VENETA oregon Inc.1962

September 13, 2023

City of Veneta
PO Box 458
Veneta, OR 97487

Re: Floodplain Development Permit (City File No. FP-1-23)

To whom it may concern:

On September 13, 2023, the Building and Planning Official **approved** the Floodplain Development Permit for Map and Tax Lot 17-06-36-00-00602 to place fill to elevate portions of the lot above the base flood elevation (BFE).

The decision of the Building and Planning Official was made following the procedures laid out for Type I Procedures in Veneta Land Development Ordinance No. 493, Section 11.05. A Type I Decision is final on the date it is signed by the Director, with no right to a local appeal. Therefore, this decision is final as of September 15, 2023.

If you have any questions concerning this letter or the decision, you may contact me at 541-935-2191 or at mlaird@ci.veneta.or.us.

Sincerely,

Matt Laird
Community Development Director
City of Veneta

CC: Planning File

Exhibits:
A: August 8, 2023 - Technical Memorandum "No Rise Analysis"
B: May 15, 2023 - Existing Conditions Topographic Survey

EXHIBIT "A"

TECHNICAL MEMORANDUM

WEST Consultants, Inc.
2601 25th St. SE
Suite 450
Salem, OR 97302-1286
(503) 485-5490
(503) 485-5491 Fax
www.westconsultants.com

WEST CONSULTANTS
WATER | ENVIRONMENTAL | SEDIMENTATION | TECHNOLOGY

REGISTERED PROFESSIONAL ENGINEER
85518PE
Kenneth D Puhn
OREGON
MAY 21, 2014
KENNETH D. PUHN
EXPIRES: 12/31/2024

To: Matt Laird, Lane Branch, PE
Date: August 8, 2023
From: Ken Puhn, PE, CFM
Reviewed: Hans Hadley, PE, CFM, Vice President
Subject: No-Rise Analysis for Lot 602 in Veneta, Oregon

Introduction

At the request of Matt Laird of the City of Veneta (City), WEST Consultants (WEST) has conducted a "No-Rise" hydraulic analysis for Lot 602 in Veneta, Oregon. Lot 602 is located immediately east of 8th Steet, between Jack Kelly Drive to the north, and the railroad line to the south. Based on FEMA Flood Insurance Rate Map (FIRM) panel number 41039C1086F (effective on June 2, 1999), Lot 602 is within a FEMA Zone AE Special Flood Hazard Area (SFHA) for the Long Tom River. No floodway has been designated for the study area. The City would like to place fill to elevate portions of the lot above the FEMA base flood elevation (BFE) to allow for development. The study area and effective floodplain boundaries are shown in **Figure 1** and **Figure 2.** All figures referenced in the text are found in **Appendix A** located at the end of this memorandum. Unless otherwise stated, all elevations referenced herein are based on the North American Vertical Datum of 1988 (NAVD 88).

The topography of the Long Tom River floodplain near the project site has changed significantly since the hydraulic modeling in the effective Flood Insurance Study (FIS) was completed. The construction of Highway 126 and the 8th Street overpass, which are not represented in the effective FIS, have changed the terrain in the vicinity of the study area, resulting in hydraulic isolation of Lot 602 from the FEMA 1% annual-chance (100-year) floodplain. Accordingly, the effective floodplain and BFEs near the project site are not representative of current conditions. Other significant inconsistencies are found in the effective FIS. Notably, upstream of where the Long Tom River channel crosses under the Coos Bay Rail Line and Highway 126, the existing elevated railroad grade is shown in the FIS to function as a levee and prevent water from flowing north, away from the river. However, based on inspection of LiDAR and aerial imagery, it appears that a series of large hydraulic openings exist which would convey water north under the railroad embankment and Highway 126, upstream of where the river channel crosses Highway 126.

According to the Veneta Land Development Ordinance No. 493 Section 4.13(8), the following provision applies to development within the FEMA regulatory floodplain:

> *The cumulative effect of any proposed development, where combined with all other existing and anticipated development, shall not increase the water surface elevation of the base flood more than one foot at any point.*

To satisfy the floodplain requirement of the City Land Development Ordinance, a hydraulic study was conducted in accordance with standard engineering practice for a FEMA "No-Rise" Analysis. This memorandum summarizes the analysis methodology and results.

