



City of Manzanita

P.O. Box 129, Manzanita, OR 97130-0129
Phone (503) 812-2514 | Fax (503) 368-4145 | TTY Dial 711
ci.manzanita.or.us

Planning Commission

Zoom Video Webinar
<https://ci.manzanita.or.us/planning-commission/>

AGENDA

December 11, 2023
04:00 PM Pacific Time

Video Meeting: The Planning Commission will hold this meeting through video conference. The public may watch live on the [City's Website: ci.manzanita.or.us/broadcast](http://ci.manzanita.or.us/broadcast) or by joining the Zoom Meeting:

<https://us02web.zoom.us/j/87826336519>

Dial in number:

(253) 215 8782

Please note that a passcode is not required to enter the webinar.

Note: Agenda item times are estimates and are subject to change.

1. **CALL TO ORDER** (4:00 p.m.)
2. **APPROVAL OF MINUTES** (4:01 p.m.)
3. **AUDIENCE PARTICIPATION** (4:02 p.m.)
4. **AGENDA ITEMS** (4:10 p.m.)
 - A. TSP
 - B. Public Hearing- Design Review 655 Manzanita Ave
5. **GENERAL UPDATES** (5:55 p.m.)
6. **ADJOURN** (6:00 P.M.)

**CITY OF MANZANITA
PLANNING COMMISSION MEETING MINUTES
November 13, 2023**

I. CALL MEETING TO ORDER: Chair Karen Reddick-Yurka called the meeting to order at 4:00 p.m.

II. ROLL: Members present were: Karen Reddick-Yurka, Bert Gregory, Phil Mannan, John Collier, Thomas Christ, Frank Squillo and Lee Hiltenbrand. Staff present were: Building Official Scott Gebhart, City Manager Leila Aman, Head of Public Works Dan Weitzel, and Permit Technician Chris Bird. Commissioner Squillo was excused midway through the meeting

III. AUDIENCE: There were 16 persons in the audience.

IV. PUBLIC COMMENTS: There was no public comment.

LEGISLATIVE ITEM

ANNOUNCEMENT OF PUBLIC HEARING PROCEDURES: Chair Reddick-Yurka introduced the application being considered, described the public hearing process, and opened the hearing at 4:03 p.m.

V. PUBLIC HEARING:REVISING STREET IMPROVEMENT STANDARDS ORDINANCE 91-2; ZONING ORDINANCE 95-4, & THE SUBDIVISION ORDINANCE 95-5: THE PURPOSE IS TO CONFORM THE ORDINANCES WITH THE POLICIES ADOPTED WITH THE REGIONAL TRANSPORTATION PLAN

- A. STAFF REPORT** – City Manager Leila Aman presented the staff report and described the application. She then presented the staff's findings of facts, conclusions, and recommended conditions of approval.
- B. GENERAL COMMENTS AND QUESTIONS** – It was asked of staff if parking and bike lanes would be on private property as far as right of way in the future. It was then asked of staff if travel lanes would be precluded for two-way traffic. The commission then asked if a street is in the Urban Growth Area, would the city have control over street standards.
- C. STAFF REPORT** - City Manager Leila Aman continued her staff report focusing on pedestrian connections, block lengths, and the zoning ordinances.
- D. GENERAL COMMENTS AND QUESTIONS** - The commission delved into different aspects of block length using examples from different communities across the country.
- E. STAFF REPORT** – City Manager Leila Aman continued her staff report focusing on off-

street parking, off-street loading, and bicycle requirements.

- F. GENERAL COMMENTS AND QUESTIONS** – Staff was asked if the only change was adding bike requirements and if e-bikes and scooters would be included. The physical attributes and standards of the bicycle parking were then discussed.
- G. STAFF REPORT** – City Manager Leila Aman continued her staff report focusing on transportation impact analysis.
- H. GENERAL COMMENTS AND QUESTIONS** – It was asked of staff if the language of the Traffic Impact Analysis would pass the scrutiny of the courts.
- I. STAFF REPORT** – City Manager Leila Aman continued her staff report focusing on Multifamily and Commercial Pedestrian Access and Circulation.
- J. GENERAL COMMENTS AND QUESTIONS** – It was asked about street and parking lot Standards.
- K. STAFF REPORT** - City Manager Leila Aman continued her staff report focusing on Governing Conditional Uses.
- L. GENERAL COMMENTS AND QUESTIONS** – The commission discussed standards
- M. STAFF REPORT** - City Manager Leila Aman continued her staff report focusing on Transportation Improvements and Uses and Notifications.
- N. GENERAL COMMENTS AND QUESTIONS** – It was asked if a building or structure was included in a transportation facility.
- O. STAFF REPORT** - City Manager Leila Aman continued her staff report focusing on Building Sites and Blocks.
- P. GENERAL COMMENTS AND QUESTIONS** – It was asked about the required width for fire safety.

VI. APPROVAL OF MINUTES: OCTOBER 16, 2023

There were no corrections noted.

A motion was made by Mannan, seconded by Hiltenbrand to approve the minutes of the September 18, 2023 Planning Commission meeting. Motion passed unanimously.

- VII. GENERAL UPDATES:** City Manager Leila Aman informed the Commission that there would be a design review on the new city hall at the next meeting.

VIII. ADJOURNMENT:

Chair Reddick-Yurka adjourned the meeting at 6:00 p.m.

**MINUTES APPROVED THIS 13TH
DAY OF NOVEMBER 2023**

Karen Reddick-Yurka, Chair

ATTEST:

Leila Aman, City Manager/Recorder



CITY OF MANZANITA

P.O. Box 129, Manzanita, OR 97130-0129
Phone (503) 812-2514 | Fax (503) 368-4145 | TTY Dial 711
planning@ci.manzanita.or.us

COMMERCIAL LAND USE APPLICATION

Date: / /

File #:

Pre-App. File #:

PRE-APPLICATION CONFERENCE REQUIRED PRIOR TO SUBMITTING APPLICATION

Once submitted, application materials and applicant information become public record.

APPLICANT INFORMATION:

Project Contact Name:	Company:
Mailing Address:	Zip:
Phone(s):	Email:
City Limits:	Urban Growth:

SITE INFORMATION:

Site Address:	
Map & Tax Lot(s):	Zone:

PROPOSAL (brief description):

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REQUIRED DOCUMENTS

(Please submit electronic copies of all documents as a PDF to buidling@ci.manzanita.or.us)

Commercial, Industrial, other- \$682.50

1. Completed Request Form & fee. (Payable by check or ePermitting. An invoice will be sent, if paying by credit card through ePermitting, along with payment instructions)
2. Email a PDF Copy of all documents to building@ci.manzanita.or.us. Provide Seven (7) paper copies of submittal documents. All drawings must be to scale.
3. Approval letters from the following:
 - a. Public Works, 503-368-5343
 - b. Nehalem Bay Wastewater, 503-368-5125
 - c. Nehalem Bay Fire & Rescue, 503-368-7590
 - d. Tillamook County Environmental Health Program Manager, 503-842-3909 (When required)
4. Wetland Delineation Study (When required)
5. Stormwater Retention
6. Traffic impact Analysis (When required)
7. Narrative: A detailed description of your proposal. Include a brief description of the physical context of the site, including a map showing the site and surrounding properties.

8. The design plan must identify: **(Manzanita Zoning Ordinance 95-4, Section 4.156 Architectural and Landscape Design Evaluation Criteria)**
- a. Natural and man-made features, including trees and structures onsite and on adjacent properties having a visual or other significant relationship with or that may affect the development. **(Section 4.155 Site Design Evaluation Criteria)**
 - b. The location and external dimensions of proposed buildings and structures, and of existing buildings and structures to be retained. **(Section 3.040 Commercial Zone, C-1 (3) Standards)**
 - c. The location of fences, retaining walls, mechanical equipment, garbage disposal areas, utility appurtenances and similar structures.
 - d. Pedestrian, parking, **(Section 4.090 Off-Street Parking Requirements)** and vehicular circulation areas including service areas for the loading and delivery of goods.
 - e. Private and shared outdoor areas, including walkways, plazas, courtyards, seating areas, street furniture and permanent outdoor features including sculptures and artwork.
 - f. Exterior lighting on all buildings and in landscape areas, including type, intensity and area to be illuminated.
 - g. Location, size and method of illuminating signs. **(Section 4.070 Sign Requirements)**
 - h. Points of access and interior floor plans on architectural plans to the extent required to clarify access functions and the relationship to decks, porches, balconies, stairs or other exterior features.
 - i. The color and texture of finish materials, window and door placement and materials, light fixtures, stairways, unique architectural elements, especially in development plans that are unique or innovative.
 - j. Location and proposed living plant material for landscaped areas, including type, number and size of living plant materials and including visual representations of the living plant materials relative to building elevations. [Added by Ord. 14-02, passed April 9, 2014]. **(Section 3.040(3)(d))**



City of Manzanita

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

November 14, 2022

Chris Keane
Beariing Architecture
215 SE 9th Avenue
Portland, Oregon 97214

RE: Completeness Letter – City Hall Design Review

Mr. Keane:

The City of Manzanita received your Design Review application for the new City Hall building that will be located on the 2.66-acre city owned property located on Manzanita Avenue, between Classic Street and Division Street.

City staff reviewed the application against the submittal requirements and determined the application is **COMPLETE**. The City will begin processing the application and provide a separate Notice of Public Hearing.

Please contact me if you have any questions.

Respectfully,

Scott Fregonese
City Planner
(503) 946-9365 x248



NOTICE OF DESIGN REVIEW APPLICATION MANZANITA CITY HALL

The City of Manzanita Planning Commission will hold its regular meeting on Monday, December 11, 2023, at 4:00 PM via Zoom. Go to www.ci.manzanita.or.us for log in information. This meeting will include a Design Review Board Meeting and Decision to consider the following application:

File No: 23029
Request: Design Review for the new City Hall building that will be located on the 2.66-acre city owned property located on Manzanita Avenue, between Classic Street and Division Street.
Applicant: Chris Keane, Beariing Architecture
Location: 655 Manzanita Avenue
Assessor's Map: 3N 10 29 AD Tax Lot 2500
Zoning: Commercial Zone (C-1)
Criteria: This application will be evaluated against the following Section of Ordinance 95-4: Section 4.150 Design Review

Persons interested in the proposal should become involved in the land use decision-making process. Anyone desiring to speak for or against the proposal may do so in person or by representative at the hearing. Written comments may also be filed with the City of Manzanita prior to the public hearing. All documents, evidence, and staff reports relied upon by the applicant, including a list of Manzanita Zoning Ordinance approval criteria applicable to the request, are available for inspection at Manzanita City Hall at no cost, or copies can be obtained for \$0.25/page.

The Planning Commission's review is for the purpose of making a decision on the proposal. A decision by the Planning Commission to approve or deny the application will be based upon the above listed criteria and these criteria only. At the hearing it is important that comments relating to the request pertain specifically to the applicable criteria. Failure of an issue to be raised in the 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 appeal to the Land Use Board of Appeals based on that issue.

A copy of the staff report will be available at least seven days prior to the hearing for inspection at no cost, or a copy can be obtained for \$0.25/page. If you need any special accommodations to participate in the hearing, please notify City Hall 24-hours before the meeting. For further information please contact Leila Aman, City Manager, Manzanita City Hall, 368-5343, P.O. Box 129, Manzanita, Oregon 97130.



City of Manzanita Planning
building@ci.manzanita.or.us
PO Box 129
Manzanita, OR 97130

Date: November 10, 2023
Subject: Manzanita City Hall Project Land Use Application
3N 10 29 AD - TAX LOT 2500

PROJECT NARRATIVE

The new City Hall building will be located on the 2.66-acre city owned property located on Manzanita Avenue, between Classic Street and Division Street. The property sits in the C-1 zone and is a permitted outright use as per Section 3.040 (1). The project, as designed, meets all standards described in Section 3.040 (3). See drawings for site location map, lot size, setbacks, FAR, landscaping, and building heights.

PARKING

*See sheets G2.01 for parking calculations.
See sheets G1.01, C1.00, L1.00 for parking layout.*

Parking shall be in accordance with Article 4, Section 4.080. See sheet G2.01 for parking calculations. Parking will be clearly marked and shall not be less than 9 feet by 18 feet in size for each space required. An information sign of 4 square feet, visible from Manzanita Avenue will be used to identify the location of the public off-street parking area. See sheets C2.00 and L1.00 for parking layout.

SIGNS

All signs shall be in accordance with Article 4, Section 4.070.

All signs will meet the material and construction methods requirements of the latest Uniform Sign Code, and Oregon Structural Specialty Code.

As per Section 4.070 .5:

Exempted signs: The following signs are permitted and exempt from the requirements of subsection 1 of Section 4.070:

- a. Public signs placed by the City of Manzanita or other governmental entity.
- e. Flags and insignias.



STORM DRAINAGE

See sheet C2.00, C3.00 for location and size of rain gardens.

Site stormwater will be managed so that there are no adverse effects on neighboring properties or public rights-of-way.

The existing site impervious area totals 21,650 square feet composed of existing building structures and asphalt pavement areas. The new development will create 17,121 square feet of new impervious area composed of building structures, parking area, and concrete sidewalks. Overall, there will be a net decrease of 4,529 square feet of impervious areas. The new impervious areas will be managed via infiltrating rock trenches with an overflow connection to the public storm sewer in Division and Manzanita Ave. Infiltration system was sized using the simplified storage equation in the Drywell and Infiltration System Standards Manual of City of Manzanita.

Public roadway improvements along Classic St will sheet flow to a gravel shoulder where it will be infiltrated and overflow to existing public catch basins.

SITE DESIGN - Section 4.155

See sheets G1.01, L1.00

The site design incorporates the building location, a public and staff parking lot and a series of pedestrian walkways that connect public and staff entrances to parking and to Manzanita Avenue.

The building's main entrance is located on Manzanita Avenue and is set back from the street to provide a planted buffer and create a generous entry sequence while fitting in with its neighbors.

The building is sited to leave as much space on the remaining site as possible for other uses and possible future development. Existing trees on the site will remain.

All mechanical equipment will be shielded from view from Manzanita Avenue and Division Street.

ARCHITECTURAL AND LANDSCAPE DESIGN - Section 4.156

See sheets G1.01, L1.00 for site plan.

See sheet A3.01 for building elevations.

See sheet G3.01 for materials palette.

See sheet G3.02 for building renderings.

The single-story project consists of two simple volumes connected by a trellis. The building presents a civic, front door to Manzanita Avenue locating public parking to the west and staff parking to the north, away from the street. The building's scale, massing, and materiality has been conceived to fit in to the local context and limit any negative visual impact on adjacent neighbors. The main entrance to the facility faces Manzanita Avenue with direct, secure entrances to city hall and the council chambers off a small lobby. The police station is located to the north in a separate volume with access from this central space via a covered outdoor connection. Trellises on the south and north create layers that provide visual interest, mark main entrance points, and soften the buildings appearance.



