



1510 – B Third Street  
Tillamook, Oregon 97141  
[www.tillamook.or.us](http://www.tillamook.or.us)  
(503) 842-3408

*Land of Cheese, Trees and Ocean Breeze*

**Floodway Development Permit #851-21-000230-PLNG &  
Non-Conforming Minor Review #851-21-000195-PLNG:  
Gunness**

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

**NOTICE OF ADMINISTRATIVE REVIEW  
Date of Notice: January 28, 2022**

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

**851-21-000230-PLNG:** A review of a Floodway Development Permit for expansion to add an exterior staircase and elevate the existing dwelling together, with a Non-Conforming Minor Review #851-21-000195-PLNG. The subject property is accessed from Resort Drive, a County Road, and is designated as Tax Lot 400, of Section 19AD of Township 4 South, Range 10 West of the Willamette Meridian, Tillamook County, Oregon. The property is located in the Pacific City/Woods Medium Density Residential (PCW-R2) Zone. The applicant and property owner are Jeff Gunness.

Written comments received by the Department of Community Development prior to 4:00p.m. on February 11, 2022, will be considered in rendering a decision. Comments should address the criteria upon which the Department must base its decision. A decision will be rendered no sooner than the next business day, February 14, 2022.

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

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

If you have any questions about this application, please call the Department of Community Development at 503-842-3408 Ext. 3301 or [mjenck@co.tillamook.or.us](mailto:mjenck@co.tillamook.or.us)

Sincerely,

Melissa Jenck, CFM, Land Use Planner II

Sarah Absher, CFM, Director

Enc. Applicable Ordinance Criteria, Maps

## REVIEW CRITERIA

### ARTICLE III – ZONE REGULATIONS

#### **TCLUO SECTION 3.510: FLOOD HAZARD OVERLAY ZONE**

- (1) The fill is not within a Coastal High Hazard Area.
- (2) Fill placed within the Regulatory Floodway shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- (3) The fill is necessary for an approved use on the property.
- (4) The fill is the minimum amount necessary to achieve the approved use.
- (5) No feasible alternative upland locations exist on the property.
- (6) The fill does not impede or alter drainage or the flow of floodwaters.
- (7) If the proposal is for a new critical facility, no feasible alternative site is available.
- (8) For creation of new, and modification of, Flood Refuge Platforms, the following apply, in addition to (14)(a)(1-4) and (b)(1-5):
  - i. The fill is not within a floodway, wetland, riparian area or other sensitive area regulated by the Tillamook County Land Use Ordinance.
  - ii. The property is actively used for livestock and/or farm purposes,
  - iii. Maximum platform size = 10 sq ft of platform surface per acre of pasture in use, or 30 sq ft per animal, with a 10-ft wide buffer around the outside of the platform,
  - iv. Platform surface shall be at least 1 ft above base flood elevation,
  - v. Slope of fill shall be no steeper than 1.5 horizontal to 1 vertical,
  - vi. Slope shall be constructed and/or fenced in a manner so as to prevent and avoid erosion.

Conditions of approval may require that if the fill is found to not meet criterion (5), the fill shall be removed or, where reasonable and practical, appropriate mitigation measures shall be required of the property owner. Such measures shall be verified by a certified engineer or hydrologist that the mitigation measures will not result in a net rise in floodwaters and be in coordination with applicable state, federal and local agencies, including the Oregon Department of Fish and Wildlife.

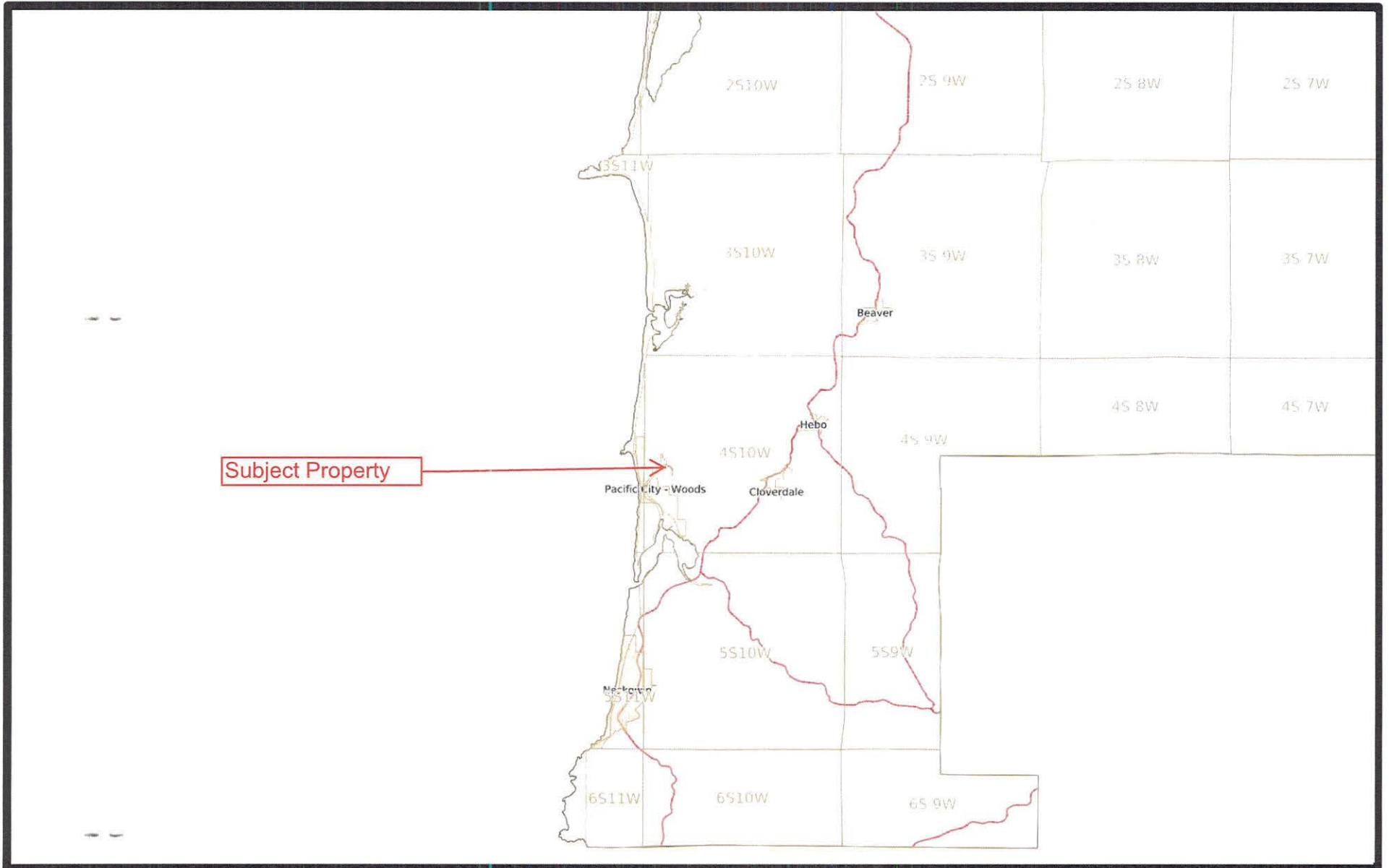
#### **TCLUO SECTION 7.020: NONCONFORMING USES AND STRUCTURES**

- (11) **MINOR REVIEW:** Application is made under the fee and procedures for a Type II Administrative Review and is reviewed using the following review criteria. A request may be permitted if:
  - (a) The request will have no greater adverse impact on neighboring areas than the existing use or structure when the current zoning went into effect, considering:
    - i. A comparison of existing use or structure with the proposed change using the following factors:
      1. Noise, vibration, dust, odor, fumes, glare, or smoke detectable at the property line or off-site;
      2. Numbers and kinds of vehicular trips to the site;
      3. Amount and nature of outside storage, loading and parking;

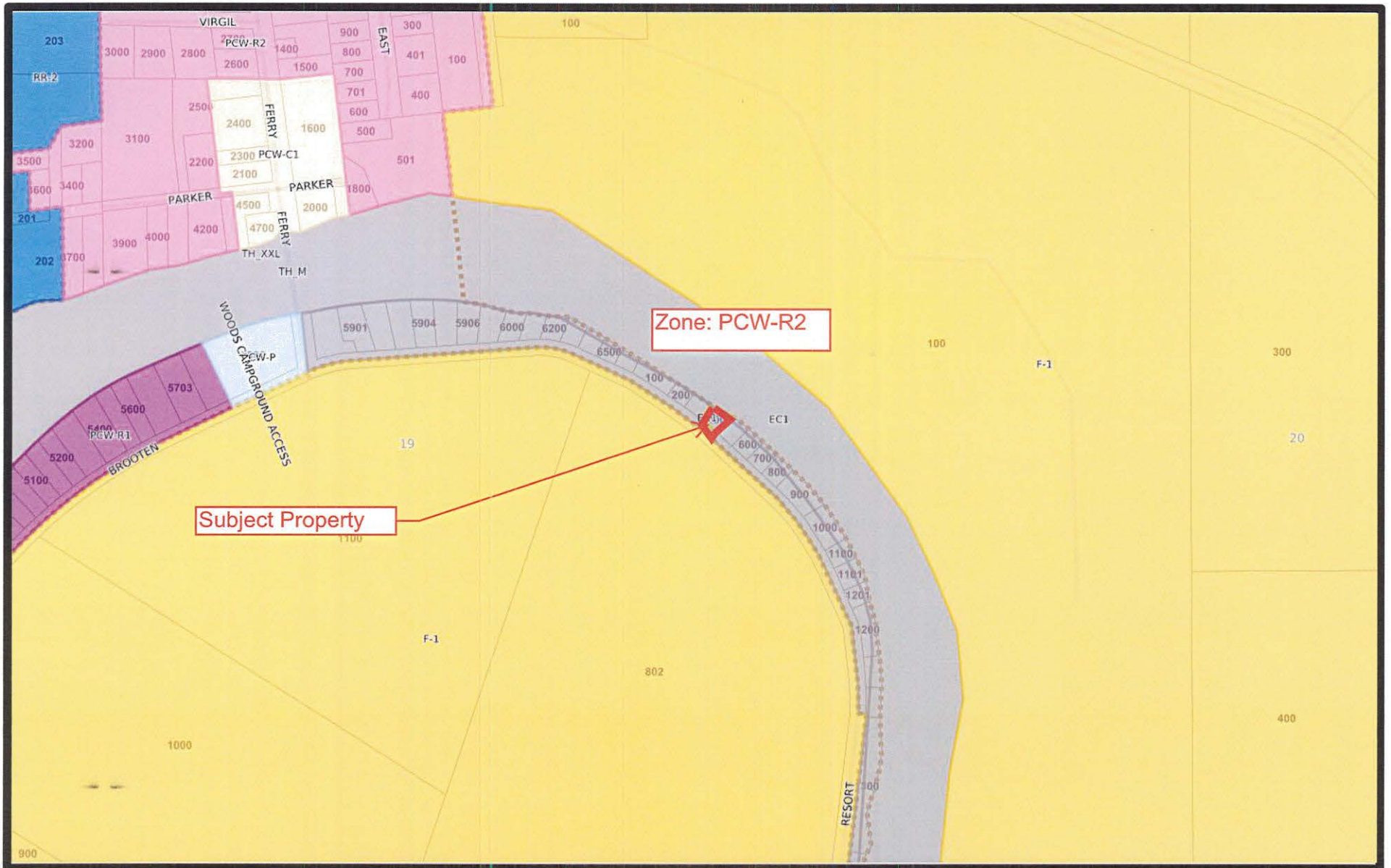
4. Visual impact;
  5. Hours of operation;
  6. Effect on existing vegetation;
  7. Effect on water drainage and water quality;
  8. Service or other benefit to the use or structure provides to the area; and
  9. Other factors relating to conflicts or incompatibility with the character or needs of the area.
- ii. The character and history of the use and of development in the surrounding area.
- (b) The request shall maintain a minimum separation of six feet between structures, and comply with the clear vision area of Section 4.010.