Analysis

Since physical conditions have changed which could affect the hydraulics for the study area, a two-dimensional (2D) hydraulic model for the study area was developed using the Hydraulic Engineering Center – River Analysis System (HEC-RAS) software (version 6.3.1) software. The 2D model domain is shown in **Figure 3**. Since the effective FIS hydraulic model is only available in hard-copy format, a Duplicate Effective Model was not developed. Instead, an Existing Conditions Model was developed using channel data from the effective FIS model and overbank data from LiDAR topographic date collected between 2008 and 2015 (Watershed Sciences 2015). For the 2D mesh, a variable cell size was used, which ranged from 20 feet within the Long Tom River channel to 50 feet in the overbanks, for a total of 52,940 cells within the model domain. Since the downstream boundary of the model is located in a Zone A floodplain where BFEs have not been established in the FIS, a normal depth condition with a friction slope of 0.0015 (based on local topography) was used. Manning's n values were estimated from field observations, aerial imagery, and engineering judgement. Seven bridge openings and three culverts that convey flow from south to north across the railroad and Highway 126 were included in the model. The size of most of the openings was estimated using LiDAR and aerial imagery. A large overflow channel culvert that conveys flow under Highway 126, is located just west of Lot 602, and was considered important for defining an updated BFE near the project site. Accordingly, this culvert was surveyed by Branch Engineering in 2023 to ensure accuracy of the modeled BFE in this area.

Based on the FIS 1% annual chance (100-year) discharge of 8,310 cfs, the hydraulic model results indicated a BFE of 385.8 feet immediately west of the 8th Street overpass. This BFE is noted to be approximately 3.8 feet lower than the effective FIS BFE at that location (389.6 feet). The updated hydraulic modeling shows that Lot 602 is hydraulically isolated from the newly developed 100-year floodplain. The low point in the local topography that would need to be overtopped to allow water to flow east to Lot 602 is located at the intersection of Highway 126 and 8th Street. Based on review of the available LiDAR data and survey data collected by Branch, the low point is approximately 392.3 feet, which is approximately 2.7 feet above the effective FIS BFE at that location and 6.5 feet above WEST's modeled BFE. Branch also surveyed underneath the 8th Street railroad line overpass, which has a lowest ground elevation of 397.6 feet, which is approximately 8 feet above the effective FIS BFE and 11.8 feet above WEST's modeled BFE. Since no other conveyance structures exist that could pass flow under 8th Street, this indicates that the project site is hydraulically isolated (**Figure 4**). Some portions of Lot 602 are lower than WEST's modeled BFE (lowest existing site elevation is 383.4 feet); however, floodwaters cannot reach the site due to the 8th Street roadway prism. In the event that seepage occurs through the fill that comprises the 8th Street

roadway prism, allowing floodwaters east of 8th Street, water would pond and not be conveyed through the area to the east of 8th Street (including Lot 602). This is because this area has no downstream outlet due to the naturally occurring high ground to the east and south, as well as the highway roadway embankment to the north. Accordingly, under those conditions the no-rise condition is still met.

Conclusions

A hydraulic analysis was completed for the Long Tom River in the vicinity of Lot 602 and the City of Veneta. Comparison of modeled flood elevations to the terrain near Lot 602 shows that the proposed project site is hydraulically isolated from the Long Tom River floodwaters. Therefore, fill placed on the lot will not cause an increase in base flood water surface elevations during the occurrence of the 1% annual chance (100-year) flood event. Accordingly, any proposed fill within Lot 602 will be in compliance with Veneta Land Development Ordinance No. 493 Section 4.13(8). A FEMA Engineering No-Rise Certificate for the project is provided in **Figure 5**.

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

References

Federal Emergency Management Agency (FEMA), Flood Insurance Study for Lane County, Oregon and Incorporated Areas, June 5, 2020.

Watershed Sciences, Veneta LiDAR data, Acquired Aug 31, 2008-Jul 01, 2009; Sep 05, 2013-Jun 08, 2015. Accessed via DOGAMI online.

U.S. Army Corps of Engineers, Hydrologic Engineering Center; HEC-RAS, River Analysis System, Software Version 6.3.1; September 2022