The building exterior is clad in vertical cedar siding. The building roofs are a dark powder coated, standing seam metal with a low reflective quality. Window frames will be painted and scaled to fit in with the adjacent context. The building will be ADA compliant throughout.

Though mostly flat the site will be graded to provide barrier free, accessible entrance for people of all abilities. Around the building, planted areas will be made up of trees and shrubs, selected for their appropriateness for the climactic zone and growing conditions. Plant material will consist of native and adapted plant material suitable for the coastal environment of Manzanita without the use of supplemental irrigation. Planted trees will be 1 1/2"-3" caliper, and shrubs will consist of material from 4" to #5 pots. Lawn will be seeded.

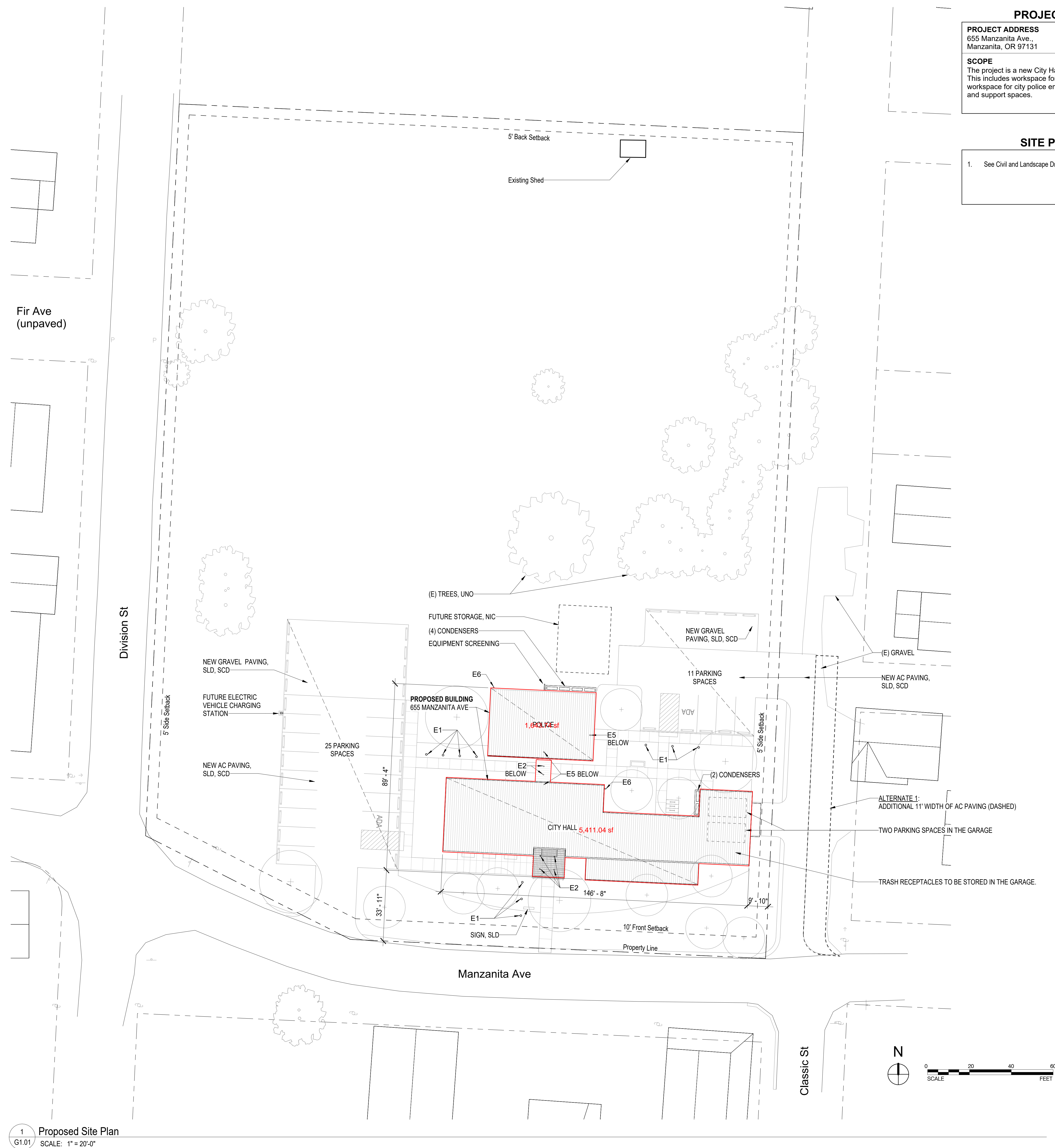
Site stormwater will be managed so that there are no adverse effects on neighboring properties or public rights-of-way.

LIGHTING

See sheet G3.03 for exterior light fixtures.

All outdoor lighting will be designed in accordance with the proposed City of Manzanita Dark Sky Ordinance. As such:

- A. All outdoor light fixtures will be fully shielded, and the bulb pointed in a downward direction so that light does not radiate from the sides or top of the fixture.
- B. Lights shall be turned off when not in use and shall not be left on for more than 12 consecutive hours. Porch lights may be fitted with motion detectors.
- C. Patio lighting shall be prohibited between the hours of 12:00am-6:00am.
- D. Landscape lights shall be prohibited from illuminating in an upwards direction beyond the property boundaries.
- E. Security (flood) lights shall be on motion detectors and must not shine on adjacent houses.



PROJECT ADDRESS
655 Manzanita Ave.,
Manzanita, OR 97131

SCOPE
The project is a new City Hall and associated site amenities. This includes workspace for city government employees, workspace for city police employees, city council chambers, and support spaces.

1. See Civil and Landscape Drawings for more information.

655 Manzanita Ave.
Manzanita, OR 97131



Bearing Architecture LLC
215 SE 9th Avenue - Unit 303
Portland, Oregon 97214

letstalk@bearingarchitecture.com

(503) 487-0211

Consultant

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Printing	Date
PRELIMINARY PRICING SET	Dec 16, 2022
PRICING SET	Sept 22, 2023
LAND USE APPLICATION	Nov 10, 2023

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Drawn by
AH

Bearing Job Number
2202

Sheet Title

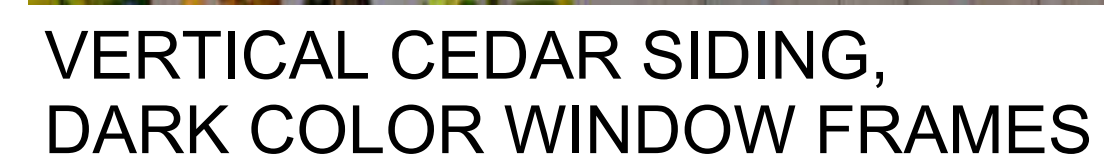
PROPOSED SITE PLAN

Sheet Number

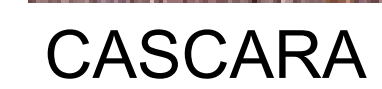
G1.01

The plants shown below are the basis of design. The final selection will include plants appropriate to the coastal climate.

BUILDING MATERIALS



LANDSCAPE MATERIALS



655 Manzanita Ave.
Manzanita, OR 97131



letstalk@bearingarchitecture.com
(503) 487-0211

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PRELIMINARY PRICING SET	Dec 16, 2011
PRICING SET	Sept 22, 2012
LAND USE APPLICATION	Nov 10, 2012

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AH

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2202

Sheet Title

MATERIALS

Sheet Number

G3.01



Views 3 through 6 are taken from the C-2 and C-3 Residential Zones.



Printing	Date
PRELIMINARY PRICING SET	Dec 16, 2022
PRICING SET	Sept 22, 2023
AND USE APPLICATION	Nov 10, 2023

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G3.02

**Manzanita City
Hall**
655 Manzanita Ave.
Manzanita, OR 97131



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Printing	Date
PRELIMINARY PRICING SET	Dec 16, 2010
PRICING SET	Sept 22, 2011
LAND USE APPLICATION	Nov 10, 2011

Revisions and Description	Date
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[illegible]

Sheet Title

Sheet Number

G3.03

E1 - BOLLARD LIGHTS

E2 - DOWNLIGHT AT TRELLIS

E3 - LUMINAIRE AT PORCH
(UNDER COVER OF ROOF)

E4 - WALL MOUNTED UPLIGHT AT PORCH
(UNDER COVER OF ROOF)

E5 - SOFFIT MOUNTED DOWNLIGHTS

E6 - SECURITY LIGHTS
(WALL MOUNTED, POINTED DOWN)



Manzanita City Hall

b bearing

(503) 487-0211

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PRELIMINARY PRICING SET

Dec 16,

PRICING SET

Sept 22, 202

Revisions and Description	Date

Drawn by

KAM

Bearing Job Number

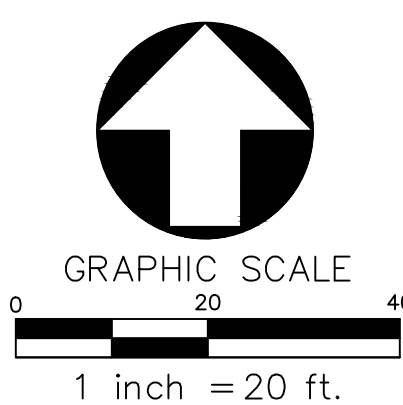
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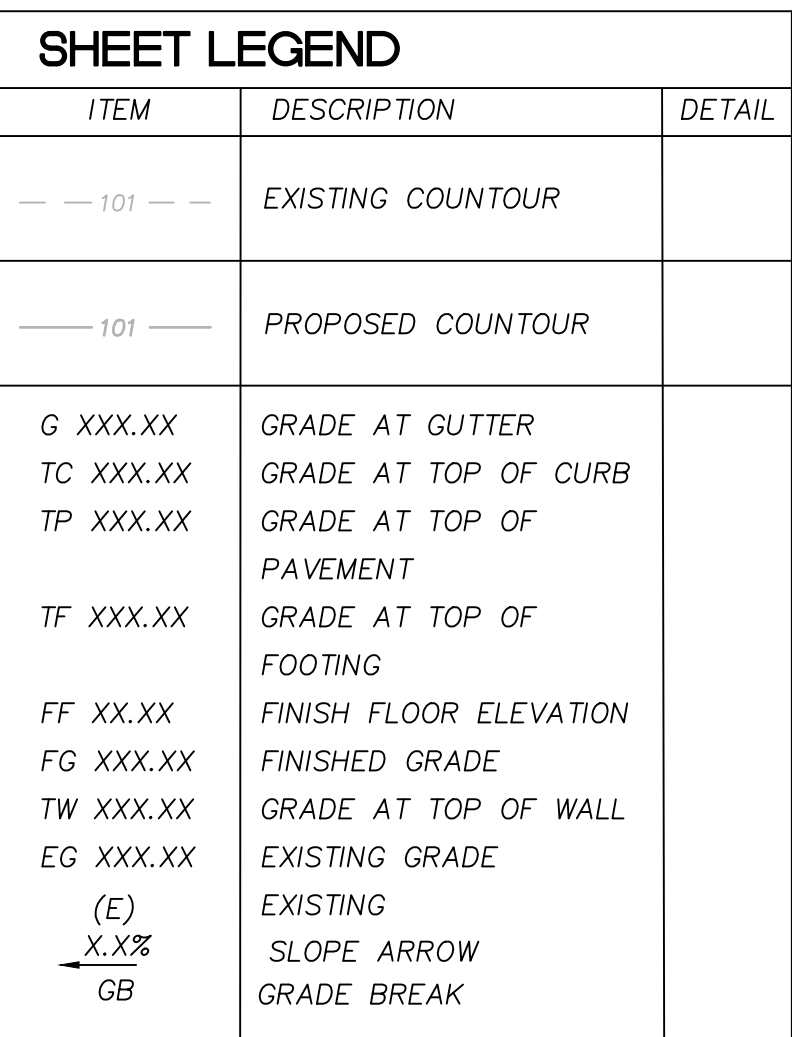
Sheet Title

LAYOUT AND PAVING PLAN

Sheet Number

C1.00



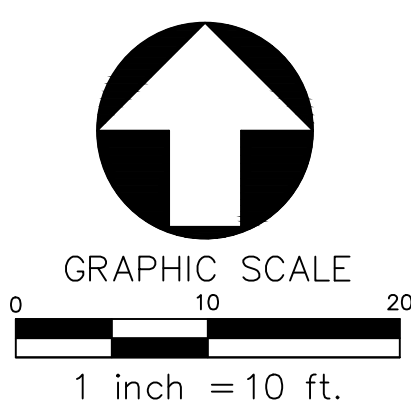


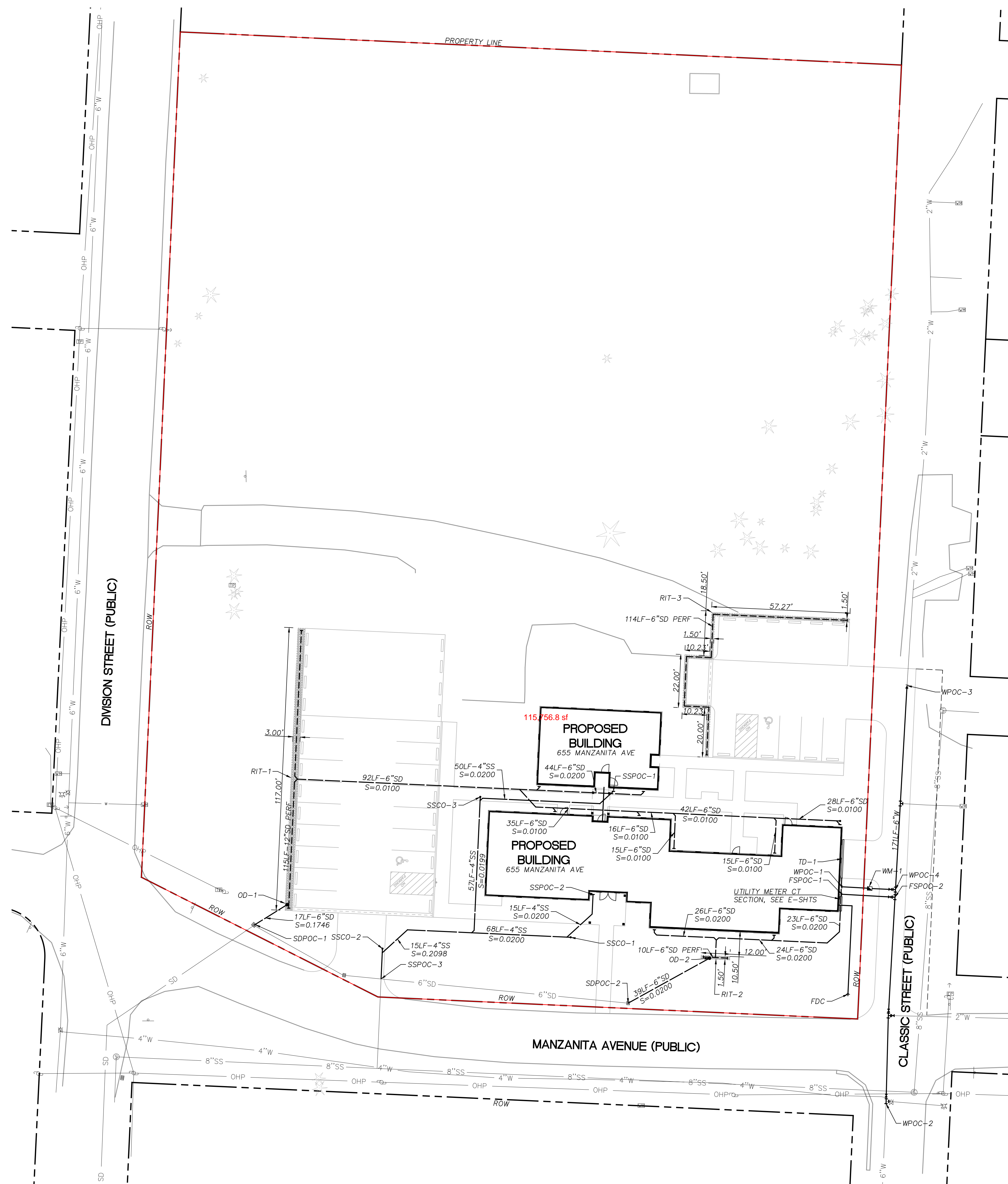
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Design
Group, Inc.
Civil Engineering • 503.946.6690 • hdgpd.com

