention, beyond mulching, matting and “timely placement of vegetation.”

Conditions 12 through 14 of the preliminary PUD approval are specific to landscaping and irrigation; these conditions apply to the revegetation of the bank.

12. The applicant shall update their landscaping plan to include the species, sizes and locations throughout the development, including in the proposed rain gardens and parking areas.

13. Specifications for soil at the time of planting, irrigation and anticipated planting schedule shall be furnished by the applicant prior to any site disturbance, final PUD, final plat, and /or with each associated building permit.

14. An irrigation plan is required prior to final PUD approval.

Condition 7: The applicant shall submit a grading and erosion plan (bank stabilization plan), including (a) a timeline which incorporates removal, fill, revegetation, irrigation, and drainage plans, and (b) the methodology for devising the plan. This grading and erosion plan shall be submitted prior to any site disturbance.

11. Recommendations for placement of all structures, on site drives, and roads.

The Branch Engineering geotechnical report includes recommendations for settlement, slabs-on-grade, and pavement design, in addition to the recommendations repeated in this report (Exhibit F)

12. Recommendations for protecting the surrounding area from any adverse effects of the development. (Amended by Ord. No. 10, Series 2009)

The submitted SIR and geotechnical report include recommendations for excavating and stabilizing the bank, and conclude that if the recommendations included in the geotechnical report are followed, there will be no adverse effects on the surrounding area. See also Condition 7, above, which requires a detailed grading and erosion plan be submitted by the applicant prior to any site disturbance.

In addition, Condition 6 of Resolutions PC 19 22 PUD 03, 19 23 SUB 04 and 19 25 CUP 08 requires the applicant to maintain a 10-foot vegetated buffer along the south-western perimeter of the development, from the trash enclosure to the 15th Street entrance; this is depicted on Exhibit D, Site Plan.

D. Specific Standards for Phase II Site Investigation Reports will be determined on the basis of the information provided in the Phase I Site Investigation Report. At a minimum, specific standards shall address the following (may include more than one category listed below):

- 1. The SIR Phase II - Geologic Report shall follow the “Guidelines for Preparing Engineering Geologic Reports in Oregon” as adopted by the Oregon State Board of Geologist Examiners or shall meet the requirements for Site Investigation Reports as required by the Oregon State Board of Examiners for Engineering and Land Surveying (OSBEELS). The SIR Phase II – Geologic Report shall address the following:**
 - a. An explanation of the site and scope of the study area (e.g. subdivision, by lot specific, or for public improvements)**
 - b. An explanation of the degree the condition affects the property use in question;**
 - c. An explanation of the measures to be employed to minimize detrimental impacts associated with the condition;**
 - d. An explanation of the condition-associated consequences the development and the loss-minimizing measures will have on the surrounding properties.**

[...]

- 3. Slopes in the 12% to 25% range: Determine the presence of soil creep, fills, or signs of past instability. If hazards are present, engineering recommendations shall be provided. If conditions require recommendations for foundation construction outside of the Building Code (IBC), those recommendations shall be provided by an appropriately qualified professional engineer. If thorough examination of the site determines that no hazards are present, documentation by an appropriately qualified professional.**
- 4. Slopes greater than 25%:**
 - a. Subsurface exploration of areas above, below, and alongside known or suspected slides**

- b. **Accurate identification and measurement of the limits of the slide mass**
- c. **Identification of the stability of the slide mass and the mechanics of slide movement.**
- d. **Identification of the orientation of bedding planes in relation to the dip of the surface slope**
- e. **A site specific grading and erosion control plan for site stabilization and construction**
- f. **The methodology for determining the site stabilization plan**
- g. **Recommendation of suitable setbacks, keeping in mind the anticipated life of the structure or development.**

[...]

- 8. **Soils: The Site Investigation Report shall address the following development constraints for the soil types.**
 - d. **Waldport - These are sand dunes which are covered with stabilization vegetation. Conditions are moderate to severe, depending on slope. The particular need here is to preserve existing vegetation and to stabilize soil which is disturbed.**

There are (a) slopes greater than 25%, (b) slopes in the 12-25% range, and (c) Waldport sand on Subject Property.

The submitted Phase 2 Site Investigation Report and Geotechnical Report was prepared by Branch Engineering Principal Geotechnical Engineer Ronald Derrick, P.E., G.E., and addresses the Specific Standards for Phase II Site Investigation Reports outlined above.

As noted above, the existing steep slopes are planned to be removed or reduced as part of the proposed development, and Branch Engineering has concluded that if the earthwork recommendations in their geotechnical report are incorporated into design and construction of the project, alleviate risk of slope instability.

See also Condition 7, above, which requires the applicant submit a grading and erosion plan (bank stabilization plan), including (a) a timeline which incorporates removal, fill, revegetation, irrigation, and drainage plans, and (b) the methodology for devising the plan, prior to any site disturbance.

10-7-7: REVIEW AND USE OF SITE INVESTIGATION REPORTS

- A. **The Phase I Site Investigation Report shall be reviewed administratively through a Type II Review. If it is found that the condition identified on the "Hazards Map" or "Soils Map" or "Beaches and Dunes Overlay Zone" or other identified problem area does not exist on the subject property; no Phase II report is required and the Site Investigation process is terminated. If hazards are found to exist, a Phase II report and a Conditional Use Permit shall be required.**

If a Phase II Site Investigation Report is required, the Phase II conclusions shall be submitted for Planning Commission review.

As noted above, a Phase 2 SIR was required of the applicant for the approval of their proposed subdivision and Planned Unit Development, and has been completed and submitted for Planning Commission review. This report is specific to that required Phase 2 SIR and accompanying geotechnical report.

B. Required Certifications and Inspections:

For any Phase II SIR submitted, the registered professional of record shall be required to:

- 1. Review final plans for development and submit a signed and stamped certification report that all recommendations have been incorporated into development plans.**
- 2. Review subgrade excavations and fills for structures and stormwater drainage and submit a signed and stamped certification report that construction is proceeding in accordance with approved plans.**
- 3. Perform interim inspections as necessary and a final inspection of the site and submit a signed and stamped certification report that the project as constructed complies with approved plans.**

Branch Engineering provided the following recommendation for review/inspection, which the applicant shall follow.

See also Condition 4, above, which requires the applicant to follow all recommendations provided by Branch in their February 5 geotechnical report (Exhibit F), and all subsequent recommendations resulting from their oversight of the proposed development project.

Recommended Construction Phases to be Observed by the Geotechnical Engineer	
Phase	Observation
At completion of street excavation	Subgrade observation by the geotechnical engineer before fabric and aggregate placement.
Imported fill material	Observation of material or information on material type and source.
Placement of compaction of fill material	Observation by geotechnical engineer or test results by qualified testing agency.

C. Conditions of approval may be imposed and/or a bond may be required to be posted prior to issuance of permit to ensure that harmful effects such as erosion, sand encroachment, destruction of desirable vegetation including inadvertent destruction by moisture loss or root damage, spread of noxious weeds, damage to archaeological resources, are mitigated or eliminated.

Condition 8: The applicant shall furnish cost estimates and post a performance bond in that amount with the City, to accomplish the proposed excavation and stabilization.

Condition 9: The applicant shall include in the Covenants, Conditions and Restrictions for the development that the developer shall be responsible for long range vegetation and maintenance of the bank. (This is in addition to Condition 9 of Resolutions PC 19 22 PUD 03, 19 23 SUB 04

and 19 25 CUP 08, which states, “The applicant shall be required to submit a copy of the Covenants, Conditions and Restrictions for the development prior to the issuance of any relevant building permits. The developer shall be responsible for the maintenance of the common space areas.”)

D. Approval: The property owner shall record a Covenant of Release which outlines the hazard, restrictions and/or conditions that apply to the property and shall state, “The applicant recognizes and accepts that this approval is strictly limited to a determination that the project as described and conditioned herein meets the land use provisions and development standards of the City Code and Comprehensive Plan current as of this date. This approval makes no judgment or guarantee as to the functional or structural adequacy, suitability for purpose, safety, maintainability, or useful service life of the project.”

Condition 10: The property owner shall record a Covenant of Release which outlines the hazard, restrictions and/or conditions that apply to the property and shall state, “The applicant recognizes and accepts that this approval is strictly limited to a determination that the project as described and conditioned herein meets the land use provisions and development standards of the City Code and Comprehensive Plan current as of this date. This approval makes no judgment or guarantee as to the functional or structural adequacy, suitability for purpose, safety, maintainability, or useful service life of the project.”

VI. CONDITIONS OF APPROVAL

The application, as presented, meets or can meet applicable City codes and requirements, provided that the conditions of approval are met in coordination with the below limitations.

Any modifications to the approved plans or changes of use, except those changes relating to Building Codes, will require approval by the Community Development Director or Planning Commission/Design Review Board.

Regardless of the content of material presented for this Planning Commission, including application text and exhibits, staff reports, testimony and/or discussions, the applicant agrees to comply with all regulations and requirements of the Florence City Code which are current on this date, EXCEPT where variance or deviation from such regulations and requirements has been specifically approved by formal Planning Commission action as documented by the records of this decision and/or the associated Conditions of Approval. The applicant shall submit to the Community Development Department a signed “Agreement of Acceptance” of all conditions of approval.

Exhibits:

Approval shall be shown on conditions of approval as supported by the following record:

“A”	Findings of Fact
“B”	Application
“C”	Phase 2 Site Investigation Report
“D”	Site Map
“E”	Vegetation Clearing Area Map
“F”	Geotechnical Report
“G”	Resolutions PC 19 22 PUD 03, 19 23 SUB 04 and 19 25 CUP 08
“H”	2019 Oregon Structural Specialty Code, Appendix J, Grading

"I"	ODOT Standard Detail RD1055
"J"	DOGAMI 2013 Landslide Susceptibility Map
"K"	Testimony: Civil West Engineering
"L"	Reference Testimony: Jonathan Hornung
"M"	Phase 1 Site Investigation Report

Findings of Fact attached as Exhibit "A" are incorporated by reference and adopted in support of this decision.

1. Any modifications to the approved plans or changes of use, except those changes relating to Building Codes, will require approval by the Community Development Director or Planning Commission/Design Review Board.
2. Regardless of the content of material presented, including application text and exhibits, staff reports, testimony and/or discussions, the applicant agrees to comply with all regulations and requirements of the Florence City Code which are current on this date, EXCEPT where variance or deviation from such regulations and requirements has been specifically approved by formal Planning Commission action as documented by the records of this decision and/or the associated Conditions of Approval. The applicant shall submit to the Community Development Department a signed "Agreement of Acceptance" of all conditions of approval prior to issuance of a building permit.
3. Upon encountering any cultural or historic resources during construction, the applicant shall immediately contact the State Historic Preservation Office and the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians. Construction shall cease immediately and shall not continue until permitted by either a SHPO or CTCLUSI representative.
4. The applicant shall follow the recommendations provided by Branch Engineering in their Geotechnical Report dated February 5, 2020 (Exhibit F), including recommendations related to oversight and any subsequent direction by Branch resulting from that oversight.
5. An on-site storm drainage system shall be engineered for this project, and approved by the City prior to issuance of a building permit or construction of parking and access drives.
6. If excavations do encounter the static water table, excavation shall cease and Florence Public Works shall be notified. Resulting dewatering measures (such as utility installation below the water table elevation) shall be approved by the Florence Public Works prior to commencing excavation.
7. The applicant shall submit a grading and erosion plan (bank stabilization plan), including (a) a timeline which incorporates removal, fill, revegetation, irrigation, and drainage plans, and (b) the methodology for devising the plan. This grading and erosion plan shall be submitted prior to any site disturbance.
8. The applicant shall furnish cost estimates and post a performance bond in that amount with the City, to accomplish the proposed excavation and stabilization.
9. The applicant shall include in the Covenants, Conditions and Restrictions for the development that the developer shall be responsible for long range vegetation and maintenance of the bank. (This is in addition to Condition 9 of Resolutions PC 19 22 PUD 03, 19 23 SUB 04 and 19 25 CUP 08, which states, "The applicant shall be

required to submit a copy of the Covenants, Conditions and Restrictions for the development prior to the issuance of any relevant building permits. The developer shall be responsible for the maintenance of the common space areas.”)

10. The property owner shall record a Covenant of Release which outlines the hazard, restrictions and/or conditions that apply to the property and shall state, “The applicant recognizes and accepts that this approval is strictly limited to a determination that the project as described and conditioned herein meets the land use provisions and development standards of the City Code and Comprehensive Plan current as of this date. This approval makes no judgment or guarantee as to the functional or structural adequacy, suitability for purpose, safety, maintainability, or useful service life of the project.”

VII. ALTERNATIVES

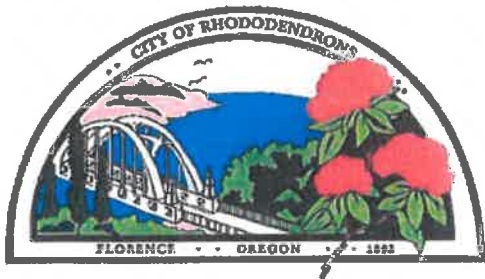
1. Approve the application based on the findings of compliance with City regulations.
2. Modify the findings, reasons or conditions, and approve the request as modified.
3. Deny the application based on the Commission’s findings.
4. Continue the Public Hearing to a date certain if more information is needed.

VIII. CONCLUSIONS AND RECOMMENDATIONS

Staff finds that the proposed application meets the requirements of City Code with conditions, and **recommends approval** of **the Conditional Use Permit** subject to conditions as listed in the Resolution.

IX. EXHIBITS

“A”	Findings of Fact
“B”	Application
“C”	Phase 2 Site Investigation Report
“D”	Site Map
“E”	Vegetation Clearing Area Map
“F”	Geotechnical Report
“G”	Resolutions PC 19 22 PUD 03, 19 23 SUB 04 and 19 25 CUP 08
“H”	2019 Oregon Structural Specialty Code, Appendix J, Grading
“I”	ODOT Standard Detail RD1055
“J”	DOGAMI 2013 Landslide Susceptibility Map
“K”	Testimony: Civil West Engineering
“L”	Reference Testimony: Jonathan Hornung
“M”	Phase 1 Site Investigation Report



City of Florence
Community Development Department
250 Highway 101
Florence, OR 97439
Phone: (541) 997 - 8237
Fax: (541) 997 - 4109
www.ci.florence.or.us

Type of Request

THIS SECTION FOR OFFICE USE ONLY

Type I Type II Type III Type IV

Proposal:

PC2005CUPO1 - DevNW STR

Applicant Information

Name: Stonewood Construction, Inc

Phone 1:

E-mail

Address

Signature

Date: 2/4/20

Applicant's Representative (if any): Josh Shafer

Property Owner Information

Name: DevNW

Phone 1:

E-mail Address

Address

Signature

Date:

Applicant's Representative (if any): Erin Dey

NOTE: If applicant and property owner are not the same individual, a signed letter of authorization from the property owner which allows the applicant to act as the agent for the property owner must be submitted to the City along with this application. The property owner agrees to allow the Planning Staff and the Planning Commission onto the property. Please inform Planning Staff if prior notification or special arrangements are necessary.

For Office Use Only:



Approved

Exhibit

Exhibit B

Property Description

Site Address: 1424 Airport Road, Florence, OR

General Description: Undeveloped Lot from the on the southwest corner of Airport Road and Nopal Street.

Assessor's Map No.: 18 - 12 - 27 - 1 Tax lot(s): 15400

Zoning District: Multi-family Residential

Conditions & land uses within 300 feet of the proposed site that is one-acre or larger and within 100 feet of the site that is less than an acre OR add this information to the off-site conditions map

(FCC 10-1-1-4-B-3): Low density residential to the west. High density residential to the south, and high density residential to the east. High density residential to the north

Project Description

Square feet of new: 48000 Square feet of existing: 0

Hours of operation: N/A Existing parking spaces: 0

Is any project phasing anticipated? (Check One): Yes No

Timetable of proposed improvements: Construction to begin February 26, 2020

Will there be impacts such as noise, dust, or outdoor storage? Yes No

If yes, please describe: _____

Proposal: (Describe the project in detail, what is being proposed, size, objectives, and what is desired by the project. Attach additional sheets as necessary)

The project consists of both public and private improvements. The public improvements include an extension to Airport Road to conform with city standards of a collector, and will include a stormwater treatment facility and sidewalk. a public water and sanitary line will extend through the site to connect to the proposed development. The private improvements will include a connecting drive aisle from Airport Road to Nopal Street with parking throughout. Twelve new homes will be constructed with an internal space for recreation serving the new development.

For Office Use Only:

Date Submitted: _____ Fee: _____

Received by: _____

Paid

**CITY OF FLORENCE
SITE INVESTIGATION REPORT PHASE 2**

DevNW

February 5, 2020

Applicant

Date

DevNW Airport Road PUD

18-12-27-1

15400

Proposal

Map No. Tax Lot

1424 Airport Road, Florence, Oregon

Multi-Family Residential

Street Address

Zoning District

Overlay District

This investigation was done by:



 Signature
Andrew Strout

 Name
EIT

 Title

Florence City Code 10-7-4: Site Investigation

A. Areas Requiring a Site Investigation: Areas identified on the "Hazards Map," "Soils Map," or Resource Inventory are subject to the site investigation procedure contained in site investigation reports by Wilbur E. Ternyik, published by OCZMA. No building permit, conditional use permit or other permit subject to the provisions of this Title may be issued except with affirmative findings that:

1. Upon specific examination of the site, the condition identified on the "Hazards Map" or "Soils Map" or supporting inventory documents did not exist on the subject property; or
2. That harmful effects could be mitigated or eliminated through, for example, foundation of structural engineering, setbacks or dedication of protected natural areas.

Site investigation requirements may be waived where specific standards, adequate to eliminate the danger to health, safety and property, have been adopted by the City. This exception would apply to flood-prone areas, which are subject to requirements of the National Flood Insurance Program and other problem areas which may be adequately protected through provisions of the Building Code. (Ord. 669, 5-17-82)

B. Site Preparation Permit Required: A site preparation permit is required for sites identified as subject to a site investigation. A permit will be issued by the Planning Director based on criteria 1 and 2 of 10-7-4-A.

**SITE INVESTIGATION – PHASE 2
DEVELOPMENT APPLICATION CHECKLIST**

See report, "Beach and Dune Implementation Techniques: Site Investigation Reports," Oregon Coastal Zone Management Association, for details on the following requirements.

A. STATE AND LOCAL LAND USE REGULATIONS

Submit letter from City planning staff and/or engineer certifying that the proposed development site plan conforms with applicable city regulations and plan designations. Letter must indicate approval of conformance with any special code provisions. If an exception to a statewide planning goal or a variance has been

previously approved for the particular locale, substantiate accordingly.

B. IDENTIFIED SET BACK LINE OR DESIGNATIONS

Identify on site plan all established set back lines.

C. IDENTIFIED HAZARDOUS CONDITIONS

1. Map to approximate scale all identified areas of wind erosion, water erosion, and slide activity.
2. Provide written details on extent of hazard: wind erosion, water erosion, slide areas.

D. EXISTING SITE VEGETATION

1. Map all major areas of vegetation and provide lists of dominant species in each area.
2. Provide investigator's assessment of age, condition, and stability of all vegetated areas.
3. Identify on site plan any removal or modification of vegetative cover.
4. Give brief description of vegetative cover on adjoining lands.
5. Identify and describe areas where vegetative cover poses a fire hazard. List species and condition. Propose solution to fire hazard problem. Furnish dated photographs of such areas.

E. FISH AND WILDLIFE HABITAT

1. Describe and identify any rare or endangered species or unique habitats present on the site.
2. Describe any adverse impacts on significant habitat to be caused by the proposed development.
3. If adverse impacts are anticipated, describe plans for minimizing such impacts.
4. Describe possible benefits to adjoining habitats to be realized as a result of the project.

F. FLOODPLAIN ELEVATION

1. Identify on site plan 100 year floodplain and highest observed tide line. Give elevation of same.
2. Identify on site plan the State of Oregon Beach Zone Line or the top of river bank.
3. Give evidence that elevation of the lowest habitable floor will be raised above the top of the highest predicted storm wave or 100 year floodplain. Registered surveyor or engineer signed report will suffice.

G. HISTORICAL AND ARCHAEOLOGICAL SITES

1. Describe and locate on site plan any identified historical or archaeological sites.
2. Describe any protection measures that may be needed to protect the site.

H. CONDITION OF ADJOINING AREAS

1. Open Dunes
 - a. Give location of open dunes in relationship to the development site.
 - b. Indicate approximate size (acres), maximum elevation, direction of movement, and predicted rate of movement of adjoining open dune areas.
 - c. Indicate ownership of adjoining dunes and proposed future management, if known.
 - d. Indicate investigator's assessment of probable threat to development site. Furnish aerial photographs if possible.
2. Active Foredunes
 - a. Describe size (height and width) of active foredunes on adjoining areas.
 - b. Describe any threat they pose to development site.
 - c. Describe any plans for cooperative measures to alleviate problems.
3. Storm Run-off Erosion
 - a. Describe any known storm run-off or flood velocity hazards on adjoining property that might adversely affect the site. Examples might be stream, river, denuded watershed, etc.
 - b. Describe any plans for cooperative measures to alleviate problems.
4. Wave Undercutting or Wave Overtopping
 - a. Describe extent of recent or historic undercutting, length of area and height of cut.
 - b. Describe area of wave overtopping and furnish photographs or other evidence.
 - c. Describe historic stability of beaches or riverbank in the general area.