Appendix A
Figures

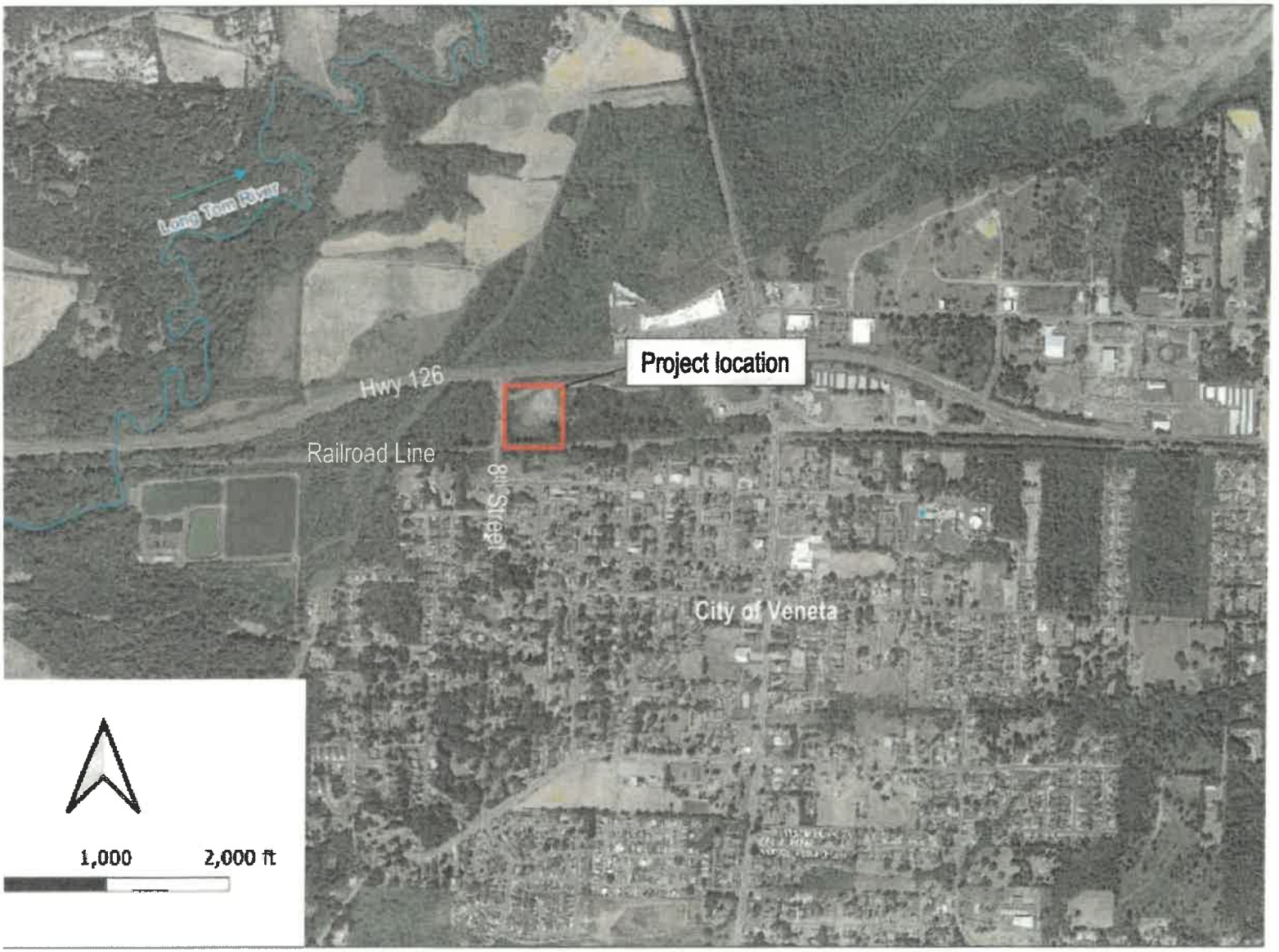


Figure 1 – Project Location Map