EXPIRES 12-31-2024

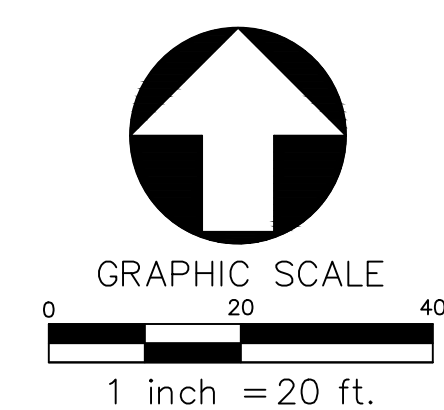
Revisions and Description	Date
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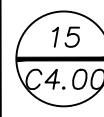

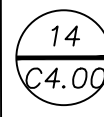


C2.00





UTILITY PLAN
SCALE: 1"=20'



SHEET LEGEND		
ITEM	DESCRIPTION	DETAIL
	STORM	
	SANITARY	
	WATER	
	FIRE SERVICE	
	PERFORATED PIPE	
	AREA DRAIN	
	CLENAOUT	
	WATER VALVE	
	WATER METER	

WATER SCHEDULE		
ITEM	DESCRIPTION	REFERENCE
WM--1	WATER METER. INSTALL 1" METER BY CITY OF MANZANITA. CONTRACTOR CONNECT TO THE SHORT STUB-OUT ON THE BACK SIDE OF THE METER BOX. 37.5 WSFU	
FSPOC--1	FIRE SERVICE POINT OF CONNECTION. SIZE= XXX, FOR BUILDING PLUMBING, SEE P--SHTS.	
FSPOC--2	FIRE SERVICE POINT OF CONNECTION. SIZE= XXX, CONNECTION TO PUBLIC WATER MAIN.	
WPOC--1	WATER POINT OF CONNECTION. SIZE= XXX, FOR BUILDING PLUMBING, SEE P--SHTS.	
WPOC--2	WATER POINT OF CONNECTION. REPLACE EXISTING 2" WATER MAIN AND CONNECT TO EXISTING 6" WATER MAIN.	
WPOC--3	WATER POINT OF CONNECTION. REPLACE EXISTING 2" WATER MAIN AND CONNECT TO EXISTING 2" WATER MAIN.	
WPOC--4	WATER POINT OF CONNECTION TO PUBLIC WATER MAIN.	
FDC	FIRE DEPARTMENT CONNECTION	

SANITARY SEWER SCHEDULE		
ITEM	DESCRIPTION	REFERENCE
SSPOC-1	SANITARY SEWER CONNECTION, SIZE=XXX", IE=XXX", FOR BUILDING SEWER SEE PLUMBING, XXX DFL	
SSPOC-2	SANITARY SEWER CONNECTION, SIZE=XXX", IE=XXX", FOR BUILDING SEWER SEE PLUMBING, XXX DFL	
SSPOC-3	COMBINATION SEWER POINT OF CONNECTION, CONNECT TO EX. SEWER LATERAL, CONTRACTOR TO V.I.F. ASSUMED IE=96.17	
SSCO-1	SANITARY SEWER CLEANOUT TO GRADE, IE=XXX	14 C4.00
SSCO-2	SANITARY SEWER CLEANOUT TO GRADE, IE=XXX	14 C4.00
SSCO-3	SANITARY SEWER CLEANOUT TO GRADE, IE=XXX	14 C4.00

Manzanita City Hall

655 Manzanita Ave,
Manzanita, OR 97131



Bearing Architecture LLC
215 SE 9th Avenue - Unit 303
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Civil Engineering • 503.946.6690 • hdgpdx.com

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EXPIRES 12-31-2024

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Revisions and Description	Date
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KAM

Bearing Job Number
2202

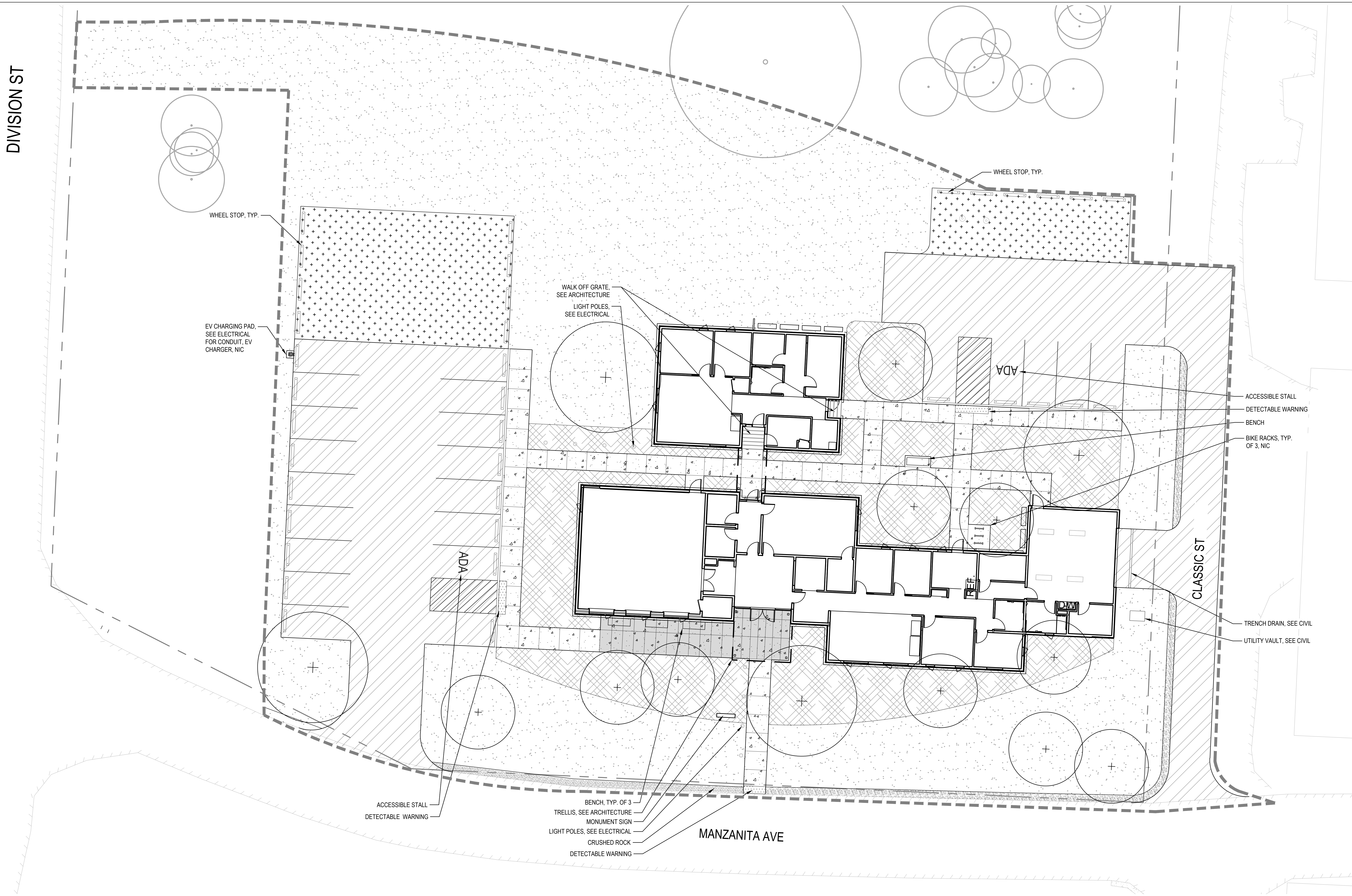
Sheet Title

UTILITY PLAN

Sheet Number

C3.00

DIVISION ST



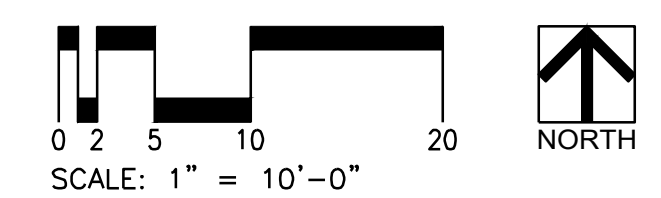
LEGEND

- Legend for Plan Symbols:**

 - LIMIT OF WORK**: Represented by three parallel horizontal lines.
 - PROPERTY LINE**: Represented by a single horizontal line.
 - CONCRETE PAVING - PEDESTRIAN EXPOSED AGGREGATE FINISH**: Represented by a circle with '1' and 'L4.00' next to a rectangular area with a stippled pattern.
 - CONCRETE PAVING - PEDESTRIAN BROOM FINISH**: Represented by a circle with '1' and 'L4.00' next to a rectangular area with a horizontal line pattern.
 - LAWN**: Represented by a rectangular area with a diagonal line pattern.
 - PLANTING AREA**: Represented by a rectangular area with a cross-hatch pattern.
 - ASPHALT PAVING - VEHICULAR, SEE CIVIL**: Represented by a rectangular area with a diagonal line pattern.
 - ASPHALT PAVING - VEHICULAR, SEE CIVIL**: Represented by a rectangular area with a diagonal line pattern.
 - AGGREGATE PAVING - VEHICULAR, SEE CIVIL**: Represented by a rectangular area with a stippled pattern.
 - CRUSHED ROCK SHOULDER**: Represented by a circle with '3' and 'L4.00' next to a rectangular area with a stippled pattern.
 - DETECTABLE WARNING**: Represented by a circle with '11' and 'L4.00' next to a small rectangular area with a stippled pattern.
 - PROPOSED TREE**: Represented by a circle with a '+' symbol inside.
 - EXISTING TREE**: Represented by a circle with a '*' symbol inside.

GENERAL NOTES

1. CONTRACTOR TO NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES BETWEEN THE PLANS AND THE EXISTING CONDITIONS BEFORE STARTING WORK.



Manzanita City Hall

____ Manzanita Ave,
Manzanita, OR 97131



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15 SE 9th Avenue - Unit 303
Portland, Oregon 97214

etstalk@bearingarchitecture.com

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Consultant

WALKER MACY

11 SW Oak Street, SUITE 200
PORTLAND, OR. 97204
503-228-3122

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NOT FOR CONSTRUCTION

Printing	Date
PRELIMINARY PRICING SET	Dec 16, 2022
DESIGN DEVELOPMENT	Sept 22, 2023
AND USE APPLICATION	Nov 10, 2023