# EXHIBIT A

# Vicinity Map



# Zoning Map



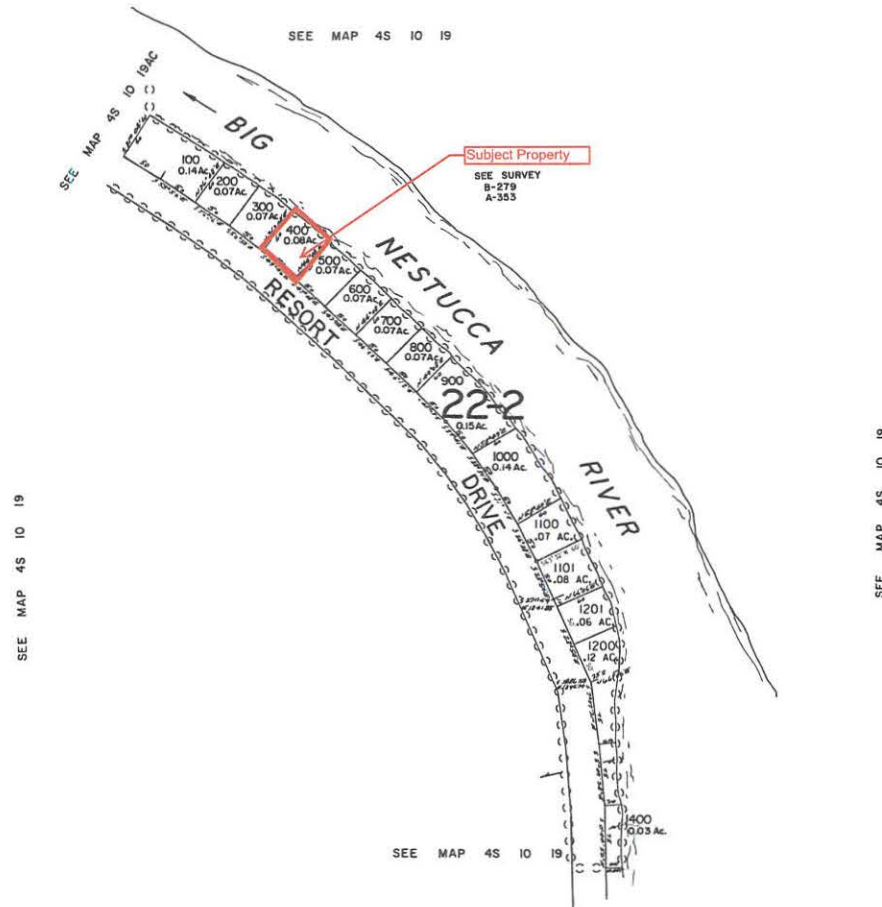
THIS MAP WAS PREPARED FOR  
ASSESSMENT PURPOSE ONLY

SE1/4 NE1/4 SEC.19 T.4S. R.10W. W.M.  
TILLAMOOK COUNTY

1" = 100'

4S 10 19AD

CANCELLED NO.  
1300



4S 10 19AD

REVISED 12/07/07, WS

# National Flood Hazard Layer FIRMeTte



123°57'19"W 45°12'52"N



## Legend

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

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

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone 2
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

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

MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/27/2022 at 3:12 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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



# EXHIBIT B



## PLANNING APPLICATION

**Applicant**  (Check Box if Same as Property Owner)

Name: JEFF GUNNESS Phone: 503-244-6438  
 Address: 12604 SW 61ST PLACE  
 City: PORTLAND State: OR Zip: 97219  
 Email: jeffgunness@gmail.com

**Property Owner**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Email: \_\_\_\_\_

OFFICE USE ONLY	
Date Stamp	<b>MAY 17 2021</b>
BY:	<i>[Signature]</i>
<input type="checkbox"/> Approved	<input type="checkbox"/> Denied
Received by:	<i>[Signature]</i>
Receipt #:	<u>120480</u>
Fees:	<u>845.00</u>
Permit No:	<u>851-21-000195-PLNG</u>

Request: Request APPROVAL to proceed with obtaining approval to get building permit for RAISING FINISH FLOOR ELEVATION to a point 3 feet minimum above BFE. ~~#333 #~~

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

**Location:**

Site Address: 33765 RESORT DR. PACIFIC CITY, OR. 97135  
 Map Number: 4S1019AD00400 400  
Township Range Section Tax Lot(s)

Clerk's Instrument #: \_\_\_\_\_

**Authorization**

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

Property Owner Signature (Required) *Jeff Gunness* 5/10/21  
Signature Date

Applicant Signature \_\_\_\_\_ Date \_\_\_\_\_

TAX LOT 300



SCALE: 1"=20'  
DATE: APRIL 12, 2021

PROPOSED REMODEL FOR JEFF GUNNESS

IN TAX LOT 400, 45-10-19-AD, TILLAMOOK CO., OR  
PROPOSED REMODEL: MAINTAIN THE SAME HOUSE FOOTPRINT  
BUT, RAISE THE FINISH FLOOR ELEVATION TO A POINT 3 FEET  
MINIMUM ABOVE THE BASE FLOOD ELEVATION.

GUNNESS  
TAX LOT 400

NESTUCCA  
RIVER

KELLOW LAND SURVEYING  
P.O. BOX 335  
PACIFIC CITY, OR 97135  
503-801-3537  
kellow@pacifier.com

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

*Douglas H. Kellow*

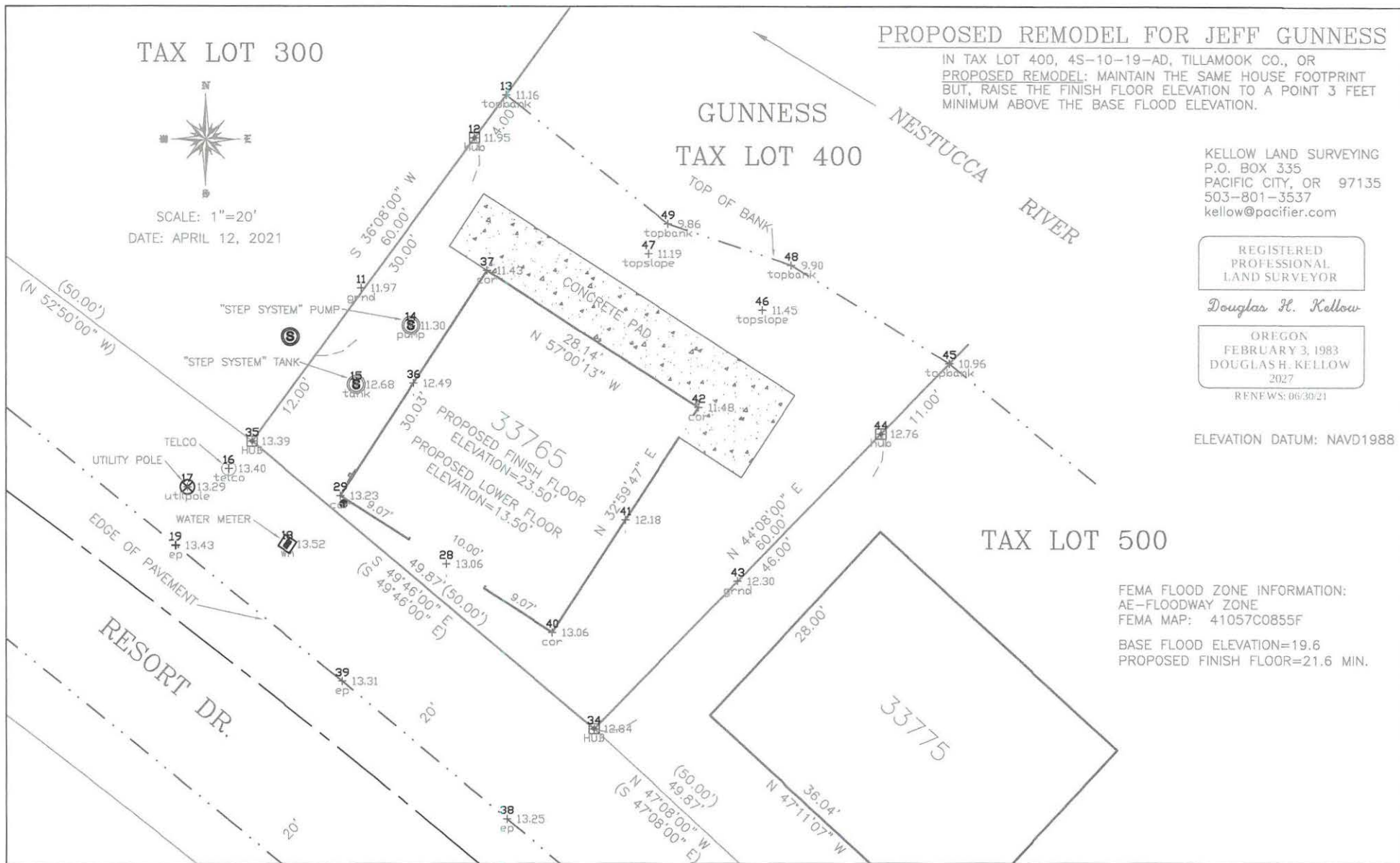
OREGON  
FEBRUARY 3, 1983  
DOUGLASH H. KELLOW  
2027

RENEWS: 06/30/21

ELEVATION DATUM: NAVD1988

TAX LOT 500

FEMA FLOOD ZONE INFORMATION:  
AE-FLOODWAY ZONE  
FEMA MAP: 41057C0855F  
BASE FLOOD ELEVATION=19.6  
PROPOSED FINISH FLOOR=21.6 MIN.



May 10, 2021

Reason for raising:

The current foundation height is below BFE and is also cracked in the middle of each side. I want to raise to 3 feet above BFE. The current living space will not be changed with exception of a new electrical service panel.

For the last 20 years the cabin has been occupied no more than 30 nights per year. It is not rented out nor used by anyone except immediate family and our adult children. I expect use to increase only marginally. The 840 sq foot living space and only 2 beds keeps a limit the number of people at any one time.

Outside storage will not increase as we are gaining a storage area under the cabin with the raise.

The structures next to us are both raised to above BFE heights and are both greater than six feet from us.

Since 1962 this cabin has flooded 5 times. It has now been over 20 years since the last time and I am looking forward to mitigate that risk.

I would like to begin this project in April 2022.



## PLANNING APPLICATION

**Applicant**  (Check Box if Same as Property Owner)

Name: JEFF GUNNESS Phone: 503-244-6438  
 Address: 12604 SW 61ST PLACE  
 City: PORTLAND State: OR Zip: 97219  
 Email: jeffgunness@gmail.com

**Property Owner**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Email: \_\_\_\_\_

OFFICE USE ONLY	
Date Stamp	
<input type="checkbox"/> Approved	<input type="checkbox"/> Denied
Received by:	<u>JS</u>
Receipt #:	<u>120877</u>
Fees:	<u>983.00</u>
Permit No:	<u>85121-00230-PLNG</u>

Request: Request APPROVAL to proceed with obtaining approval to get building permit for RAISING FINISH FLOOR ELEVATION to a point 3 feet minimum above BFE. ~~##3##~~

**Type II**

- Farm/Forest Review
- Conditional Use Review
- Variance
- Exception to Resource or Riparian Setback
- Nonconforming Review (Major or Minor)
- Development Permit Review for Estuary Development
- Non-farm dwelling in Farm Zone
- Fore-dune Grading Permit Review
- Neskowin Coastal Hazards Area

**Type III**

- Appeal of Director's Decision
- Extension of Time
- Detailed Hazard Report
- Conditional Use (As deemed by Director)
- Ordinance Amendment
- Map Amendment
- Goal Exception

**Type IV**

- Appeal of Planning Commission Decision
- Ordinance Amendment
- Large-Scale Zoning Map Amendment
- Plan and/or Code Text Amendment

**Location:**

Site Address: 33765 RESORT DR. PACIFIC CITY, OR. 97135  
 Map Number: 4S1019AD00400 400  
Township Range Section Tax Lot(s)

Clerk's Instrument #: \_\_\_\_\_

**Authorization**

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

Property Owner Signature (Required) Jeff Gunness

5/10/21  
Date

Applicant Signature \_\_\_\_\_

Date \_\_\_\_\_

# ELEVATION CERTIFICATE

Important: Follow the instructions on pages 1-9.