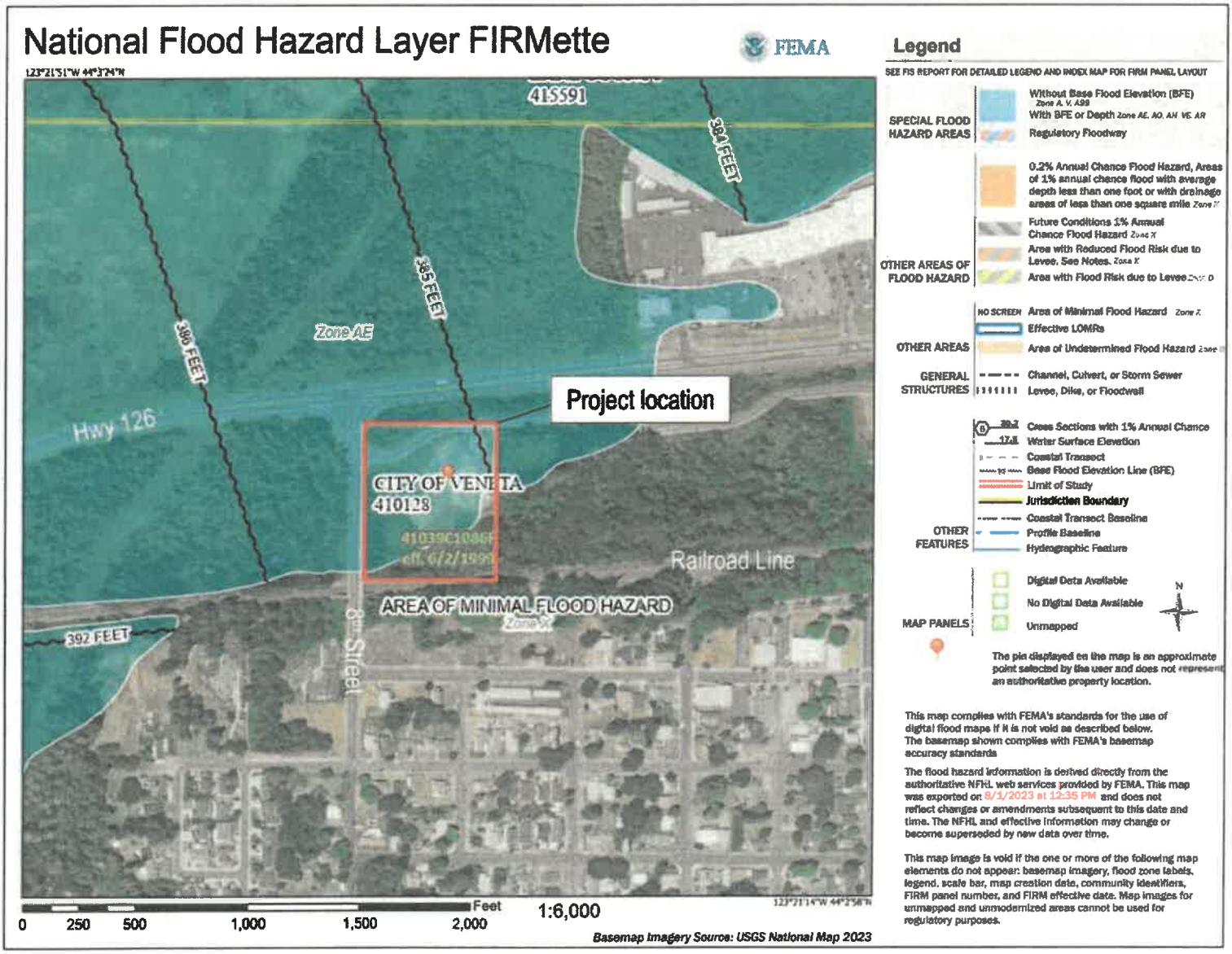


Figure 2 – FEMA FIRMette (Note: FEMA BFEs shown in NGVD29 vertical datum)