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Drawn by

B/SG

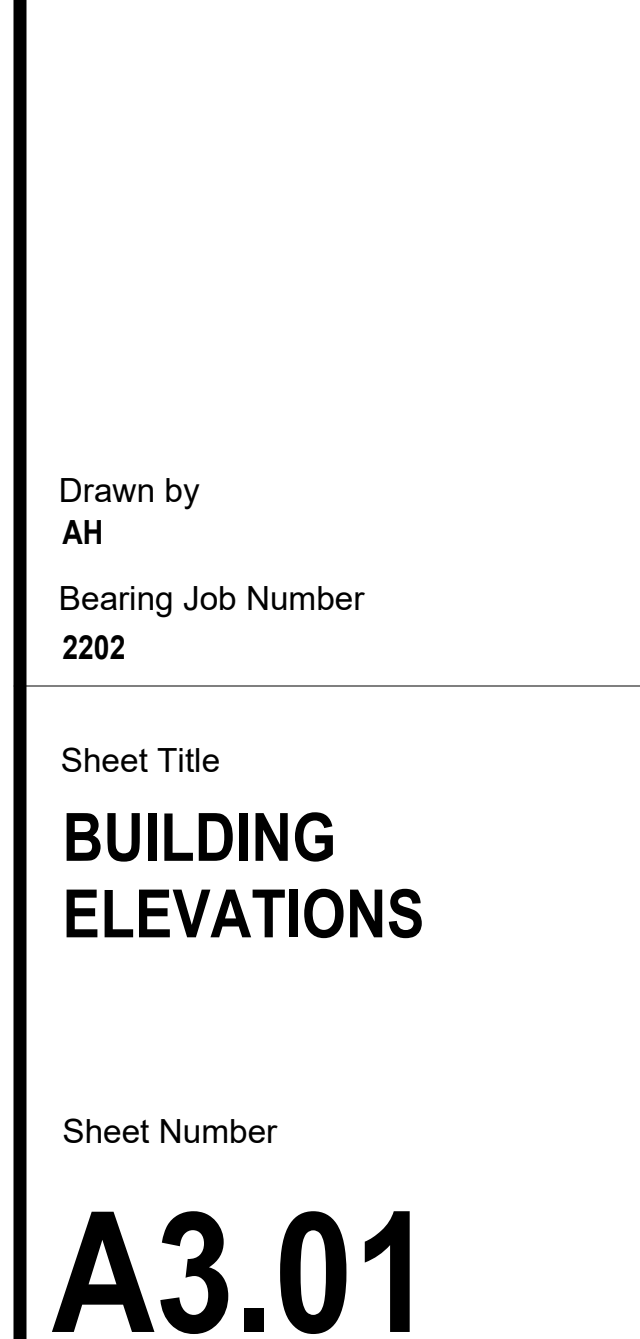
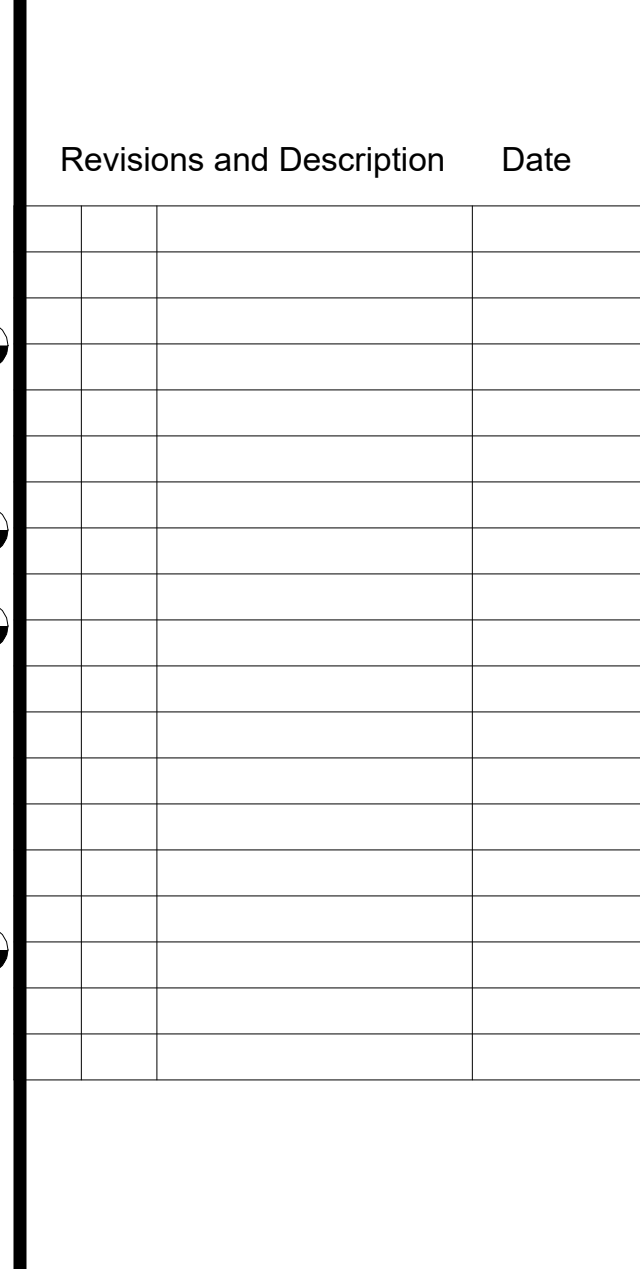
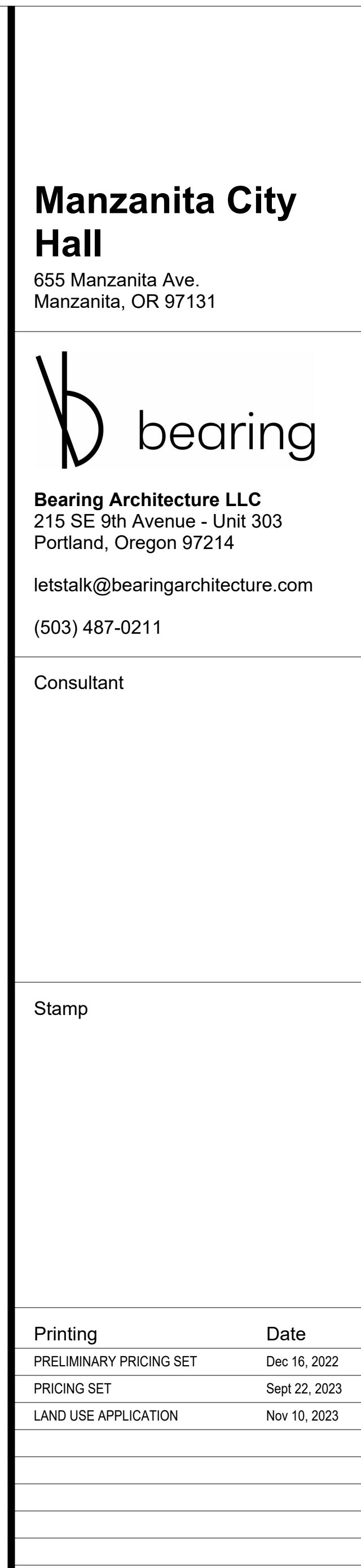
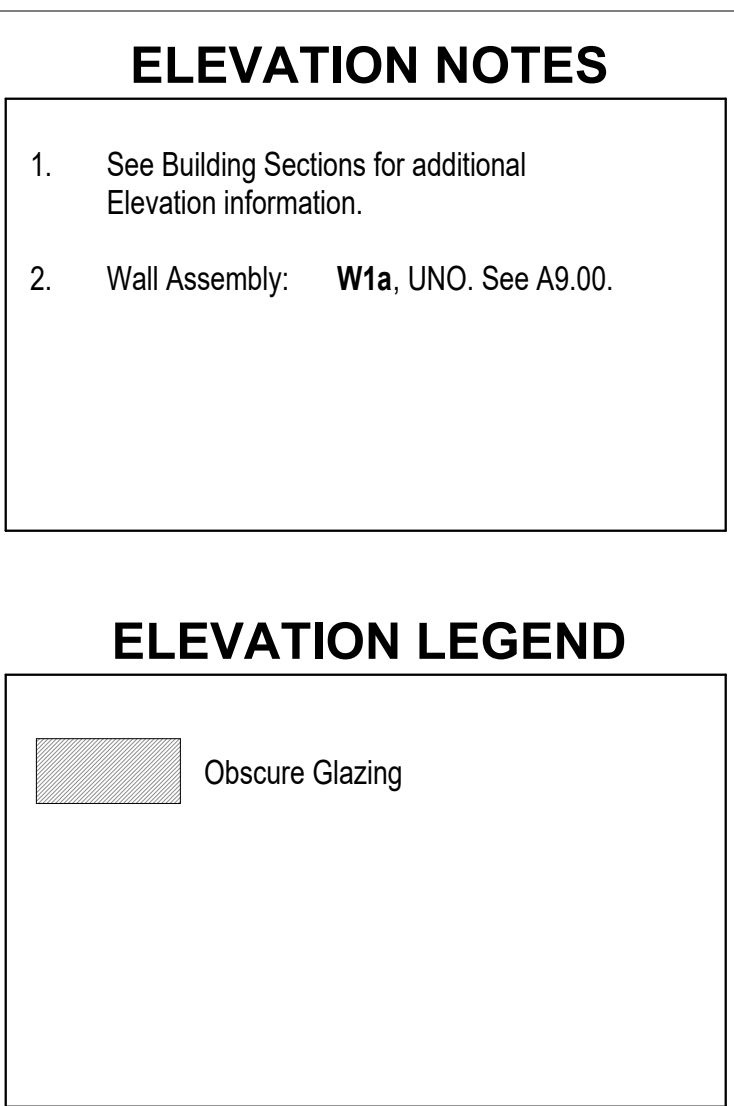
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202

Sheet Title

MATERIALS PLAN

Sheet Number

L1.00



Stormwater Management Facilities

Private Stormwater Report

Manzanita City Hall

HDG Job #: BAL001

Prepared For: City of Manzanita
167 S 5th St
Manzanita, OR 97130

Prepared By:



**Humber
Design
Group, Inc.**

110 SE Main St. Suite 200
Portland, OR 97214
(P) 503 946 6690

I hereby certify that this Stormwater Management Report for the Manzanita City Hall project has been prepared by me or under my supervision and meets minimum standards of City of Manzanita and normal standards of engineering practice.

I hereby acknowledge and agree that the jurisdiction does not and will not assume liability for the sufficiency, suitability, or performance of drainage facilities designed by me.

Date: November 10, 2023



EXPIRES 12-31-2024

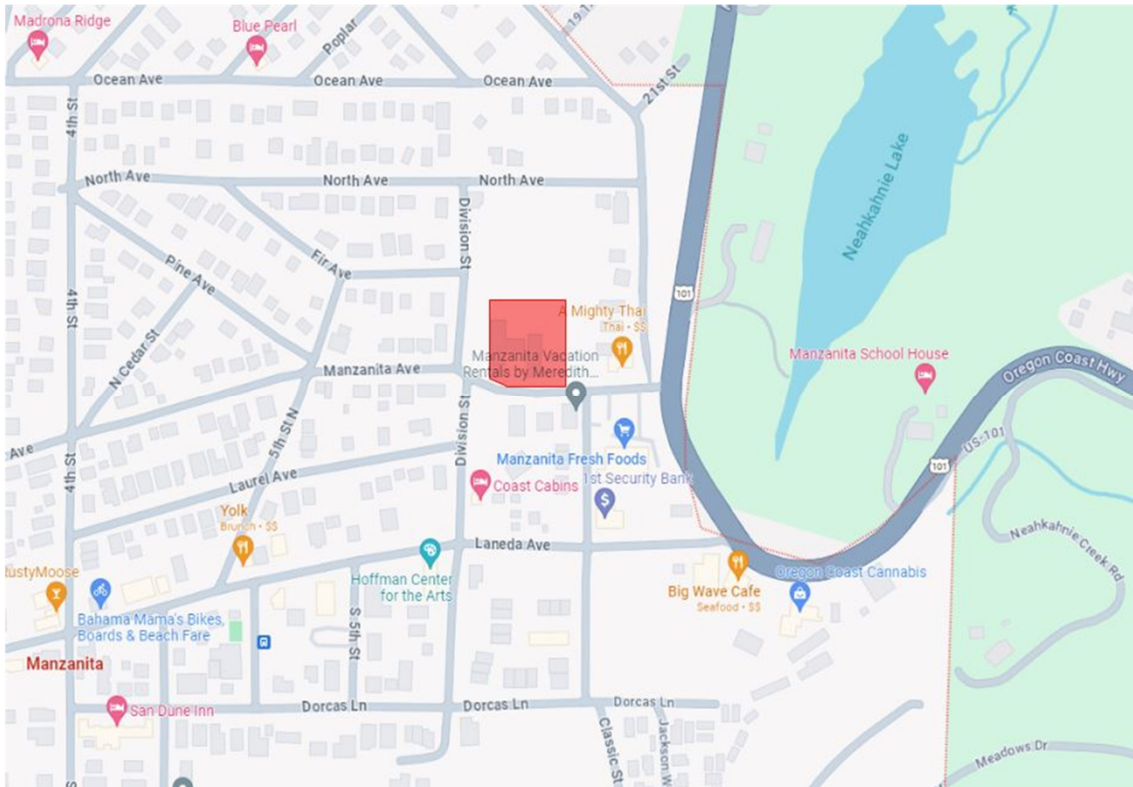
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Project Overview and Description

Location of Project	655 Manzanita Ave
Site Area/Acreage	2.66
Proposed Impervious Area	17,711 SF
Nearest Cross Street	Manzanita Ave
Property Zoning	MZ-C1
Existing Conditions	The existing site consists of (1) story building with asphalt and gravel parking lot.
Proposed Development	The proposed site will consist of 2 (1) story buildings with parking lot.
Tax Map	3N1029AD
Tax Lot	2500
Flood Zone	N/A
Permits Required	Building Permit

Vicinity Map



Site Location

Methodology

Existing Drainage

Stormwater on the site is currently conveyed to various catch basins and sent to the existing public storm pipe in Division Street.

Infiltration Results

PRIVATE Proposed Stormwater Management Techniques

Stormwater runoff from site will be managed by underground rock infiltration systems.

Discharge Point

Drywell or Soakage Trench (UIC)

Analysis

Computational Method Used Using stormwater storage capacity requirement equation from Drywell & Infiltration System Standards manual of City of Manzanita.

Soil Types Beach and Dune Sands

Stormwater Management Narrative Stormwater runoff from the 12,497 SF of proposed impervious area will be treated by 3'X3' infiltration trench and 4,624 SF of proposed impervious area will be treated by (2) 1.5'X3' infiltration trench system. Overflow from infiltration trench will be delivered to the existing stormwater pipe located in Division Street.

Table 4 – Catchment Areas and Facility Table

Catchment/ Facility ID	Source (roof, road, etc.)	Treatment Area (sf)	Ownership (private/ public)	Facility Type/ Function	Facility Size
A	Roof, Pakring Lot, Sidewalk	12,497	Private	Infiltration Trench	3'X3'-115LF
B	Roof	719	Private	Infiltration Trench	1.5'X3'-10LF
C	Parking Lot	3,905	Private	Infiltration Trench	1.5'X3'-114LF

Engineering Conclusions

The preceding methodologies and calculations presented indicate compliance with the current jurisdictional stormwater management codes and requirements. A summarized breakdown is presented below:

Water Quality

The proposed development will meet the provisions for water quality per the Drywell & Infiltration System Standards Manual of City of Manzanita.

Water Quantity

The proposed development will meet the provisions for water quantity per the Drywell & Infiltration System Standards Manual of City of Manzanita.

Downstream / Upstream Impacts

There are no upstream or downstream impacts created by this proposed development.

Appendix A

Stormwater Facility Details / Exhibits

Catchment Map

Utility Map

Rock Infiltration Trench Details

DIVISION STREET (PUBLIC)

CLASSIC STREET (PUBLIC)

MANZANITA AVENUE (PUBLIC)

PROPOSED BUILDING

PROPOSED BUILDING
655 MANZANITA AVE

1.5'X3'
INFILTRATION
TRENCH

3'X3'
INFILTRATION
TRENCH

1.5'X3'
INFILTRATION
TRENCH

6"SD

ROW

ROW

ROW



Catchment A = 12,497 SF

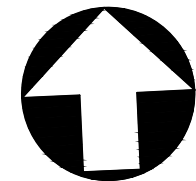


Catchment C = 3,905 SF

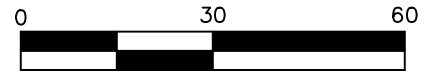


Catchment B = 719 SF

Total Impervious area = 17,121 SF




GRAPHIC SCALE



1 inch = 30 ft.

MANZANITA CITY HALL
CATCHMENT MAP

PROJECT NO.: BAL001		Humber Design Group, Inc. <small>Civil Engineering • 503.946.6690 • hdgpdex.com</small>
DRAWN BY: MCS		
DESIGN BY: MCS		
REVIEWED BY: KAM		
DATE: 11/9/2023		



SANITARY SEWER SCHEDULE		
ITEM	DESCRIPTION	REFERENCE
SSPOC-1	SANITARY SEWER CONNECTION, SIZE="XXX", IE="XXX", FOR BUILDING SEWER SEE PLUMBING, XXX DFW.	
SSPOC-2	SANITARY SEWER CONNECTION, SIZE="XXX", IE="XXX", FOR BUILDING SEWER SEE PLUMBING, XXX DFW.	
SSPOC-3	COMBINATION SEWER POINT OF CONNECTION, CONNECT TO EX SEWER LATERAL, CONTRACTOR TO V.I.F. ASSUMED IE=96.17	
SSCO-1	SANITARY SEWER CLEANOUT TO GRADE, IE=XXX	14 C4.09
SSCO-2	SANITARY SEWER CLEANOUT TO GRADE, IE=XXX	14 C4.09
SSCO-3	SANITARY SEWER CLEANOUT TO GRADE, IE=XXX	14 C4.09

**Manzanita City
Hall**
655 Manzanita Ave,
Manzanita, OR 97131

 bearing

Bearing Architecture LLC
215 SE 9th Avenue - Unit 303
Portland, Oregon 97214

letstalk@bearingarchitecture.com
(503) 487-0211

Consultant

 Humber
Design
Group, Inc.