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

SECTION A – PROPERTY INFORMATION				FOR INSURANCE COMPANY USE	
A1. Building Owner's Name GUNNESS, JEFFREY				Policy Number:	
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 33765 RESORT DRIVE				Company NAIC Number:	
City CLOVERDALE		State Oregon		ZIP Code 97112	
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) TAX LOT 400,4S-10-19-AD, TILLAMOOK COUNTY, OREGON					
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <u>RESIDENTIAL</u>					
A5. Latitude/Longitude: Lat <u>45.21083</u> Long <u>123.94972</u> Horizontal Datum: <input type="checkbox"/> NAD 1927 <input checked="" type="checkbox"/> NAD 1983					
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.					
A7. Building Diagram Number <u>7</u>					
A8. For a building with a crawlspace or enclosure(s):					
a) Square footage of crawlspace or enclosure(s) <u>765.00</u> sq ft					
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade <u>4</u>					
c) Total net area of flood openings in A8.b <u>800.00</u> sq in					
d) Engineered flood openings? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
A9. For a building with an attached garage:					
a) Square footage of attached garage _____ sq ft					
b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade _____					
c) Total net area of flood openings in A9.b _____ sq in					
d) Engineered flood openings? <input type="checkbox"/> Yes <input type="checkbox"/> No					
SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION					
B1. NFIP Community Name & Community Number TILLAMOOK COUNTY 410196			B2. County Name TILLAMOOK		B3. State Oregon
B4. Map/Panel Number 41057C0855	B5. Suffix F	B6. FIRM Index Date 09-28-2018	B7. FIRM Panel Effective/ Revised Date 09-28-2018	B8. Flood Zone(s) AE	B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) 19.6
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: <input type="checkbox"/> FIS Profile <input checked="" type="checkbox"/> FIRM <input type="checkbox"/> Community Determined <input type="checkbox"/> Other/Source: _____					
B11. Indicate elevation datum used for BFE in Item B9: <input type="checkbox"/> NGVD 1929 <input checked="" type="checkbox"/> NAVD 1988 <input type="checkbox"/> Other/Source: _____					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Designation Date: _____ <input type="checkbox"/> CBRS <input type="checkbox"/> OPA					

# ELEVATION CERTIFICATE

OMB No. 1660-0008  
Expiration Date: November 30, 2022

<b>IMPORTANT: In these spaces, copy the corresponding information from Section A.</b>			<b>FOR INSURANCE COMPANY USE</b>
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 33765 RESORT DRIVE			Policy Number:
City CLOVERDALE	State Oregon	ZIP Code 97112	Company NAIC Number

## SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on:  Construction Drawings\*  Building Under Construction\*  Finished Construction  
 \*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations – Zones A1–A30, AE, AH, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO.  
 Complete Items C2.a–h below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.

Benchmark Utilized: P.C. NO. 7 Vertical Datum: NAVD 1988

Indicate elevation datum used for the elevations in items a) through h) below.

NGVD 1929  NAVD 1988  Other/Source: \_\_\_\_\_

Datum used for building elevations must be the same as that used for the BFE.

Check the measurement used.

- |                                                                                                                               |      |                                          |                                 |
|-------------------------------------------------------------------------------------------------------------------------------|------|------------------------------------------|---------------------------------|
| a) Top of bottom floor (including basement, crawlspace, or enclosure floor)                                                   | 13.5 | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| b) Top of the next higher floor                                                                                               | 23.5 | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| c) Bottom of the lowest horizontal structural member (V Zones only)                                                           |      | <input type="checkbox"/> feet            | <input type="checkbox"/> meters |
| d) Attached garage (top of slab)                                                                                              |      | <input type="checkbox"/> feet            | <input type="checkbox"/> meters |
| e) Lowest elevation of machinery or equipment servicing the building<br>(Describe type of equipment and location in Comments) |      | <input type="checkbox"/> feet            | <input type="checkbox"/> meters |
| f) Lowest adjacent (finished) grade next to building (LAG)                                                                    | 11.4 | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| g) Highest adjacent (finished) grade next to building (HAG)                                                                   | 13.2 | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support                                  |      | <input type="checkbox"/> feet            | <input type="checkbox"/> meters |

## SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

Were latitude and longitude in Section A provided by a licensed land surveyor?  Yes  No  Check here if attachments.

Certifier's Name DOUGLAS H. KELLOW	License Number OREGON PLS 2027	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>REGISTERED PROFESSIONAL LAND SURVEYOR</b> </div> <div style="font-family: cursive; font-size: 1.2em; margin-bottom: 5px;"> <i>Douglas H Kellow</i> </div> <div style="border: 1px solid black; padding: 5px;"> <b>OREGON FEBRUARY 3, 1983 DOUGLAS H. KELLOW 2027</b> </div> <p style="font-size: 0.8em;">RENEWS: 06/30/21</p>
Title LAND SURVEYOR		
Company Name KELLOW LAND SURVEYING		
Address P.O. BOX 335		
City PACIFIC CITY	State Oregon	ZIP Code 97135
Signature <i>Douglas H Kellow</i>	Date 04-12-2021	Telephone (503) 801-3537

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments (including type of equipment and location, per C2(e), if applicable)

A8b.c.d.) OWNER AND BUILDER PROPOSE TO USE "SMART VENTS" MODEL NO. 1540-510 ENGINEERED VENTS =200 SQ. IN.

June 15, 2021

#### Development Review Criteria

1. The fill is not within a Coastal High Hazard Area.
2. As per the attached FEMA "No-Rise" hydraulic analysis, the fill will not increase flood levels.
3. The fill is necessary to facilitate construction of a new concrete foundation to raise the structure above BFE.
4. The fill will be the minimum amount needed to support the new foundation.
5. There is no feasible alternative upland location on the property. The structure is situated on a small (50' X 60') lot.
6. As per the attached FEMA "No-Rise" hydraulic analysis, the proposed project will not impact the 100-year flood elevations.
7. There is no alternative site.
8. Flood Refuge Platforms are not applicable to this project.



# Technical Memorandum

WEST Consultants, Inc.

2601 25<sup>th</sup> St. SE  
Suite 450  
Salem, OR 97302-1286  
(503) 485 5490  
(503) 485-5491 Fax  
www.westconsultants.com

**Name:** Mr. Jeff Gunness  
**Date:** 4 May 2021  
**From:** James Heyen, P.E., Project Manager  
**Subject:** Gunness Property, No-Rise Analysis and Certification



EXPIRATION DATE: 06/30/2021

## Introduction

At your request, a FEMA “No-Rise” hydraulic analysis was conducted for your property and proposed structure modifications located along the left bank of the Nestucca River at 33765 Resort Drive in Pacific City, Oregon. The property is a 0.08-acre parcel and is identified by Tillamook County as Tax lot Number 4S1019AD00400, Account Number 229121. The property is located within a Special Flood Hazard Area (SFHA) of the Nestucca River floodplain in the left overbank between FEMA lettered cross sections “E” and “F”. Further, the proposed structure lies within the regulatory floodway. The effective base flood elevation at the proposed structure site is 19.7’ and the floodway elevation is 20.1’. Both these elevations are referenced to the North American Vertical Datum of 1988. Site reconnaissance was conducted on March 9, 2021 by Lyndsey Croghan, P.E., a WEST Consultants senior hydraulic engineer. Figure 1 presents the study area and effective FEMA flood hazard mapping. All figures referenced in the text are found at the end of this memorandum.

As specified by Article 3, Section 2.03.510(9a) of the Tillamook County Code, new construction is prohibited within a regulatory floodway “unless certification is provided by a professional registered civil engineer demonstrating through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that such encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge.”

All elevations listed in this memorandum are in the North American Vertical Datum of 1988 (NAVD88).

A hydraulic study was conducted in accordance with standard engineering practice for a FEMA No-Rise analysis which indicates that the proposed structure does not result in an increase in water surface elevations during the base flood. This memorandum summarizes the analysis methodology and results.

## Analysis Approach

The hydraulic study utilized the U.S. Army Corps of Engineers' (USACE) software HEC-RAS (Hydraulic Engineering Center – River Analysis System) version 5.0.7 (USACE 2019). According to the effective Flood Insurance Study (FIS) for Tillamook County (FEMA 2018), the original hydraulic modeling of this reach of the Nestucca River was conducted by CH2M Hill in July 1977.

Procedures set forth by FEMA Region 10 call for a multi-step analysis approach for evaluating a proposed project for No-Rise certification (FEMA 2013). The steps are as follows:

1. Current Effective Model: Obtain the effective model upon which the current effective base flood elevations and floodway extents is based. Effective models are archived by FEMA.
2. Duplicate Effective Model (DEM): Use the Current Effective Model input data to create a Duplicate Effective Model to ensure that the results recorded in the effective FIS can be reproduced within an acceptable tolerance.
3. Corrected Effective Model (CEM): The Duplicate Effective Model is then modified to correct any errors and incorporate the most recent topographic information.
4. Existing Conditions Model (ECM): The Corrected Effective Model is revised to reflect any modifications that have occurred within the floodplain since the date of the original analysis but prior to the proposed project. This model should be the best depiction of existing conditions.
5. Proposed Conditions Model (PCM): The Proposed Conditions Model is to reflect conditions following the completion of the project and will be compared with the Existing Conditions Model to determine the projects effects (if any). The direct comparison of water surface elevations between the results of these two models is the basis of a No-Rise analysis.

The effective model was requested from and provided by the FEMA Engineering Library in Alexandria, VA. However, that model was an older HEC-2 model. A more recent model of the lower Nestucca River was produced by WEST Consultants, Inc. (WEST) for a Letter of Map Revision (LOMR), effective September 24, 2015. The model produced for the LOMR is considered by FEMA to be the current effective model and was used to perform the hydraulic analysis for this No-Rise analysis.

### **Effective Model**

Documentation accompanying the effective model indicates that it was produced using Geographic Information System (GIS) data available in the digital flood insurance map (DFIRM) for Tillamook County (FEMA) and topographic data available from the Oregon Department of Geologic and Mineral Industries (DOGAMI 2009). The model includes FEMA lettered cross sections A through F and 16 unlettered cross sections. Bathymetry at all cross sections was manually created to match thalweg elevations indicated in the FIS profiles and to match water surface elevations (WSE) of the original HEC-2 model. Discharges and downstream boundary conditions were set to published values in the effective Flood Insurance Study. The limits of floodway encroachments were extracted from the S\_FLD\_HAZ\_LN layer in the DFIRM.

### **Duplicate Effective Model (DEM)**

A Duplicate Effective Model (DEM) was created from a copy of the effective. Results from the DEM were compared with water surface elevations computed by the Effective Model. The DEM results are within the minimum agreement tolerance of 0.1 feet. The DEM is considered sufficient for conducting a No-Rise analysis. Table 1 presents the comparison of DEM and FIS water surface elevations.

**Table 1 - Duplicate Effective Model vs. Effective Model**

River Station (ft) and FEMA XS Letter		Regulatory Water Surface Elevation (ft)			With Floodway Water Surface Elevation (ft)		
		Effective Model	DEM	Difference (DEM – Eff. Model)	Effective Model	DEM	Difference (DEM – Eff. Model)
0	--	14.15	14.15	0.00	15.15	15.15	0.00
1,271	--	14.28	14.28	0.00	15.27	15.27	0.00
2,646	A	14.76	14.76	0.00	15.61	15.61	0.00
4,529	--	16.04	16.04	0.00	16.72	16.72	0.00
5,739	--	16.25	16.25	0.00	16.90	16.90	0.00
6,092	--	16.35	16.35	0.00	17.01	17.01	0.00
6,888	--	16.61	16.61	0.00	17.19	17.19	0.00
7,804	B	16.82	16.82	0.00	17.42	17.42	0.00
7,949	C	16.97	16.97	0.00	17.61	17.61	0.00
9,267	--	17.73	17.73	0.00	18.30	18.30	0.00
10,296	D	18.50	18.50	0.00	18.91	18.91	0.00
11,441	--	19.37	19.37	0.00	19.84	19.84	0.00
12,521	--	19.41	19.41	0.00	19.88	19.88	0.00
12,629	E	19.43	19.43	0.00	19.89	19.89	0.00
13,850	--	19.49	19.49	0.00	19.94	19.94	0.00
15,553	--	19.53	19.53	0.00	19.99	19.99	0.00
15,776	--	19.52	19.52	0.00	19.98	19.98	0.00
15,920	--	19.53	19.53	0.00	20.00	20.00	0.00
16,980	--	19.70	19.70	0.00	20.14	20.14	0.00
18,057	--	19.94	19.94	0.00	20.45	20.46	0.01
18,909	F	20.08	20.08	0.00	20.63	20.63	0.00
20,454	--	20.49	20.49	0.00	21.12	21.12	0.00

Notes: --- Indicates unlettered FEMA cross section; estimated from FIS flood profile

**Corrected Effective Model (CEM)**

The DEM was modified to create the Corrected Effective Model (CEM). The modifications consisted of adding ten additional cross sections necessary to characterize the proposed modifications to Mr. Gunness’ existing structure. Figure 2 shows the ten added cross sections. Ineffective flow definitions in the DEM were revised for the CEM to correctly depict flow in the left overbank in the vicinity of the bridge carrying Ferry Street over the river. Ineffective flow definitions were modified at cross sections 11,441 through 15,553. Slight modifications to Manning’s roughness values were also made to eliminate interpolated roughness values that remained in the DEM. Results from the CEM were compared with the water surface elevations computed by the DEM. That comparison is presented in Table 2.