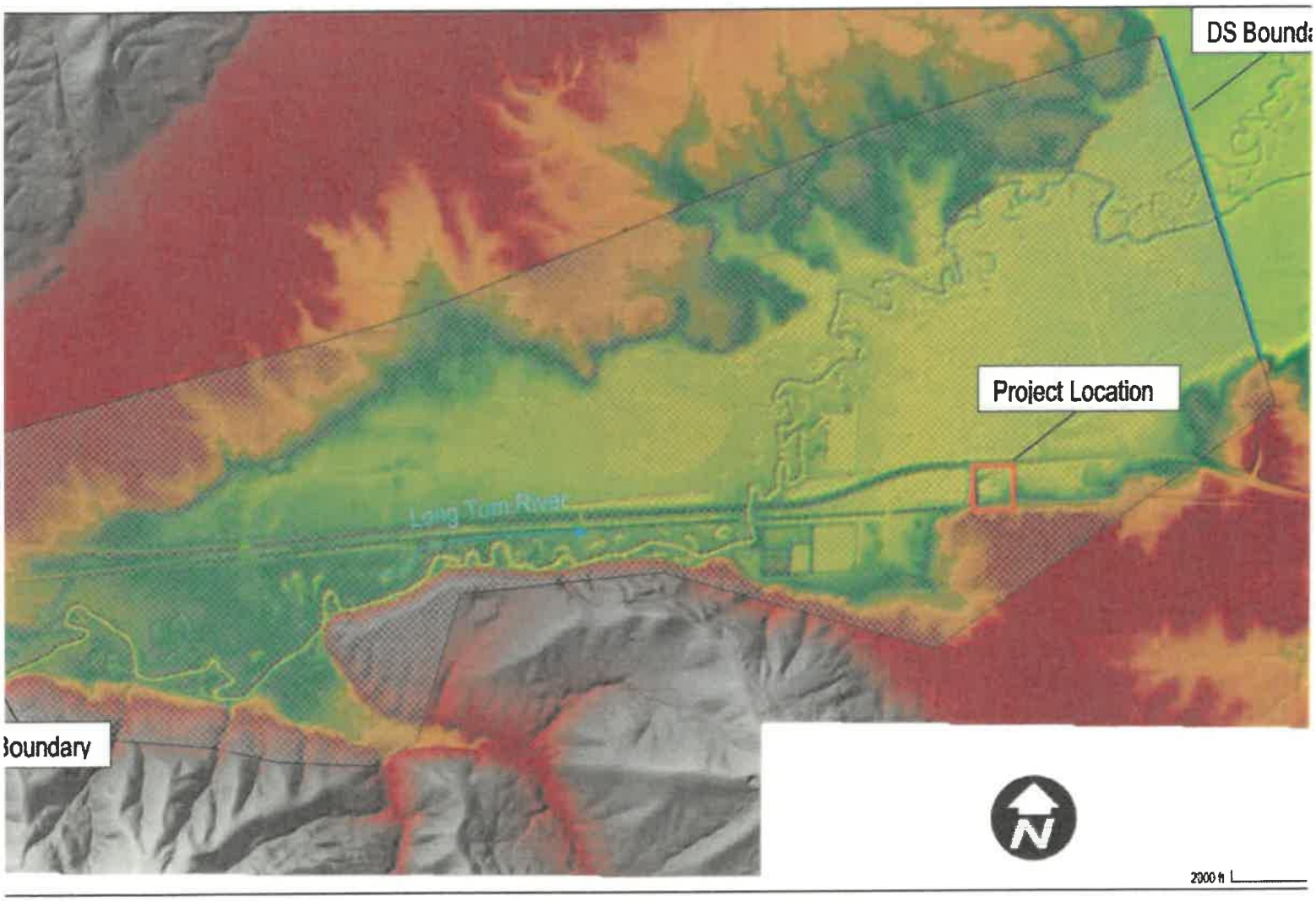


Figure 3 – 2D Model Domain

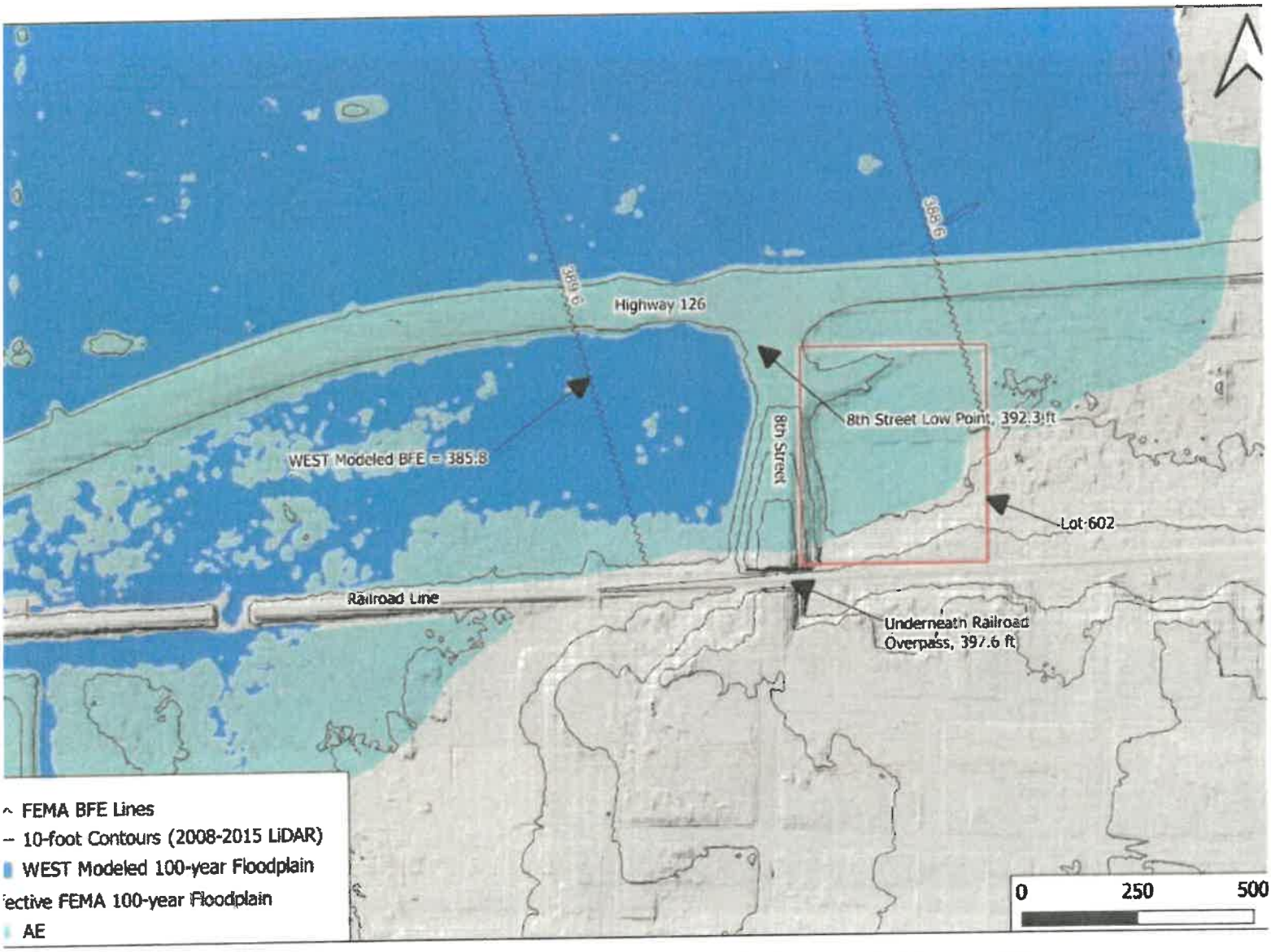


Figure 4. Comparison of Effective FEMA and WEST Modeled BFE Near Lot 602

ENGINEERING NO-RISE CERTIFICATION

City of Veneta
Community Name

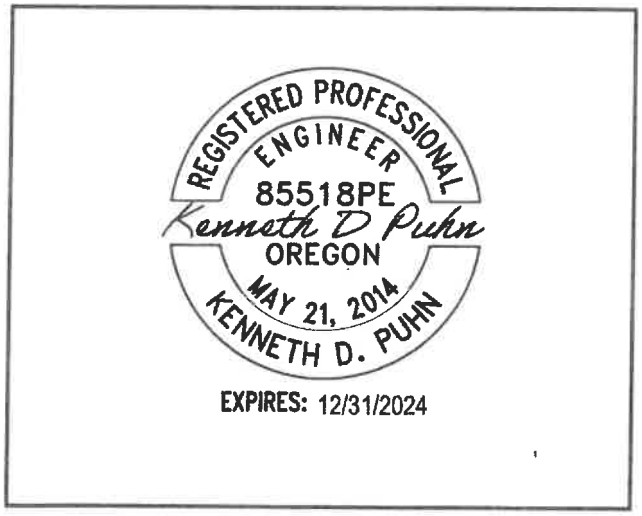
Lot 602
Development Name

Lot 602
Lot/Property Designation

City of Veneta
Property Owner

I hereby certify that I am a duly qualified engineer licensed to practice in the State of Oregon. I further certify that the technical data provided herein supports the fact that fill placed on Lot 602 in Veneta (Lane County), Oregon will not impact the 1% annual chance flood elevations on the Long Tom River at published sections in the FEMA Flood Insurance Study for Lane County and Incorporated Areas dated June 5, 2020 and will not impact the 1% annual chance flood elevations at unpublished cross sections in the vicinity of the proposed project.

8/8/2023
(Date)



(Signature)

Project Engineer
(Title)