Civil Engineering • 503.946.6690 • hdbgpx.com

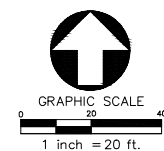
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PRELIMINARY PRICING SET	Dec 16, 2022
PRICING SET	Sept 22, 2023

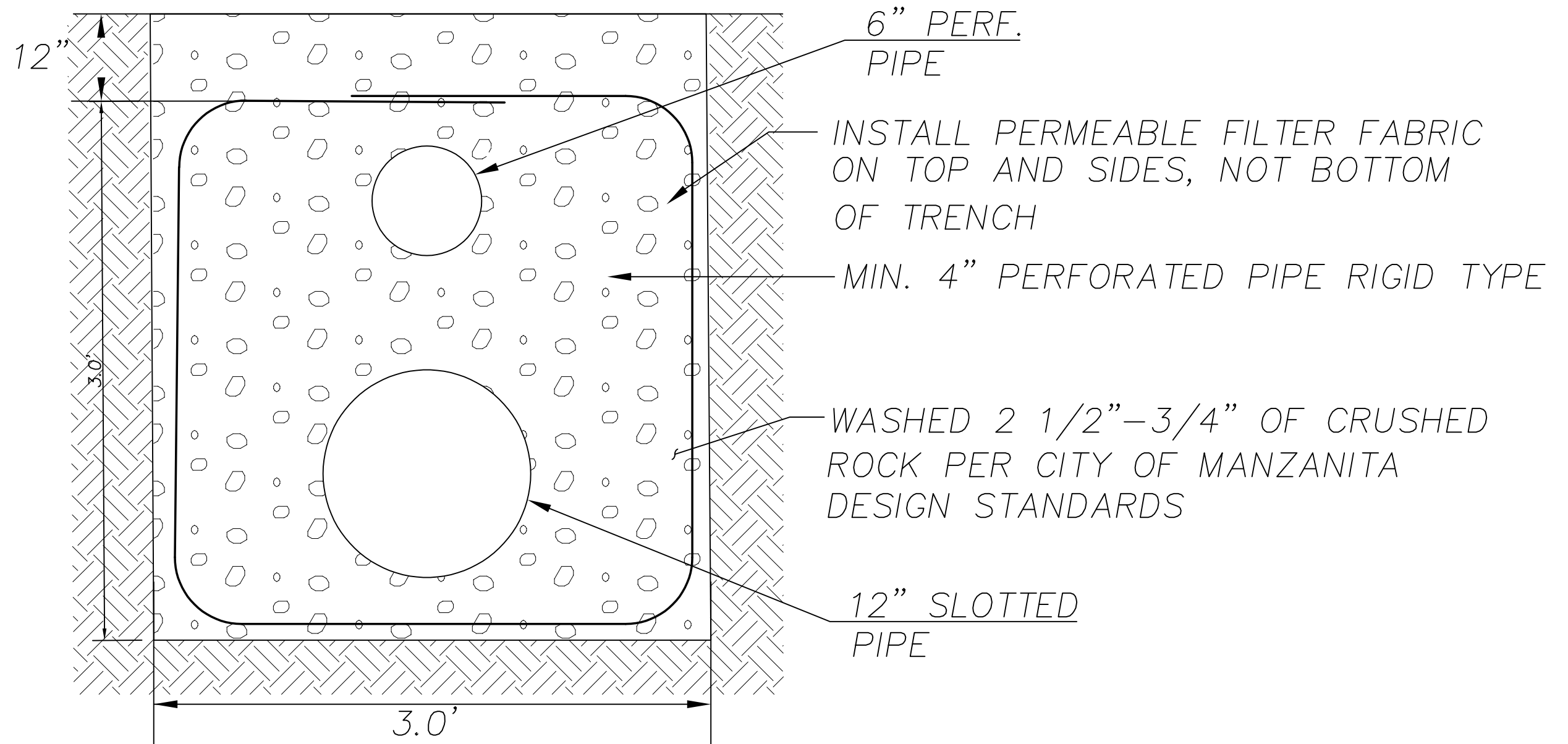
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KAM
Bearing Job Number
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UTILITY PLAN

Sheet Number

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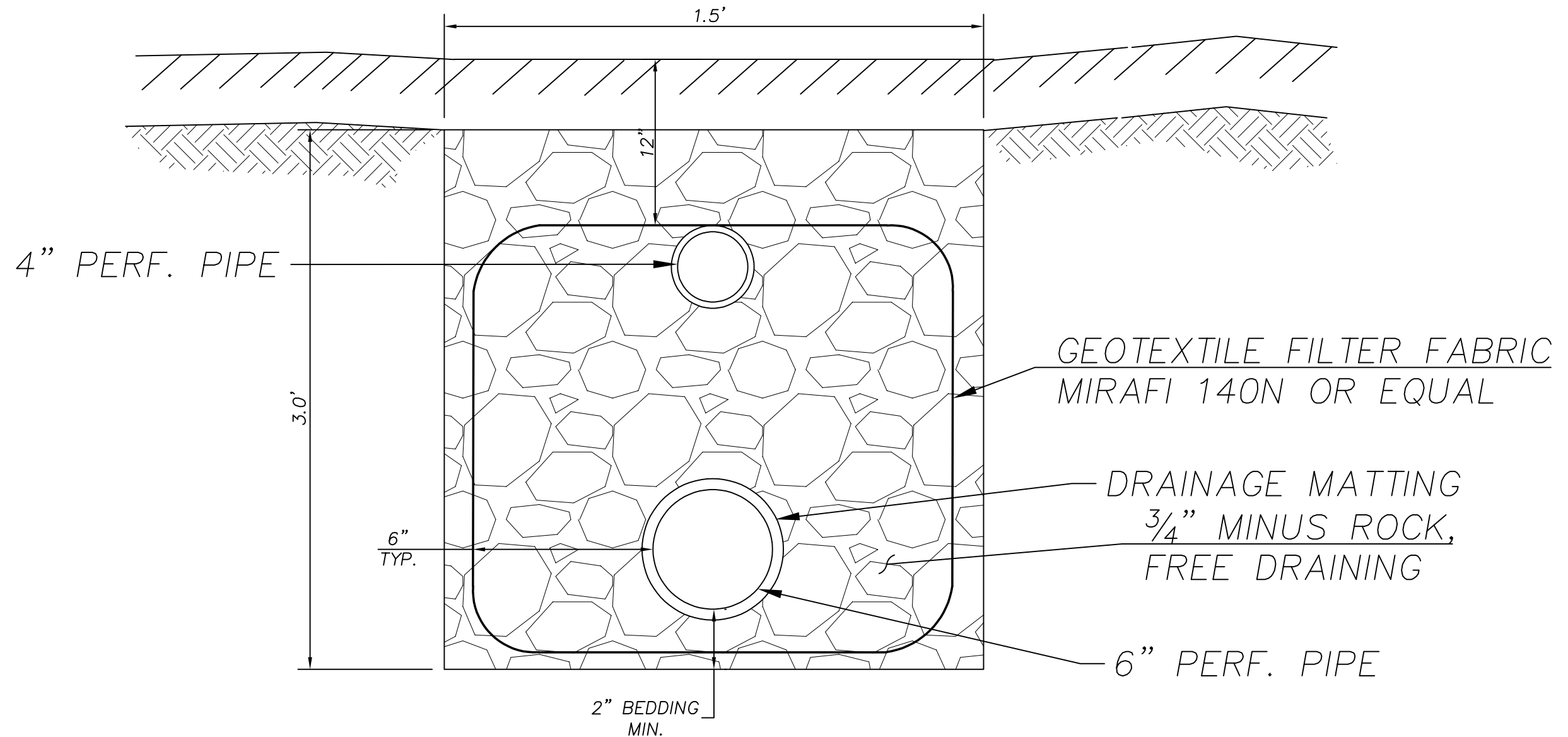




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ROCK INFILTRATION TRENCH - 1

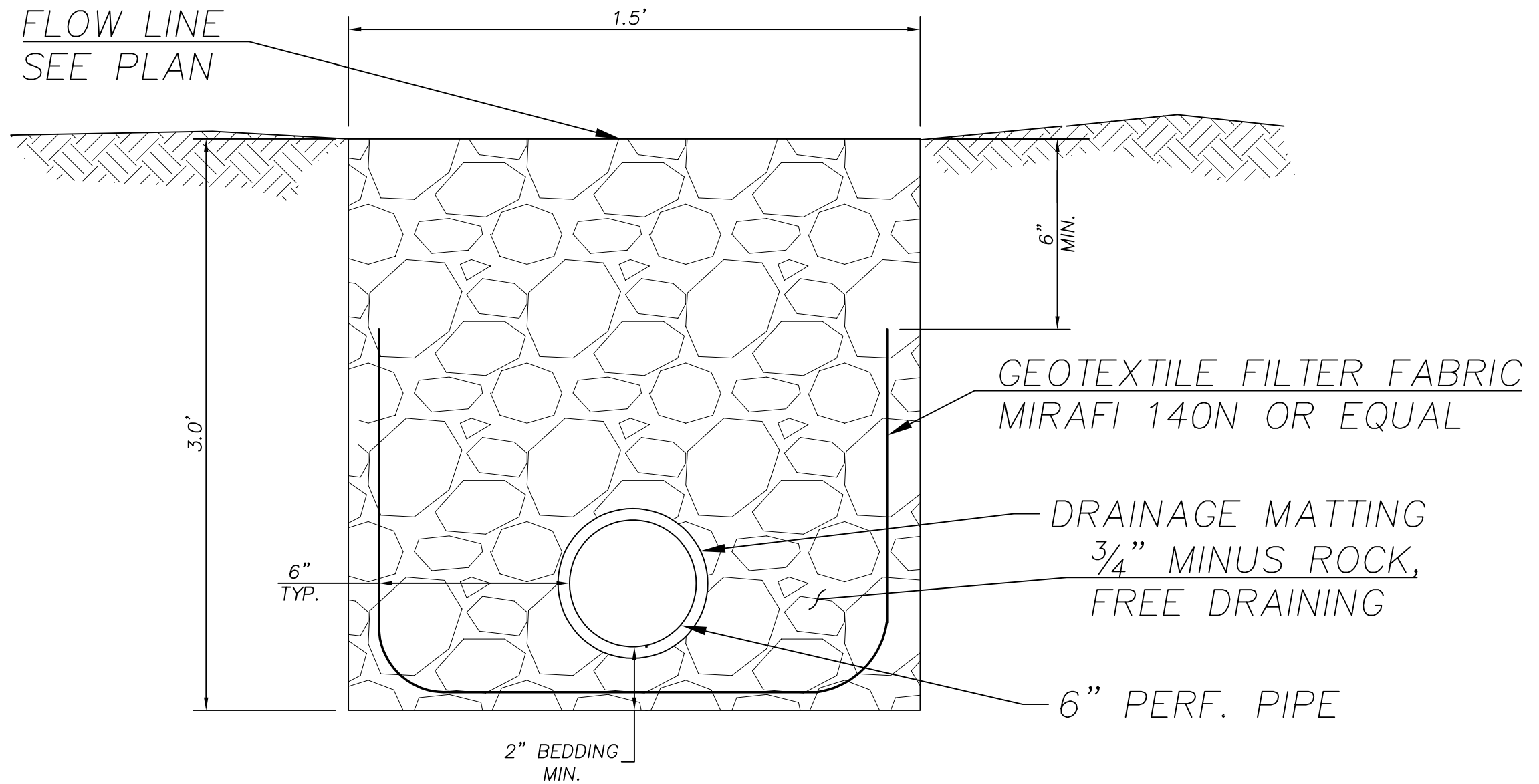
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2

ROCK INFILTRATION TRENCH - 2

NTS



3

ROCK INFILTRATION TRENCH - 3

NTS

Appendix B

Support Calculations

Rock Infiltraion Trench Calculations



Humber
Design
Group, Inc.

Date: November 09, 2022

To: City of Manzanita
167 S 5th St
Manzanita, OR 97130

From: Min Chan Song, EIT
Humber Design Group, Inc. (HDG)

Subject: Stormwater Storage Capacity Calculations – Catchment A

Rational Formula: 1 cubic foot for every 44 square feet of impervious area.

Assumptions:

Void of Rock = 40%, Void of Perf. Pipe = 100%

Rock Area Dimension, D = 3' X 3'

Radius of Perf. Pipe Size, r = 6" and 3"

Section Area with Void, $A = (D - (\pi r^2) - (\pi r^2)) * 40\% = 3.21 \text{ sqft}$

Calculations:

Impervious Area = 12,497 SF

Storage required = $12,497 / 44 = 284 \text{ cuft}$

Trench Length Required = $284 \text{ cuft} / 3.21 \text{ sqft} = 88.47 \text{ ft}$



Humber
Design
Group, Inc.

Date: November 09, 2022

To: City of Manzanita
167 S 5th St
Manzanita, OR 97130

From: Min Chan Song, EIT
Humber Design Group, Inc. (HDG)

Subject: Stormwater Storage Capacity Calculations – Catchment B

Rational Formula: 1 cubic foot for every 44 square feet of impervious area.

Assumptions:

Void of Rock = 40%, Void of Perf. Pipe = 100%

Rock Area Dimension, D = 1.5' X 3'

Radius of Perf. Pipe Size, r = 3" and 2"

Section Area with Void, $A = (D - (\pi r^2) - (\pi r^2)) * 40\% = 1.69 \text{ sqft}$

Calculations:

Impervious Area = 719 SF

Storage required = $719 / 44 = 16.3 \text{ cuft}$

Trench Length Required = $16.3 \text{ cuft} / 1.69 \text{ sqft} = 9.65 \text{ ft}$



Humber
Design
Group, Inc.

Date: November 09, 2022

To: City of Manzanita
167 S 5th St
Manzanita, OR 97130

From: Min Chan Song, EIT
Humber Design Group, Inc. (HDG)

Subject: Stormwater Storage Capacity Calculations – Catchment C

Rational Formula: 1 cubic foot for every 44 square feet of impervious area.

Assumptions:

Void of Rock = 40%, Void of Perf. Pipe = 100%

Rock Area Dimension, $D = 1.5' \times 3'$

Radius of Perf. Pipe Size, $r = 3"$

Section Area with Void, $A = (D - \pi r^2) * 40\% = 1.72 \text{ sqft}$

Calculations:

Impervious Area = 3905 SF

Storage required = $3905 / 44 = 88.75 \text{ cuft}$

Trench Length Required = $88.75 \text{ cuft} / 1.72 \text{ sqft} = 51.6 \text{ ft}$

Appendix C

Additional Forms & Associated Reports

Geotechnical Report



Draft Geotechnical Engineering Report

Manzanita City Hall
635-655 Manzanita Avenue
Manzanita, Oregon

Prepared for:
City of Manzanita
Leila Aman | Manzanita City Manager
PO Box 129
Manzanita, OR 97130

October 31, 2022
Project No. COM-2022-001

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SUPPORTING DATA

Appendix A – Figures

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Figure 2	Site Exploration Plan
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Appendix B

Interpreted Summary Boring Logs
Results of Laboratory Testing

1.0 INTRODUCTION

This Geotechnical Engineering Report (GER) presents Rhino One Geotechnical (ROG) geotechnical engineering study for the proposed new City Hall for the City of Manzanita. The project location is shown on Figure 1, *Site Location Map* and attached in Appendix A.