**Table 2 - Corrected Effective Model vs. Duplicate Effective Model**

River Station (ft) and FEMA XS Letter		Regulatory Water Surface Elevation (ft)			With Floodway Water Surface Elevation (ft)		
		DEM	CEM	Difference (CEM - DEM)	DEM	CEM	Difference (CEM - DEM)
0	---	14.15	14.15	0.00	15.15	15.15	0.00
1,271	----	14.28	14.30	0.02	15.27	15.29	0.02
2,646	A	14.76	14.77	0.01	15.61	15.62	0.01
4,529	---	16.04	16.05	0.01	16.72	16.73	0.01
5,739	---	16.25	16.26	0.01	16.90	16.92	0.02
6,092	---	16.35	16.37	0.02	17.01	17.02	0.01
6,888	---	16.61	16.63	0.02	17.19	17.20	0.01
7,804	B	16.82	16.84	0.02	17.42	17.43	0.01
7,949	C	16.97	16.98	0.01	17.61	17.62	0.01
9,267	---	17.73	17.74	0.01	18.30	18.31	0.01
10,296	D	18.50	18.53	0.03	18.91	18.94	0.03
11,441	---	19.37	19.40	0.03	19.84	19.87	0.03
12,521	---	19.41	19.56	0.15	19.88	20.01	0.13
12,629	E	19.43	19.61	0.18	19.89	20.06	0.17
13,692	*		19.76			20.18	
13,707	*		19.76			20.18	
13,709	*		19.76			20.18	
13,734	*		19.76			20.18	
13,736	*		19.76			20.18	
13,739	*		19.76			20.18	
13,740	*		19.76			20.18	
13,743	*		19.75			20.18	
13,744	*		19.76			20.18	
13,750	*		19.76			20.18	
13,850	---	19.49	19.77	0.28	19.94	20.19	0.25
15,553	---	19.53	19.84	0.31	19.99	20.31	0.32
15,776	---	19.52	19.86	0.34	19.98	20.35	0.37
15,920	---	19.53	19.90	0.37	20.00	20.39	0.39
16,980	---	19.70	20.12	0.42	20.14	20.60	0.46
18,057	---	19.94	20.45	0.51	20.46	21.01	0.55
18,909	F	20.08	20.57	0.49	20.63	21.17	0.54
20,454	---	20.49	20.93	0.44	21.12	21.60	0.48

Notes: --- indicates unlettered FEMA cross section  
 \* indicates cross section added at subject property

As seen in Table 2, the CEM computed water surface elevations for the reach located downstream of the bridge carrying Ferry Street (River Station 12,521) compare well with the values computed by the DEM. Upstream of river station 11,441, the modifications to ineffective flow definitions and the added cross

sections resulted in CEM water surface elevation increases of up to 0.55 feet for the 1-percent annual chance flood elevations.

### **Existing Conditions Model (ECM)**

No modifications to the modeling were necessary to create the ECM as there have been no significant modifications of the floodplain along this reach of the Nestucca River since the modeling for the 2015 LOMR was conducted. The ECM is the best representation of existing conditions in the study reach and was used as the basis for determining impacts to the water surface profile, if any, caused by the proposed structure.

### **Proposed Conditions Model (PCM)**

The ECM was modified to create the PCM by adding the proposed staircase and elevating the existing deck along the river side of the structure. The proposed staircase was characterized with blocked obstructions matching the plans provided by Stricker Engineering dated 02/03/2021, which indicate an approximately 4' x 12' rectangular footprint added to the existing staircase footprint on the upstream side of the house. The deck modifications were characterized by removing the existing deck, which was modeled as a complete blocked obstruction beginning at existing grade, and replacing it with smaller blocked obstructions matching the proposed deck footings and supports. The deck will be constructed 10'-4" above existing grade (approximately elevation 22', 2'-6" above the effective BFE). A new concrete patio will be constructed to match existing grade directly beneath the proposed deck. Figures 3 and 4 depict the approximate structure dimensions and location on Mr. Guinness' property, the added cross sections, and the underlying terrain. Detailed plans for the construction are included in Appendix A.

## **Analysis Results**

Water surface elevations predicted by the ECM and PCM models were compared to determine if the proposed structure resulted in a rise in water surface elevations for either the base flood or the floodway. Table 3 presents the computed water surface elevations for the ECM and PCM, and the calculated difference. As the table indicates, the proposed construction on Mr. Guinness' property will not result in a rise in water surface elevations along the Nestucca River for either the base flood or the floodway. A FEMA No-Rise Certificate is provided in Figure 5. Supporting data, including the effective FEMA flood hazard mapping and select model cross sections, are included in Appendix A.

**Table 3 - Proposed Conditions vs. Existing Conditions**

River Station (ft) and FEMA XS Letter		Regulatory Water Surface Elevation (ft)			With Floodway Water Surface Elevation (ft)		
		ECM	PCM	Difference (PCM - ECM)	ECM	PCM	Difference (PCM - ECM)
0	---	14.15	14.15	0.00	15.15	15.15	0.00
1,271	---	14.30	14.30	0.00	15.29	15.29	0.00
2,646	A	14.77	14.77	0.00	15.62	15.62	0.00
4,529	---	16.05	16.05	0.00	16.73	16.73	0.00
5,739	---	16.26	16.26	0.00	16.92	16.92	0.00
6,092	---	16.37	16.37	0.00	17.02	17.02	0.00
6,888	---	16.63	16.63	0.00	17.20	17.20	0.00
7,804	B	16.84	16.84	0.00	17.43	17.43	0.00
7,949	C	16.98	16.98	0.00	17.62	17.62	0.00
9,267	---	17.74	17.74	0.00	18.31	18.31	0.00
10,296	D	18.53	18.53	0.00	18.94	18.94	0.00
11,441	---	19.40	19.40	0.00	19.87	19.87	0.00
12,521	---	19.56	19.56	0.00	20.01	20.01	0.00
12,629	E	19.61	19.61	0.00	20.06	20.06	0.00
13,692	*	19.76	19.76	0.00	20.18	20.18	0.00
13,707	*	19.76	19.76	0.00	20.18	20.18	0.00
13,709	*	19.76	19.76	0.00	20.18	20.18	0.00
13,734	*	19.76	19.76	0.00	20.18	20.18	0.00
13,736	*	19.76	19.76	0.00	20.18	20.18	0.00
13,739	*	19.76	19.76	0.00	20.18	20.18	0.00
13,740	*	19.76	19.76	0.00	20.18	20.18	0.00
13,743	*	19.75	19.75	0.00	20.18	20.18	0.00
13,744	*	19.76	19.76	0.00	20.18	20.18	0.00
13,750	*	19.76	19.76	0.00	20.18	20.18	0.00
13,850	---	19.77	19.77	0.00	20.19	20.19	0.00
15,553	---	19.84	19.84	0.00	20.31	20.31	0.00
15,776	---	19.86	19.86	0.00	20.35	20.35	0.00
15,920	---	19.90	19.90	0.00	20.39	20.39	0.00
16,980	---	20.12	20.12	0.00	20.60	20.60	0.00
18,057	---	20.45	20.45	0.00	21.01	21.01	0.00
18,909	F	20.57	20.57	0.00	21.17	21.17	0.00
20,454	---	20.93	20.93	0.00	21.60	21.60	0.00

Notes: --- indicates unlettered FEMA cross section  
 \* indicates cross section added at subject property

If you have any questions, please feel free to contact me by phone at (503) 485-5490, or by email at [jheyen@westconsultants.com](mailto:jheyen@westconsultants.com).

## References

U.S. Army Corps of Engineers, Hydrologic Engineering Center; HEC-RAS, River Analysis System, Software Version 5.0.7; March 2019

U.S. Department of Homeland Security, Federal Emergency Management Agency; Flood Insurance Study for Tillamook County, OR and Incorporated Areas, 41057C002A, Vol. 1 and 2; Effective September 28, 2018

U.S. Department of Homeland Security, Federal Emergency Management Agency; Letter of Map Revision, Case No. 14-10-1727P; Effective September 24, 2015

U.S. Department of Homeland Security, Federal Emergency Management Agency, Region X; Procedures for “No-Rise” Certification for Proposed Developments in the Regulatory Floodway; October 2013

Oregon Department of Geology and Mineral Industries; Light Detection and Ranging (LiDAR) data; OLC North Coast 2020; Published October 1, 2009