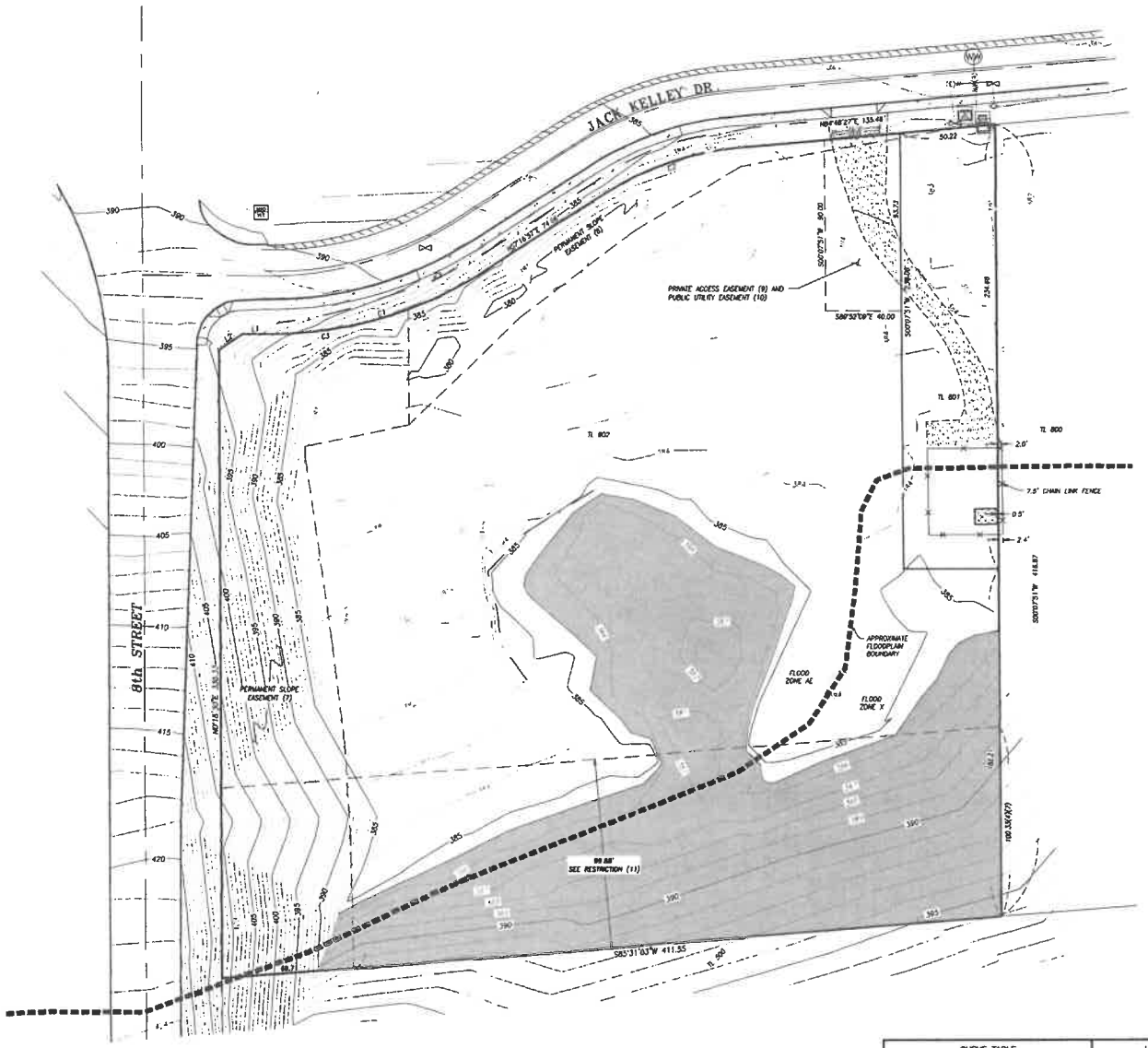
WEST Consultants, Inc.
(Company)

2601 25th Street SE, Ste 450
(Address 1)

Salem, OR 97302
(Address 2)

Figure 5 – Engineering No-Rise Certification

EXHIBIT "B"



BENCHMARK

ELEVATIONS ARE BASED ON RTK GPS OBSERVATIONS TAKEN ON MAY 8, 2023 USING THE OREGON REAL-TIME GEODETIC NETWORK AND GEOID 12A(NAVD88). ELEVATIONS WERE THEN TRANSLATED TO NGVD29 USING NGS VERTCON PROGRAM.

VERTCON CONVERSION USED = 3.61 FEET.