The proposed project is located on an approximately 2.7-acre site at 635-655 Manzanita Avenue. There is an old existing school and quonset hut on the property that are both unoccupied. The new City Hall will be about 6,000 square feet along with on-site parking and other improvements. Parts of the existing structures may be renovated and incorporated as part of the new development.

The purpose of this study is to provide geotechnical data for the proposed buildings, pavements, and miscellaneous improvements. This report provides a summary of our field exploration, laboratory testing, geotechnical engineering analysis, seismic design criteria, geotechnical design criteria, and construction recommendations for the proposed project. This report may require modification as the project develops.

2.0 SCOPE OF SERVICES

The scope of services for ROG was completed in general accordance with our proposal dated July 25, 2022. Generally, the services consisted of the following major elements.

- Field Exploration and Laboratory Testing
- Geotechnical Engineering Analysis
- Preparation of this Geotechnical Engineering Report (GER)

3.0 EXPLORATION AND TESTING PROGRAM

3.1 Geotechnical Field Explorations

The subsurface exploration program for this project consisted of drilling five (5) borings with a full-size track-mounted drill rig operated by Crisman Pacific Strata Drilling L.L.C, of Donald, Oregon on October 10 and 11, 2022. The borings (B-01 to B-05) were drilled at the approximate locations shown on the *Site Exploration Plan* (Appendix A, Figure 2) and were drilled to depths between 11.5 and 81.5 feet below ground surface (BGS). The drilling was performed using mud-rotary drilling techniques. Disturbed Standard Penetration Test (SPT) soil samples were obtained at regular 2.5-foot or 5-foot intervals using a 140-pound automatic hammer with an average energy transfer ratio of 73.8% during the drilling in general accordance with the *Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils* (ASTM D 1586).

The subsurface materials encountered were logged and field classified in general accordance with the *ASTM Manual-Visual Classification Method* (ASTM D 2488). The SPT samples were collected at desired depths and packaged in moisture-tight bags. Uncorrected blow counts from the SPT sampling are reported on the boring logs. Corrected blow counts $[(N1)_{60}]$ were used for our analysis unless otherwise noted. Interpreted summary borings logs are presented in Appendix B. Table 1 describes the explorations completed for the project and as shown on the *Site Exploration Plan*.

Table 1 Geotechnical Exploration Program Summary

Exploration Number	Ground Elevation ¹ (feet)	Termination Depth ² (BGS, feet)	Exploration Method	Groundwater Depth ² (BGS, feet)
B-01	104	81.5	MR	NE
B-02	106	51.5	MR	NE
B-03	105	16.5	MR	NE
B-04	104	11.5	MR	NE
B-05	105	21.5	MR	NE

Notes:

1: Elevation approximated from Google Earth

2: Below existing ground surface at time of drilling

MR = Mud rotary drilling technique using track-mounted rig

NE = not encountered due to use of mud rotary drilling techniques

3.2 Laboratory Testing

Laboratory tests were conducted to provide data on the physical characteristics and engineering properties of the soil essential for engineering studies and analyses. Laboratory tests were conducted on selected soil samples in accordance with standard ASTM methods. The tests conducted include:

- Natural moisture content of selected samples obtained from the borings in general accordance with guidelines presented in ASTM D 2216.
- Grain size analysis on selected samples obtained from the borings in general accordance with guidelines presented in ASTM D C136/117.

The results of these tests are attached in Appendix B, selected test results are presented on the boring logs, and a summary of test results is shown on Table 2.

Table 2 Laboratory Test Results Summary

Boring Designation, Sample Depth Interval (feet)	Percent Gravel	Percent Sand	Percent Silt and Clay
B-01, 5 – 6.5	0.0	99.5	0.5
B-01, 10 – 11.5	0.0	99.4	0.6
B-01, 15 – 16.5	0.0	98.4	1.6
B-01, 20 – 21.5	0.0	96.9	3.1
B-01, 25 – 26.5	0.0	96.4	3.6
B-01, 30 – 31.5	0.0	97.3	2.7
B-01, 35 – 36.5	0.0	96.7	3.3
B-01, 40 – 41.5	0.0	96.5	3.5
B-01, 50 – 51.5	0.0	95.0	5.0
B-01, 60 – 61.5	0.0	95.3	4.7
B-01, 70 – 71.5	0.0	92.5	7.5
B-01, 80 – 81.5	0.0	90.7	9.3

4.0 SITE GEOLOGIC AND SUBSURFACE CONDITIONS

4.1 Geologic Information

Regional geology for the project vicinity was evaluated based on a review of existing geologic mapping, site reconnaissance, and subsurface explorations. Figure 2 (*Site Exploration Plan*) shows the approximate locations of exploration for this project.

4.1.1 Regional Published Geology Summary

The site is located along the northern Oregon coast of the Pacific Ocean. The region consists of accreted marine sedimentary rocks consisting of siltstone and sandstone. Exposures of invasive lava flows of the Columbia River Basalt Group lava is present north of the Neahkahnie Beach. Published mapping indicates bedrock underlying the project consists of Miocene to Oligocene aged marine sedimentary rocks (map units Tmo (Wells, Snaveley, MacLeod, Kelly, & Parker, 1994). Surficial deposits consist of beach and dune sand deposits.

4.2 Interpreted Subsurface Conditions

As discussed above, to date we have completed five borings at the site. Subsurface data from the test borings were used to develop a general subsurface profile for the project location.

The materials encountered are described below. Additional observations regarding groundwater are included in Section 4.3.

4.2.1 Project Geotechnical Units

The materials encountered in our field explorations for the project are interpreted to represent beach and dune sand unit. Our interpretation of the subsurface conditions is based on our explorations and regional geologic information from published sources. The subsurface interpretation considered our borings from the current exploration program as well as geologic information from published sources. Subsurface conditions may vary between explorations differently from those discussed below or shown on the boring logs. The following sections are intended to provide the reader with a general overview of subsurface conditions. Individual borings logs should be reviewed to best understand the encountered subsurface conditions at specific locations. For detailed boring descriptions see attached boring logs.

4.2.1.1 Beach and Dune Sand

The encountered soils generally consist of loose to very dense, poorly graded sand (SP) and very dense, poorly graded sand with silt (SP-SM). The sand with silt typically have no plasticity. The soils were observed to be moist to wet. The soils correlate to beach and dune sand deposits. All borings were terminated in this unit. This unit was observed to for the full depths of exploration to 81.5 feet BGS in all borings.

The measured natural water content from the samples ranged from 10.0 to 24.5 percent with an average of 16.8 percent. The SPTs conducted in this layer ranged from 3 to 104 blows per foot (BPF) with an average of 24.1 BPF. The fines content of this material ranged from 0.5 to 9.3 percent with an average fines content of 3.8 percent.

4.3 Groundwater Observations

The borings were drilled using mud-rotary drilling techniques. Therefore, groundwater could not be directly measured at the time of drilling due to the introduction of artificial drilling slurry into the borehole. Groundwater was interpreted at depths between 30 and 35 feet BGS in the borings at the time of explorations based on moisture conditions. We also reviewed historical logs for Highway 101 for the tunnel crossing at Neahkahnie Creek. Groundwater was encountered at approximate

elevation 55 to 62 feet (NGVD 29) in the piezometers installed for that study. Based on our observation and the data from historical logs, we recommend that groundwater be assumed at 30 feet BGS for design purposes.

5.0 SEISMIC HAZARDS EVALUATION

5.1 Seismic Design Considerations

This section presents the results of ROG's site-specific seismic hazard analysis for the proposed Project. The site location relative to surrounding physical features is shown on Figure 1 (Appendix A). This facility qualifies as an "Essential Structure" in accordance with Oregon Revised Statutes (ORS) Section 455.447(1).

This study has been completed as required in Section 1803.3.2 – "Seismic Site Hazard Study" with the reporting requirements of Section 1803.6.1 – "Seismic Site Hazard Report" of the Oregon Structural Specialty Code (OSSC, 2019)). The following sections of the report discuss these requirements along with the relevant section numbers from the code.

5.2 Geologic Profile (OSSC 1803.6.1, Item 1)

Figure 2, Appendix A, shows the location of test borings conducted for this study. Section 4 of the report describes materials encountered in detail to the depth explored. Borings logs and laboratory testing data are presented in Appendix B of the report. Section 4.3 of the report describes groundwater in detail. An estimated geologic profile at the site is presented in Table 3 below.

Table 3 Estimated Geologic Profile

Profile Depth (feet)	Geologic Unit	Shear Wave Velocity (feet per second)
0 to 20	Beach and Dune Sands	600 to 900
20 to 100	Beach and Dune Sands	900 to 1,200
> 100	Weathered Siltstone / Sandstone (Marine Sedimentary Rock)	1,500 to 2,500

5.3 Seismicity (OSSC 1803.6.1, Items 2 and 3)

Historic Seismicity

Information on the historical record of Oregon earthquakes dates back to approximately 1841. Prior to 1900, approximately 30 earthquakes had been recorded in the area. Several hundred earthquakes have been recorded in the State since 1900, especially since the 1980's when the University of Washington established a recording station as part of the Pacific Northwest Seismic Network (PNSN). Catalogues of earthquake events are available from Berg and Baker (1963) and Johnson et al. (1994). Additional summary of Oregon earthquakes resources includes Wong et al. (2000).

Oregon is a region of low to medium historical seismicity. Clusters of earthquakes are recorded in the Klamath Falls region (M = 6.0, approximately 260 miles from the Site), northeast Oregon (M= 5.0 Umatilla, M= 6.5 Milton Freewater, approximately 200 to 250 miles from the Site), and the Portland – Northern Willamette Valley (M= 5.6 Mt. Angel, approximately 100 miles from the Site).

Seismic Sources

Information provided by several references characterize the principal tectonic feature of the Pacific Northwest as the Cascadia Subduction Zone (CSZ). The subduction zone begins off the coast of Oregon and dips downward beneath Western Oregon. Two primary seismic source mechanisms are associated with the subduction zone: an interface source mechanism and an intraplate source mechanism. Additionally, several shallow crustal seismic faults of the North American Plate have also been mapped. The following subsections describe these three sources in detail. Volcanic sources beneath the Cascade Range are not considered in this study, as they rarely generate seismic events in excess of magnitude 5.0 and are not considered to pose significant ground shaking hazard at the Project Site.

Cascadia Subduction Zone - Interface Earthquake

CSZ represents the boundary between the subducting Juan de Fuca tectonic plate and the overriding North American tectonic plate. Interface earthquakes occur along the 1000 kilometer (km) thrust fault stretching from Northern Vancouver Island to Cape Mendocino California and are located at depths of less than approximately 30 km. Historically, earthquakes generated from subduction zone interface sources are the largest earthquakes observed worldwide. Geologic evidence from the coastal areas of Washington and Oregon indicates the CSZ has produced very large megathrust earthquakes of estimated moment magnitude (M_w) 8 to 9 originating at irregular intervals along the interface source in the past. The last such megathrust event occurred in January 1700 which likely ruptured much of the length of the CSZ. It is estimated the 1700 CSZ event had a moment magnitude (M_w) between 8.7 and 9.2 and the ground shaking may have continued for up to 3 to 4 minutes (Atwater, B. F., et al., 1995). Recurrence intervals for subduction zone megathrust interface earthquakes are based on studies of the geologic record. Studies indicate a recurrence interval ranging from 300 to 600 years.

The CSZ fault zone located offshore is considered to have the potential to generate a M9 event at a site distance of approximately 15 miles (Petersen, et al., 2014). The Oregon Structural Specialty Code (OSSC, 2019) requires the consideration of an earthquake on the seismogenic part of the CSZ interface with a minimum magnitude of 8.5 (1803.3.2.1(3), Design Earthquake), which likely corresponds to a 10 percent chance of being exceeded in 50 years. A moment magnitude event of 9.0 likely corresponds to a 2 percent chance of being exceeded in 50 years.

Cascadia Subduction Zone - Intraplate Earthquake

Intraplate earthquakes occur within the subducting Juan de Fuca plate where the plate bends below the North American plate. Intraplate earthquakes typically occur along normal faults and at greater depths than interface earthquakes. A number of researchers have noted the complete absence of intraplate seismicity in Western Oregon (Ludwin, R.S., Weaver, C.S., and Crosson, R.S, 1991) and (Rogers, A. M., Walsh, T. J., Kockelman, W. J., and Priest, G. R., 1996)). With the possible exception of the 1873 Crescent City Earthquake Richter magnitude 6.75, no moderate to large intraplate earthquakes (M_w greater than 5.0) have occurred within the CSZ from south of Puget Sound to Cape Mendocino. These earthquakes are postulated to have a deep focus of 40 to 80 kilometers in the subducted Juan de Fuca Plate, and theoretical magnitudes of up to 7.8.

This fault is considered to be capable of generating a M6.9 at a distance of about 50 miles from the site (Petersen, et al., 2014). The Oregon Structural Specialty Code (OSSC, 2019) requires the consideration of a deep earthquake on the seismogenic part of the subducting CSZ with a moment magnitude greater than 7 (1803.3.2.1(2), Design Earthquake).

Crustal Sources

Crustal source seismic events are shallow earthquakes occurring within the North American plate. Due to their proximity, crustal faults are significant seismic sources for ground motion. A review of the (US Geological Survey (USGS), May 26 2015) and a study by (Geomatrix Project Number 2442, 1995) indicates there are 4 crustal faults within a 20-mile radius of Site. Table 4 and Figure 3 present the mapped crustal faults within 20-mile radius of the Project Site.

Table 4 Potentially Active Crustal Fault Summary

Fault Name	Fault Number	Closest Distance to Site (mile)	Fault Type	Most Recent Deformation (year)	Mapped Length (km)
Tillamook Bay Fault Zone	881	9.9	Reverse	< 1.6 M	32
Fault H	790	12.9	Normal	< 15 ka	49
Nehalem Bank Fault	789	17.1	Right Lateral	< 15 ka	101
Gales Creek Fault Zone	718	17.3	Right Lateral	< 1.6 M	73

Recorded seismicity due to these sources in the Site vicinity is relatively limited, with only a few recorded earthquakes in the region exceeding moment magnitude (M_w) 3.0 and none exceeding 5.0. Studies (Yelin, T. S. and Patton, H. J. , 1991) of small earthquakes in the region indicate most crustal earthquake activity is occurring at depths of 10 to 20 kilometers.