- d. Furnish investigator's assessment of possible threat to the site.

I. DEVELOPMENT IMPACTS

1. Report should include the investigator's assessment of the site's overall capability and suggest maximum use level that will not cause weight slope failure, vegetation problems from too high a density of human population, damage to aquifer, etc. This is a judgment of extreme importance because the cumulative effect of minor impacts could result in a total dune project or riverbank failure.
2. Describe any projected off site adverse impacts on adjoining or nearby properties as a result of the development.
3. Identify and list all benefits of the project (information needed to evaluate social economic gains as required by Statewide Planning Goal 9: Economy, and coordination with possible area recreation plan):
 - a. New jobs created (temporary construction and permanent)
 - b. Increased tax base or assessed valuation of completed project
 - c. Describe any newly created or restored habitat resulting from development
 - d. Describe any improvement to public access provided by the project
4. Evaluate the impact of the proposed development on seasonal surface water and drainage flow patterns and the potential impact of flooding problems resulting from the development. If the development proposes to lower the groundwater in the deflation plain, plans must accommodate problems associated with changes in the landform. The SIR should address groundwater considerations including high water table, ponding, salt-water intrusion, drawdown on sand spits, and pollution potential.

J. PROPOSED DESIGN

1. Furnish a site plan map drawn to scale. Show in detail exact location and size of all proposed structures. Scale drawing of front, back and side view are required as well.
2. Submit detailed plans and specifications for structure foundation and identify materials to be used.
3. Furnish detailed plans and specifications for the placement of all protective structures proposed.
4. Provide complete location mapping and actual work specifications for all initial, temporary, or maintenance stabilization plans proposed.
5. Furnish detailed cost estimates and post performance bond in that amount with City to accomplish stabilization or restoration proposed, if required by City.
6. Identify legal responsibilities for long range vegetation maintenance programs.
7. Describe any benefits realized from dune or river bank stabilization or restoration measures proposed.
8. Furnish copies of necessary shorefront protection permits or completed permit applications (e.g., U.S. Army Corps of Engineers, Oregon Division of State Lands, etc.
9. Furnish detailed plans and specifications for interim stabilization, permanent re-vegetation, and vegetative maintenance as proposed.
10. Furnish detailed plan for off-road vehicle and pedestrian management, if applicable.
11. Furnish detailed plan for required reclamation of areas disturbed for sand removal, road construction, logging, etc.

K. LCDC COASTAL GOAL REQUIREMENTS

1. Identify potential conflicts with Coastal Goals or LCDC-acknowledged comprehensive Plan, and Oregon's Coastal Management Program. In addition, for river bank applications, relevant Statewide Planning Goals also include: Goal 16: Estuarine Resources, Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces, Goal 6: Air, Water and Land Resources Quality, and Goal 7: Areas Subject to Natural Hazards
2. Identify efforts made in development design to resolve or minimize identified conflicts.



February 5, 2020

Attn: Wendy Farley-Campbell
Planning Director
City of Florence
250 Highway 101
Florence, OR 97439

**RE: PHASE II SITE INVESTIGATION REPORT – DEVNW AIRPORT ROAD PUD
Branch Engineering, Inc. Project No. 18-493**

Branch Engineering, Inc, presents this summary report of our findings as compliance for the Phase II Site Investigation Report required in Florence City Code Title 10, Chapter 7. This information in this report is tailored to the requirements of Florence City Code 10-7-4 and shall not be solely used to design or construct the project site improvements.

The site is located on the Southwest corner of the intersection of Airport Road and Nopal Street. The site is 1.73 acres and is primarily composed of a large, vegetated dune that spans the majority of the southern portion of the property beginning between 60 and 100 feet from the northwest property line. The Northwestern portion of the property has some minor improvements including a paved parking area, with a fenced garden area.

IDENTIFIED SET BACK LINE OR DESIGNATIONS

In accordance with the Condition 6 of the Conditions of Approval a 10-foot setback and vegetated buffer along the western boundary of the property needs to be maintained to protect adjacent property vegetation and bank stabilization. All other building setback lines can be seen on the Phase II Site Investigation Report Map submitted with this document.

IDENTIFIED HAZARDOUS CONDITIONS

Areas of the dune on site have minimal erosion due to water. No evidence of wind erosion or side activity are present. Locations for the water erosion can be seen on the existing conditions map attached with this report. The area that is affected by water erosion is one of the least vegetated portions of the dune, and is covered by scotch broom, an invasive species. Other areas where water erosion is present look to be heavily trafficked areas, where human debris can be found.

EXISTING SITE VEGETATION

Existing Vegetation

The dune as a whole has a variety of plants that adorn its structure. In the low-lying area only grass can be found. The dominant species on site were identified as rhododendrons, salal, and coastal pine. These plants continue onto the adjacent properties to the west. On the east side of the dune, that was cut for the development to the east, there appears to be hooker willow planted

to stabilize the cut bank. In a small area on site, on the north side of the dune, there are some invasive scotch broom plants.

Age, Condition, and Stability of Existing Vegetation

There are several coastal pines that have fallen or are in danger of falling. Several trees have exposed roots, and some trees have lost all or most of their pine leaves, and are either dead or dying. The rhododendrons and salal plants are overgrown throughout the entire site and make traversing the southern portion of the property completely impossible. There was a decomposing stump from a tree that appeared to be cut down, and the rings were visible. The age of the tree could not be determined due to the level of rot on the stump, but the rings were of similar size and there were approximately 6 rings per inch. The largest living tree on site was approximately 19 inches in diameter. Given this, the approximate age of the oldest vegetation on site was determined to be 60 years old.

Removal and Modification to Vegetated Cover

All vegetation within the development area along with the zone labeled “BANK STABILIZATION AREA” on the Phase II Site Investigation Report Map will be removed. The Bank Stabilization Area is a designated zone to revegetate to stabilize the newly created bank.

Adjoining Vegetated Cover

The adjoining properties all have similar vegetation to the site.

Description and Location of Vegetated Fire Hazards

Most of the northern portion of the dune will be removed to accommodate the development. This will help reduce the amount of dead or dying trees that could be a potential fire or falling hazard, and will eliminate the invasive species on the north side of the dune.

DEVELOPMENT IMPACTS

Investigator’s Assessment

The overall capability of the site to support the development being proposed is high. It will reduce the area of trees that have potential fire and falling hazards. Portions of the existing dune that have water erosion and invasive species will also be removed. In areas where the bank of the dune needs to be stabilized, smaller plants can be included to ensure that future hazards will be mitigated. It will be important to prevent foot traffic in bank stabilization areas to prevent future water and wind erosion.

Off-Site Impacts

The only adjacent properties that are likely to be affected by the development will be protected by a vegetation buffer. It will be imperative that any trees that are within this area that are at risk of falling need to be removed and replaced with bank stabilization vegetation to prevent damage.

Projected Job Creation

The project will create temporary private sector construction jobs as well as long-term maintenance jobs for the upkeep of the common areas associated with the development.

Value of Completed Project

There are planned to be twelve new individually owned homes on site, which will be affordable housing. This will help build equity in low income families and allow the tax base in Florence to increase. It will reduce unauthorized camping in the area, and could help make the community a safer environment for those nearby

Restored Habitat

The dune to the south will be cut back to between 170 and 240 feet from the northwest property line. All new vegetation will be native species to the Oregon coast. All invasive species that were located on site will be removed.

Improved Public Access

Public access along Airport Road will be increased with a widening of the drive aisle and including a sidewalk along the frontage of the property.

Impact on Surface Water and Drainage

The development will include stormwater facilities to limit runoff from the site, as well as a public stormwater facility that will limit capture stormwater from airport road, and decrease flows downhill from the site. Test pits were only able to be dug to a depth of 6.5 feet due to the soils caving into the hole, and no groundwater was discovered.

PROPOSED DESIGN

Structure Foundations

The following is an excerpt from the Geotechnical Report for specifications on structure foundation for the site: "In areas of foundation footings, organic topsoil and loose sand shall be removed to consistently medium dense sand either for the placement of foundation forms or structural fill. Upon excavation to suitable subgrade, the subgrade shall be wetted and rolled with a vibratory smooth drum roller with a minimum weight of 6,500 lbs until no additional visual settlement of the subgrade is detected. Conventional strip and spread footings may be used for the foundation system of the proposed structures. Foundation footings shall be placed at least 5-feet from the competent face of downward slopes below footings.

If footings are not constructed immediately upon subgrade preparation, we recommend that the subgrade be covered with a minimum of 4-inches of compacted aggregate to mitigate wind and water erosion. After construction of footings, the perimeter of the footings shall be protected from erosion to mitigate undermining of footings."

Bank Stabilization

It is recommended that any cut banks created be seeded or planted with native material. This can be done by grinding the native plants that will be removed during construction and scattering them along the cut bank. Once the area is sufficiently covered in a layer of native material, place Coir Mat 70 from GEI Works across all slopes greater than 2:1, and Coir Mat 40 across all slopes greater than 3:1. Placement of mats should meet manufacturers recommendations.

Temporary stabilization needs to meet the specifications in ODOT Standard Detail RD1055 if the slope should exceed a slope greater than 3:1

**DEVNW AIRPORT RD. PUD
 PHASE II SITE INVESTIGATION REPORT**

TAX MAP: 18-12-27-1, TAX LOT: 15400
 FLORENCE, OREGON
 97439

revisions:

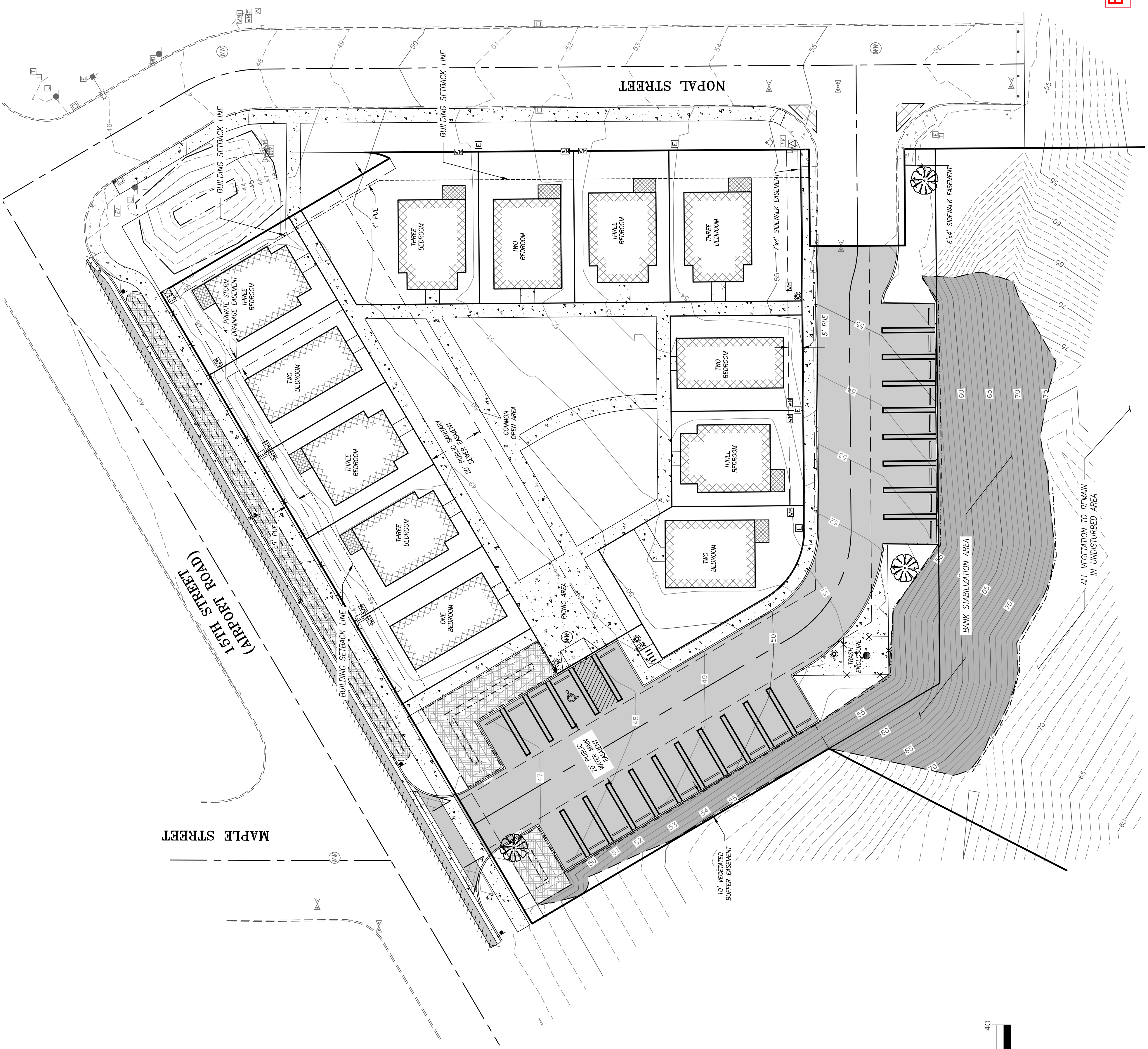
date: FEB. 5, 2020
 drawn by: AMWS
 designer: RC
 project no: 18-493

**PHASE II
 PROPOSED SITE
 INVESTIGATION
 REPORT MAP**

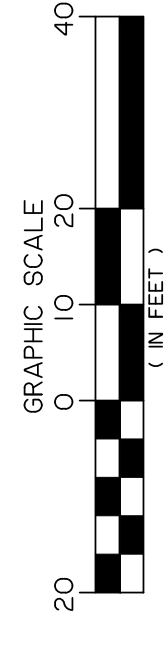
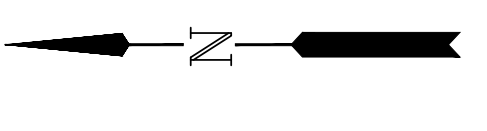
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Exhibit D

2



EXISTING		PROPOSED	
	CONTOUR LINE		BUILDING
	ASPHALT EDGE		ASPHALT
	CURB		CONCRETE
	TOP OF SLOPE		STORAGE SHED
	TOE OF SLOPE		WATER METER
	CATCH BASIN		HOSE BIB
	WATER METER		FIRE HYDRANT
	PUBLIC FIRE HYDRANT		IRRIGATION VALVE
	SANITARY MANHOLE		STORMWATER CURB INLET
	AREA DRAIN		SANITARY SEWER MANHOLE
	ELECTRIC VAULT		TELEPHONE RISER
	SIGN		LIGHT POLE
	WHEEL STOP		ONSITE LIGHT POLE
	DECORATIVE PEDIESTAL MOUNTED LIGHT		ELECTRIC RISER
	FENCE		JUNCTION BOX
	10'X10' VISION CLEARANCE AREA		TRANSFORMER
			MAIL BOX



TABULATION OF COVERAGE

TABULATION OF COVERAGE INCLUDES THE TOTAL SITE AREA

DEVELOPMENT SITE	
TAX MAP 18-12-27-10 TAX LOT 15400	75,076 SF (1.72 ACRES)
TOTAL SITE AREA	51,968 SF (1.19 ACRES)
DEVELOPMENT AREA	
IMPERVIOUS AREA	
ROOF	83 SF (0.00 ACRES)
ASPHALT	5,508 SF (0.13 ACRES)
CONCRETE	263 SF (0.01 ACRES)
PERVIOUS AREA	42,955 SF (0.99 ACRES)
PROPOSED CONDITIONS	
IMPERVIOUS AREA	
ROOF	11,808 SF (0.27 ACRES)
ASPHALT	11,165 SF (0.26 ACRES)
CONCRETE	6,431 SF (0.15 ACRES)
PERVIOUS AREA	11,770 SF (0.27 ACRES)
COMMON	5,753 SF (0.13 ACRES)
INCREASE IN IMPERVIOUS AREA	23,650 SF (0.54 ACRES)
LANDSCAPED AREA	9,782 SF (0.09 ACRES)
LANDSCAPED STORMWATER FACILITIES	1,221 SF (0.03 ACRES)
UNDEVELOPED AREA	26,414 SF (0.61 ACRES)
PERCENTAGE OF LOT LANDSCAPED	50%

NOT FOR CONSTRUCTION

Project title:

DEVNW AIRPORT RD. PUD PHASE II SITE INVESTIGATION REPORT

TAX MAP: 18-12-27-1, TAX LOT: 15400
 FLORENCE, OREGON
 97439

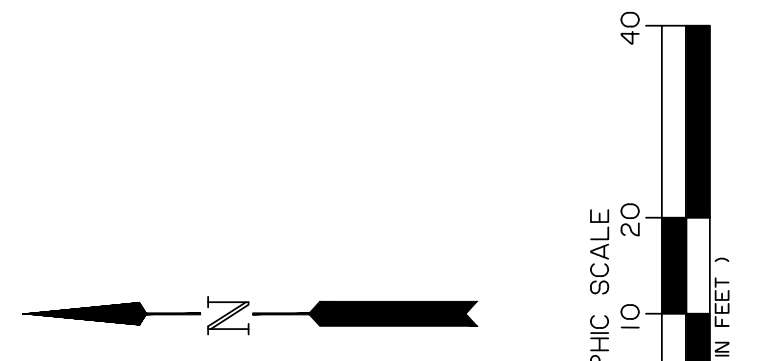
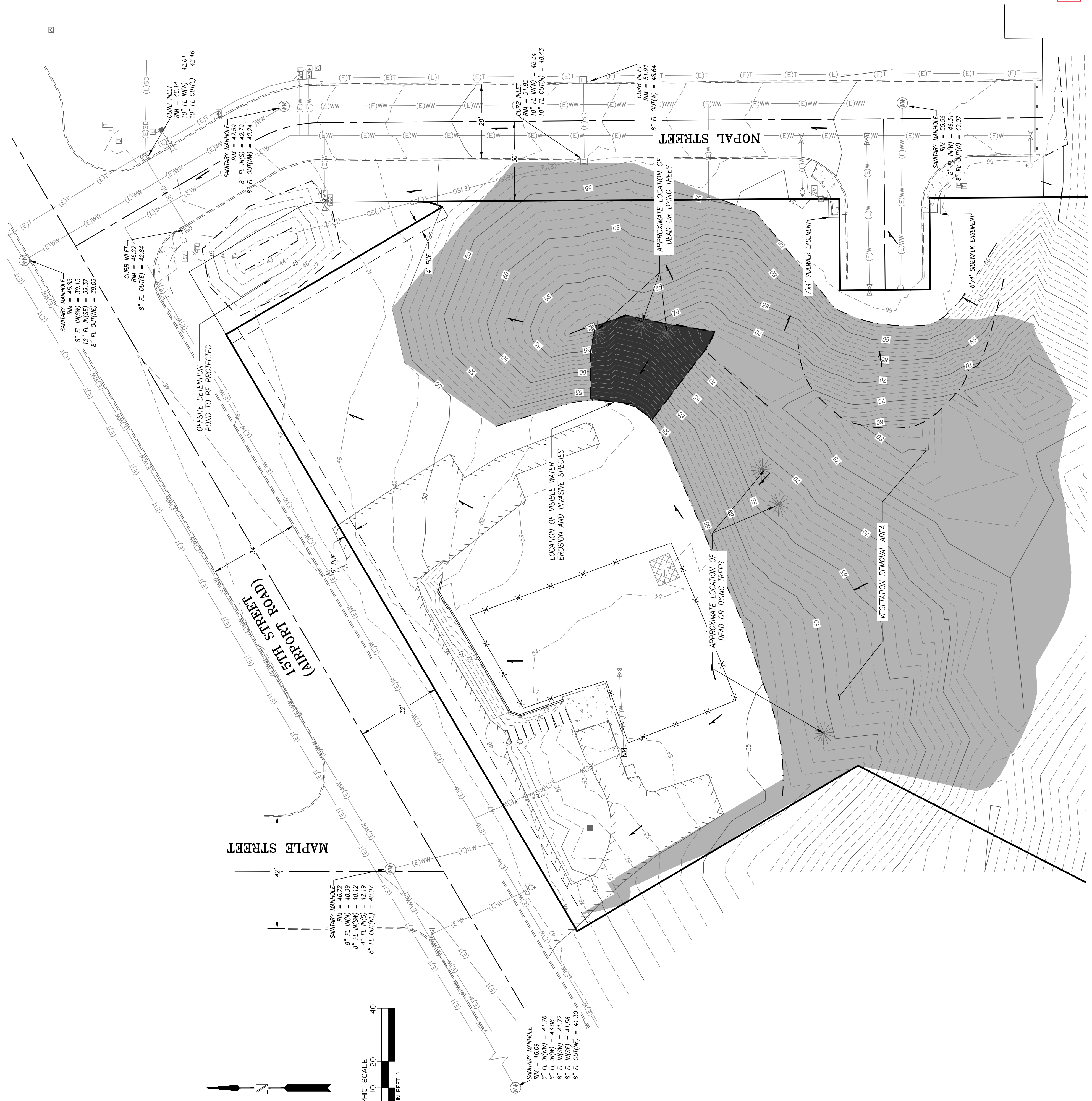
revisions:

date: FEB. 5, 2020
 drawn by: AWMS
 designer: RC
 project no.: 18-493

**PHASE II
 EXISTING SITE
 INVESTIGATION
 REPORT MAP**

sheet: **1**

Exhibit E



VERTICAL DATUM
 OR NAD83 2011/GEOD12A—ORON
 OREGON COAST

SOIL TYPES:
 ACCORDING TO THE USDA NATURAL RESOURCES CONSERVATION SERVICES WEB SOIL SURVEY,
 THE SITE SOIL IS MAPPED AS WALDFORT FINE SAND (NATIONAL MAP UNIT SYMBOL 131C AND
 131E).