## Figures

**Figure 1 – Study Area with Effective FEMA Flood Hazard Mapping**

**Figure 2 – Cross Sections Added for CEM**

**Figure 3 – Approximate Area of Proposed Construction**

**Figure 4 – Project Site with Terrain and Proposed Construction Footprint**

**Figure 5 – FEMA No-Rise Certificate**

## Appendix A

**Effective FIRM Panel**

**Effective Floodway Data Table**

**Preliminary Construction Plans by Stricker Engineering (excerpt)**

**HEC-RAS Cross Section Plots, Existing and Proposed Conditions**



# Figures

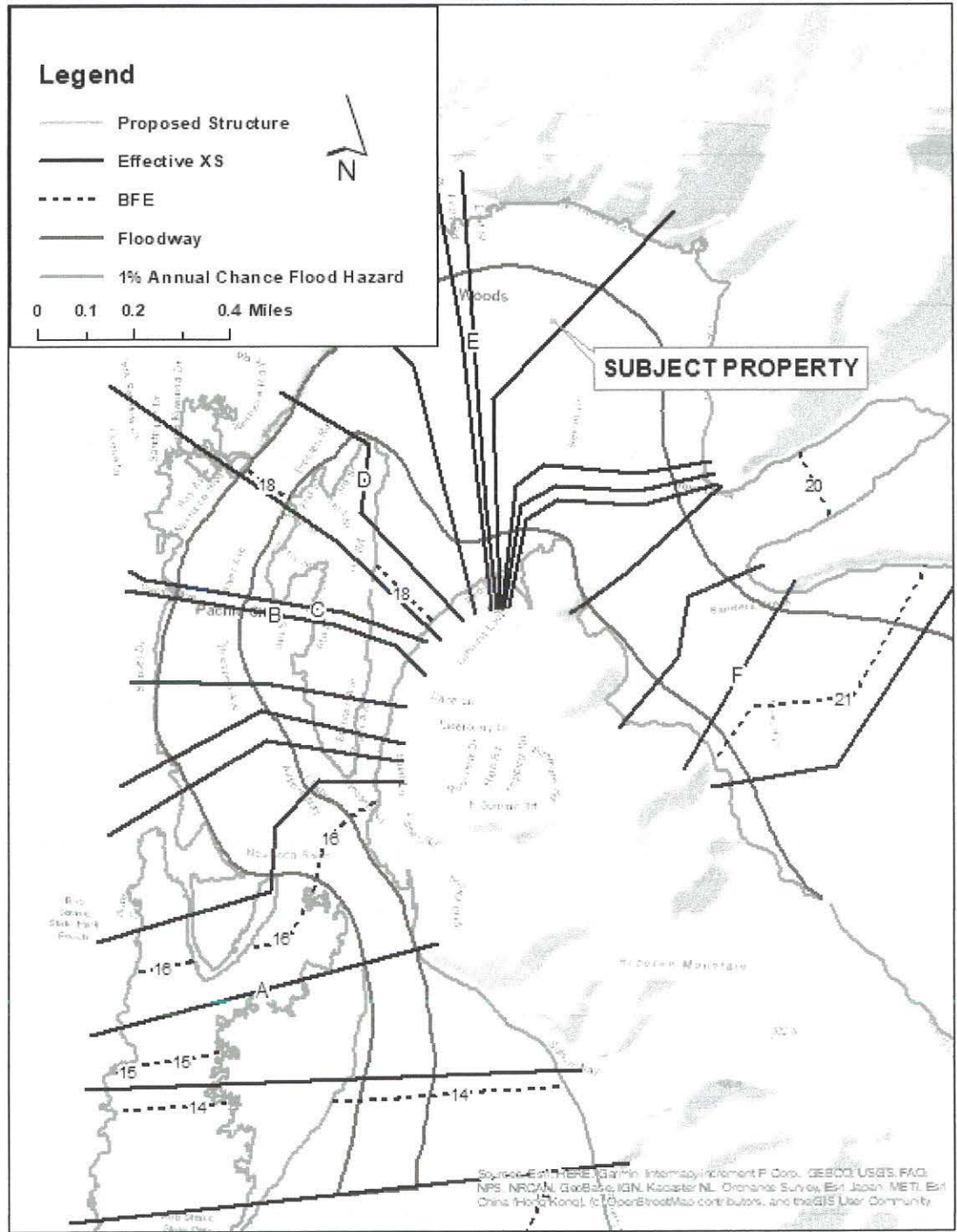


Figure 1 - Study Area with Effective FEMA Flood Hazard Mapping

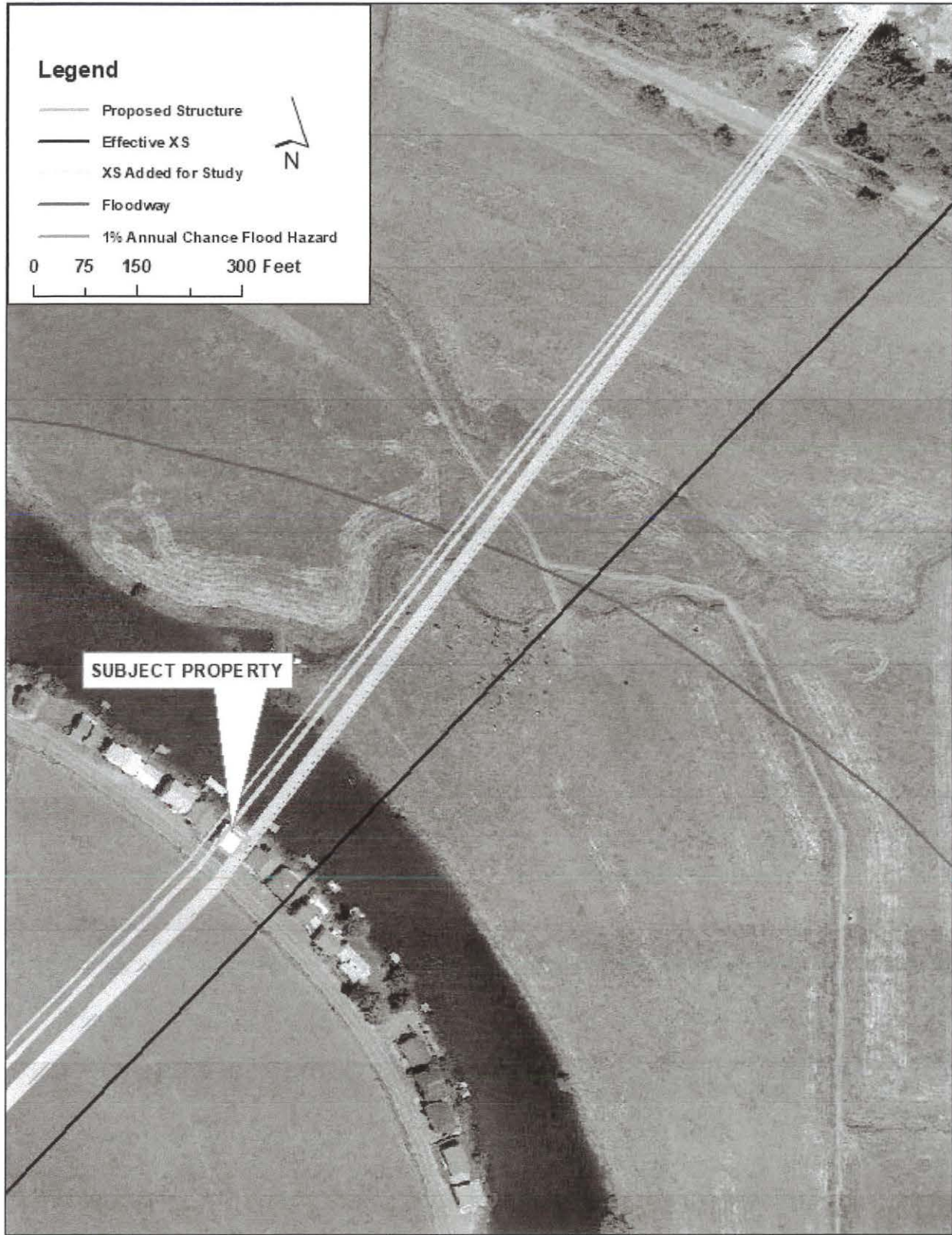


Figure 2 - Cross Sections Added for CEM

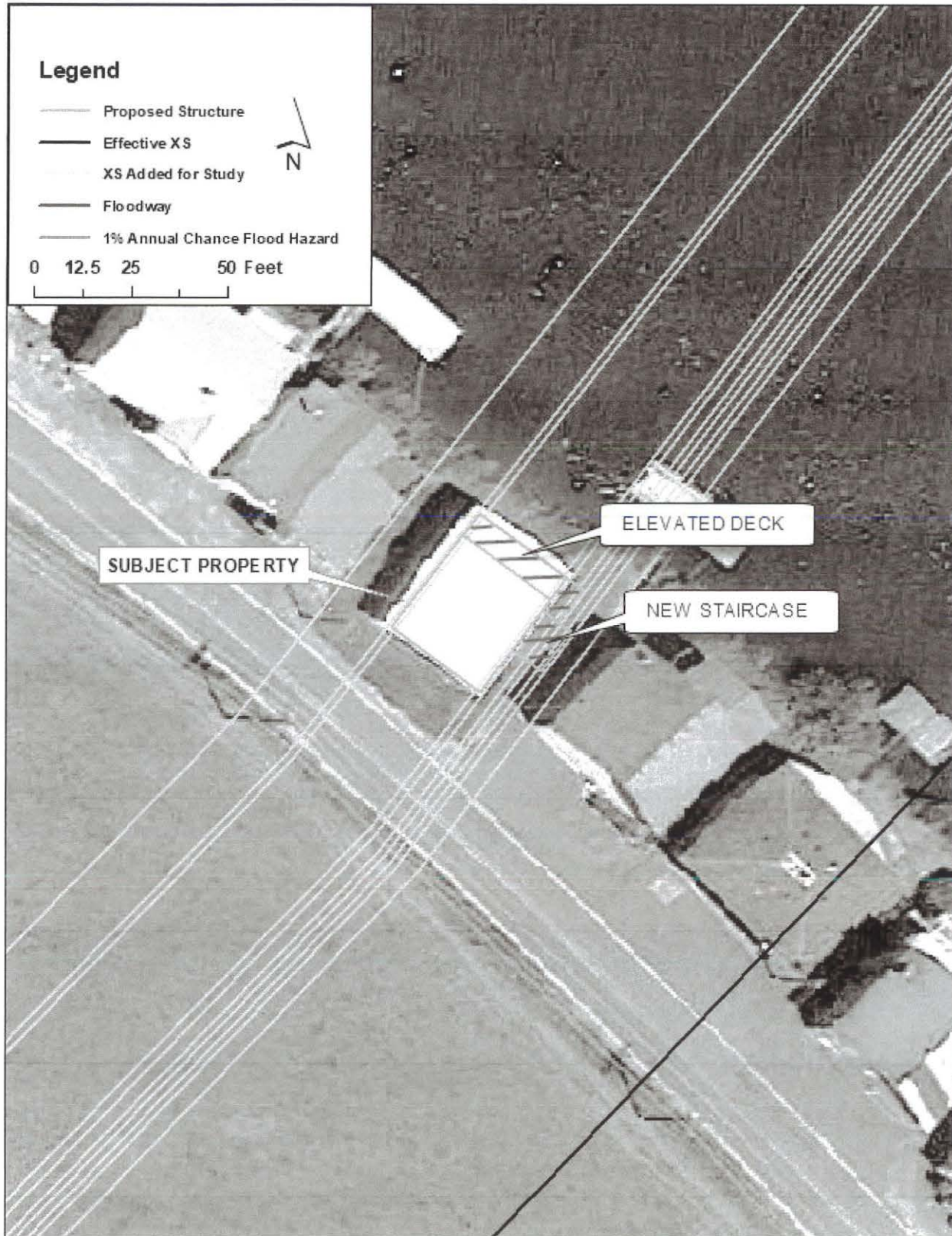


Figure 3 – Approximate Area of Proposed Construction

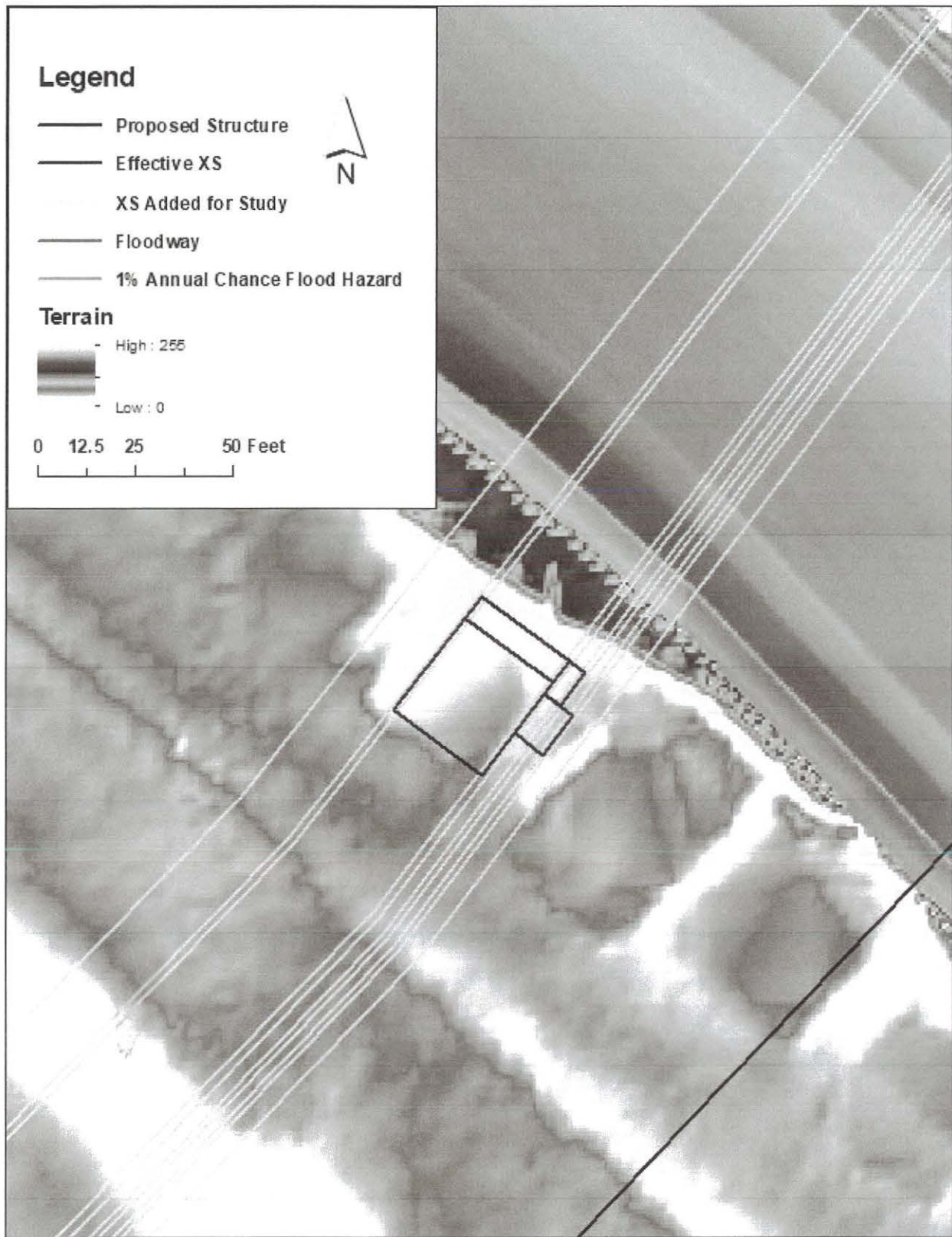


Figure 4 – Project Site with Terrain and Proposed Construction Footprint

ENGINEERING "NO-RISE" CERTIFICATION

This is to certify that I am a duly qualified engineer licensed to practice in the State of Oregon.