NOTES

1. LOCATIONS OF UNDERGROUND UTILITIES SHOWN ARE BASED ON A COMBINATION OF VISIBLE FACILITIES LOCATED ABOVE GROUND, AS-BUILT DRAWINGS AND UTILITY LOCATE MARKS. NO CERTIFICATION IS MADE TO ACTUAL LOCATION OF UNDERGROUND UTILITIES.
2. ALL DISTANCES SHOWN ARE IN FEET
3. BEARINGS BASED ON OREGON COORDINATE REFERENCE SYSTEM – EUGENE PROJECTION 2011.
4. FLOOD ZONE IS SHOWN BASED ON FLOOD INSURANCE RATE MAP (#41039C1086F EFFECTIVE JUNE 2, 1999
5. BASE FLOOD ELEVATION VARIES FROM 385 – 385.5 FEET (NGVD29).
6. THE PURPOSE OF THIS EXISTING CONDITIONS MAP IS TO SHOW THE CITY OF VENETA WHERE THEIR PROPERTY ELEVATIONS ARE IN RELATION TO BASE FLOOD ELEVATION.
7. PERMANENT SLOPE EASEMENT RECORDED ON NOVEMBER 23, 2001 AS RECEPTION NUMBERS 2001-078225 AND 2001-078226, LCOOR
8. PERMANENT SLOPE EASEMENT RECORDED ON NOVEMBER 18, 2002 AS RECEPTION NUMBER 2002-080354, LCOOR.
9. THE PRIVATE ACCESS EASEMENT OVER PARCEL 2 BENEFITING PARCEL 1 HAS THE FOLLOWING TERMS:
   A. THE OWNERS OR OCCUPIERS OF THE PARCELS AFFECTED BY THIS EASEMENT SHALL HAVE THE RIGHT TO USE THEIR PROPERTY, INCLUDING THE AREAS DESCRIBED AS THE EASEMENT, FOR ANY PURPOSE AS LONG AS THE OWNERS OR OCCUPIERS DO NOT INTERFERE WITH THE USE OF THE EASEMENT AS GRANTED HEREON. NO VEHICLE PARKING OR STORAGE OF VEHICLES SHALL BE ALLOWED BY ANY PARTY WITHIN THE EASEMENT AREA, INCLUDING THE AGENTS, EMPLOYEES, TENANTS, AND INVITEES OF SAID OWNERS.
   B. THE OWNERS OR OCCUPIERS OF THE PARCELS AFFECTED BY THIS EASEMENT SHALL HAVE THE RIGHT TO RELOCATE THE EASEMENT PROVIDED THE RELOCATION MEETS THE VEHICULAR NEEDS OF THE OWNER OF PARCEL 2 AND DOCUMENTATION OF THE RELOCATION, INCLUDING ACCEPTANCE BY THE OWNER OF PARCEL 2, IS RECORDED IN THE LANE COUNTY OREGON OFFICIAL RECORDS.
   C. THE COST OF ANY MAINTENANCE OR REPAIR OF THE EXISTING DRIVEWAY IMPROVEMENTS WITHIN THE EASEMENT AREA SHALL BE SPLIT EQUALLY BETWEEN THE OWNERS OF THE PROPERTIES UTILIZING THE EASEMENT, SHOULD THE OWNER OF PARCEL 1 CHOSE TO IMPROVE THE CURRENT DRIVEWAY OR RELOCATE THE DRIVEWAY, THE COST OF ANY MAINTENANCE OR REPAIR OF THE CURRENTLY DRIVEWAY IMPROVEMENTS WITHIN THE EASEMENT AREA SHALL BE THE RESPONSIBILITY OF THE OWNER OF PARCEL 1. FOLLOWING ANY SUCH MAINTENANCE OR REPAIRS, THE SURROUNDING AREA SHALL BE RETURNED TO EQUIVALENT OR BETTER CONDITION THAN BEFORE SAID MAINTENANCE OR REPAIRS.
10. PUBLIC UTILITY EASEMENT AS RECORDED ON LAND PARTITION PLAT NUMBER 2020-P7978 ON OCTOBER 14, 2020.
11. THE QUITCLAIM DEED RECORDED AS INSTRUMENT 8000017 ON REEL 2028R, LCOOR CONTAINS EASEMENTS AND/OR RETAINED RIGHTS TO SOUTHERN PACIFIC TRANSPORTATION COMPANY FOR THE FOLLOWING PURPOSES:
   A. WATER
   B. TIMBER
   C. MINERALS
   D. COMMUNICATIONS AND PIPELINES, INCLUDING ACCESS TO THE FACILITIES
   E. UTILITIES

LEGEND

- PROPERTY LINE
- ADJOINER LINE
- EDGE OF ASPHALT
- CURB
- CONTOUR LINE
- EASEMENT
- APPROXIMATE FLOODPLAIN BOUNDARY
- GRADE BREAK
- FENCE LINE
- ELECTRIC LINE
- WATER LINE
- WASTEWATER LINE
- WASTEWATER MANHOLE
- ELECTRIC VAULT
- TRANSFORMER
- WATER VALVE
- FIRE HYDRANT
- WATER VAULT
- CONCRETE
- GRAVEL
- BUILDING
- AREA ABOVE BASE FLOOD ELEVATION

CURVE TABLE					LINE TABLE		
CURVE	DELTA	RADIUS	ARC	CHORD	MARK	BEARINGS	DISTANCE
C1	35°58'13"	213.00	133.73	N73°46'07"E 122.03	L1	S89°44'44"E	12.56
C2	27°31'30"	153.00	74.46	N71°00'42"E 73.75	L2	N56°37'08"E	15.29
C3	20°14'20"	213.00	75.85	N80°08'08"E 75.65	L3	N00°18'32"E	4.84

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)

TAX MAP 17-06-36, TAX LOT: 601 & 602

Branch ENGINEERING Inc.
civil • transportation
structural • geotechnical
SURVEYING
310 5th Street
Springfield, OR 97477
p 541 746 0637
www.BranchEngineering.com

REGISTERED PROFESSIONAL LAND SURVEYOR

PRELIMINARY

OREGON
MAY 12, 2011
DANIEL ADAM NELSON
84832PLS

EXPIRES: December 31, 2024

project title:

EXISTING CONDITIONS SURVEY FOR CITY OF VENETA

8th ST. & JACK KELLEY DR.
VENETA, OREGON

revisions:

date: MAY 15, 2023
drawn by: JLB
designer: DAN
project no: 19-006G

EXISTING CONDITIONS

sheet: 1