LEGEND
 EXISTING

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February 5, 2020

Erin Dey
DevNW Airport Road PUD
Via Email: erin.dey@devnw.org

**RE: GEOTECHNICAL ENGINEERING RECOMMENDATIONS AND SITE EVALUATION
DEVNW AIRPORT ROAD PUD
AIRPORT ROAD AND NOPAL STREET
FLORENCE, OREGON
BRANCH ENGINEERING INC. PROJECT NO. 18-493**

Pursuant to your authorization Branch Engineering Inc. (BEI) performed a geotechnical engineering investigation at the subject site for the proposed development of a multi-family residential subdivision.

On January 24, 2020 five (5) exploratory test pits were advanced using a metal tracked excavator to a maximum depth of 6.7-feet below ground surface (BGS), and the subsurface soil conditions in the test pits were logged in accordance the USCS (Unified Soil Classification System) ASTM D2488. Four (4) falling head infiltration tests were previously performed by BEI on January 24, 2019. The accompanying report presents the results of our site research, field exploration and testing, data analysis, our conclusions and geotechnical engineering recommendations for the project. The site is suitable for the planned development, provided the recommendations of this report are implemented in the design and construction of the project.

Sincerely,
Branch Engineering Inc.



EXPIRES: 12/31/2021

Ronald J. Derrick, P.E., G.E.
Principal Geotechnical Engineer

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FIGURE 1 – Site Map

APPENDIX A – Test Pit Logs & Field Test Summaries, Infiltration Testing Data, Well Logs, USDA NRCS Soil Mapping

APPENDIX B – Geotechnical Specifications

1.0 INTRODUCTION

The subject site is located on the southwest corner of the intersection between Airport Road and Nopal Street, at latitude 43.978802° north and longitude 124.105754° west. The site is a single lot 1.73 acres in size. The northwestern portion of the property has some minor improvements including a paved parking area, with a fenced garden area.

This report presents the results and findings of Branch Engineering, Inc. (BEI) field observations, testing, and research for the subject site. Our investigation included the evaluation of the subsurface conditions at the site to provide geotechnical recommendations for the design and construction of proposed residential buildings and site improvements for access and parking.

1.1 Project and Site Description

Our understanding of the project is a residential development consisting of detached housing units with associated site improvements such as utility installation, paved access roads, and parking is proposed. Access to the site is expected to be taken from Airport Road with a through drive aisle connecting to Nopal Street. The site is surrounded by single-family residential development with Airport Road trending east-west along the northern perimeter of the site. Miller Park is located approximately 500 feet to the North of the site.

At the time of our visit the site surface was covered with vegetation consisting of scattered shore pines, salal, rhododendrons, and other vegetation typical of the Oregon Coast dune ecology. Two former driveways, or pathways were used to access the interior of the site. Review of historical photos available from Google Earth™ indicate that in the 1990's through the early 2000's the site was used as a Senior Center. During our site visit we observed several areas of debris indicating the site has been used as an unauthorized camp site. Water and wastewater pipes from the former Senior Center were observed in various locations on the site. Areas of undocumented sand fill are also likely to be encountered during site clearing activities.

The northwestern site topography is relatively flat, with elevations ranging from 48-feet to 55-feet above sea level. The southern portion of the site beginning between 60- and 100- feet from the northwest property line consists of a vegetated dune that measures approximately 75-feet to 80-feet above sea level at its peak. There is also a retaining wall 20-feet from the northwest property line that supports the former building pad.

1.2 Scope of Work

Our scope of work included a site reconnaissance and subsurface investigation on January 24, 2020. Five (5) exploratory test pits were advanced at the locations shown on the attached Figure-1 Site Exploration Map with the observed soil stratigraphy classified in accordance with the American Society of Testing and Materials (ASTM) Method D-2488. A portable dynamic cone penetrometer which consists of graduated steel rods driven into the soil by dropping a 35-lb slide hammer a vertical distance of 18-inches was used to assess the consistency of the site soil at select locations and depths in the test pits.

In addition to the exploratory test pits, four (4) Enclosed Falling Head Infiltration Tests were performed by BEI on January 24, 2019 at the locations shown on the attached Figure-1 with results summarized below and field data attached.

Field log summaries of the site exploratory test pits, including field test results, are presented in Appendix A. Also included in Appendix A are copies of nearby well logs from the Oregon Department of Water Resources on-line database, and the soil survey mapping of the site. Field and laboratory test results are summarized on the test pit log summaries.

1.3 Site Information Resources

The following site investigation activities were performed and literature resources were reviewed for pertinent site information:

- Review of the United States Department of the Interior Geological Survey (USGS) 2017 Mercer Lake, Oregon Quadrangle Map and the 2017 Florence, OR Quadrangle Map.
- Five exploratory test pits were advanced to a maximum depth of 6.7-feet below ground surface (BGS), and four Falling Head Infiltration Tests were performed on the site at the approximate locations shown on Figure-1.
- Review of the Lane County area Web Soil Survey, United States Department of Agricultural (USDA) Natural Resources Conservation Service (NRCS), see Appendix A.
- Review of the USGS Geologic Map of Oregon, (USGS 1991, Walker & MacLeod).
- Review of Oregon Department of Water Resources Well Logs from nearby locations, see Appendix A.
- Review of DOGAMI online hazard view for the subject site vicinity.

2.0 SITE SUBSURFACE CONDITIONS

The analyses, conclusions and recommendations contained in this report are based on site conditions as they presently exist and assume the exploratory test pit excavation, presented in Appendix A, are representative of the subsurface conditions throughout the site. If, during construction, subsurface conditions differ from those encountered in the exploratory test pits; BEI requests that we be informed to review the site conditions and adjust our recommendations, if necessary.

2.1 Site Soils

The NRCS Web Soil Survey maps two soil units across the site area; Waldport fine sand, 0 to 12 percent slopes and Waldport fine sand, 12-30 percent slopes are mapped across the entirety of the site area. Both soil units are described as well drained fine grain eolian sand.

In the exploratory test pits, loose to medium dense, tan, moist, fine grain sand was observed underlying existing topsoil, or root zones. Sidewall caving was observed as excavation depths increased below approximately 3-feet to 5-feet BGS. Test Pit 5 deviated from the other test pits

due to it being just above the retaining wall. The first 4.9 feet consisted of fill with the top 0.5' being ¾"-0 aggregate, followed by light brown to tan fine grain sand with some landscaping debris to a depth of 2.7 feet, and finally a brown clayey silt with reddish-brown and tan fine grain sand. The remaining soil was consistent with the other test pits found on site.

Blow counts recorded during DCP testing at depths from 3-feet to 6-feet BGS indicate a very loose to medium dense consistency of the sand.

2.2 Ground Water

No groundwater was observed in the exploratory test pits which were advanced to a maximum of 6.7-feet BGS or to about a bottom elevation of 42-feet (mean sea level) MSL. Well logs from nearby sites were obtained from the Oregon Water Resources Department and list static water levels at 8.2-feet, 9-feet and 17-feet BGS, see attached logs. Variations in the depth to water is typical in stabilized dune environments with raised dunal areas and deflation zones with water closer to the surface.

We expect that ground water levels (from the regional water table or perched lenses) will fluctuate with the seasons and should be expected to be highest during the late winter and spring months when rainstorms are more intense and frequent, and soils are near saturation.

The presence of ground water is not expected to impact the proposed development, provided the recommendations of this report are implemented in the design and construction of the project. Perched lenses of water may be encountered but impacts can be mitigated by the recommendations within this report. If excavations do encounter the static water table dewatering measures may be required for work such as utility installation below the water table elevation.

3.0 GEOLOGIC SETTING

The 1991 Geologic map of Oregon by Walker and MacLeod maps the site geology as lacustrine and fluvial sedimentary rocks. The subject site is located near the southern bend of the Siuslaw River. The dunes in the area were likely formed post ice-age during the Holocene epoch by eolian processes associated with the activity of wind. The area is mapped unconsolidated to semi-consolidated lacustrine clay, silt, sand and gravel. This includes deltaic gravel and sand and gravel bars.

The site is located on the Oregon Coast, the entire Oregon Coast is located near the Cascadia Subduction Zone, which is a zone of converging tectonic plates that historically produces major earthquake events, a depiction of the historical Subduction Zone earthquake events is shown below.

Occurrence and Relative Size of Cascadia Subduction Zone Megathrust Earthquakes

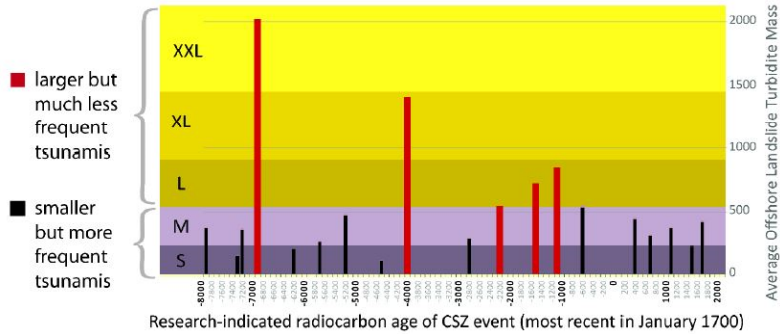


Figure 3: This chart depicts the timing, frequency, and magnitude of the last 19 great Cascadia Subduction Zone events over the past 10,000 years. The most recent event occurred on January 26, 1700. The 1700 event is considered to be a “medium sized” event. The data used to create this chart came from research that examined the many submarine landslides, known as “turbidites,” that are triggered only by these great earthquakes (Witter and others, 2011). The loose correlation is “the bigger the turbidite, the bigger the earthquake.”

3.1 Seismic Site Classification

Based on the soil properties encountered in our site pits and on-site well log information, Site Class D (Table 20.1-1 ASCE 7) is recommended for the medium dense sand encountered in the test pits. Pursuant to the 2019 Oregon Structural Specialty Code the following potential geologic and seismic hazards are addressed.

- **Slope Instability:** Our review of the online Department of Geologic and Mining Industries (DOGAMI) hazard viewer maps the area as a high possibility of landslide due to the existing topography, with no existing landslides in the vicinity of the site, or in a location that may affect the site illustrated in the landslide inventory. The existing slopes mapped as a high landslide hazard are planned to be removed or reduced as part of the proposed development. Provided the earthwork recommendations in this report are incorporated into design and construction of the project the risk of landslides impacting the site is low.
- **Liquefaction:** Near surface sands are loose and susceptibility to liquefaction and settlement exists if saturated at the time of a seismic event; however, based on our investigation findings and review of area well logs, it appears that the high ground water level is at least 8.5-feet below most areas of the site, at or below an elevation of 50-feet MSL. The sand at this depth becomes a medium dense consistency. Based on an anticipated lateral acceleration of 0.4g in the event of CSZ earthquake resulting in a cyclic stress ratio of 0.26 the sands within 20-feet BGS, liquefaction may occur (Boulanger & Idriss, University of California, Davis 2014) in saturated conditions; however, the risk of ground surface effects due to liquefaction are considered to be low. The potential from tsunami and ground shaking at the site in the event of a CSZ earthquake are considered to be the primary potential site impacts.
- There are no known active faults on the site, other quaternary faults are mapped in the hills approximately 9 miles east of the site, however, these faults are not known to be active. The risk of surface rupture is low.
- The proposed site grading contains no abrupt changes in ground elevation on or near the site that would present a potential for lateral spreading to occur during a seismic event;

the risk for lateral spread on the site is low, provided any embanked fill on the site is constructed per the recommendations in this report.

4.0 CONCLUSIONS

Based on our field observations, subsurface explorations, and data analyses, we conclude that the site is geologic and geotechnically suitable for the proposed development provided that the recommendations of this report are incorporated into the design and construction of the project. Our investigation did not reveal any specific site features or subsurface conditions that would impede the proposed design and construction of the project. We conclude that no further geotechnical analysis is required on the subject site for the proposed site improvements.

5.0 RECOMMENDATIONS

The following sections present site-specific recommendations and design parameters for site preparation, drainage, foundations, utility excavations, and slab/pavement design. General material and construction specifications for the items discussed herein are provided in Appendix B.

The subsurface conditions observed in our site investigation are consistent; however, our field explorations only represent a very small portion of the site. Should loose or unsuitable soils extend to a depth greater than that described herein, or areas of distinct soil variation be discovered, this office shall be notified to perform site observation and additional excavation may be required.

5.1 Site Preparation and Foundation Subgrade Requirements

The following recommendations are for earthwork in the building foundation areas, roadways, and parking areas. Earthwork shall be performed in general accordance with the standard of practice as described in Appendix J of the 2019 Oregon Structural Specialty Code and as specified in this report.

All areas intended to directly or laterally support structures or roadways shall be stripped of vegetation, organic soil, unsuitable fill, and/or other deleterious material. These stripping's shall be removed from the site or reserved for use in landscaping or non-structural areas. Once subgrade is exposed, which is expected to be loose to medium dense sand, the recommended subgrade preparation is as follows:

Foundation Subgrade Preparation

In areas of foundation footings, organic topsoil and loose sand shall be removed to consistently medium dense sand either for the placement of foundation forms or structural fill. Upon excavation to suitable subgrade, the subgrade shall be wetted and rolled with a vibratory smooth drum roller with a minimum weight of 6,500 lbs until no additional visual settlement of the subgrade is detected. Conventional strip and spread footings may be used for the foundation system of the proposed structures. Foundation footings shall be placed at least 5-feet from the competent face of downward slopes below footings.

If footings are not constructed immediately upon subgrade preparation, we recommend that the subgrade be covered with a minimum of 4-inches of compacted aggregate to mitigate wind and

water erosion. After construction of footings, the perimeter of the footings shall be protected from erosion to mitigate undermining of footings. If structural fill is required to raise subgrade elevations, the fill shall conform to the recommendations in Sections 5.2 below.

Pavement Subgrade Preparation

In areas of pavement for vehicle access or parking, we recommend that the existing vegetation, topsoil, previously placed fill, and areas of loose soil be removed to consistent subgrade material as described above. The expected depth of excavation to the subgrade material described above is approximately 12 to 16-inches which may increase to approximately 5-feet in areas of previously placed fill. Upon excavation to suitable subgrade, the subgrade shall be wetted and rolled with a vibratory smooth drum roller until no additional visual settlement of the subgrade is detected. Fill placed to raise pavement subgrade elevations shall be placed on suitable subgrade, and conform to the recommendations below. We recommend that a minimum of 8-inches of compacted aggregate be placed on the subgrade in light vehicle pavement areas. Heavy construction traffic will require additional aggregate thickness, a minimum of 12-inches, to mitigate rutting of the subgrade.

During subgrade excavation in foundation and pavement areas we recommend the Geotechnical Engineer of Record, or designated representative visit the site to observe the subgrade material prior to placement of structural fill or aggregate.

5.2 Engineered Fill Recommendations

All engineered fill placed on the site shall consist of homogenous material and shall meet the following recommendations. Clean, native sand is suitable for use as structural fill material.

- Areas of structural fill placement shall be stripped of organic material, loose soil, and subgrade approved by the Geotechnical Engineer prior to the placement of fill materials. Sloped areas in excess of 20% shall be properly keyed and benched horizontally into competent material as the fill height progresses. Proof-rolling or hand-probing of the subgrade may be required to assess competence.
- Prior to placement, fill material shall be approved by the Geotechnical Engineer. Acceptable fill shall be free of organics or other deleterious materials. The sand present on the site is acceptable for use as engineered fill upon removal of any organic material.
- The fill shall be moisture conditioned within 2% +/- of optimum moisture content and compacted in lifts with loose lift thickness not exceeding 8- inches with appropriate equipment for the fill material.
- Periodic visits to the site to verify lift thickness, source material, and compaction efforts shall be conducted by the Geotechnical Engineer or designated representative and documented.
- The recommended compaction level for engineered fill is 90% of ASHTO T-180/ASTM 1557-D (modified Proctor) unless otherwise specified. Compaction shall be measured by testing with nuclear densometer ASTM D-6938, or D-1556 sand cone method. If compaction testing by nuclear densometer is not possible due to the nature of the approved fill material, proof rolling

with a fully loaded 10 CY dump truck observed by the Geotechnical Engineer or designated representative shall be conducted.

5.3 Cut/Fill Slopes

No fill slopes are proposed. Temporary cut slopes may be excavated up to 1.5:1 (H:V) in steepness, but permanent slopes shall not exceed 2:1. All slopes shall be protected from erosion by timely placement of vegetation, or other means, and runoff should not be allowed to flow down the face of slopes.

Cut and/or fill slopes shall be no steeper than 2:1 and shall be compacted to their outer edge by either back rolling or being over built and cut to grade. All slopes shall be protected with erosion control measures and surface water shall not be allowed to drain over the top of a slope. Foundations shall be placed such that there is at least 5 lateral feet from the face of slope or outside a 1:1 plane projected from the toe of slope; whichever is greater.

5.4 Lateral Earth Pressures and Friction Coefficient

The following equivalent fluid pressure parameters can be used for design of site retaining structures that are free draining with no hydrostatic pressures or surcharge loads.

Table-1 Lateral Earth Pressures

Material	Passive Earth Pressure (Kp)*1	Active Earth Pressure (Ka)*3	At-Rest Earth Pressure (Ko)*2
Sand (Level Backfill)	250 pcf	30 pcf	45 pcf
Sand (2:1 Backfill Slope)	250 pcf	40 pcf	55 pcf

*1 - Neglect upper foot of material unless covered by footing of pavement.

*2 - For walls restrained at the top from movement

*3 - For seismic design increase Ka by 0.7 of the peak ground acceleration (PGA) and apply at 0.4H above the base of the wall, where H is the wall height.

The coefficient of friction for concrete poured neat against undisturbed or compacted sand subgrade is 0.45 and 0.5 may be used for concrete poured on a minimum of 12-inches of compacted aggregate.

5.5 Drainage & Infiltration Testing

An on-site storm drainage system is expected to be engineered for this project. Four encased falling head infiltration tests were performed on January 24, 2019. Infiltration tests were conducted with 6-inch diameter pipes set and sealed in native soil. Infiltration test locations are shown on the attached Figures 1. The recorded field test measurements are provided in Appendix A. No factor of safety has been applied to the measured rates of vertical hydraulic conductivity.

Table 2: Hydraulic Conductivity

<i>Test Location</i>	<i>Test Depth (Inches)</i>	<i>Measured Hydraulic Conductivity, k (in/hr)</i>
IT-1	42	58.9
IT-2	46	41.3
IT-3	70	59.6
IT-4	41	135.7

Alteration of existing grades for this project will likely change drainage patterns but should not adversely affect adjacent properties. We recommend that areas of structural fill be evaluated to ensure proper drainage away from structures is maintained. Accumulation of drainage near structural fills may result in saturation and softening of material. Final perimeter landscape grades shall slope away from the foundation and surface water shall not be allowed to pond adjacent to foundations.

5.6 Soil Bearing Capacity

Based on our site observations and review of proposed building plans, conventional spread or continuous strip footings are suitable for the proposed site development provided the building pad area preparation is in conformance with the recommendations described above in Section 5.1. The allowable bearing capacity for foundation elements placed on undisturbed sand subgrade or prepared structural fill is 1,500 psf. The allowable bearing capacity may be increased by 1/3 for short-term loading such as wind and seismic.

Additionally, if placed, structural fill should extend laterally, from all foundation edges, a minimum distance of 5-feet or within a 1:1 plane from at least 1-foot outside the edge of footing. Perimeter landscape grades shall be sloped away from all foundations and water should not be allowed to pond within 10-feet of footings.

The following recommendations shall be implemented in the design and construction of the project. Periodic site observations by a geotechnical representative of Branch Engineering, Inc. are recommended during the construction of the project. The specific phases of construction that should be observed are:

Table 3:

Recommended Construction Phases to be Observed by the Geotechnical Engineer	
<i>Phase</i>	<i>Observation</i>
At completion of street excavation	Subgrade observation by the geotechnical engineer before fabric and aggregate placement.
Imported fill material	Observation of material or information on material type and source.
Placement or compaction of fill material	Observation by geotechnical engineer or test results by qualified testing agency.