Seismic Sources

The contribution of earthquake hazards for the PGA from various seismogenic sources was evaluated using the interactive deaggregation tool provided by the USGS (U.S. Department of the Interior, U.S. Geological Survey, 2020). The interactive deaggregation tool incorporates the results of the 2014 National Seismic Hazard Mapping Program (NSHMP) and separates the earthquake hazards into four sources: interface, slab, fault and grid. The interface and slab categories are from the CSZ, and the fault and grid categories represent the shallow crustal sources (the “fault” category is the hazard from discrete crustal faults in the USGS 2014 NSHMP seismic source model; the “grid” category is the hazard also from crustal seismicity but from as-of-yet unknown or discretely modeled faults). The seismic hazard at the site is dominated by Interface Earthquake with a Moment Magnitude of 9.08 a distance of 31.5 KM from the site with a PGA of 0.77g. This earthquake scenario was analyzed further for liquefaction and lateral spreading analysis.

5.4 Recommended Design Spectra

The design of the new structure will be governed by the 2019 Oregon Structural Specialty Code (International Code Council, Inc., 2019). Therefore, the seismic design will be completed in accordance with ASCE 7-16. The following sections provide seismic design criteria in accordance with ASCE 7-16.

The code-based design earthquake spectral response acceleration parameters were determined using ASCE's online Hazard Tool (American Society of Civil Engineers, 2020). Section 11.4.8 of ASCE/SEI 7-16 recommends a ground motion hazard analysis be completed for structures on Site Class D with S_1 greater than or equal to 0.2g. This site has S_1 of 0.671g which is greater than 0.2g. Therefore, the values for long-period site coefficient (F_v), spectral response acceleration parameter adjusted for site class effects (S_{M1}) and design spectral response acceleration parameter (S_{D1}) at a

period of 1 second are not listed in the ASCE's online Hazard Tool. Based on our discussions with the structural engineer, the proposed structure is a two-story building with a fundamental period of vibration less than 0.5 seconds. Therefore, a site response analysis is not required, rather a site class is permitted to be determined in accordance with Section 20.3 of ASCE 7-16 and corresponding values of F_a and F_v determined from tables 11.4-1 and 11.4-2.

Following the requirements of Section 21.2 of ASCE/SEI 7-16, a probabilistic ground motion analysis was completed using USGS's *Unified Hazard Tool*, version 4.2.0, Dynamic: Conterminous U.S. 2014 (update) for Site Class D (U.S. Department of the Interior, U.S. Geological Survey, 2020). The Risk Targeted Ground Motions (RTGM) was calculated using the USGS RTGM Calculator (U.S. Department of the Interior, U.S. Geological Survey, 2020) in accordance with "Method 2" of Section 21.2.1.2 of ASCE/SEI 7-16. The maximum RTGM spectral acceleration was calculated as 1.856g at a period of 0.3 second. Since this value is less than 1.2 F_a , deterministic ground motion analyses are not required. The design spectral accelerations can therefore be taken as 2/3 of the RTGM spectral accelerations unless it is less than 80% of the spectral accelerations evaluated using the procedure in Section 11.4.6 with $F_v = 2.5$. Table 5 summarizes the spectral accelerations based on the method discussed above and the site-specific seismic analysis.

Table 5. ASCE 7-16 Seismic Design Parameters (OSSC 2019)

	Short Period (0.2 Sec)	Long Period (1 Sec)
Maximum Credible Earthquake Spectral Acceleration (g)	S _s = 1.278 g	S ₁ = 0.671 g
Site Class	D	
Results from ASCE 7-16 Online Calculator		
Site Coefficient	F _a = 1.2	F _v = N/A
Adjusted Spectral Acceleration (g)	S _{MS} = 1.533	S _{M1} = N/A
Design Spectral Response Acceleration Parameters (g)	S _{DS} = 1.022	S _{D1} = N/A
Mapped PGA (g)	0.64 g	
F _{PGA}	1.20	
PGA _M (g)	0.768 g	
"Method 2" of Section 21.2.1.2 of ASCE/SEI 7-16		
Risk Targeted Ground Motions Spectral Acceleration (Section 21.2) ¹	1.828 g	1.482 g
Design Spectral Response Acceleration Parameters (Method 2)	S _{DS} = 1.219 g	S _{D1} = 0.988 g
Design Spectral Acceleration in accordance with Section 11.4.6 with F _v = 2.5	1.022 g	1.118 g
80% Design Spectral Acceleration in accordance with Section 11.4.6 with F _v = 2.5	0.818 g	0.894 g
Recommended Design Spectral Response Acceleration Parameters	S _{DS} = 1.219 g	S _{D1} = 0.988 g

Notes:

1: Uses scale factors of 1.1 at 0.2s and 1.3 at 1s

5.5 Seismic Hazards (OSSC 1803.6.1, Item 6):

In addition to ground shaking, site-specific geologic conditions can influence soil strength behavior and permanent ground deformations. Based on our subsurface exploration, analysis, literature review and experience, a summary of the potential geologic and seismic hazards at the site are discussed in the following sections.

Earthquake Induced Slope Instability

The site slopes gently towards the east and west at an average slope of flatter than 5H: 1V. Earthquake induced Slope stability is not a concern at these flat slopes.

Liquefaction and Differential Settlements

We conducted a preliminary screening for liquefiable soils based on the Bray and Sancio (Bray & Sancio, 2006) criteria, which suggest soils with plasticity indices below 12 with a natural moisture content greater than 0.85 times the liquid limit are susceptible to liquefaction, and using the Boulanger and Idriss (2006) method which provides recommendations the fine-grained soils with a plasticity index less than 7 are susceptible to liquefaction. Soils which met these criteria were considered potentially liquefiable.

Liquefaction triggering analyses were completed for a magnitude 9.1 earthquake with a peak ground acceleration of 0.77 g. For this analysis, groundwater was assumed at a depth greater than 30 feet BGS. Liquefaction triggering analysis was completed using the method outlined by Boulanger and Idriss (2014). The computer programs LiqSVs version 2.0.1.6 by GeoLogismiki were used to analyze the SPT data. A liquefaction hazard was assumed to exist if the calculated factor of safety against liquefaction was less than 1.2. The loose to medium dense material consisting of poorly graded sand from a depth of 30 feet (assumed groundwater level) to 40 feet are potentially liquefiable. Our analysis indicates post liquefaction settlement on the order of 2- to 5- inches could result during a design seismic event.

Surface Displacement Due to Faulting or Lateral Spreading

The nearest mapped crustal fault is located approximately ten miles from the project site. This fault is not considered to be active. Therefore, fault rupture at the project site is not a seismic hazard. Lateral spreading on the site could occur towards the ocean or Neahkahnie Lake. Based on our preliminary analysis, lateral spreading could range from 12 to 18 inches during design seismic event due to the liquefaction of the later between 30 to 40 feet BGS.

Tsunami or Seiche Inundation

The site is inland and elevated at an elevation of 100 feet above MSL. Accordingly, tsunami or seiche events do not represent a seismic hazard to the site.

6.0 GEOTECHNICAL DESIGN RECOMMENDATIONS

6.1 General

The new City Hall is proposed to be approximately 6,000 square feet two-story building with on-site parking and other miscellaneous improvements. Parts of the existing structures may be renovated and incorporated as part of the new development. The location of the new City Hall was chosen, in part, due to it being outside of the tsunami inundation zone. As such, it may be used as a shelter and muster point in the event of an earthquake and accompanying tsunami. Therefore, the new City Hall may be designed as a risk category IV. Building loads are not known at this time. For the purposes of this report, we have assumed loads on the order of 250 kips and 6 kips per foot for isolated columns and perimeter foundations.

6.2 Design Profile Recommendations

All borings were advanced in the vicinity of the proposed building during our exploration program. These borings were drilled to depths of 11.5 to 81.5 feet BGS. Based on the subsurface conditions encountered in these borings, we have developed the following profile for geotechnical analysis of the bridge and retaining walls.

Table 6 Recommended Soil Strength Properties

Soil Type	Effective Unit Weight, γ (pcf)	Angle of Internal Friction, Φ (degree)	Cohesion, c (psf)	L-Pile Soil Model Type	Non-Default, k (pci)	Strain Factor, ϵ_{50}
Loose to Medium Dense Poorly-graded Sand (SP) (0 – 10 feet)	110	30	0	Sand	25	NA
Medium Dense Poorly-graded Sand (SP) (10 – 25 feet)	52.6	30	0	Sand	60	NA
Dense Poorly-graded Sand (SP) (25 – 45 feet)	52.6	34	0	Sand	90	NA
Very Dense Poorly-graded Sand (SP) (45 – 80 feet)	57.6	39	0	Sand	125	NA

Notes:

pci: pounds per cubic inch

psf: pounds per square foot

Groundwater was encountered at depths of 10 to 15 feet at time of drilling. For design assume groundwater at 25 feet below ground surface

6.3 Building Foundations Design Approach

We understand that part of this building will be used as an emergency response center and will therefore be designed as a risk category IV structure. Table 12.13-2 within ASCE 7-16 defines the upper limit on lateral ground displacement for use of shallow foundations. Based on our calculations, the lateral spreading is on the order of 12- to 18- inches towards the ocean and the Lake Nehalem during a design seismic event. The vertical differential settlements are specified in ASCE 7-16 Table 12.13-3 to be less than $0.002L$ for risk category IV structures. For a 50 feet span, these differential settlements are calculated as 1.2 inches. As noted, before, the post-liquefaction settlements are calculated as 2 to 5 inches with an estimated differential settlement of 1 to 2.5 inches which is larger than the 1.2 inches allowed for a 50 feet span. We recommend that the owner/design team evaluate these lateral spreading and settlements estimates limits for the type of building and decide if shallow spread footing or deep foundations systems are required.

Based on this analysis, the building foundations should be supported on deep foundations for a risk category IV structure. This deep foundation foundations system should also be designed to resist additional lateral loads due to lateral spreading. We have however provided preliminary recommendations for both shallow spread footings and deep foundations (Continuous Flight Auger (CFA)). Once the building types are decided, these recommendations will be updated as needed.

6.4 Spread Foundations Design Recommendations

Shallow spread footings can be placed on firm native subgrade or on top of engineered fill. Continuous wall and isolated spread footings should be at least 18 and 24 inches wide, respectively. The bottom of exterior footings should be at least 24 inches below the lowest adjacent exterior grade. The bottom of interior footings should be established at least 18 inches below the base of the floor slab. Due to the settlement risks associated with post-liquefaction settlements, we recommend that the following two measures be used for the design of foundations:

- Use a minimum of 12 inches of compacted gravels below the spread footings, wall footings and grade beams.
- The structural engineer should evaluate if the calculated post-liquefaction differential settlement of 1 to 2.5 inches is detrimental to the building performance for code required life-safety requirements. Remedial measures like tying the building together using grade beams or other structural measures should be instituted if needed.

The nominal bearing capacity (un-factored) for footings meeting the above minimum dimensions is 6,000 pounds per square feet (psf). Footings bearing on compact native soils should be sized for an allowable bearing capacity of 2,000 psf (Factor of Safety = 3). This is a net bearing pressure. The weight of the footing and overlying backfill can be disregarded in calculating footing sizes. The recommended allowable bearing pressure applies to the total of dead plus long-term-live loads, and this bearing pressure may be doubled for short-term loads such as those resulting from wind or seismic forces.

Based on our analysis, total post-construction settlements were calculated to be less than 1 inch, with post-construction differential settlement of less than 0.5 inch over a 50-foot span for maximum column and perimeter footing loads of less than 250 kips and 6 kips per linear foot.

Lateral loads on footings can be resisted by passive earth pressure on the sides of the structures and by friction at the base of the footings. A passive earth pressure of 300 pounds per cubic foot (pcf) may be used for footings confined by native soils. Adjacent floor slabs, pavements, or the upper 24-inch depth of adjacent, unpaved areas should not be considered when calculating passive resistance. For footings in contact with native material, use a coefficient of friction equal to 0.53 when calculating resistance to sliding. Both of these numbers do not include a factor of safety. We recommend a minimum factor of safety of 1.5 be used with these numbers.

The footings should be founded below an imaginary line projecting at a 1-horizontal to 1-vertical (1H:1V) slope from the base of any adjacent parallel utility trenches. The footings must be embedded so there is a minimum of 10 feet of horizontal distance between the base of the footings and any adjacent slope.

A geotechnical engineer or their representative from ROG should confirm suitable bearing conditions and evaluate footing subgrades. Observations should also confirm loose or soft material, organics, unsuitable fill, and topsoil zones were removed. Localized deepening of excavations may be required to penetrate deleterious materials. Any resulting excavations should be backfilled with compacted granular material.

6.5 Deep Foundation Design Recommendations

Our analysis indicates that soils from 30 to 40 feet are potentially liquefiable and therefore the deep foundations should be supported below 40 feet BGS. Continuous flight auger (CFA) piles are an economical method of supporting the proposed structures. We recommend the CFA piles be installed at least 10 feet into the dense to very dense sands which were encountered below a depth of 40 feet in the borings. The minimum depth of the CFA piles is recommended to be 50 feet BGS.

We analyzed the vertical compressive and tension (uplift) load capacities of 18-inch and 24-inch diameter CFA piles using the computer program Shaft® version 2017.8.10 by Ensoft, Inc. We also completed lateral load analysis using computer program LPILE® version 2019.11.07 by Ensoft, Inc. The following table summarizes the results of our analysis.

Table 7. Preliminary CFA Pile Capacities

CFA Pile Diameter (inch)	Pile Depth ¹ (feet)	Allowable Vertical Capacity (kip) ² (FS = 3)	Allowable Uplift Capacity (kip) ² (FS = 3)	Lateral Load at ½ -inch Deflection (Free Head) (kip)	Lateral Load at ½ -inch Deflection (Fixed Head) (kip)
18	50	62	40	13	20
18	55	88	56		
18	60	104	74		
24	50	92	56	20	35
24	55	128	80		
24	60	162	106		

Notes:

1: The depth of embedment is measured from existing ground surface

2: The capacities can be increased by 1/3 during seismic events

3: Additional downdrag loads of 75 kips should be added to piles during design seismic event

The individual nominal vertical resistance of each CFA should be reduced by a factor η for an isolated CFA piles taken as:

- $\eta = 0.65$ for a center-to-center spacing of 2.5 diameters
- $\eta = 1.0$ for a center-to-center spacing of 4.0 diameters or more

For intermediate spacings, the value of η may be, determined by linear interpolation.

Similarly, p-y multipliers should be used for lateral load capacities depending on the pile spacing. The lateral load analysis should be updated with these multipliers once the pile spacing is decided. The p- multiplier for CFA piles shall be taken as:

- $\eta = 0.70, 0.5$, and 0.35 for rows 1, 2, and 3 (and higher) respectively for a center-to-center spacing of 3 diameters
- $\eta = 1, 0.85$, and 0.70 for rows 1, 2, and 3 (and higher) respectively for a center-to-center spacing of 5 diameters

For intermediate spacings, the value of η may be determined by linear interpolation.

Additional bending moment and shear forces will be applied to the piles during a lateral spreading event. ROG should evaluate these forces as the design of the building proceeds in conjunction with the structural engineer.