It is to further certify that the attached technical data supports the fact that the proposed deck construction at Tillamook County Tax lot 4S1019AD00400 will  
*(Name of Development)*

not impact the 100-year flood elevations, floodway elevations and floodway widths on the Nestucca River at published sections  
*(Name of Stream)*

in the Flood Insurance Study for Tillamook Co. & Incorporated Areas (41057CV001A),  
*(Name of Community)*

dated September 28, 2018 and will not impact the 100-year flood elevations, floodway elevations, and floodway widths at unpublished cross-sections in the vicinity of the proposed development.

Attached are the following documents that support my findings:

Technical Memorandum by WEST Consultants, Inc. dated May 4, 2021.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Date) May 4, 2021

(Signature)



(Title) Project Manager

WEST Consultants, Inc.

2601 25<sup>th</sup> Street

Suite 450

Salem, OR 97302

(Address)



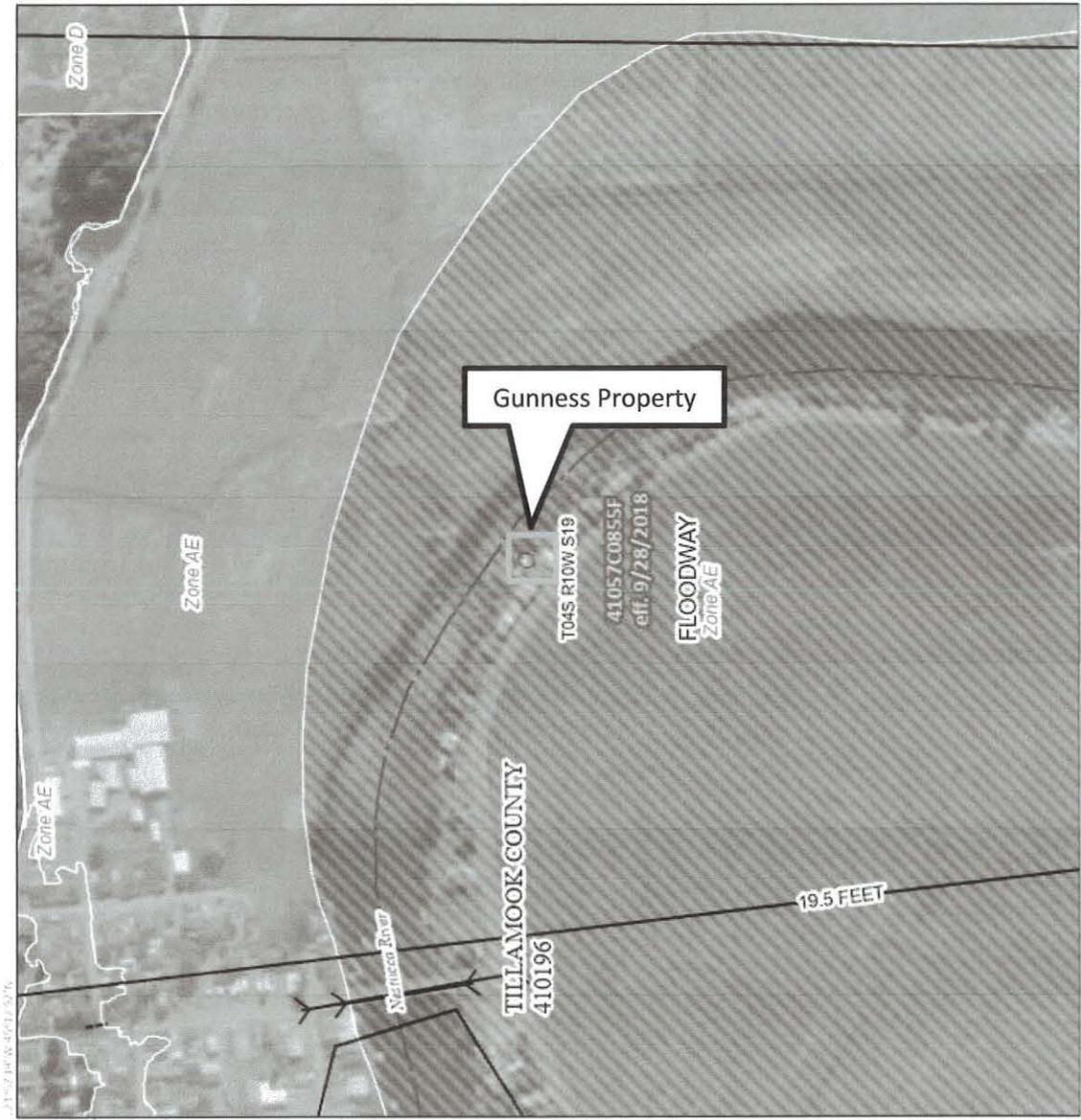
EXPIRATION DATE: 06/30/2021

Figure 5 – FEMA No-Rise Certificate

## Appendix A

# Effective FEMA FIRM Panel

## National Flood Hazard Layer FIRMette



### Legend

- SECTION FOR DEWAUD LEGEND AND NECK MAP FOR FIRM PANEL (CROSS)
- SPECIAL FLOOD HAZARD AREAS**
- Without Base Flood Elevation (BFE) Zone AE, Zone D
  - With BFE or Depth Zone AE, Zone D, Zone X
  - Regulatory Floodway
- OTHER AREAS OF FLOOD HAZARD**
- 0.2% Annual Chance Flood Hazard Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile (Zone X)
  - Future Conditions (1% Annual)
  - Chance Flood Hazard (Zone X)
  - Area with Reduced Flood Risk due to Levees. See Notes. (Zone X)
  - Area with Flood Risk due to Levees (Zone X)
- OTHER AREAS**
- No Screen
  - Area of Minimal Flood Hazard (Zone X)
  - Effective LOMRS
  - Area of Undetermined Flood Hazard (Zone X)
- GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- OTHER FEATURES**
- Cross Sections with 1% Annual Chance Water Surface Elevation
  - Coastal Transsect
  - Base Flood Elevation Line (BFE)
  - Limit of Study
  - Jurisdiction Boundary
  - Coastal Transsect Baseline
  - Profile Baseline
  - Hydrographic Feature
- MAP PANELS**
- Digital Data Available
  - No Digital Data Available
  - Unmapped
- The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.
- This map complies with FEMA's standards for the use of digital flood maps. If it is not valid as described below. The basemap shown complies with FEMA's basemap accuracy standards.
- The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/28/2021 at 10:30 PM, and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.
- This map is sold as one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unpopulated areas cannot be used for regulatory purposes.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map Orthoimagery. Data refreshed: October, 2020

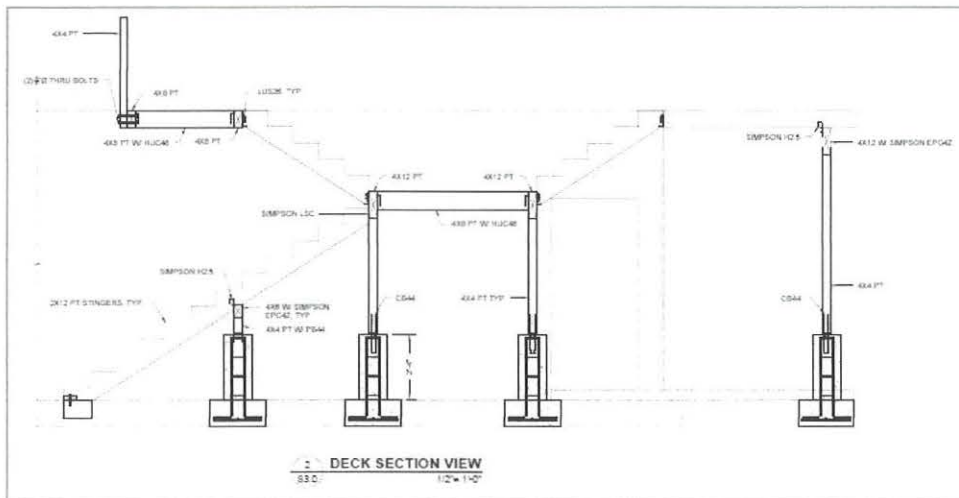
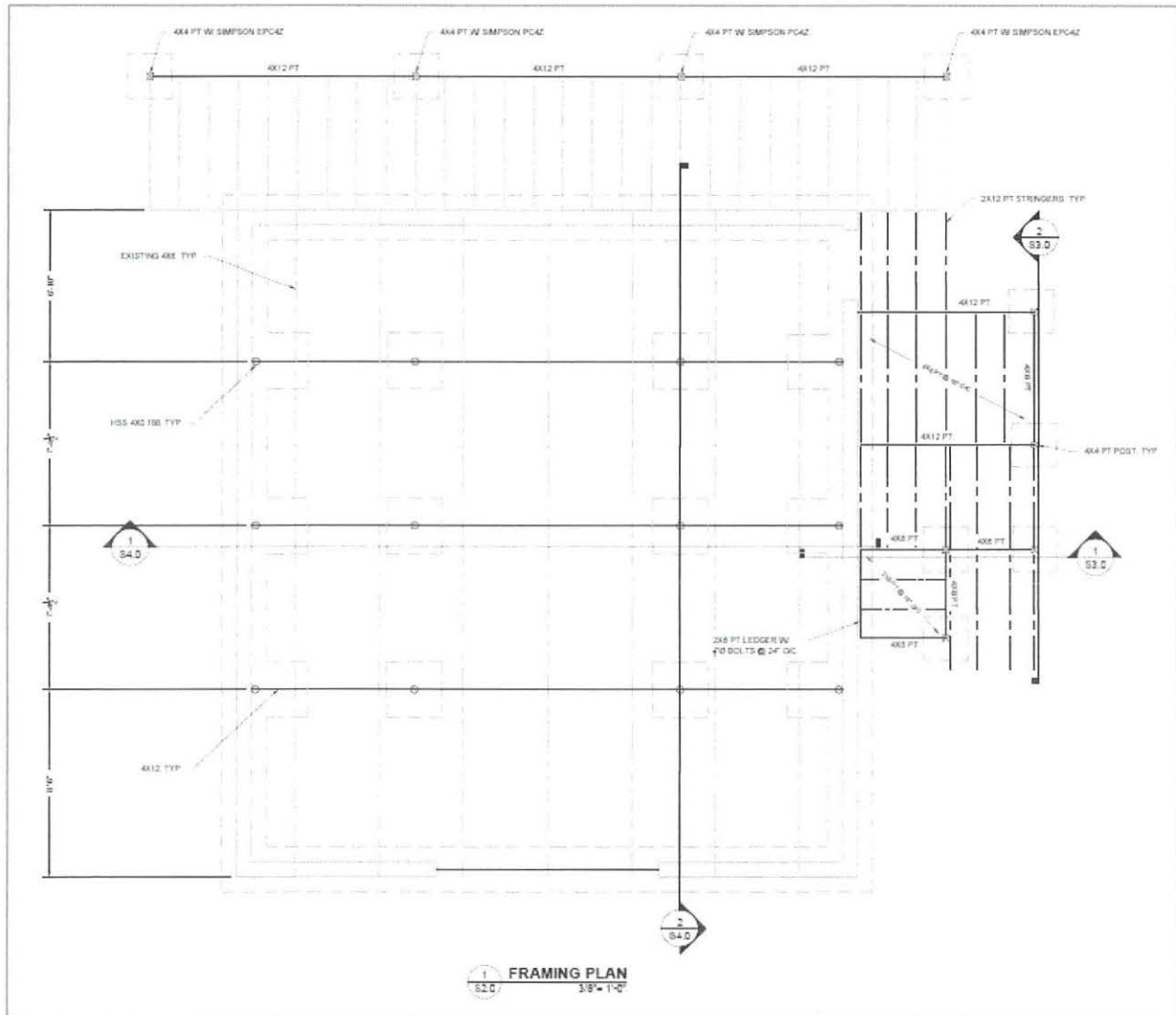


LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	2,647	607	7,750	6.9	14.9	14.9	15.7	0.8
B	7,805	764	8,765	6.9	16.9	16.9	17.5	0.6
C	7,949	783	8,221	7.3	17.1	17.1	17.7	0.6
D	10,296	700	8,046	7.2	18.6	18.6	19.0	0.4
E	12,629	2,925	36,571	2.4	19.5	19.5	20.0	0.5
F	18,909	1,418	15,555	5.7	20.2	20.2	20.7	0.5
G	24,140	4,186	45,222	1.1	22.3	22.3	23.3	1.0
H	28,300	4,256	43,463	1.1	23.1	23.1	24.1	1.0
I	32,000	3,965	32,222	1.5	24.3	24.3	25.3	1.0
J	34,205	2,020	17,839	2.7	25.5	25.5	26.5	1.0
K	36,400	1,657	13,236	3.6	27.3	27.3	28.3	1.0
L	37,600	451	6,773	7.1	28.6	28.6	29.6	1.0
M	41,950	1,874	16,114	2.9	31.5	31.5	32.4	0.9
N	45,620	1,020	12,882	3.6	32.7	32.7	33.7	1.0
O	48,480	1,033	11,134	4.2	34.4	34.4	35.4	1.0
P	52,980	605	8,356	5.5	38.3	38.3	39.3	1.0
Q	55,350	297	6,473	6.3	41.1	41.1	42.1	1.0
R	57,350	780	7,772	5.2	43.8	43.8	44.8	1.0
S	58,995	235	7,785	5.1	45.5	45.5	46.3	0.8
T	60,400	392	6,738	5.9	46.6	46.6	47.5	0.9
U	61,700	415	6,638	6.0	48.0	48.0	48.9	0.9
V	63,105	227	3,549	11.3	49.2	49.2	50.0	0.8
W	65,200	169	2,827	14.0	52.9	52.9	53.2	0.3
X	67,185	344	4,958	8.0	58.4	58.4	58.5	0.1

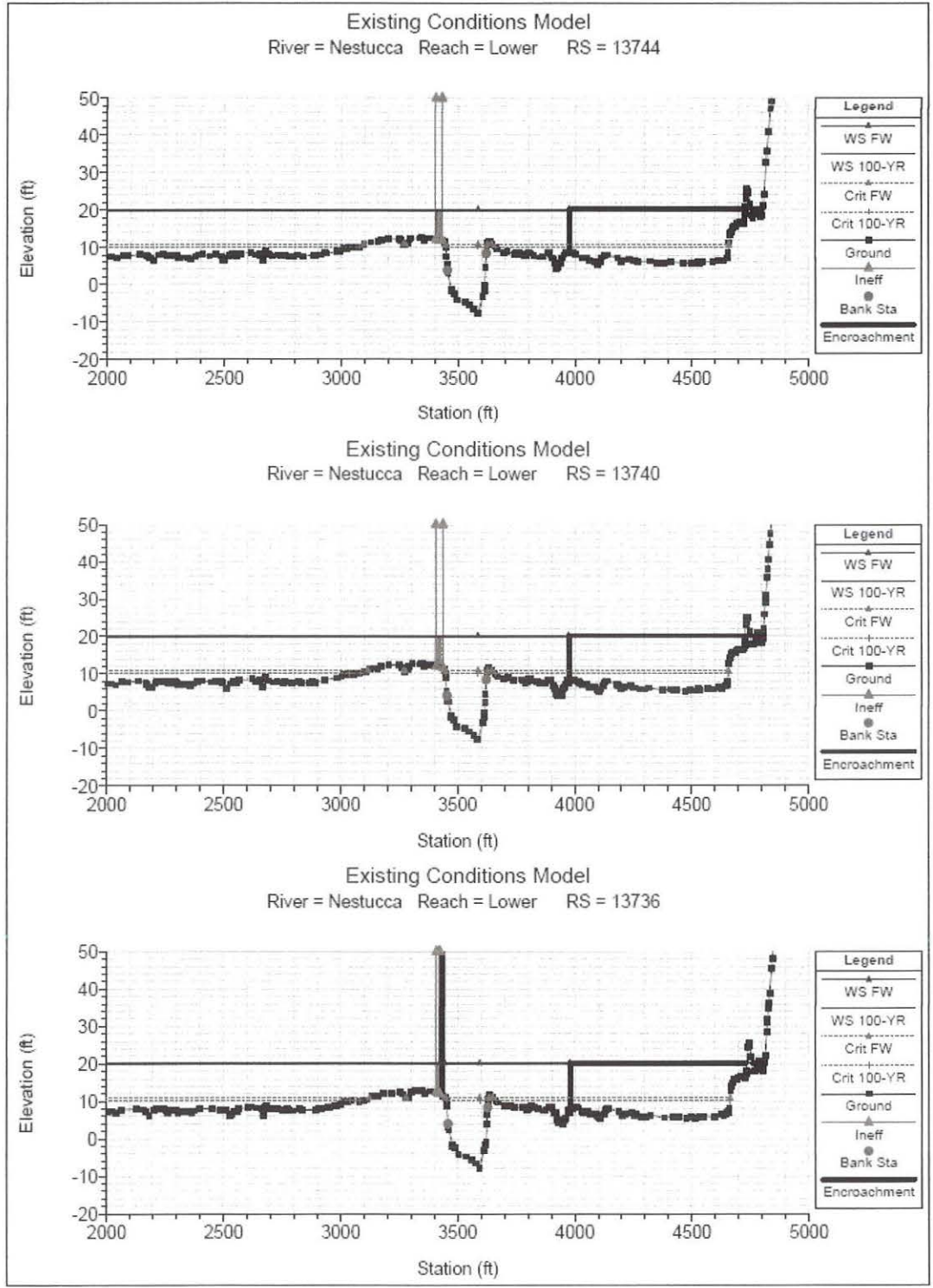
<sup>1</sup>Feet above Nestucca Bay

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY <b>TILLAMOOK COUNTY, OREGON</b> AND INCORPORATED AREAS	<b>FLOODWAY DATA</b>
		FLOODING SOURCE: NESTUCCA RIVER

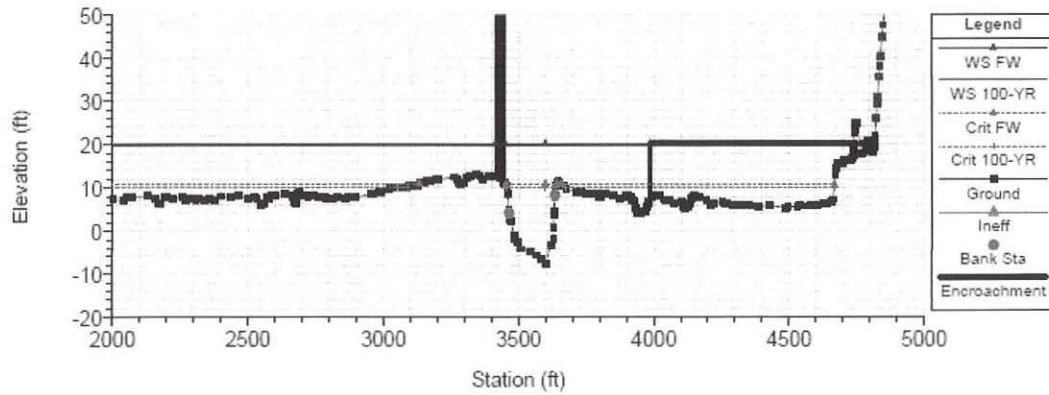
Preliminary Construction Plans by Stricker Engineering (excerpt)



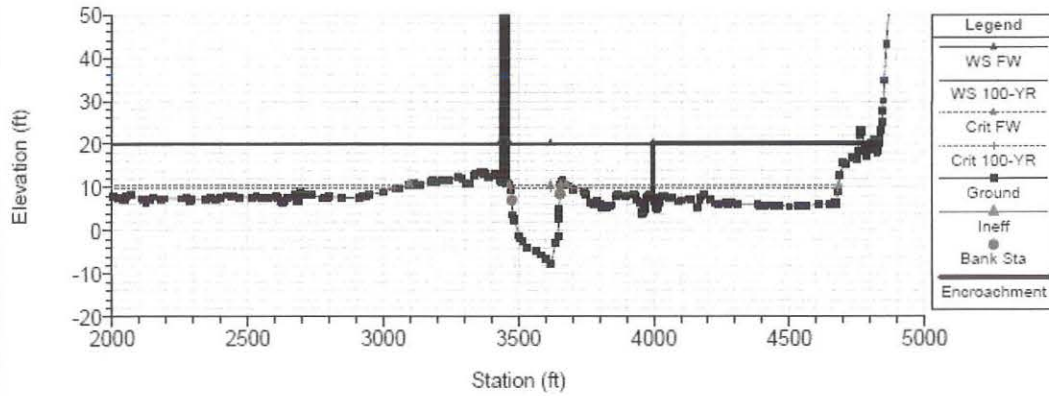
# HEC-RAS Cross Section Plots – Existing Conditions



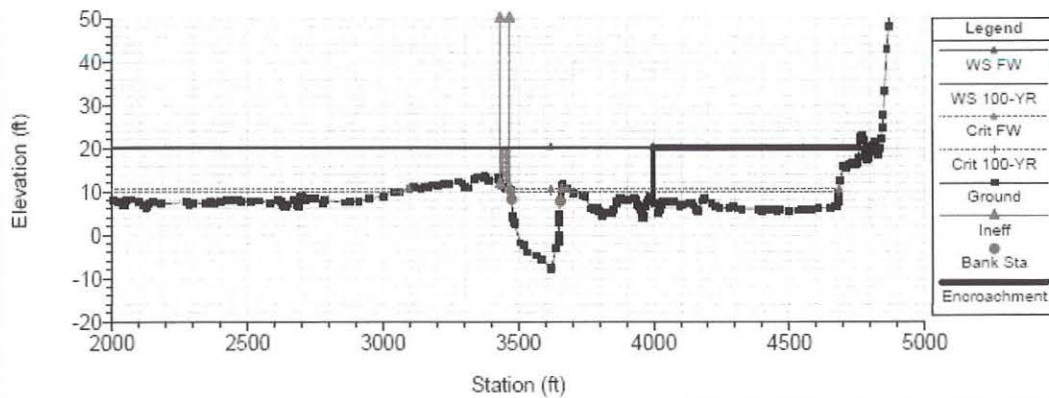
Existing Conditions Model  
 River = Nestucca Reach = Lower RS = 13734