5.7 Settlement

The maximum building foundation loads are estimated to be less than 1.5 kip/linear foot for wall loads and/or 3 kips for column loads. Site-specific consolidation testing was not performed; however, based on soil observations and test results in similar soil conditions, the estimated total settlement at the site is not expected to exceed 0.75-inches with a differential settlement up to 0.5-inches over a span of 20 feet. The settlement estimates are based on the building load effects and area expected to occur over a short-term, generally by the time construction is completed. These settlement estimates do not account for seismic induced settlement, which may be as much as 2+ inches, but is expected to be relatively uniform across a building footprint. Foundations should be placed a minimum distance from each other to prevent overlapping of stress distributions defined as a 1:1 (H:V) slope projection from all foundation edges to a minimum depth of two (2) times the foundation width of the largest footing.

5.8 Slabs-On-Grade

After site preparation to expose suitable subgrade prepared in accordance with Section 5.1, load bearing concrete slabs shall be underlain by a compacted sand subgrade or leveling course of compacted, crushed aggregate, if necessary. A modulus of subgrade reaction of 150 pci may be used for design of slabs on approved native subgrade material or structural fill. Non-load bearing slabs or pavements do not require geotechnical design criteria; however, BEI recommends a stable subgrade to mitigate un-controlled cracks. The edges of slabs shall be protected from erosion and undermining of the slab; a vapor barrier system shall be selected by the project architect and may be dependent on slab cover materials.

5.9 Pavement Design Recommendations

The estimated California Bearing Raito (CBR) for the near surface loose sand is 2 based on blow count correlations; however, once the pavement section subgrade is exposed and compacted, the consistency of the sand can typically be increased to at least medium dense to depths of at least 3-feet thereby increasing the CBR of 8, which is a "Fair" classification. Our recommendations used the guidance of the 1993 AASHTO Guide for Design of Pavement Structures, the 2003 revised Asphalt Pavement Design Guide, published by the Asphalt Pavement Association of Oregon, and the 2019 ODOT Pavement Design Guide as well as results from engineered structural pavement sections developed for sites with similar soils and anticipated traffic loads. Based on an estimated equivalent 18-kip single axle loading (ESAL) of 50,000 over 20-years, a subgrade resilient modulus of 5000 psi, and 90% reliability, a Structural Number of 3.0 has been used for design of the pavement sections for the driveway portions of the site. Pavement may consist of 4-inches of Asphalt Concrete (AC) over 12-inches of base aggregate. The above section is recommended for areas of anticipated heavy traffic, including refuse, delivery, and furniture moving trucks. In areas that will be restricted to light passenger vehicle travel or parking, the recommended pavement section can be reduced to 3-inches of AC pavement over 8-inches of base aggregate. A geotextile separation fabric is recommended in wet areas where pumping of the sand may cause intrusion into the base aggregate.

The above recommended structural pavement sections are designed for the type of vehicle use on the site after construction completion, not for construction vehicle traffic which is generally heavier, occurs over a short time, and impacts the site before full pavement sections are constructed. The construction traffic may cause subgrade failures and the site contractor should

consider over-building designated haul routes through the site to mitigate soft areas at the time of final paving.

5.10 Wet Weather/Dry Weather Construction Practices

The site material is sand to the max depth of the site investigation and is relatively free-draining. Precipitation will not adversely impact site earthwork; however, high groundwater levels during the wet season may impact site trenching activities and cause “pumping” of the subgrade with repeated heavy vehicle traffic. Dewatering and/or shoring of excavation sidewalls may be required during construction. Construction traffic routes should have a minimum of 12-inches of aggregate, with preferably 3-inch minus angular aggregate in the lower 8-inches of the temporary road section to mitigate subgrade degradation during wet weather conditions. Final design pavement sections and foundation subgrade recommendations do not account for repeated heavy truck traffic associated with construction.

6.0 REPORT LIMITATIONS

This report has presented BEI’s site observations and research, subsurface explorations, geotechnical engineering analyses, and recommendations for the proposed site development. The conclusions in this report are based on the conditions described in this report and are intended for the exclusive use of DevNW and their representatives for use in design and construction of the development described herein. The analysis and recommendations may not be suitable for other structures or purposes.

Services performed by the geotechnical engineer for this project have been conducted with the level of care and skill exercised by other current geotechnical professionals in this area. No warranty is herein expressed or implied. The conclusions in this report are based on the site conditions as they currently exist and it is assumed that the limited site locations that were physically investigated generally represent the subsurface conditions at the site. Should site development or site conditions change, or if a substantial amount of time goes by between our site investigation and site development, we reserve the right to review this report for its applicability. If you have any questions regarding the contents of this report please contact our office.

FIGURE 1

Site Map



DEVNW AIRPORT RD. PUD

TAX MAP: 18-12-27-1, TAX LOT: 15400
FLORENCE, OREGON
97439

revisions:

date: JAN. 24, 2020
drawn by: AWMS
designer: RC
project no: 18-493

**EXISTING
CONDITIONS
AND DEMO
PLAN**

sheet: **C1**

INDEX

- C1 EXISTING CONDITIONS/DEMO PLAN
- C2 SITE AND GRADING PLAN
- C3 UTILITY AND STORMWATER PLAN
- C4 LANDSCAPE PLAN

OWNER

CITY OF FLORENCE
250 HWY 101
FLORENCE, OR 97439

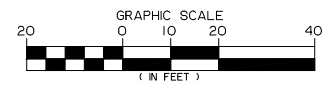
- TP# TEST PIT LOCATION
- IT# INFILTRATION TEST LOCATION

VERTICAL DATUM

OR NAD83 2011/GEOID12A-ORGN
OREGON COAST

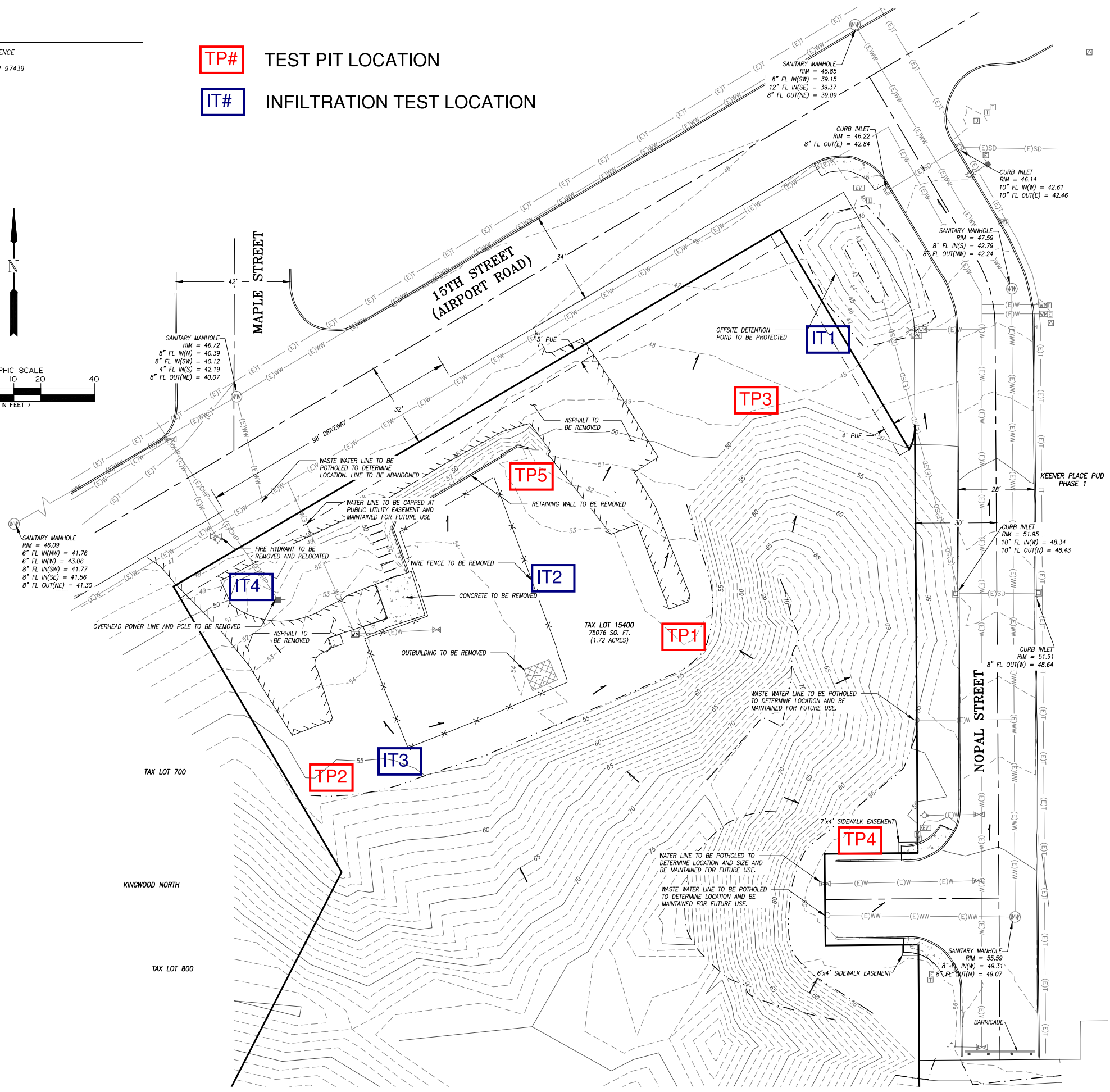
SOIL TYPES:

ACCORDING TO THE USDA NATURAL RESOURCES CONSERVATION SERVICES WEB SOIL SURVEY,
THE SITE SOIL IS MAPPED AS WALDPOR FINE SAND (NATIONAL MAP UNIT SYMBOL 234).



LEGEND

- EXISTING**
- CONTOUR LINE
 - FENCE LINE
 - STRUCTURE
 - ASPHALT EDGE
 - CONCRETE
 - CURB
 - STAIRS
 - TOP OF SLOPE
 - TOE OF SLOPE
 - WATER LINE
 - WATER VALVE
 - WATER METER
 - HOSE BIB
 - FIRE HYDRANT
 - IRRIGATION VALVE
 - IRRIGATION BOX
 - STORMWATER LINE
 - STORMWATER CURB INLET
 - SANITARY SEWER MAIN
 - SANITARY SEWER CLEANOUT
 - SANITARY SEWER MANHOLE
 - UNDERGROUND COMMUNICATION LINE
 - TELEPHONE RISER
 - OVERHEAD WIRE
 - ELECTRICAL POLE
 - LIGHT POLE
 - ONSITE LIGHT POLE
 - ELECTRIC VAULT
 - ELECTRIC RISER
 - JUNCTION BOX
 - TRANSFORMER
 - MAIL BOX
 - SLOPE ARROW



APPENDIX A

**Test Pit Logs & Field Test Summaries,
Infiltration Testing Data, Well Logs, USDA NRCS
Soil Mapping**



RELATIVE DENSITY - COARSE GRAINED SOILS

RELATIVE DENSITY	SPT N-VALUE	D&M SAMPLER (140 lbs hammer)	D&M SAMPLER (300 lbs hammer)
VERY LOOSE	< 4	< 11	< 4
LOOSE	4 - 10	11 - 26	4 - 10
MEDIUM DENSE	10 - 30	26 - 74	10 - 30
DENSE	30 - 50	74 - 120	30 - 47
VERY DENSE	> 50	> 120	> 47

USCS GRAIN SIZE

FINES		< #200 (.075 mm)
SAND	Fine	#200 - #40 (.425 mm)
	Medium	#40 - #10 (2 mm)
	Coarse	#10 - #4 (4.75 mm)
GRAVEL	Fine	#4 - 0.75 inch
	Coarse	0.75 - 3 inch
COBBLES		3 - 12 inches

CONSISTENCY - FINE GRAINED SOILS

CONSISTENCY	SPT N-VALUE	D&M SAMPLER (140 lbs hammer)	D&M SAMPLER (300 lbs hammer)	POCKET PEN. / UNCONFINED (TSF)	MANUAL PENETRATION TEST
VERY SOFT	< 2	< 3	< 2	< 0.25	Easy several inches by fist
SOFT	2 - 4	3 - 6	2 - 5	0.25 - 0.50	Easy several inches by thumb
MEDIUM STIFF	4 - 8	6 - 12	5 - 9	0.50 - 1.00	Moderate several inches by thumb
STIFF	8 - 15	12 - 25	9 - 19	1.00 - 2.00	Readily indented by thumb
VERY STIFF	15 - 30	25 - 65	19 - 31	2.00 - 4.00	Readily indented by thumbnail
HARD	> 30	> 65	> 31	> 4.00	Difficult by thumbnail

UNIFIED SOIL CLASSIFICATION CHART

MAJOR DIVISIONS		GROUP SYMBOLS AND TYPICAL NAMES			
COARSE-GRAINED SOILS: More than 50% retained on No. 200 sieve	GRAVELS: 50% or more retained on the No. 4 sieve	CLEAN GRAVELS	GW Well-graded gravels and gravel-sand mixtures, little or no fines. GP Poorly-graded gravels and gravel-sand mixtures, little or no fines.		
		GRAVELS WITH FINES	GM Silty gravels, gravel-sand-silt mixtures. GC Clayey gravels, gravel-sand-clay mixtures.		
		CLEAN SANDS	SW Well-graded sands and gravelly sands, little or no fines. SP Poorly-graded sands and gravelly sands, little or no fines.		
			SANDS WITH FINES	SM Silty sands, sand-silt mixtures. SC Clayey sands, sand-clay mixtures.	
	FINE-GRAINED SOILS: Less than 50% retained on No. 200 sieve	SILT AND CLAY	LIQUID LIMIT LESS THAN 50	ML Inorganic silts, rock flour, clayey silts. CL Inorganic clays of low to medium plasticity, lean clays. OL Organic silt and organic silty clays of low plasticity.	
				LIQUID LIMIT 50 OR GREATER	MH Inorganic silts, clayey silts. CH Inorganic clays of high plasticity, fat clays. OH Organic clays of medium to high plasticity.
			HIGHLY ORGANIC SOILS		PT Peat, muck, and other highly organic soil.

MOISTURE CONTENT

DRY: Absence of moisture, dusty, dry to the touch
 DAMP: Some moisture but leaves no moisture on hand
 MOIST: Leaves moisture on hand
 WET: Visible free water, usually saturated

	PLASTICITY	DRY STRENGTH	DILATANCY	TOUGHNESS
ML	Non to Low	Non to Low	Slow to Rapid	Low, can't roll
CL	Low to Med.	Med. to High	None to Slow	Medium
MH	Med. to High	Low to Med.	None to Slow	Low to Med.
CH	Med. to High	High to V.High	None	High

STRUCTURE

STRATIFIED: Alternating layers of material or color > 6mm thick.
 LAMINATED: Alternating layers < 6mm thick.
 FISSURED: Breaks along definite fracture planes.
 SLICKENSIDED: Striated, polished, or glossy fracture planes.
 BLOCKY: Cohesive soil that can be broken down into small angular lumps which resist further breakdown.
 LENSES: Has small pockets of different soils, note thickness.
 HOMOGENEOUS: Same color and appearance throughout.

LIST OF ABBREVIATION & EXPLANATIONS

SPT	Standard Penetration Test split barrel sampler	G	Grab sample
D&M	Dames and Moore sampler	MC	Moisture Content
LL	Atterberg Liquid Limit	MD	Moisture Density
PL	Atterberg Plastic Limit	UC	Unconfined Compressive Strength
PP	Pocket Penetrometer		
VS	Vane Shear		

EXPLORATORY KEY



DEVNW - AIRPORT ROAD PUD

FLORENCE, OREGON

JANUARY 24, 2020

DEPTH (FT)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (FT) ELEVATION	SAMPLE AND SAMPLER TYPE	COMMENTS
TP-1					
5		(Fill) 3/4" minus aggregate with sand and silt	0.5'		Dynamic Cone Penetrometer (DCP) at 3.3' BGS Blows/10 cm See attached DCP log 2 3 3 4 4 5 5 5 7 6
		(SP) Light brown, moist, fine grain Sand Loose to medium dense Sidewall caving at 4'			
10		Total Depth = 6.5', excavation progress slow due to caving sidewalls No groundwater observed	6.5'		
15					

TP-2					
5		(OL) Topsoil: Moist, brown Silt with fine roots	0.8'		
		(SP) Light brown, moist, fine grain Sand Loose to medium dense Sidewall caving at approx. 3' as depth of excavation advanced			
10		Total Depth = 6.5', excavation progress slow due to caving sidewalls No groundwater observed	6.5'		
15					

CLIENT: DEVNW
 CONTRACTOR: RAY WELLS INC.
 EXCAVATION METHOD: METAL TRACKED EXCAVATOR
 NOTES: TEST PITS BACKFILLED LOSSELY WITH EXCAVATION SPOILS AFTER COMPLETION

LOGGED BY: MWR CHECKED BY: RJD
 DATE OF EXCAVATION: JANUARY 24, 2020

EXPLORATORY TEST PITS



DEVNW - AIRPORT ROAD PUD

FLORENCE, OREGON

JANUARY 24, 2020

DEPTH (FT)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (FT) ELEVATION	SAMPLE AND SAMPLER TYPE	COMMENTS
TP-3					
		(Fill) 3/4" minus aggregate with sand, silt, and fine roots	0.5'		Dynamic Cone Penetrometer (DCP) at 2.5' BGS Blows/10 cm See attached DCP log 3 4 8 10 10 12
		(SP) Reddish-brown, moist, fine grain Sand	1.5'		
5		(SP) Light brown, moist, fine grain Sand Loose to medium dense Sidewall caving at approx. 5'			
		Total Depth = 6.5', excavation progress slow due to caving sidewalls No groundwater observed	6.5'		

TP-4					
		(OL) Topsoil, roots, brown silt, organics	12"		
		(SP) Light brown, moist, fine grain Sand Loose to medium dense			
		Layer of brown organic soil with wood debris	3'		
5		(SP) Light brown, moist, fine grain Sand Loose to medium dense	3.3'		
		Total Depth = 6.5' No groundwater observed	6.5'		

CLIENT: DEVNW
 CONTRACTOR: RAY WELLS INC.
 EXCAVATION METHOD: METAL TRACKED EXCAVATOR
 NOTES: TEST PITS BACKFILLED LOOSELY WITH EXCAVATION SPOILS AFTER COMPLETION

LOGGED BY: MWR CHECKED BY: RJD
 DATE OF EXCAVATION: JANUARY 24, 2020



DEVNW - AIRPORT ROAD PUD

FLORENCE, OREGON

JANUARY 24, 2020

DEPTH (FT)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (FT) ELEVATION	SAMPLE AND SAMPLER TYPE	COMMENTS
TP-5					
		(Fill) 3/4" minus aggregate with sand, silt, and fine roots	0.5'		
		(Fill) Light brown - tan fine grain sand with occasional debris (landscaping materials)			
		(Fill) Brown, clayey silt with reddish-brown and tan fine grain sand	2.7'		
5		(SP) Light brown, moist, fine grain Sand Loose to medium dense	4.9'		
		Total Depth = 6.7' No groundwater observed	6.7'		
10					
15					

TP-6					
5					
10					
15					

CLIENT: DEVNW
 CONTRACTOR: RAY WELLS INC.

LOGGED BY: MWR CHECKED BY: RJD
 DATE OF EXCAVATION: JANUARY 24, 2020

EXCAVATION METHOD: METAL TRACKED EXCAVATOR

NOTES: TEST PITS BACKFILLED LOSSELY WITH EXCAVATION SPOILS AFTER COMPLETION, TEST PIT TP-5 EXCAVATED IN AREA LOCATED BEHIND EXISTING RETAINING WALL



DEVNW - AIRPORT ROAD PUD

FLORENCE, OREGON

JANUARY 24, 2020



DYNAMIC CONE LOG

PROJECT NUMBER: 18-493
 DATE STARTED: 01-24-2020
 DATE COMPLETED: 01-24-2020

HOLE #: TP-1
 CREW: MWR
 PROJECT: DEVNW Airport Road PUD
 ADDRESS: Airport Road
 LOCATION: Florence, OR

SURFACE ELEVATION: N/A
 WATER ON COMPLETION: No
 HAMMER WEIGHT: 35 lbs.
 CONE AREA: 10 sq. cm

DEPTH	BLOWS PER 10 cm	RESISTANCE Kg/cm ²	GRAPH OF CONE RESISTANCE				N'	TESTED CONSISTENCY	
			0	50	100	150		NON-COHESIVE	COHESIVE
1 ft									
2 ft									
3 ft									
1 m	2	8.9	••				2	VERY LOOSE	SOFT
	3	11.6	•••				3	VERY LOOSE	SOFT
4 ft	3	11.6	•••				3	VERY LOOSE	SOFT
	4	15.4	••••				4	VERY LOOSE	SOFT
	4	15.4	••••				4	VERY LOOSE	SOFT
5 ft	5	19.3	•••••				5	LOOSE	MEDIUM STIFF
	5	19.3	•••••				5	LOOSE	MEDIUM STIFF
	5	19.3	•••••				5	LOOSE	MEDIUM STIFF
6 ft	5	19.3	•••••				5	LOOSE	MEDIUM STIFF
	7	27.0	••••••				7	LOOSE	MEDIUM STIFF
2 m	6	23.2	••••••				6	LOOSE	MEDIUM STIFF
7 ft									
8 ft									
9 ft									
3 m 10 ft									
11 ft									
12 ft									
4 m 13 ft									



DYNAMIC CONE LOG

PROJECT NUMBER: 18-493
 DATE STARTED: 01-24-2020
 DATE COMPLETED: 01-24-2020

HOLE #: TP-3
 CREW: MWR
 PROJECT: DEVNW Airport Road PUD
 ADDRESS: Airport Road
 LOCATION: Florence, OR

SURFACE ELEVATION: N/A
 WATER ON COMPLETION: No
 HAMMER WEIGHT: 35 lbs.
 CONE AREA: 10 sq. cm

DEPTH	BLOWS PER 10 cm	RESISTANCE Kg/cm ²	GRAPH OF CONE RESISTANCE 0 50 100 150	N'	TESTED CONSISTENCY	
					NON-COHESIVE	COHESIVE
1 ft						
2 ft						
3 ft	3	13.3	•••	3	VERY LOOSE	SOFT
4 ft	4	17.8	••••	5	LOOSE	MEDIUM STIFF
1 m	8	35.5	••••••••	10	LOOSE	STIFF
10 ft	10	38.6	••••••••	11	MEDIUM DENSE	STIFF
4 ft	10	38.6	••••••••	11	MEDIUM DENSE	STIFF
12 ft	12	46.3	••••••••	13	MEDIUM DENSE	STIFF
5 ft						
6 ft						
2 m						
7 ft						
8 ft						
9 ft						
3 m						
10 ft						
11 ft						
12 ft						
4 m						
13 ft						

INFILTRATION TESTING REPORT

BRANCH ENGINEERING INC.
 310 5TH ST.
 SPRINGFIELD, OREGON 97477

Project Name: Keener Place
 Project Number: 18-493
 Location: 1424 Airport Road, Florence OR
 Date: 1-24-2019
 Comments: Encased falling head tests performed in 6" auger borings

Infiltration Test No. 1 Depth: 42" Diameter: 6" Vol. of Presat. 2 gallons
 Soil Description: 0-6" Grass, Gravel, Brown Organics; 6-42" Tan Moist Sand

Time Elapsed (min):	Depth to Water (in):	k (in/hr)	Notes:
0.00	37.75		Trial #1
1.00	38.75	60.0	$k_{avg} = 58.2$
2.00	39.75	60.0	
4.47	42.00	54.7	
<hr/>			
0	38		Trial #2
1	39	60.0	$k_{avg} = 57.8$
2	40	60.0	
4.25	42	53.3	
<hr/>			
0	37		Trial #3
1.25	38.5	72.0	$k_{avg} = 60.8$
2.5	39.5	48.0	
4.9	42	62.5	
<hr/>			
Trial #1 Total $k_{avg} =$		58.9	

Infiltration Test No. 2 Depth: 46" Diameter: 6" Vol. of Presat. 2 gallons
 Soil Description: 0-6" Brown sandy gravel; 6-22" Dark Brown w/ some gravel; 12-18" firm moist fine grain sand;
 18-30" Loose moist sand

Time Elapsed (min):	Depth to Water (in):	k (in/hr)	Notes:
0.00	44.00		Trial #1
1.00	45.25	75.0	$k_{avg} = 52.3$
2.52	46.00	29.6	
<hr/>			
0	40.5		Trial #2
1	41	30.0	$k_{avg} = 38.9$
2	42	60.0	
11.03	46	26.6	
<hr/>			
0	41.75		Trial #3
2.17	43	34.6	$k_{avg} = 32.7$
4	44.25	41.0	
8.63	46	22.7	
<hr/>			
Trial #2 Total $k_{avg} =$		41.3	

INFILTRATION TESTING REPORT

BRANCH ENGINEERING INC.
 310 5TH ST.
 SPRINGFIELD, OREGON 97477

Infiltration Test No. 3 Depth: 70" Diameter: 6" Vol. of Presat. 2 gallons
 Soil Description: 0-12" Dark Brown Sandy Gravel; 12-42" Tan Firm Sand Moist

Time Elapsed (min):	Depth to Water (in):	k (in/hr)	Notes:
0.00	63.50		Trial #1
1.00	64.50	60.0	$k_{avg} = 61.4$
2.00	65.50	60.0	
3.00	66.50	60.0	
6.2	70	65.6	
0	64.5		Trial #2
1	65.5	60.0	$k_{avg} = 55.9$
2	66.5	60.0	
3	67	30.0	
5.45	70	73.5	
0	64		Trial #3
1	65.25	75.0	$k_{avg} = 61.5$
2	66	45.0	
3	67	60.0	
5.73	70	65.9	

Trial #3 Total $k_{avg} = 59.6$

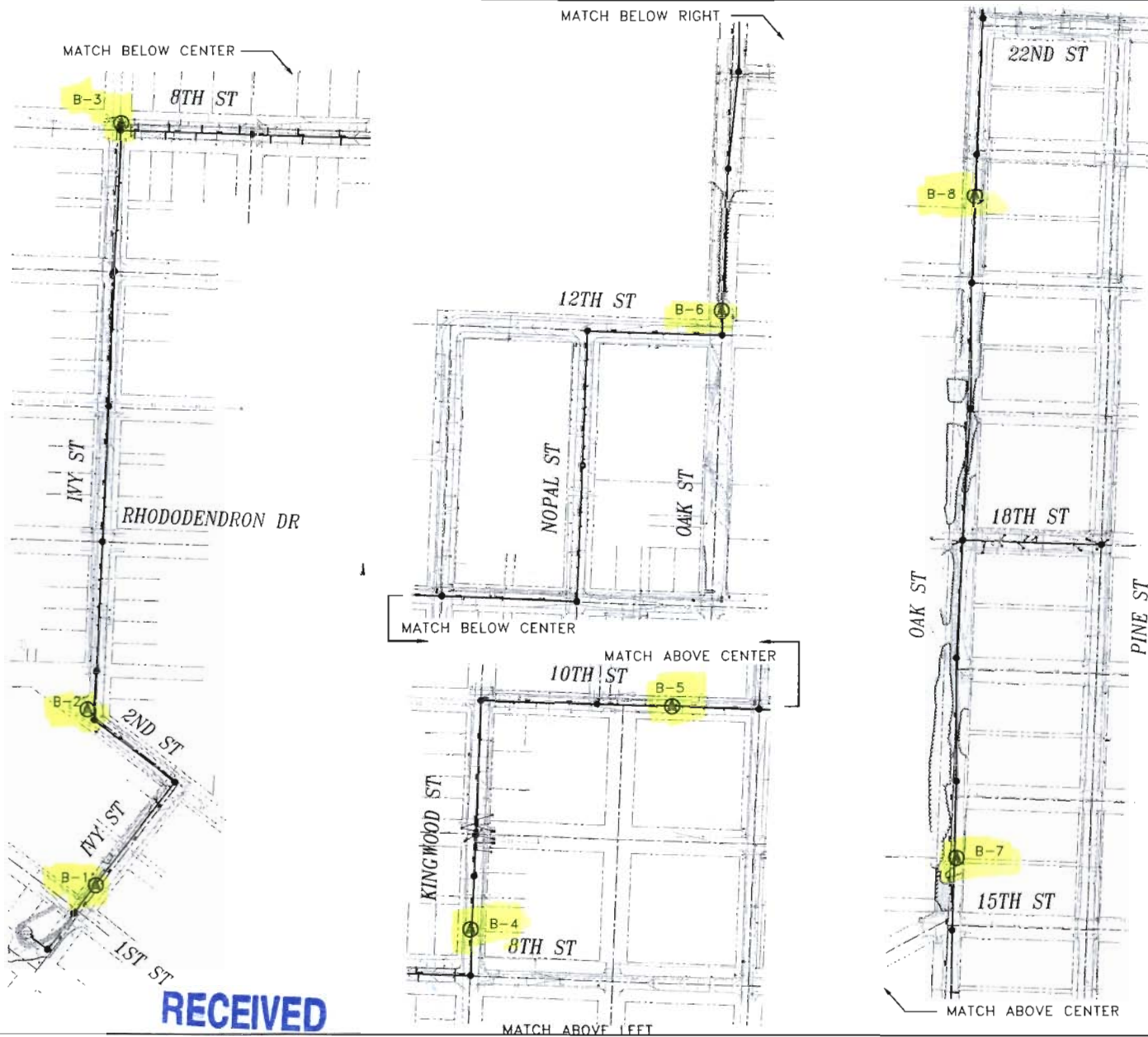
Infiltration Test No. 4 Depth: 41" Diameter: 6" Vol. of Presat. 2 gallons
 Soil Description: 0-4" Brown Organics; 4-16" Brown Firm Sand with Gravel; 16-42" Tan Moist Firm Sand

Time Elapsed (min):	Depth to Water (in):	k (in/hr)	Notes:
0.00	37.50		Trial #1
1.33	41.00	157.9	$k_{avg} = 157.9$
0	37.5		Trial #2
0.5	38.75	150.0	$k_{avg} = 126.1$
1.82	41	102.3	
0	36.5		Trial #3
1	39	150.0	$k_{avg} = 123.0$
2.25	41	96.0	

Trial #4 Total $k_{avg} = 135.7$

LANE 70972

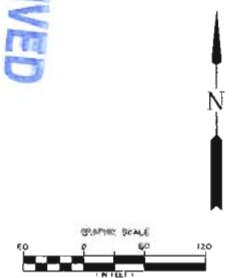
EXHIBIT 'A' BORE HOLE LOCATION MAP



LEGEND

- B-3 BORE HOLE
- ⊙ SYMBOL AND IDENTIFICATION NO.

RECEIVED
FEB 25 2011
WATER RESOURCES DEPT
SALEM, OREGON

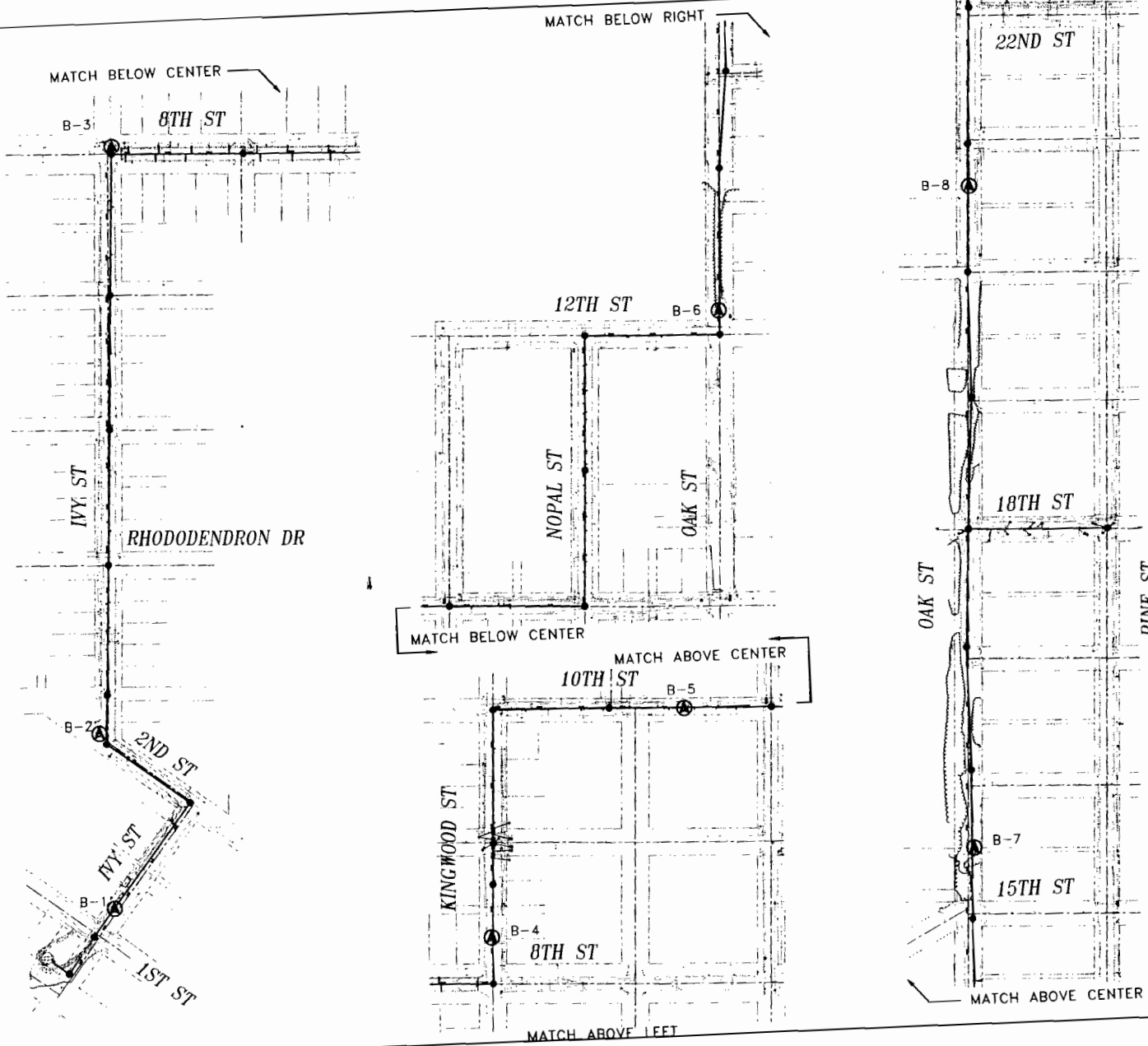


RECEIVED

JUN 24 2011

WATER RESOURCES DEPT
SALEM, OREGON

EXHIBIT 'A'
BORE HOLE
LOCATION MAP

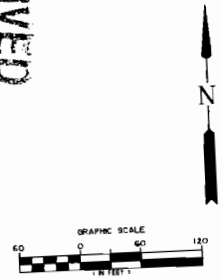


LEGEND

- B-3 BORE HOLE SYMBOL AND IDENTIFICATION NO.

WATER RESOURCES DEPT
SALEM, OREGON

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FEB 25 2011



LANE 70779

EXHIBIT 'A' BORE HOLE LOCATION MAP

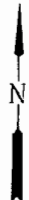
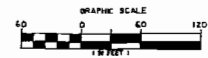
LEGEND

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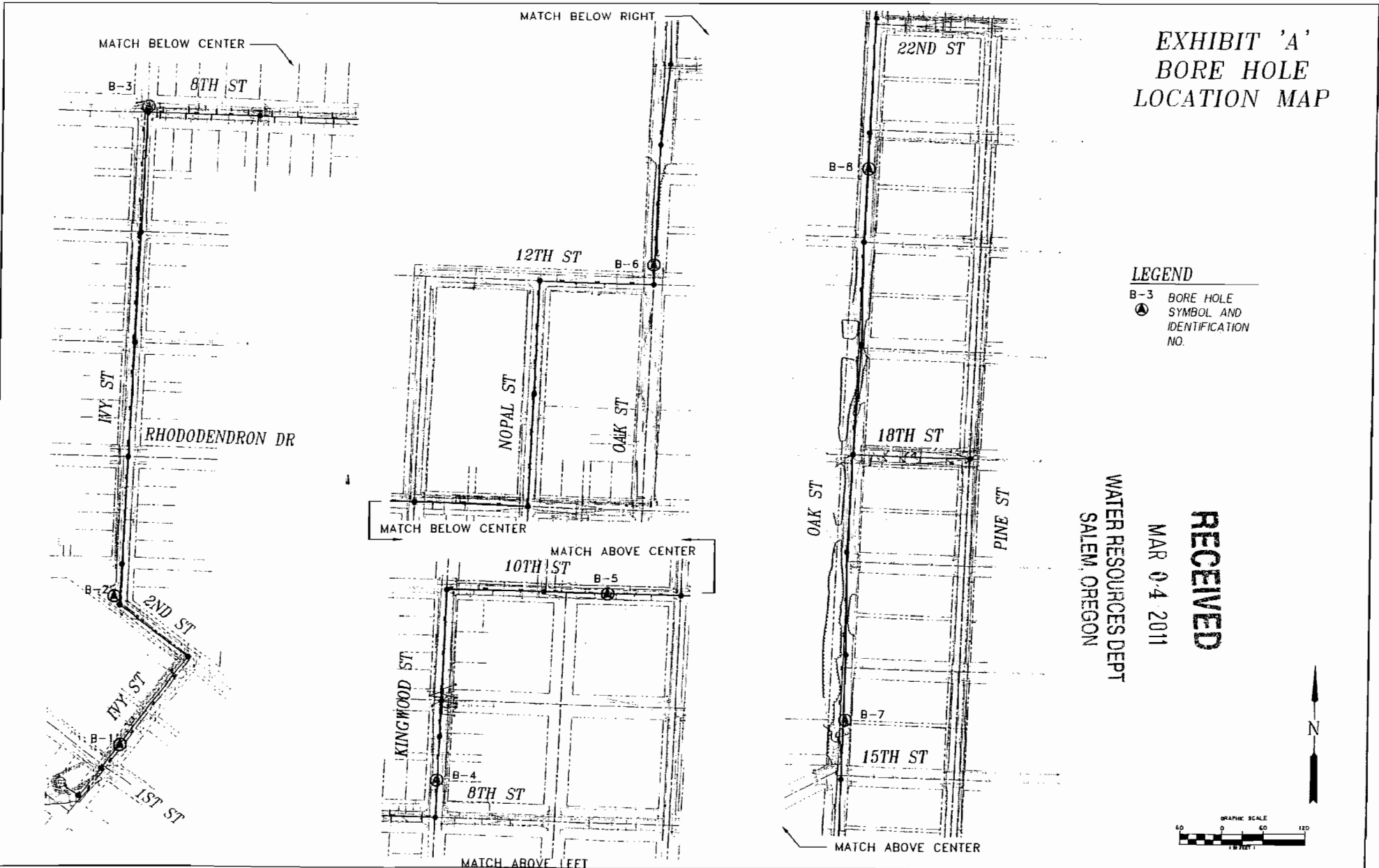
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SALEM, OREGON

MAR 04 2011

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LANE 70779



STATE OF OREGON
GEOTECHNICAL HOLE REPORT
(as required by OAR 690-240-0035)

10-08-2010

(1) OWNER/PROJECT Hole Number B - 6

PROJECT NAME/NBR: LCC01OS.10P

First Name Last Name

Company City of Florence

Address 250 Hwy 101

City Florence State OR Zip 97439

(2) TYPE OF WORK
[X] New [] Deepening [X] Abandonment
[] Alteration (repair/recondition)

(3) CONSTRUCTION

- [] Rotary Air [] Hand Auger [] Hollow stem auger
[] Rotary Mud [] Cable [X] Push Probe
[] Other

(4) TYPE OF HOLE:

- [] Uncased Temporary [X] Cased Permanent
[] Uncased Permanent [] Slope Stability
[] Other

(5) USE OF HOLE

Piezometer well for observing depth to water.

(6) BORE HOLE CONSTRUCTION Special Standard [] (Attach copy)

Depth of Completed Hole 20.00 ft.

Table with columns: Dia, From, To, Material, SEAL From, To, Amt, sacks/lbs. Includes rows for Concrete and Bentonite Chips.

Backfill placed from ft. to ft. Material
Filter pack from ft. to ft. Material Size

(7) CASING/SCREEN

Table with columns: Casing, Screen, Dia, From, To, Gauge, Stl, Plstc, Wld, Thrd. Includes rows for .75 inch diameter casing.

(8) WELL TESTS

Table with columns: Pump, Bailer, Air, Flowing Artesian, Yield gal/min, Drawdown, Drill stem/Pump depth, Duration(hr).

Temperature F Lab analysis [] Yes By

Supervising Geologist/Engineer

Table with columns: Water quality concerns?, From, To, Description, Amount, Units. Includes a 'Yes (describe below)' checkbox.

(9) LOCATION OF HOLE (legal description)

County Lane Twp 18.00 S N/S Range 12.00 W E/W WM
Sec 27 NE 1/4 of the NE 1/4 Tax Lot no tax lot number
Tax Map Number Lot
Lat 0 ' or DMS or DD
Long 0 ' or DMS or DD
[] Street address of hole [X] Nearest address

Corner of Oak St. and 12th St. Florence, OR.

(10) STATIC WATER LEVEL

Table with columns: Existing Well / Predeepening, Date, SWL(psi), SWL(ft). Includes a section for WATER BEARING ZONES with columns: SWL Date, From, To, Est Flow, SWL(psi), SWL(ft).

(11) SUBSURFACE LOG Ground Elevation

Table with columns: Material, From, To. Includes a row for Sand from 0 to 20.

Date Started 02-04-2010 Completed 02-04-2010

(12) ABANDONMENT LOG:

Table with columns: Material, From, To, Amt, sacks/lbs. Includes a row for Cement from 0 to 20.