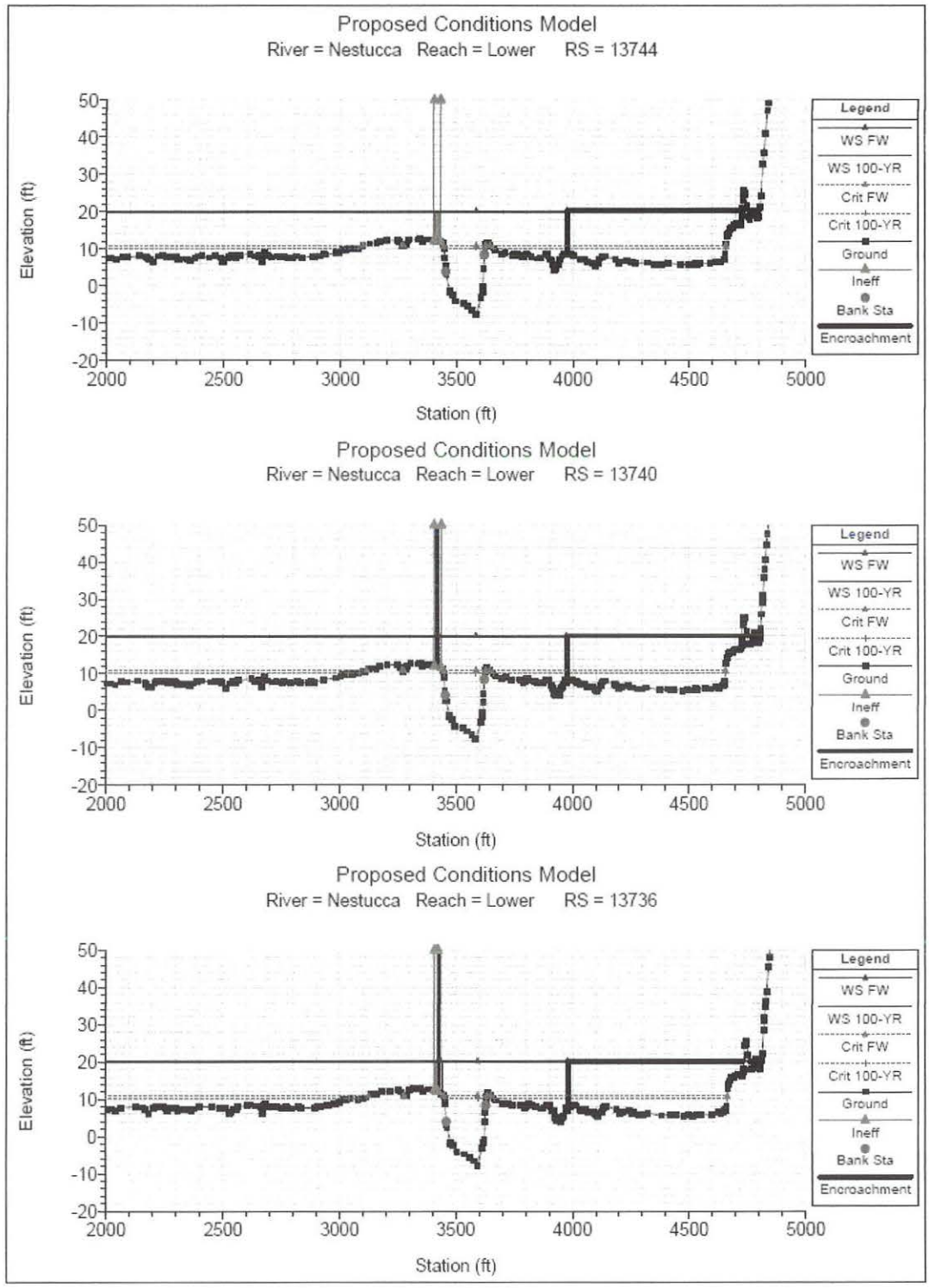
Existing Conditions Model  
 River = Nestucca Reach = Lower RS = 13709



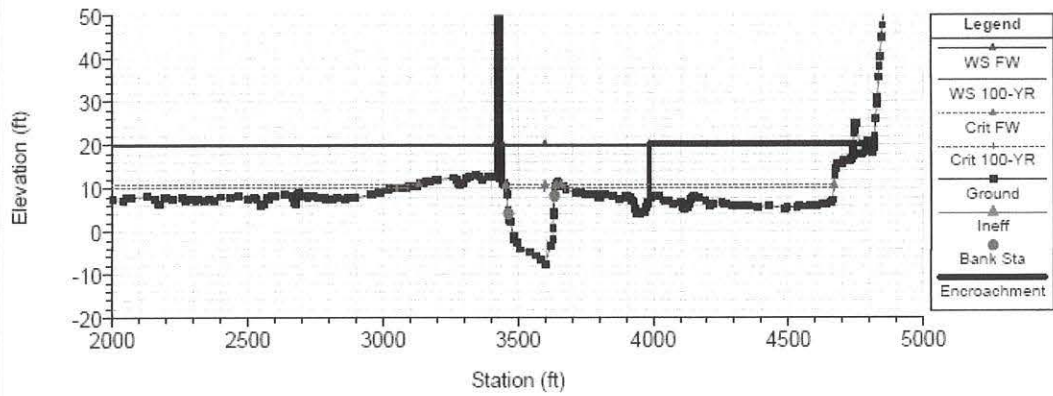
Existing Conditions Model  
 River = Nestucca Reach = Lower RS = 13707



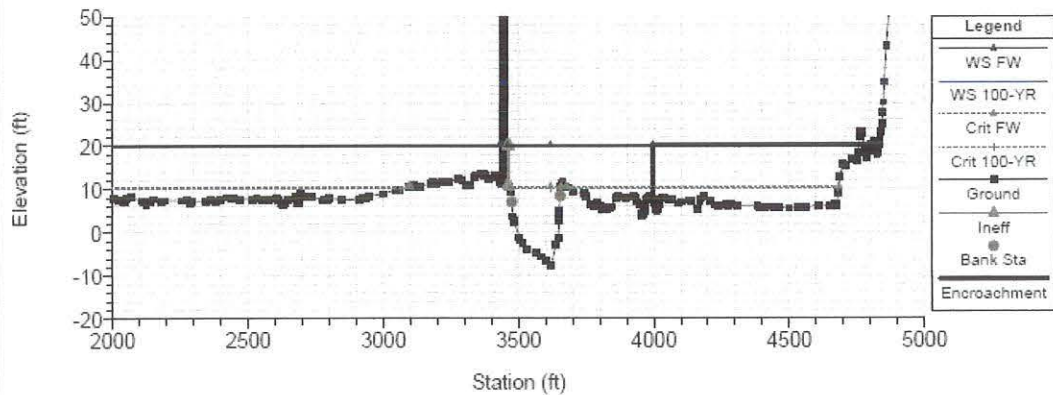
# HEC-RAS Cross Section Plots – Proposed Conditions



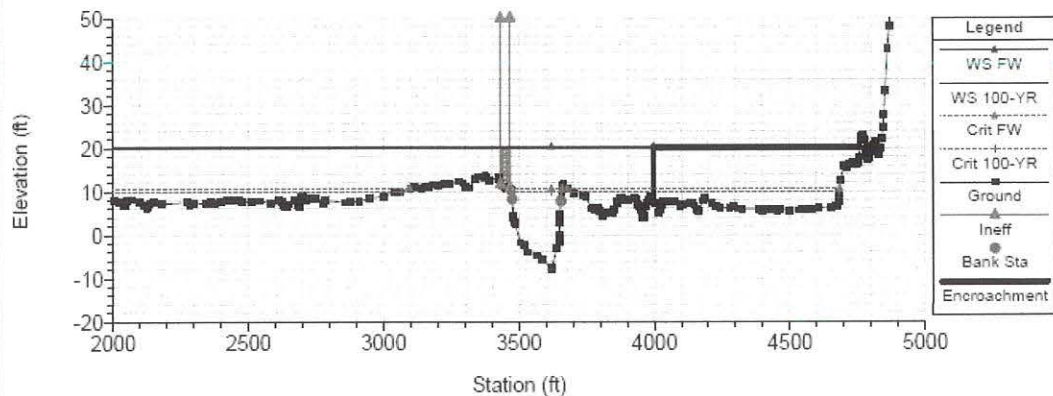
Proposed Conditions Model  
 River = Nestucca Reach = Lower RS = 13734



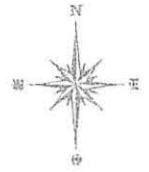
Proposed Conditions Model  
 River = Nestucca Reach = Lower RS = 13709



Proposed Conditions Model  
 River = Nestucca Reach = Lower RS = 13707



TAX LOT 300



SCALE: 1"=20'  
DATE: APRIL 12, 2021

PROPOSED REMODEL FOR JEFF GUNNESS

IN TAX LOT 400, 4S-10-19-AD, TILLAMOOK CO., OR  
PROPOSED REMODEL: MAINTAIN THE SAME HOUSE FOOTPRINT  
BUT, RAISE THE FINISH FLOOR ELEVATION TO A POINT 3 FEET  
MINIMUM ABOVE THE BASE FLOOD ELEVATION.

GUNNESS  
TAX LOT 400

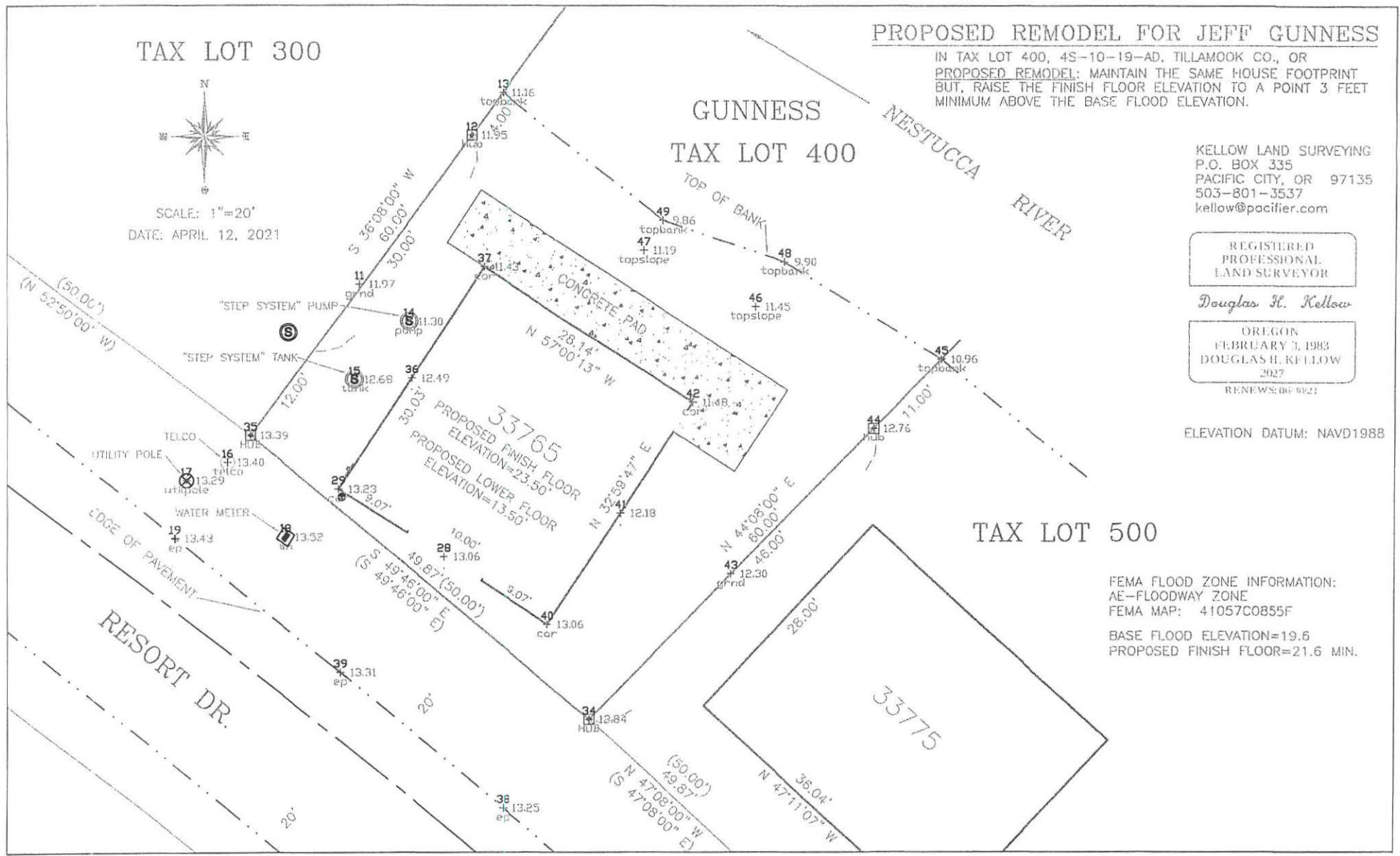
KELLOW LAND SURVEYING  
P.O. BOX 335  
PACIFIC CITY, OR 97135  
503-801-3537  
kellow@pacifier.com

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

Douglas H. Kellow

OREGON  
FEBRUARY 3, 1983  
DOUGLAS H. KELLOW  
2027  
RENEWS: 06/09/21

ELEVATION DATUM: NAVD1988



TAX LOT 500

FEMA FLOOD ZONE INFORMATION:  
AE-FLOODWAY ZONE  
FEMA MAP: 41057C0855F  
BASE FLOOD ELEVATION=19.6  
PROPOSED FINISH FLOOR=21.6 MIN.