Date Started 09-10-2010 Completed 09-10-2010

Professional Certification (to be signed by an Oregon licensed water or monitoring well constructor, Oregon registered geologist or professional engineer).

I accept responsibility for the construction, deepening, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License/Registration Number 10496 Date
Electronically Submitted
First Name Rod Last Name Johnson
Affiliation Pacific Northwest Drilling

LANE 70772

MONITORING WELL REPORT -

Map with location identified must be attached and shall include an approximate scale and north arrow

LANE 70772

10-06-2010

WELL I.D. # L 97147

START CARD # 1011658

Page 2 of 2

Map of well



Singing Pines Park -
Airport Rd. & Kingwood St.
Florence, OR 97439

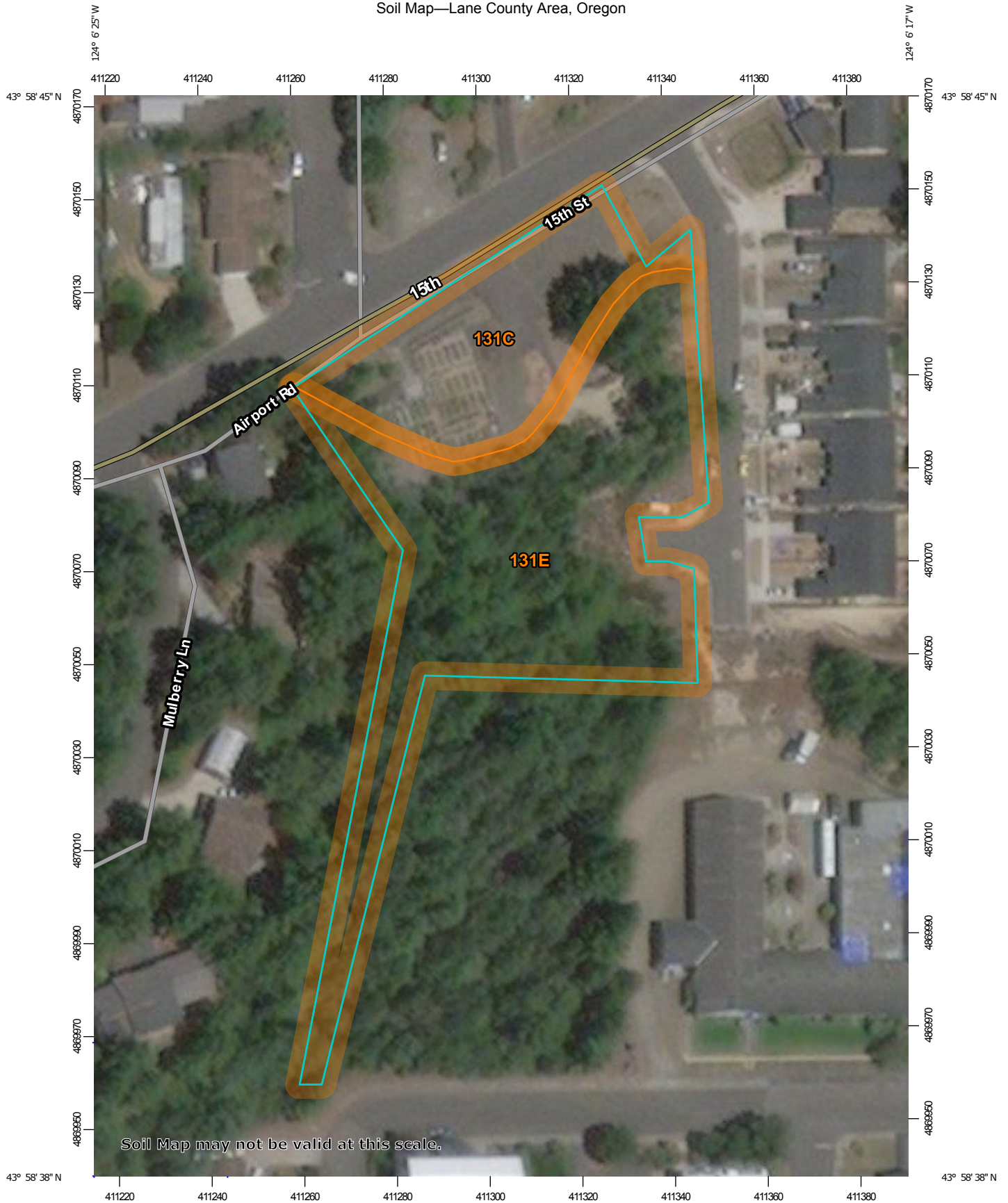
60'

RECEIVED

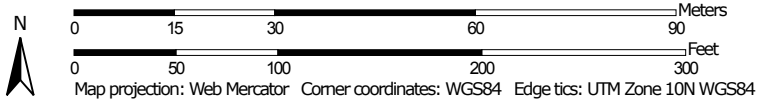
NOV 30 2010

WATER RESOURCES DEPT
SALEM, OREGON

Soil Map—Lane County Area, Oregon




Map Scale: 1:1,130 if printed on A portrait (8.5" x 11") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)




















Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


Water Features

 Streams and Canals

Transportation

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

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

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

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

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

Soil Survey Area: Lane County Area, Oregon
 Survey Area Data: Version 15, Sep 18, 2018

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

Date(s) aerial images were photographed: Aug 27, 2007—Sep 15, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
131C	Waldport fine sand, 0 to 12 percent slopes	0.5	30.1%
131E	Waldport fine sand, 12 to 30 percent slopes	1.2	69.9%
Totals for Area of Interest		1.8	100.0%

Lane County Area, Oregon

131C—Waldport fine sand, 0 to 12 percent slopes

Map Unit Setting

National map unit symbol: 234r

Elevation: 0 to 150 feet

Mean annual precipitation: 60 to 100 inches

Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 165 to 300 days

Farmland classification: Not prime farmland

Map Unit Composition

Waldport and similar soils: 85 percent

Minor components: 8 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Waldport

Setting

Landform: Dunes

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Eolian sand of mixed origin

Typical profile

O_i - 0 to 1 inches: slightly decomposed plant material

O_e - 1 to 3 inches: moderately decomposed plant material

H₁ - 3 to 8 inches: fine sand

H₂ - 8 to 60 inches: fine sand

Properties and qualities

Slope: 0 to 12 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Excessively drained

Capacity of the most limiting layer to transmit water (K_{sat}): High to very high (5.95 to 99.90 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components

Heceta

Percent of map unit: 4 percent

Landform: Interdunes
Hydric soil rating: Yes

Yaquina

Percent of map unit: 4 percent
Landform: Marine terraces
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Lane County Area, Oregon
Survey Area Data: Version 15, Sep 18, 2018

Lane County Area, Oregon

131E—Waldport fine sand, 12 to 30 percent slopes

Map Unit Setting

National map unit symbol: 234s

Elevation: 0 to 150 feet

Mean annual precipitation: 60 to 100 inches

Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 165 to 300 days

Farmland classification: Not prime farmland

Map Unit Composition

Waldport and similar soils: 85 percent

Minor components: 6 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Waldport

Setting

Landform: Dunes

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Eolian sand of mixed origin

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material

Oe - 1 to 3 inches: moderately decomposed plant material

H1 - 3 to 8 inches: fine sand

H2 - 8 to 60 inches: fine sand

Properties and qualities

Slope: 12 to 30 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Excessively drained

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 99.90 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components

Heceta

Percent of map unit: 3 percent

Landform: Interdunes
Hydric soil rating: Yes

Yaquina

Percent of map unit: 3 percent
Landform: Marine terraces
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Lane County Area, Oregon
Survey Area Data: Version 15, Sep 18, 2018

APPENDIX B:

Recommended Earthwork Specifications



GEOTECHNICAL SPECIFICATIONS

General Earthwork

1. All areas where structural fills, fill slopes, structures, or roadways are to be constructed shall be stripped of organic topsoil and cleared of surface and subsurface deleterious material, including but limited to vegetation, roots, or other organic material, undocumented fill, construction debris, soft or unsuitable soils as directed by the Geotechnical Engineer of Record. These materials shall be removed from the site or stockpiled in a designated location for reuse in landscape areas if suitable for that purpose. Existing utilities and structures that are not to be used as part of the project design or by neighboring facilities, shall be removed or properly abandoned, and the associated debris removed from the site.
2. Upon completion of site stripping and clearing, the exposed soil and/or rock shall be observed by the Geotechnical Engineer of Record or a designated representative to assess the subgrade condition for the intended overlying use. Pits, depressions, or holes created by the removal of root wads, utilities, structures, or deleterious material shall be properly cleared of loose material, benched and backfilled with fill material approved by the Geotechnical Engineer of Record compacted to the project specifications.
3. In structural fill areas, the subgrade soil shall be scarified to a depth of 4-inches, if soil fill is used, moisture conditioned to within 2% of the materials optimum moisture for compaction, and blended with the first lift of fill material. The fill placement and compaction equipment shall be appropriate for fill material type, required degree of blending, and uncompacted lift thickness. Assuming proper equipment selection, the total uncompacted thickness of the scarified subgrade and first fill lift shall not exceed 8-inches, subsequent lifts of uncompacted fill shall not exceed 8-inches unless otherwise approved by the Geotechnical Engineer of Record. The uncompacted lift thickness shall be assessed based on the type of compaction equipment used and the results of initial compaction testing. Fine-grain soil fill is generally most effectively compacted using a kneading style compactor, such as a sheeps-foot roller; granular materials are more effectively compacted using a smooth, vibratory roller or impact style compactor.
4. All structural soil fill shall be well blended, moisture conditioned to within 2% of the material's optimum moisture content for compaction and compacted to at least 90% of the material's maximum dry density as determined by ASTM Method D-1557, or an equivalent method. Soil fill shall not contain more than 10% rock material and no solid material over 3-inches in diameter unless approved by the Geotechnical Engineer of Record. Rocks shall be evenly distributed throughout each lift of fill that they are contained within and shall not be clumped together in such a way that voids can occur.
5. All structural granular fill shall be well blended, moisture conditioned at or up to 3% above of the material's optimum moisture content for compaction and compacted to at least 90% of the material's maximum dry density as determined by ASTM Method D-1557, or an equivalent method. 95% relative compaction may be required for pavement base rock or in upper lifts of the granular structural fill where a sufficient thickness of the fill section allows for higher compaction percentages to be achieved. The granular fill shall not contain solid particles over 2-inches in diameter unless special density testing methods or proof-rolling is approved by the Geotechnical Engineer of Record. Granular fill is generally considered to be a crushed aggregate with a fracture surface of at least 70% and a maximum size not exceeding 1.5-inches in diameter, well-graded with less than 10%, by weight, passing the No. 200 Sieve.
6. Structural fill shall be field tested for compliance with project specifications for every 2-feet in vertical rise or 500 cy placed, whichever is less. In-place field density testing shall be performed by a competent individual, trained in the testing and placement of soil and aggregate fill placement, using either ASTM Method D-1556/4959/4944 (Sand Cone), D-6938 (Nuclear Densometer), or D-2937/4959/4944 (Drive Cylinder). Should the fill materials not be suitable for testing by the above methods, then observation of placement, compaction and proof-rolling with a loaded 10 cy dump-truck, or equivalent ground pressure equipment, by a trained individual may be used to assess and document the compliance with structural fill specifications.

Utility Excavations

1. Utility excavations are to be excavated to the design depth for bedding and placement and shall not be over-excavated. Trench widths shall only be of sufficient width to allow placement and proper construction of the utility and backfill of the trench.
2. Backfilling of a utility trench will be dependent on its location, use, depth, and utility line material type. Trenches that are required to meet structural fill specifications, such as those under or near buildings, or within pavement areas, shall have granular material strategically compacted to at least the spring-line of the utility conduit to mitigate pipeline movement and deformation. The initial lift thickness of backfill overlying the pipeline will be dependent on the pipeline material, type of backfill, and the compaction equipment, so as not to cause deflection or deformation of the pipeline. Trench backfill shall conform to the General Earthwork specifications for placement, compaction, and testing of structural fill.

Geotextiles

1. All geotextiles shall be resistant to ultraviolet degradation, and to biological and chemical environments normally found in soils. Geotextiles shall be stored so that they are not in direct sunlight or exposed to chemical products. The use of a geotextile shall be specified and shall meet the following specification for each use.

Subgrade/Aggregate Separation

Woven or nonwoven fabric conforming to the following physical properties:

• Minimum grab tensile strength	ASTM Method D-4632	180 lb
• Minimum puncture strength (CBR)	ASTM Method D-6241	371 lb
• Elongation	ASTM Method D-4632	15%
• Maximum apparent opening size	ASTM Method D-4751	No. 40
• Minimum permittivity	ASTM Method D-4491	0.05 s ⁻¹

Drainage Filtration

Woven fabric conforming to the following physical properties:

• Minimum grab tensile strength	ASTM Method D-4632	110 lb
• Minimum puncture strength (CBR)	ASTM Method D-6241	220 lb
• Elongation	ASTM Method D-4632	50%
• Maximum apparent opening size	ASTM Method D-4751	No. 40
• Minimum permittivity	ASTM Method D-4491	0.5 s ⁻¹

Geogrid Base Reinforcement

Extruded biaxially or triaxially oriented polypropylene conforming to the following physical properties:

• Peak tensile strength lb/ft	ASTM Method D-6637	925
• Tensile strength at 2% strain lb/ft	ASTM Method D-6637	300
• Tensile strength at 5% strain lb/ft	ASTM Method D-6637	600
• Flexural Rigidity	ASTM Method D-1388	250,000 mg-cm
• Effective Opening Size rock size	ASTM Method D-4751	1.5x

**CITY OF FLORENCE
PLANNING COMMISSION**

**RESOLUTION PC 19 22 PUD 03
RESOLUTION PC 19 23 SUB 04
RESOLUTION PC 19 25 CUP 08**

A REQUEST FOR PRELIMINARY PLANNED UNIT DEVELOPMENT PLAN, TENTATIVE SUBDIVISION PLAT, AND CONDITIONAL USE PERMIT FOR A PROPOSED DEVELOPMENT OF 12 AFFORDABLE, SINGLE-FAMILY, DETACHED DWELLINGS, ON THE CORNER OF 15TH AND NOPAL STREET.

WHEREAS, application was made by Willamette Neighborhood Housing Services, Owner, for approval of a Preliminary PUD Plan, Tentative Subdivision Plan, and Conditional Use Permit for DevNW Airport Road, as required by FCC 10-1-1-4, FCC 10-1-1-6-3, FCC 10-23, FCC 10-4, and FCC 11-3; and

WHEREAS, the Planning Commission met in a duly-advertised public hearing on November 26, 2019, as outlined in Florence City Code 10-1-1-6-3, to consider the application, evidence in the record, and testimony received; and

WHEREAS, the Planning Commission of the City of Florence, per FCC 10-1-1-4, FCC 10-1-1-6-3, FCC 10-23, FCC 10-4, and FCC 11-3, finds, based on the Findings of Fact, application, staff recommendation, evidence and testimony presented to them, that the application meets the applicable criteria through compliance with certain Conditions of Approval.

NOW THEREFORE BE IT RESOLVED that the Planning Commission of the City of Florence finds, based on the Findings of Fact and the evidence in record that:

The request for a Preliminary PUD Plan, Tentative Subdivision Plan, and Conditional Use Permit for 12 affordable, single family detached dwellings on the corner of 15th and Nopal Streets meets the applicable criteria in Florence City Code and the Florence Realization 2020 Comprehensive Plan with the conditions of approval as listed below.

Informational:

Informational 1: The private stormwater facilities proposed – the rain garden and detention pond – are located adjacent to the 15th Street right-of-way. No easements on the rain garden or detention pond are proposed, although an easement may be required as a condition of approval of the final plat.

Informational 2: Information in the record calls to question whether vegetation and/or property on neighboring lots may be harmed by the proposed grading and landscaping of the southern/southwestern slope. This application does not authorize the harming of off-site vegetation and/or property. If, during construction, conditions are found that suggests off-site vegetation and/or property may be harmed, the applicant should take actions to avert harm.

Conditions of Approval:

The application, as presented, meets or can meet applicable City codes and requirements, provided that the following conditions of approval are met.

Approval shall be shown on conditions of approval as supported by the following record:

"A"	Findings of Fact
"B"	Prelim. PUD and Tent. Subdivision Plan Application
"C"	Conditional Use Permit Application
"D"	Site Plan
"E"	Tentative Subdivision Plat
"F"	Utility & Stormwater Plan
"G"	Survey
"H"	Landscape Plan
"I"	Elevations for Lot 1
"J"	Elevations for Lots 2, 3, 5, 6, 8, 9
"K"	Elevations for Lots 4, 10
"L"	Elevations for Lots 7, 12
"M"	Stormwater Report
"N"	Phase 1 Site Investigation Report
"O"	Florence Stormwater Management Plan Map
"P"	Applicant's Written Statement
"Q"	Applicant's Completeness Review Response
"R"	Testimony: Chuck Trent, Boys & Girls Club
"R2"	Testimony: Jonathan Hornung, 1370 Mulberry Ln
"S"	Referral 1: Public Works
"T"	Referral 2: Public Works

Findings of Fact attached as Exhibit "A" are incorporated by reference and adopted in support of this decision.

1. Any modifications to the approved plans or changes of use, except those changes relating to Building Codes, will require approval by the Community Development Director or Planning Commission/Design Review Board.
2. Regardless of the content of material presented, including application text and exhibits, staff reports, testimony and/or discussions, the applicant agrees to comply with all regulations and requirements of the Florence City Code which are current on this date, EXCEPT where variance or deviation from such regulations and requirements has been specifically approved by formal Planning Commission action as documented by the records of this decision and/or the associated Conditions of Approval. The applicant shall submit to the Community Development Department a signed "Agreement of Acceptance" of all conditions of approval prior to issuance of a building permit.
3. Upon encountering any cultural or historic resources during construction, the applicant shall immediately contact the State Historic Preservation Office and the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians.

Construction shall cease immediately and shall not continue until permitted by either a SHPO or CTCLUSI representative.

Title 10, Chapter 4, Conditional Uses

4. The applicant shall be required to construct a fence spanning from the northwestern corner of Lot 1, along the 15th Street frontage, ending at the northeastern corner of Lot 5. The proposed design of the fence shall meet the requirements of 10-34-5, the details of which shall be included on the site plan or another document submitted to the Florence Planning Department prior to approval of the final PUD.

Title 10, Chapter 7, Special Development Standards

5. The applicant shall be required to submit a Phase 2 Site Evaluation Report, a geotechnical report, and a detailed bank stabilization plan prior to receiving any relevant building permit.

Title 10, Chapter 13, Multi-Family Residential District

6. The applicant shall maintain a 10-foot vegetated buffer along the south-western perimeter of the development (from the trash enclosure to the 15th Street entrance).
7. The minimum vision clearance at the proposed driveway entrances shall be 10 feet.
8. There are currently no parking signs proposed along the 15th Street frontage. Should a parking lane be installed along 15th Street, the applicant shall remove those signs.

Title 10, Chapter 23, Planned Unit Developments

9. The applicant shall be required to submit a copy of the Covenants, Conditions and Restrictions for the development prior to the issuance of any relevant building permits. The developer shall be responsible for the maintenance of the common space areas.
10. The applicant shall submit a development schedule that meets the criteria of 10-23-10-5, prior to the approval of the final PUD and subdivision plat.
11. By November 26, 2020, the applicant shall file with the Planning Commission a final development plan containing in final form the information required in the preliminary plan, or a request for extension.

Title 10, Chapter 34, Landscaping

12. The applicant shall update their landscaping plan to include the species, sizes and locations throughout the development, including in the proposed rain gardens and parking areas.
13. Specifications for soil at time of planting, irrigation and anticipated planting schedule shall be furnished by the applicant prior to any site disturbance, final PUD, final plat, and/or with each associated building permit.
14. An irrigation plan is required prior to final PUD approval.
15. The landscaping plan shall detail the location and species of each of the three trees required throughout the parking lot: 1 at the 15th Street entrance, 1 near the trash enclosure, and 1 along the Nopal entrance.

Title 10, Chapter 35, Access and Circulation

16. The applicant shall be required to obtain a Construction Permit in Right-of-Way prior to their construction of their access to and improvements of 15th Street.
17. The applicant shall include an easement for joint use of the proposed driveway and parking lot on the Tentative Subdivision Plat.
18. Driveway approaches shall receive a Right of Way Excavation Work Permit prior to construction.
19. The applicant shall widen the proposed driveway to 23 feet in areas adjoining parking stalls.
20. The applicant shall obtain a Right of Way Excavation Work Permit prior to sidewalk construction.

Title 10, Chapter 36, Public Facilities

21. In conjunction with the approval of the final plat, the Planning Commission shall determine whether the applicant shall either: (1) enter into a non-remonstrance agreement, consenting to financial participation and granting of easements as needed for future improvements to the section of 15th Street adjacent to DevNW Airport Road, (2) complete a half-street improvement of the same section of 15th Street, widening it 2 feet 2 inches (to meet the criteria of a Collector, No Parking), or (3) complete a half-street improvement of the same section of 15th Street, widening 4 feet 2 inches and installing a parking strip pullout (to meet the criteria of Collector, On Street Parking).
22. Should a parking lane be installed along 15th Street, the applicant shall update the site plan and sign plan accordingly.

- 23.** The applicant shall submit a plan for mail boxes, approved by the United States Postal Service, prior to the issuance of any building permits for residential structures.
- 24.** The sanitary sewer manhole located within the 15 foot public sewer easement must be accessible, for the City to maintain and service the system (the City must be able to drive up to the manhole, set up its combination sewer cleaner over the manhole, and set up its TVI equipment). The applicant shall relocate the manhole as far to the west of its proposed location as grade and cover standards will allow, while simultaneously providing for sufficient access.
- 25.** The applicant shall increase the width of the proposed public sewer easement from 15 to 20 feet, except where adjacent to the house on Lot 6, and center the public sanitary sewer line in the easement.
- 26.** There appears to be an irrigation water meter located in a concrete pad location north west of Lot 12 (just outside of the parking area).
- 27.** The applicant shall relocate the irrigation water meter to the east of the bicycle parking area.
- 28.** The water meter shall be located in a landscaped area, not in hardscape areas.
- 29.** On Nopal Street towards the existing fire turn around (the future street stub that the proposed development will be utilizing) there is an existing water service. The applicant shall verify the location of the water service, and utilize it for one of the proposed homes if possible.
- 30.** On 15th Street, there are two existing water services. If they cannot be utilized for the project, the applicant shall properly abandon them.
- 31.** The proposed connection to the existing water main on 15th Street, to loop the water system, shall be a cut-in connection complete with three water valves in a 'T' configuration. The existing water main in 15th Street is a 6-inch water main, so the connection will need to allow for an 8-inch water main connection and the new 8-inch extending to the south of the proposed fire hydrant, then reduce to 6-inch to continue the water system to the south with connection to the existing water main that is stubbed from Nopal Street.
- 32.** Locate and cap the two existing sanitary sewer laterals that serviced the former Senior Center and the undeveloped area to the east.
- 33.** A grading plan and erosion control plan shall be submitted prior to site disturbance or construction in the right-of-way. It shall meet the standards of the Portland Erosion and Sediment Control Manual.

34. The applicant shall grant a 20-foot waterline easement along the driveway/parking lot, from Nopal Street to 15th Street, for the 6-inch water main.

Title 10, Chapter 37, Lighting

35. Locations for general site lighting are shown on the landscape and site plans. A photometric plan shall be submitted and approved prior to the issuance of any relevant building permit(s), and parking lot construction.

Title 11, Chapter 3, Major Partition, Tentative Plan Procedure

36. The applicant shall revise their subdivision plat to include existing and proposed easements, including their exact locations and dimensions, prior to approval of the final plat.
37. Lot A shall be renamed on the plat as "Tract A;" it is not a legal lot.
38. Tract A shall be divided into multiple tracts on the plat, to delineate the areas which are common ownership and the areas which are open space.

Title 11, Chapter 5, Platting and Mapping Standards

39. Final construction plans and utility facility specifications are required to be submitted for City review and approval prior to commencing construction. Stamped approval will be shown on the utility plans.

Title 9, Chapter 5, Stormwater Management

40. If the Nopal Street public swale is to be used for private stormwater originating from the project site (as opposed to surface drainage only, as stipulated in the 2009 approved stormwater plan), the 2019 stormwater plan shall be modified to address the discrepancy between the 2009 and 2019 plans. And the Nopal Street swale shall be improved to meet current qualitative treatment standards (plantings) and, if needed, quantitative standards (to handle flow).

ADOPTED BY THE FLORENCE PLANNING COMMISSION/DESIGN REVIEW BOARD
the 26th day of November, 2019.



John Murphey, Chairperson
Florence Planning Commission

12/2/19

Date



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APPENDIX J GRADING

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APPENDIX J GRADING

[Appendix J](#) is not adopted by the State of Oregon, Building Codes Division, as part of the *state building code*, consistent with the purpose and scope of application authorized in ORS 455.020.

Local municipalities are permitted to enact local ordinances for the grading.

SECTION J101 GENERAL

J101.1 Scope.

The provisions of this chapter apply to grading, excavation and earthwork construction, including fills and embankments. Where conflicts occur between the technical requirements of this chapter and the geotechnical report, the geotechnical report shall govern.

J101.2 Flood hazard areas.

Unless the applicant has submitted an engineering analysis, prepared in accordance with standard engineering practice by a *registered design professional*, that demonstrates the proposed work will not result in any increase in the level of the base flood, grading, excavation and earthwork construction, including fills and embankments, shall not be permitted in *floodways* that are in *flood hazard areas* established in [Section 1612.3](#) or in *flood hazard areas* where design flood elevations are specified but *floodways* have not been designated.

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Exhibit H



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COMPACTION. The densification of a fill by mechanical means.

CUT. See "[Excavation.](#)"

DOWN DRAIN. A device for collecting water from a swale or ditch located on or above a slope, and safely delivering it to an approved drainage facility.

EROSION. The wearing away of the ground surface as a result of the movement of wind, water or ice.

EXCAVATION. The removal of earth material by artificial means, also referred to as a cut.

FILL. Deposition of earth materials by artificial means.

GRADE. The vertical location of the ground surface.

GRADE, EXISTING. The grade prior to grading.

GRADE, FINISHED. The grade of the site at the conclusion of all grading efforts.

GRADING. An excavation or fill or combination thereof.

KEY. A compacted fill placed in a trench excavated in earth material beneath the toe of a slope.

SLOPE. An inclined surface, the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

TERRACE. A relatively level step constructed in the face of a graded slope for drainage and maintenance purposes.

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LIVE CHAT

SECTION J103 PERMITS REQUIRED

J103.1 Permits required.

Except as exempted in [Section J103.2](#), grading shall not be performed without first having obtained a *permit* therefor from the *building official*. A grading *permit* does not include the construction of retaining walls or other structures.



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6. Mining, quarrying, excavating, processing or stockpiling rock, sand, gravel, aggregate or clay controlled by other regulations, provided that such operations do not affect the lateral support of, or significantly increase stresses in, soil on adjoining properties.

7. Exploratory excavations performed under the direction of a *registered design professional*.

Exemption from the *permit* requirements of this appendix shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

SECTION J104

PERMIT APPLICATION AND SUBMITTALS

J104.1 Submittal requirements.

In addition to the provisions of [Section 105.3](#), the applicant shall state the estimated quantities of excavation and fill.

J104.2 Site plan requirements.

In addition to the provisions of [Section 107](#), a grading plan shall show the existing grade and finished grade in contour intervals of sufficient clarity to indicate the nature and extent of the work and show in detail that it complies with the requirements of this code. The plans shall show the existing grade on adjoining properties in sufficient detail to identify how grade changes will conform to the requirements of this code.

J104.3 Geotechnical report.

A geotechnical report prepared by a *registered design professional* shall be provided. The report shall contain not less than the following:



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J104.4 Liquefaction study.

For sites with mapped maximum considered earthquake spectral response accelerations at short periods (S_s) greater than 0.5g as determined by [Section 1613](#), a study of the liquefaction potential of the site shall be provided and the recommendations incorporated in the plans.

Exception: A liquefaction study is not required where the *building official* determines from established local data that the liquefaction potential is low.

SECTION J105 INSPECTIONS

J105.1 General.

Inspections shall be governed by [Section 110](#) of this code.

J105.2 Special inspections.

The *special inspection* requirements of [Section 1705.6](#) shall apply to work performed under a grading permit where required by the *building official*.

SECTION J106 EXCAVATIONS

J106.1 Maximum slope.

The slope of cut surfaces shall be not steeper than is safe for the intended use, and shall be not more than one unit vertical in two units horizontal (50-percent slope) unless the owner



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to one unit vertical (100-percent slope).

SECTION J107 FILLS

J107.1 General.

Unless otherwise recommended in the geotechnical report, fills shall comply with the provisions of this section.

J107.2 Surface preparation.

The ground surface shall be prepared to receive fill by removing vegetation, topsoil and other unsuitable materials, and scarifying the ground to provide a bond with the fill material.

J107.3 Benching.

Where existing grade is at a slope steeper than one unit vertical in five units horizontal (20-percent slope) and the depth of the fill exceeds 5 feet (1524 mm) benching shall be provided in accordance with [Figure J107.3](#). A key shall be provided that is not less than 10 feet (3048 mm) in width and 2 feet (610 mm) in depth.



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APPENDIX J GRADING

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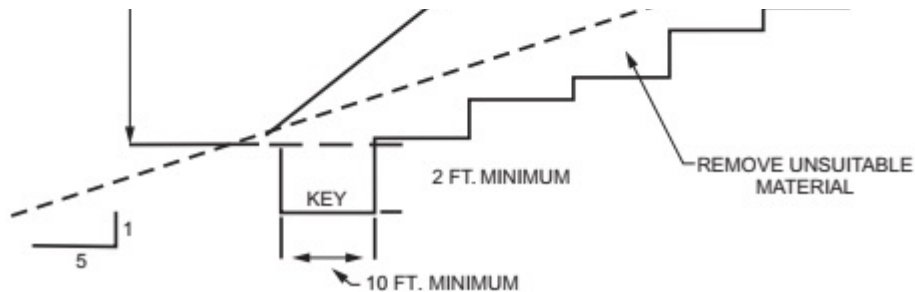
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For SI: 1 foot = 304.8 mm.

FIGURE J107.3
BENCHING DETAILS

J107.4 Fill material.

Fill material shall not include organic, frozen or other deleterious materials. Rock or similar irreducible material greater than 12 inches (305 mm) in any dimension shall not be included in fills.

J107.5 Compaction.

All fill material shall be compacted to 90 percent of maximum density as determined by [ASTM D1557](#), Modified Proctor, in lifts not exceeding 12 inches (305 mm) in depth.

J107.6 Maximum slope.

The slope of fill surfaces shall be not steeper than is safe for the intended use. Fill slopes steeper than one unit vertical in two units horizontal (50-percent slope) shall be justified by a geotechnical report or engineering data.



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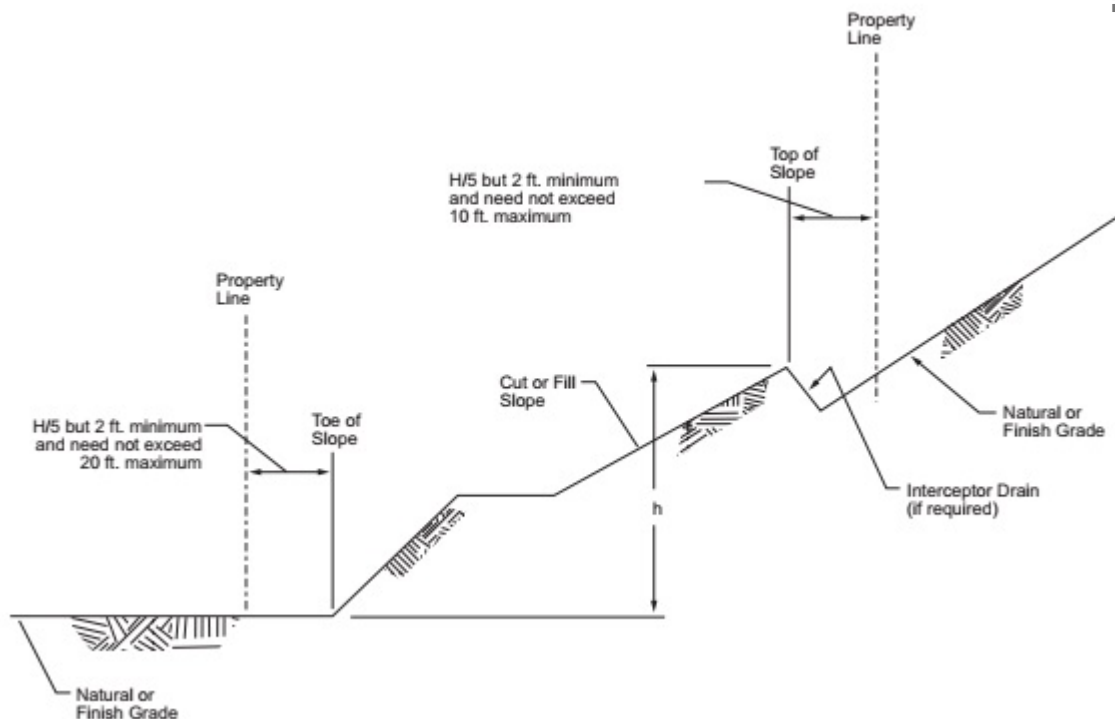


FIGURE J108.1
DRAINAGE DIMENSIONS

J108.2 Top of slope.

The setback at the top of a cut slope shall be not less than that shown in [Figure J108.1](#), or than is required to accommodate any required interceptor drains, whichever is greater.

J108.3 Slope protection.

Where required to protect adjacent properties at the toe of a slope from adverse effects of the grading, additional protection, approved by the *building official*, shall be included.

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J109.1 General.

Unless otherwise recommended by a *registered design professional*, drainage facilities and terracing shall be provided in accordance with the requirements of this section.

Exception: Drainage facilities and terracing need not be provided where the ground slope is not steeper than one unit vertical in three units horizontal (33-percent slope).

J109.2 Terraces.

Terraces not less than 6 feet (1829 mm) in width shall be established at not more than 30-foot (9144 mm) vertical intervals on all cut or fill slopes to control surface drainage and debris. Suitable access shall be provided to allow for cleaning and maintenance.

Where more than two terraces are required, one terrace, located at approximately mid-height, shall be not less than 12 feet (3658 mm) in width.

Swales or ditches shall be provided on terraces. They shall have a minimum gradient of one unit vertical in 20 units horizontal (5-percent slope) and shall be paved with concrete not less than 3 inches (76 mm) in thickness, or with other materials suitable to the application. They shall have a depth not less than 12 inches (305 mm) and a width not less than 5 feet (1524 mm).

A single run of swale or ditch shall not collect runoff from a tributary area exceeding 13,500 square feet (1256 m²) (projected) without discharging into a down drain.

J109.3 Interceptor drains.

Interceptor drains shall be installed along the top of cut slopes receiving drainage from a tributary width greater than 40 feet (12 192 mm), measured horizontally. They shall have a minimum depth of 1 foot (305 mm) and a minimum width of 3 feet (915 mm). The slope shall be approved by the *building official*, but shall be not less than one unit vertical in 50 units horizontal (2-percent slope). The drain shall be paved with concrete not less than 3 inches (76 mm) in thickness, or by other materials suitable to the application. Discharge from the



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SECTION J110 EROSION CONTROL

J110.1 General.

The faces of cut and fill slopes shall be prepared and maintained to control erosion. This control shall be permitted to consist of effective planting.

Exception: Erosion control measures need not be provided on cut slopes not subject to erosion due to the erosion-resistant character of the materials.

Erosion control for the slopes shall be installed as soon as practicable and prior to calling for final inspection.

J110.2 Other devices.

Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide safety.

SECTION J111 REFERENCED STANDARDS

[ASTM](#) [Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort \[56,000 ft-lb/ft³-\(2,700 kN-m/m³\)\].](#) [J107.5](#)

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FEEDBACK

LIVE CHAT

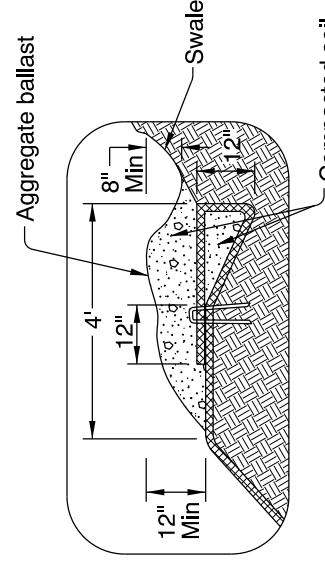


FIGURE A1

TOP OF BANK ANCHOR TRENCH,
H>3' AND TERMINAL SLOPE

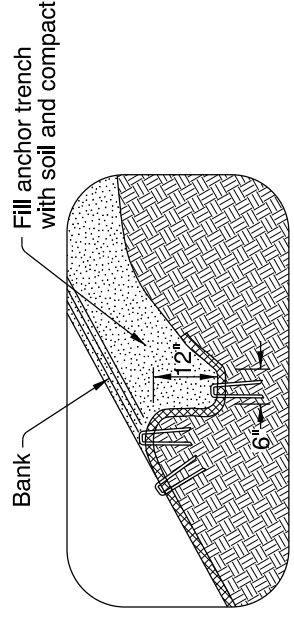


FIGURE A2

TOP OF BANK ANCHOR TRENCH, H<3'

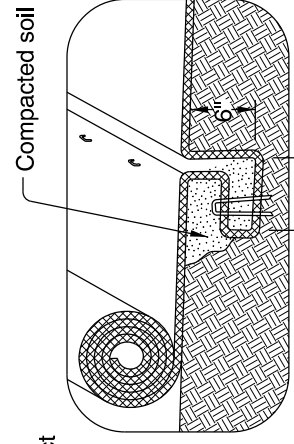


FIGURE A3

CHANNEL CHECK SLOT

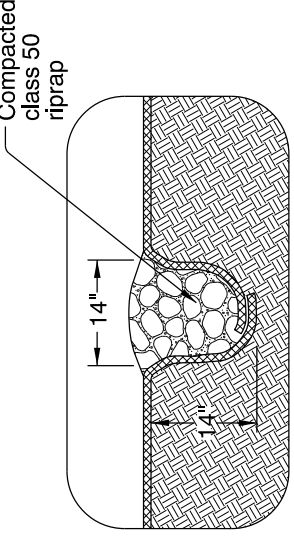


FIGURE A4

CHANNEL CHECK SLOT WITH
ROCK BACKFILL

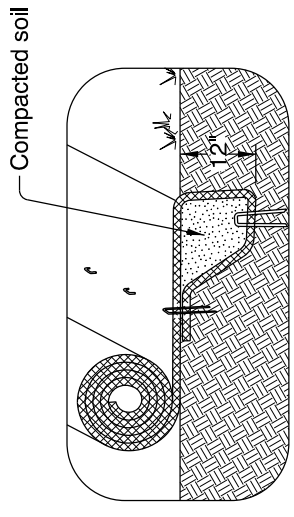
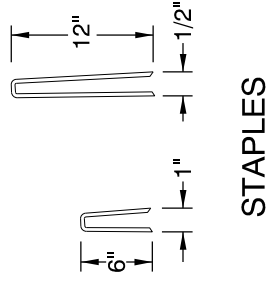
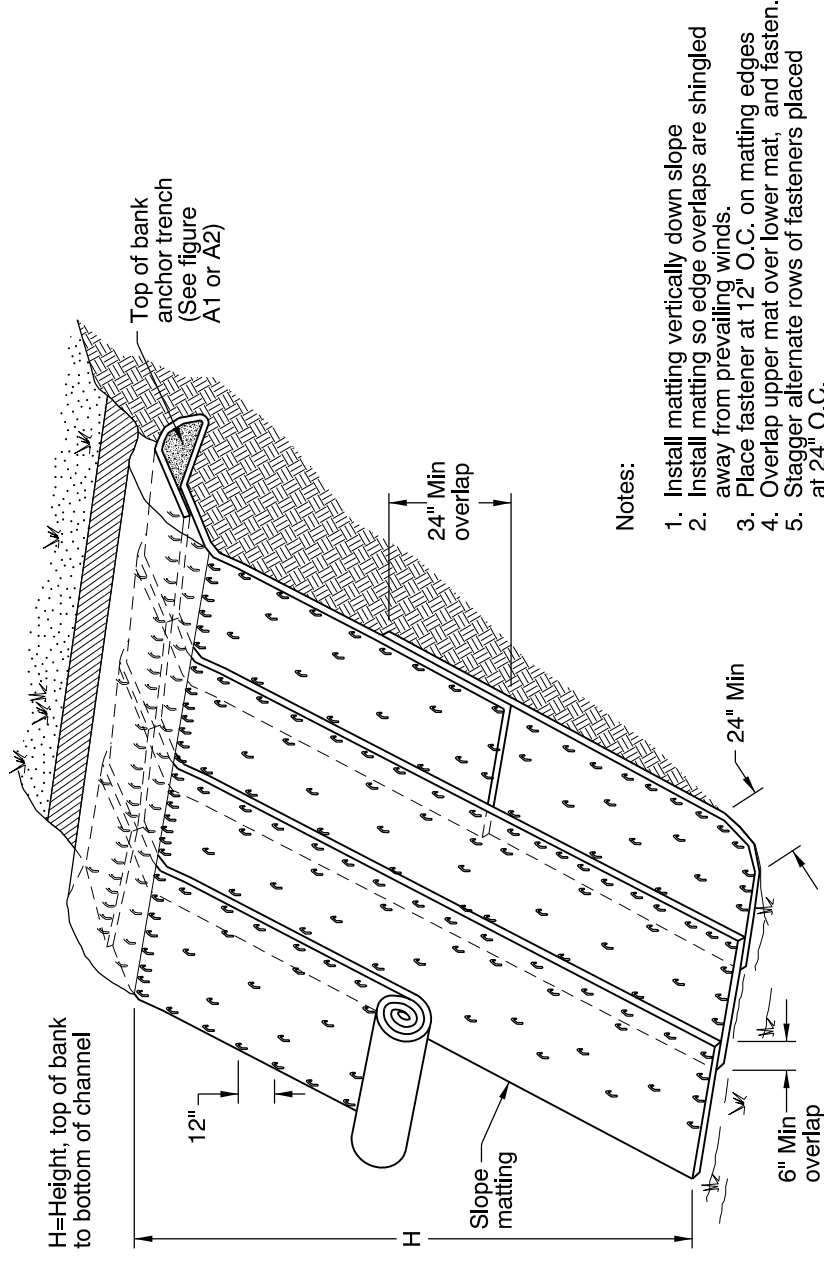


FIGURE A5

INITIAL CHANNEL
ANCHOR TRENCH



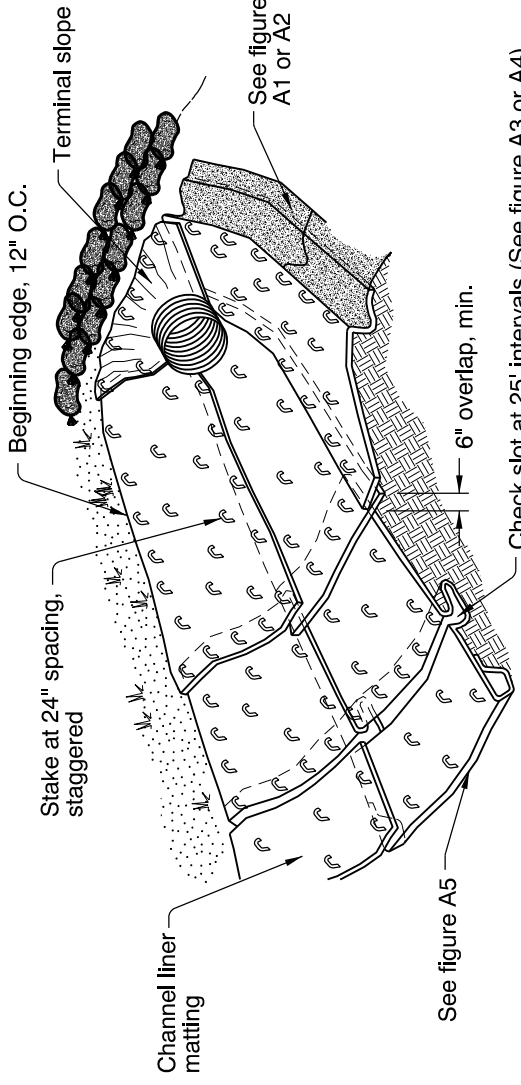
STAPLES



SLOPE ISOMETRIC VIEW

Notes:

1. Install matting vertically down slope
2. Install matting so edge overlaps are shingled away from prevailing winds.
3. Place fastener at 12" O.C. on matting edges
4. Overlap upper mat over lower mat, and fasten at 24" O.C.
5. Stagger alternate rows of fasteners placed at 24" O.C.
6. Extend mat 24" beyond toe of slope; Fold mat back under 4" and fasten.



CHANNEL ISOMETRIC VIEW

Notes:

1. Install channel liner matting, in the direction of water flow. Anchor upstream end of mat with check slot for culvert outfalls, place mat under pipe 12" minimum upstream from pipe outlet.
2. Construct check slots across channel bottom at 25' spacing and at the end of each mat (Fig. A3 or A4).
3. Overlap side channel liner matting edges 6" over the center channel liner matting and fasten edges 12" O.C. Continue overlap and stapling pattern for each additional side channel liner mat.
4. Lap upstream matting end 12" over beginning edge of downstream matting. Fasten 12" O.C.
5. Anchor top edge of side channel matting in trench and fasten 12" O.C. (Fig. A2).
6. Fasten matting interior at 24" O.C. with staggered spacing.
7. Construct initial anchor trench at downstream end of matting and terminal slope anchor at upstream end.

Exhibit I

CALC. BOOK NO. _ 6403_ 6404_ 6405 _	BASELINE REPORT DATE July 2014
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
SLOPE AND CHANNEL MATTING	
2015	
DATE	REVISION DESCRIPTION

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

Jump To:

Catalog

- Coos County
- Natural Hazards
 - Flood
 - Sea Level Rise
 - Tsunami
 - Landslide
- Landslide Susceptibility, DOGAMI, 2013
 - Low - Landsliding Unlikely
 - Moderate - Landsliding Possible
 - High - Landsliding Likely
 - Very High - Extensive Landslides
- Liquefaction
- Liquefaction Susceptibility, DOGAMI

- Active Earthquake Faults
- Active Earthquake Faults, USGS, 2003

- Estuary Maps
 - Estuary Mgmt Units, 1987
 - Coos Coastal Shorelands Boundary
 - Coos County LWI, 2014
- National Wetland Inventory
- Soils
- Administrative Boundaries
- Statutory Vegetation Line, OPRD, 1967
- Coos Tax lots
- City Limits
- Urban Growth Boundaries
- County Boundaries
- State Parks
- Coos County Zoning, 2019

- Base Maps and Photos
 - Printable Base Maps
 - Modern Ortho Photos
 - NAIP Color Aerials 2016
 - NAIP Color Aerials 2014
 - NAIP Color Aerials 2011
 - None
 - Lidar Hillshades
 - Non-Printable Base Maps
- ESRI World Imagery
- ESRI World Topographic Map

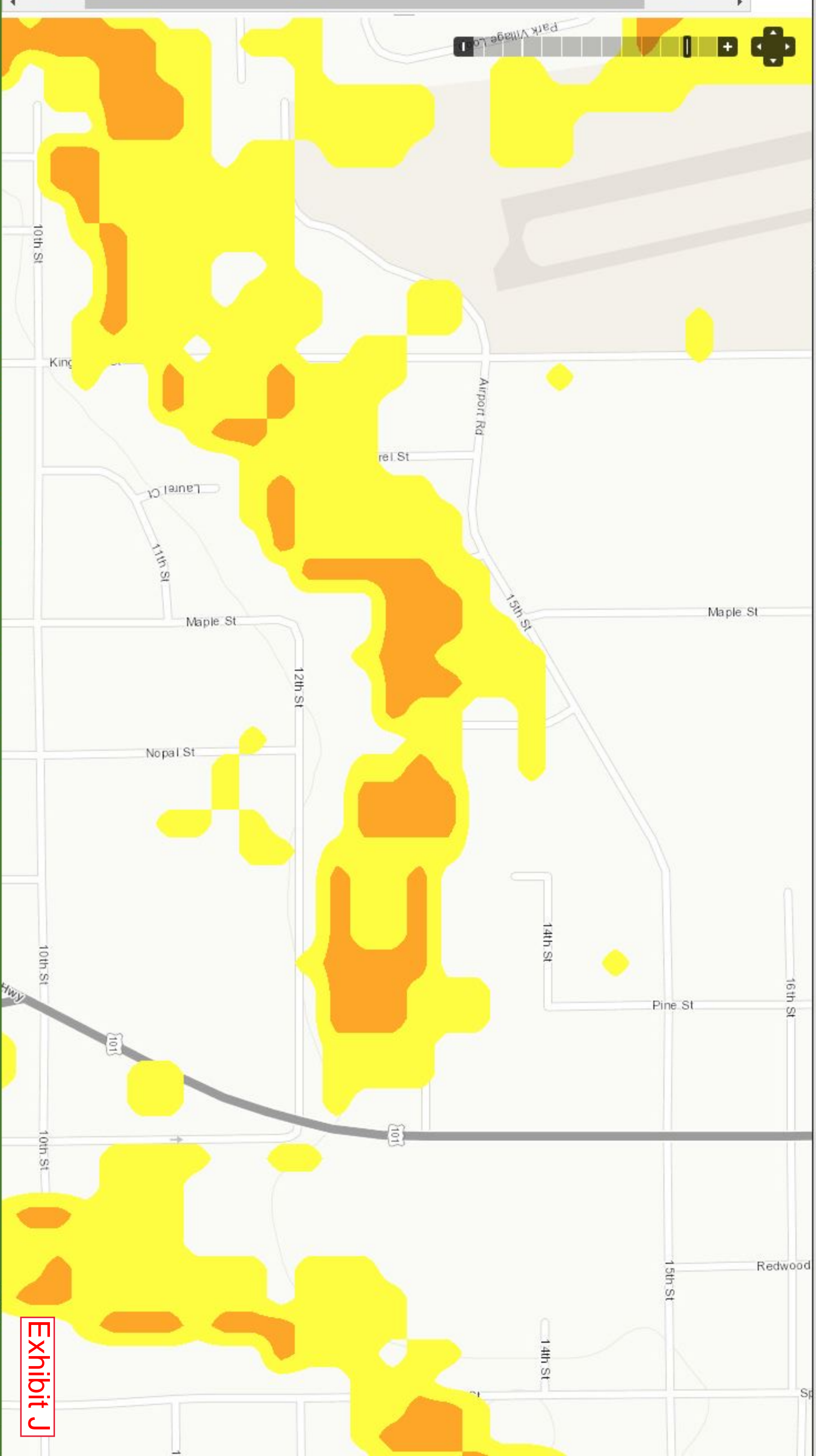


Exhibit J

February 21, 2020



**RE: Airport Road PUD Preliminary Document Review
Florence, Lane County, Oregon**

Mike:

On behalf of the City of Florence, Civil West Engineering has reviewed the documents provided to us regarding the proposed Sand Pine Ranch Subdivision. These documents, which were submitted to us on Wednesday, February 19th, 2020, include the following:

- Land Use Application
- Geotechnical Report
- Phase II Site Investigation Report
- Phase II Site Investigation Report Drawings (2 Sheets)
 - Sheet 1 – Existing Site Investigation Report map
 - Sheet 2 – Proposed Site Investigation Report map

The documents are well prepared and well designed. The requirements identified by the Site Investigation Report Phase 2 Document have been largely satisfied.

The following questions and comments, hereby submitted by Civil West, pertain to the request made by the City of Florence Planning Director, Wendy Farley-Campbell. She and Public Works Director Mike Miller have asked for a review of the completeness of these documents. The following arose during our review:

1. While the Geotechnical Report and Site Investigation report do address some temporary soil stabilization, information given is cursory. Per J – Proposed Design, the applicant shall submit complete location mapping and actual work specifications for all initial, temporary, or maintenance stabilization plans proposed. As erosion potential is high for this soil type, more information on this item is needed.
2. In accordance with the item mentioned above, applicant is required to furnish cost estimates and post a performance bond in that amount with City to accomplish stabilization or restoration proposed, if required by City.
3. Legal responsibilities for long range vegetation maintenance programs are not identified.
4. Item K – LCDC Coastal Goal Requirements does not appear to be addressed within the report.
5. Although minor items are missing from the report, the consensus appears to be correct that if the site plan and construction follow the recommendations of the Geotechnical Engineering Report, the development will meet the applicable City standards and requirements.

Respectfully,

Civil West Engineering Services, Inc.

Prepared By:

Sean Lloyd, Oregon PE #89522PE

Exhibit K

From: [Jonathan Hornung](#)
To: [planningdepartment](#)
Subject: DevNW Airport Road
Date: Tuesday, November 26, 2019 11:13:21 AM

Dear Planning Commission,

My name is Jonathan Hornung, I live at 1370 Mulberry Ln. on the western edge of the Airport rd. development. I am concerned about the grading of the slopes adjacent to my property line. There are a number of large trees on my property that would be destabilized by any digging into the dune that is planning to be graded. The initial plans proposed by NEDCO that were distributed to the property owners in the area had a 20 foot preserved vegetation buffer adjacent to my property line, but that is not seen in the current plans of DevNW. I'm hoping that the preserved vegetation can be put back into the plans because it has been a feature of plans going all the way back to the Keener Place phase 2 plans.

The city of Florence claims that they are the "city of rhododendrons" and that "The City is committed to maintaining natural beauty while welcoming new development", but the Florence Realization 2020 plan states that the city has done a poor job of maintaining native stands of vegetation and if they want to keep using the city of rhododendrons title they must get proactive. Chapter 10 of the comprehensive plan describes that vegetative cover should be maintained when building new housing. Furthermore, city zoning (Title 4- Chapter 6-1) states development should "Preserve scenic quality of city by retaining native vegetation" and "protect property from erosion". Removal of the vegetation on the dune on the south and west sides of property will destabilize a very steep slope where the mulberry lane houses reside and the scenic quality of the city will be degraded if this project is allowed to remove native vegetation. Our house is on top of this dune, and we're worried about the consequences of removal of the vegetation that keeps it stabilized

Additionally, I am concerned about the amount of native vegetation that they want to remove on the south side of the property and the result it will have on the animals who live in this area. The south facing slope of the dune is home to a number of animals such as bear, deer, raccoon, and numerous birds and owls and the removal of the vegetation on that dune will displace these animals into the surrounding neighborhood. There are countless native rhododendrons that will need to be removed as well as many large trees that maintain the stability of the dune. Digging into and grading the dune will likely result in the loss of these plants.

I'm also concerned because the PUD that is being proposed is meeting up with restricted or low-density residential where I live, but they plan on putting parking and storage directly adjacent to the property lines. I was under the impression that there should be a perimeter yard as large as the front yard of the low-density residential area (20 feet). And according to the low-density residential code (10-10-4-D-1) there should be no parking or garage structures and other buildings should be set back at least 20 feet.

I am hoping that the planning commission can see fit to modify this proposal so it will fit better in the natural area that is being proposed and so it can blend better with the low-density neighborhood to the west. I think this is a needed development, I just don't want the cost of it to be a beautiful natural area full of native vegetation.

Jonathan Hornung
Chemistry, Physics and Engineering Teacher
Siuslaw High School
Florence, OR

**CITY OF FLORENCE
PHASE I SITE INVESTIGATION REPORT**

Dev NW
Applicant

11/11/2019
Date

Dev NW Airport Road PUD
Proposal or Project

Map: 18-12-27-1
Map No. TL: 15400
Tax Lot

Develop new PUD
Purpose of Proposal or Project (attach additional sheets, as needed)

High Density Residential
Comprehensive Plan Designation
Multiple Family Residential
Zoning District

None
Street Address

N/A
Overlay District

Based on submitted information, zoning and comprehensive plan requirements, and the completed Site Investigation Report, this proposal **does** comply with Title 10 of the City Code and the Comprehensive Plan. The proposal **will** achieve the stated purpose. The site and/or building design **will not** have adverse impacts and **will** mitigate any adverse impacts.

The completed Site Investigation Report is available at the Planning Department.

This investigation was done by:

Dev NW
Print

Signature

Title

**PHASE I SITE INVESTIGATION
INITIAL PROPOSED DEVELOPMENT APPLICATION CHECKLIST**

YES	NO	
✓	_____	1. <u>LOCAL ZONING REGULATIONS</u> Does the proposed development site plan conform to City, or County Zoning Regulations regarding setback lines and other code provisions? (Contact the City or County Engineer for details.)
✓	_____	2. <u>COMPREHENSIVE PLAN SETBACK LINE OR DESIGNATION</u>
_____	✓	a. Has a Coastal Construction Setback line (CCSBL) been adopted for this County or city? (Inquire from the County or City Engineer.)
_____	N/A	b. If a CCSBL has been adopted for this County or City is the proposed site seaward of the CCSBL?
_____	N/A	c. If the proposed site is seaward of the adopted CCSBL, has application for a variance or exception been made to the Planning Commission having jurisdiction?

**PHASE 1 SITE INVESTIGATION
INITIAL PROPOSED DEVELOPMENT APPLICATION CHECKLIST**

YES	NO	
		3. <u>DUNAL FORMS</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. Does the property contain any of the following dune formations?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1. Active Dune
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Newer Stabilized Dune
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. Older Stabilized Dune
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Deflation Plan
<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. leading Edge of Sand dune
<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. Foredune
		3. <u>IDENTIFIED HAZARDOUS CONDITIONS</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. Has any portion of the property been identified as being affected by any potential or existing geological hazard? (Contact County or City Planning Departments for information published by the State Department of Geology and Mineral Industries, US Department of Agriculture-Soil Conservation Service, US Geological Survey, US Army Corps of Engineers and other government agencies.)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. Are any of the following identified hazards present?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1. foredune
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2. Active Dunes
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. Water erosion
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Flooding
<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. Wind erosion
<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. Landslide or sluff activity
<input type="checkbox"/>	<input checked="" type="checkbox"/>	7. leading edge of active Sand Dune
<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. Are there records of these hazards ever being present of the site? Describe:
		4. <u>EXISTING SITE VEGETATION</u>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	b. Does the vegetation on the site, afford adequate protection against soil erosion from wind and surface water runoff?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. Does the condition of vegetation present constitute a possible fire hazard or contributing factor to slide potential? (If answer is Yes, full details and possible remedies will be required.)
		5. <u>FISH AND WILDLIFE HABITAT</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. Does the site contain any identified rare or endangered species or unique habitat (feeding, nesting or resting)?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. Will any significant habitat be adversely affected by the development? (Contact Oregon Department of Fish and Wildlife,)
		6. <u>HISTORICAL AND ARCHEELOGICAL SITES</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Are there any identified historical or archaeological sites within the area proposed for development? (Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians.)
		7. <u>FLOOD PLAIN ELEVATION</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. If the elevation of the 100 year flood plain or storm tide has been determined, does it exceed the existing ground elevation at the proposed building site? (Contact the Federal Insurance Administration, City or County Planning

**PHASE 1 SITE INVESTIGATION
INITIAL PROPOSED DEVELOPMENT APPLICATION CHECKLIST**

YES	NO	
_____	_____	Departments for information on 100 year flood plain. Existing site elevations can be identified by local registered surveyor.)
_____	N/A	b. If elevations of the proposed development is subject to flooding during the 100 year flood or storm tide, will the lowest habitable floor be raised above the top of the highest predicted storm-wave cresting on the 100 year flood or storm tide?
		8. <u>CONDITION OF ADJOINING AND NEARBY AREAS</u>
		Are any of the following natural hazards present on the adjoining or nearby properties that would pose a threat to this site?
_____	✓	a. Active dunes
_____	✓	b. foredune
_____	✓	c. Storm runoff erosion
_____	✓	d. Wave undercutting or wave overtopping
_____	✓	e. Slide areas
_____	✓	f. Combustible vegetative cover
		(Contact County and City Planning staffs for local hazard information.)
		9. <u>DEVELOPMENT IMPACTS</u>
_____	✓	a. Will there be adverse off-site impacts as a result of this development?
_____	✓	b. Identify possible problem type
_____	✓	1. Increased wind exposure
_____	✓	2. Open sand movement
_____	✓	3. Vegetative destruction
_____	✓	4. Increased water erosion (storm runoff, driftwood removal, reduction of foredune, etc.)
_____	✓	5. Increased slide potential
_____	✓	6. Affect on aquifer
✓	_____	c. Has landform capability (density, slope failure, groundwater, vegetation, etc) been a consideration in preparing the development proposal?
✓	_____	d. Will there be social and economic benefits from the proposed development?
_____	✓	e. Identified benefits
_____	✓	1. New jobs
✓	_____	2. Increased tax valuation
_____	✓	3. Improved fish and wildlife habitat
_____	✓	4. Public access
✓	_____	5. Housing needs
✓	_____	6. Recreation potential
_____	N/A	7. Dune stabilization (protection of other features)
_____	N/A	8. Other _____
		10. <u>PROPOSED DESIGN</u>
✓	_____	a. Has a site map been submitted showing in detail exact location of proposed structures?
_____	✓	b. Have detailed plans showing structure foundations been submitted?
_____	✓	c. Have detailed plans and specifications for the placement of protective structures been submitted if need is indicated?
✓	_____	d. Has a plan for interim stabilization, permanent revegetation and continuing vegetative maintenance been submitted?
		e. Is the area currently being used by the following?

**PHASE 1 SITE INVESTIGATION
INITIAL PROPOSED DEVELOPMENT APPLICATION CHECKLIST**

YES	NO	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1. Off-road vehicles
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2. motorcycles
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. horses
<input type="checkbox"/>	<input checked="" type="checkbox"/>	f. Has a plan been developed to control or prohibit the uses of off-road vehicles, motorcycles and horses?
11. <u>LCDC COASTAL GOAL REQUIREMENTS</u>		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a. Have you read the LCDC Goals affecting the site? (contact LCDC, City or County office for copies of Goals.)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. Have you identified any possible conflicts between the proposed development and the Goals or acknowledged comprehensive plans? (If so, list them and contact local planning staff for possible resolution.)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	c. Have all federal and state agency consistency requirements been met? (Contact local planning office.)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	d. Has applicant or investigator determined that the development proposal is compatible with the LCDD Beaches and Dunes Goal and other appropriate statewide land use planning laws?

Rev. 4/09