6.6 Foundation Drain Recommendations

We recommend foundation drains around the perimeter foundations of all structures. The foundation drains should be at least 12 inches below the base of the slab. The foundation drain should consist of perforated collector pipes embedded in a minimum 2-foot-wide zone of angular drain rock. The drain rock should consist of drain rock meeting the specifications provided in 2021 version of Oregon State Standard Specifications for Construction (ODOT-SS, 2021) 00430.11 – Granular Drain Backfill Material. The drain rock should be wrapped in a geotextile fabric geotextile fabric meeting the specifications provided in ODOT-SS 2320.20 for soil separation and/or stabilization. The collector pipes should discharge at an appropriate location away from the base of the footings.

6.7 Floor Slab Design Recommendations

The floor slabs should be placed on top of imported granular materials. For on-grade slabs, we recommend an 8-inch-thick layer of imported granular material should be placed and compacted over the prepared subgrade. Imported granular material should be crushed rock or crushed gravel and fairly well-graded between coarse and fine, contain no deleterious materials, have a maximum particle size of 1-inch, and have less than 5-percent by weight passing the U.S. Standard No. 200 Sieve. A subgrade modulus of 150 pounds per cubic inch (pci) may be used to design the floor slab for static conditions. Please note that during the design seismic event, distress to the building slabs may occur due to differential settlements related to liquefaction.

The owner and design team should evaluate whether a vapor barrier is needed under the new slab areas. A vapor barrier will reduce the potential for moisture transmission through and efflorescence growth on the floor slabs. Additionally, flooring manufacturers often require vapor barriers to protect flooring and flooring adhesives and will warrant their product only if a vapor barrier is installed according to their recommendations. Actual selection and design of an appropriate vapor barrier, if needed, should be based on discussions between the owner and members of the design team.

6.8 Retaining Wall Design Recommendations

The retaining wall design recommendations are based on the following assumptions: (1) the walls consist of conventional, cantilevered retaining walls, (2) the walls are less than 10 feet in height, and (3) the backfill is drained. Review of our recommendations will be required if the retaining wall design criteria for the project varies from these assumptions.

Unrestrained site walls which retain native soils should be designed to resist active fluid unit weight of 40 pounds per cubic foot (pcf) where supporting slopes are flatter than 4H:1V. The active fluid unit weight shall be increased to 67 pcf where supporting slopes are 2H:1V. A superimposed seismic lateral force based on a dynamic force of $18H^2$ pounds per lineal foot of wall, where H is the height of the wall in feet, and applied at 0.6H from the base of the wall should also be applied to walls supporting slopes flatter than 4H:1V.

Lateral loads on footings can be resisted by passive earth pressure on the sides of the structures and by friction at the base of the footings. Nominal (Un-factored) passive earth pressure of 300 pounds per cubic foot (pcf) may be used for footings confined by native soils. Adjacent floor slabs, pavements, or the upper 24-inch depth of adjacent, unpaved areas should not be considered when calculating passive resistance. For footings in contact with native material, use a coefficient of friction equal to 0.53 when calculating resistance to sliding. These numbers do not contain a factor of safety. We recommend a minimum factor of safety of 1.5.

If other surcharges (Foundations, vehicles, etc.) are located within a horizontal distance from the back of a wall equal to twice the height of the wall, then additional pressures will need to be accounted for in the wall design. Contact our office for the appropriate wall surcharges based upon the actual magnitude and configuration of the applied loads. The wall footings should be designed in accordance with the guidelines provided in the "Spread Footing Design Recommendation" section of this report.

The design parameters provided assume back-of-wall drains will be installed in order to prevent buildup of hydrostatic pressures behind all walls. A minimum 12-inch-wide zone of drain rock, extending from the base of the wall to within 6 inches of finished grade, should be placed against the back of all retaining walls. Perforated collector pipes should be embedded at the base of the drain rock. The perforated collector pipes should discharge at an appropriate location away from the base of the wall. The backfill material placed behind the walls and extending a horizontal distance equal to at least the height of the retaining wall should consist of granular retaining wall backfill

material meeting specifications provided in Oregon's Department of Transportation/City of Portland Standard Specifications for Construction 2021 (ODOT-SS) Section 510.12. We recommend the select granular wall backfill be separated from general fill, native soil and/or topsoil using a geotextile fabric which meets the requirements provided in ODOT-SS 2320.20 for drainage geotextiles. The wall backfill should be compacted to a minimum of 92 percent of the maximum dry density, as determined by ASTM D 1557. Backfill placed within 3 feet of the wall should be compacted in lifts less than 6 inches thick using hand-operated tamping equipment (e.g., jumping jack or vibratory plate compactors).

Settlements of up to 1% of the wall height commonly occur immediately adjacent to the wall as the wall rotates and develops active lateral earth pressures. Consequently, we recommend construction of flat work adjacent to retaining walls be postponed at least four (4) weeks after backfilling of the wall, unless survey data indicates settlement is complete prior to that time.

6.9 Excavation and Temporary Shoring Design Recommendations

The proposed cuts are minimal on the order of less than 4 feet bgs for construction of foundations and utilities for the project. Trench cuts should stand vertical to a depth of approximately 4 feet, provided no groundwater seepage is present in the trench walls. Open excavation may be used to excavate with the walls of the excavation cut at a slope of 1½H:1V, provided groundwater seepage is not present and with the understanding some sloughing may occur. We did not encounter groundwater during our exploration. However, if perched groundwater is encountered provisions should be made to keep groundwater at least 2 feet below the bottom of the excavation.

If shoring or dewatering is used, we recommend the type and design of the shoring and dewatering systems be the responsibility of the contractor who is in the best position to choose systems which fit the overall plan of operation. These excavations should be made in accordance with applicable Occupational Safety and Health Administration (OSHA) and state regulations.

6.10 Pavement Design Recommendations

Our pavement recommendations are based on the following assumptions:

- A resilient modulus of 4,500 psi for the native site soils.
- A resilient modulus of 20,000 psi estimated for the base rock.
- Initial and terminal serviceability index of 4.2 and 2.5, respectively.
- Reliability and standard deviation of 85% and 0.45, respectively.
- Structural coefficient of 0.42 and 0.10 for the asphalt and base rock, respectively.
- We assumed several Equivalent Single Axle Loads (ESALs) for pavement design. The actual ESALs should be selected based on traffic levels anticipated as the project moves forward.

If any of these assumptions are incorrect, contact our office with the appropriate information so we may revise the pavement design recommendations. Pavement design recommendations were based on the 1993 AASHTO pavement design equations. The development of pavement designs for the project pavements are in general accordance with the design guidelines and procedures of the American Association of State Highway and Transportation Officials (AASHTO) and the Oregon Department of Transportation (ODOT) Pavement Design Manual. Summary of our pavement design recommendations are in the table below.

Table 8 Minimum Pavement Sections

Traffic Loading (ESALs)	Asphalt Cement Concrete (inch)	Aggregate Base Rock (inch)
10,000	3	8
50,000	4	10
100,000	4.5	12
250,000	5.5	12
500,000	6	15
1,000,000	7	15

The thicknesses shown in the table above are intended to be minimum acceptable values.

The asphalt cement (AC) binder should be PG 64-22 Performance Grade Asphalt Cement according to ODOT SS 00744.11 – Asphalt Cement and Additives. The AC should consist of dense graded Level 3, ½-inch hot mix asphalt. The minimum lift thicknesses should be 2-inches. The AC should conform to ODOT SS 00744.13 and be compacted to 91% of Rice Density of the mix, as determined in accordance with ASTM D 2041.

The pavement subgrade should be prepared in accordance with the “Site Preparation” and “Structural Fill” sections of this report.

Construction traffic should be limited to non-building, unpaved portions of the project site or haul roads. Construction traffic should be prohibited on new pavements. If construction traffic is allowable on newly constructed road sections, an allowance for this additional traffic is necessary in the design pavement section.

If moist soil conditions make it difficult to properly moisture condition and compact the roadway subgrade, the use of cement amendment should be considered as alternative to moisture conditioning and compaction. The use of cement amendment will allow for construction of the pavement sections without disturbing the sensitive soil subgrade. If this method is chosen, contact ROG for additional recommendations and alternative pavement sections.

7.0 CONSTRUCTION RECOMMENDATIONS

The construction should be carried out as indicated in accordance with 2021 Oregon Standard Specifications for Construction (APWA Oregon Chapter) (ODOT–SS). We assume these specifications will serve, in part, as the project specifications for items contained within and for those not included in this report.

7.1 Site Preparation

The existing subgrade consist generally of sand. We understand that the existing building and pavements will be demolished and hauled off from the site. The existing near-surface root zone should be stripped and removed from the project site in all proposed new structure or pavement areas. The actual stripping depth should be based on field observations at the time of construction. Stripped material should be transported off site for disposal or stockpiled for use in landscaped areas or as directed by the Owner.

Trees and shrubs should be removed from all new improvement areas. In addition, root balls should be grubbed out to the depth of the roots, which could exceed 3 feet bgs. Depending on the methods used to remove the root balls, considerable disturbance and loosening of the subgrade could occur

during site grubbing. We recommend soil disturbed during grubbing operations be removed to expose firm undisturbed subgrade. The resulting excavations should be backfilled with structural fill.

Demolition should include removal of existing improvements throughout the project site. Underground utility lines, vaults, basement walls, or tanks should also be removed or grouted full if left in place. The voids resulting from removal of footings, buried tanks, etcetera, or loose soil in utility lines should be backfilled with compacted structural fill. The base of these excavations should be excavated to firm subgrade before filling with sides sloped at a minimum of 1H: 1V to allow for uniform compaction.

Materials generated during demolition of existing improvements should be transported off site or stockpiled in areas designated by the owner. Asphalt, concrete, gravel fill, and base rock materials may be crushed and recycled for use as general fill.

Following stripping and prior to placing foundations, the exposed subgrade should be evaluated by proof-rolling. The subgrade should be proof-rolled with a fully loaded dump truck or similar heavy rubber-tire construction equipment to identify soft, loose, or unsuitable areas. A member of our geotechnical staff should observe the proof-rolling. Soft or loose zones identified during the field evaluation should be compacted to an unyielding condition or be excavated and replaced with structural fill.

7.2 Wet-Weather/Wet-Soil Conditions

Trafficability on the near-surface soils may be difficult during or after extended wet periods or when the moisture content of the surface soil is more than a few percentage points above optimum. Soils which have been disturbed during site-preparation activities, or soft or loose zones identified during probing or proof-rolling, should be removed and replaced with compacted structural fill.

Track-mounted excavating equipment may be required during wet weather. The thickness of the granular material for haul roads and staging areas will depend on the amount and type of construction traffic. A 12- to 18-inch-thick mat of imported granular material is sufficient for light staging areas. The granular mat for haul roads and areas with repeated heavy-construction traffic typically needs to be increased to between 18- to 24-inches. The actual thickness of haul roads and staging areas should be based on the contractor's approach to site development and the amount and type of construction traffic. The imported granular material should be placed in one lift over the prepared, undisturbed subgrade and compacted using a smooth-drum, non-vibratory roller. Additionally, a geotextile fabric should be placed as a barrier between the subgrade and imported granular material in areas of repeated construction traffic. The imported granular material should be 4- to 6-inch minus pit run rock with less than 10% passing a Standard #200 sieve. Note that it is the contractor's responsibility to protect the subgrade during construction.

7.3 Structural Fills

Fills should be placed over subgrade prepared in conformance with the previous section of this report. Material used as structural fill should be free of organic matter or other unsuitable materials and should meet specifications provided in Oregon Department of Transportation Standard Construction Specifications, 2021 version (ODOT SS), depending upon the application. Discussion of these materials is in the following sections.

7.3.1 Native Soils

The moisture content of the native soils is on the order of 10 to 25 percent. Proper moisture conditioning for structural fill will require large areas and dry summer weather. These soils if properly processed can be used as structural fills. For structural fills these native soils should be

placed in lifts with a maximum un-compacted thickness of 8 inches and compacted to not less than 92 percent of the maximum dry density as determined by ASTM D 1557.

7.3.2 Imported Granular Fill

Imported granular material should be pit or quarry run rock, crushed rock, or crushed gravel and sand and should meet the specifications provided in ODOT SS 00330.14 – Selected Granular Backfill, and ODOT SS 00330.15 – Selected Stone Backfill. The imported granular material should be fairly well graded between coarse and fine material and have less than 5% by weight passing the U.S. Standard No. 200 Sieve.

Imported granular material should be placed in lifts with a maximum non-compacted thickness of 8 to 12 inches and be compacted to at least 95% of the maximum dry density, as determined by ASTM D 1557. During the wet season or when wet subgrade conditions exist, the initial lift should be approximately 18 inches in non-compacted thickness and should be compacted with a smooth-drum roller without using vibratory action.

Where imported granular material is placed over wet or soft soil subgrades, we recommend a geotextile be placed as a barrier between the subgrade and imported granular material. The geotextile should meet ODOT SS 2320.20 for soil separation and/or stabilization. The geotextile should be installed in conformance with ODOT SS 00350.40 – Geosynthetic Construction.

7.3.3 Trench Backfill

Trench backfill placed beneath, adjacent to, and for at least 2 feet above utility lines (e.g., the pipe zone) should consist of well-graded, granular material with a maximum particle size of 1.5 inches, have less than 10% by weight passing the U.S. Standard No. 200 Sieve, and meet ODOT SS 405.12 - Pipe Zone Bedding. The pipe zone backfill should be compacted to at least 90% of the maximum dry density, as determined by ASTM D 1557 or as required by the pipe manufacturer or local building department.

Within roadway alignments or beneath building pads, the remainder of the trench backfill should consist of well-graded, granular material with a maximum particle size of 2.5 inches, have less than 10% by weight passing the U.S. Standard No. 200 Sieve, and meet ODOT SS 405.14 - Trench Backfill, Class B. This material should be compacted to at least 92% of the maximum dry density as determined by ASTM D 1557, or as required by the pipe manufacturer or local building department. The upper 2-feet of the trench backfill should be compacted to at least 95% of the maximum dry density as determined by ASTM D 1557.

Outside of structural improvement areas (e.g., roadway alignments or building pads), trench backfill placed above the pipe zone may consist of general fill materials free of organics and materials over 6 inches in size, and meet ODOT SS 405.14 - Trench Backfill, Class A, C, or D. This general trench backfill should be compacted to at least 90% of the maximum dry density, as determined by ASTM D 1557 or as required by the pipe manufacturer or local building department.

7.3.4 Retaining Wall Backfill

Backfill material placed behind retaining walls and extending a horizontal distance of $0.5H$, where H is the height of the retaining wall, should consist of select granular material meeting ODOT SS 510.12 – Granular Wall Backfill. We recommend the select granular wall backfill be separated from general fill, native soil and/or topsoil using a geotextile fabric that meets the requirements provided in ODOT SS 2320.20 for drainage geotextiles. The geotextile should be installed in conformance with ODOT SS 00350.40 – Geosynthetic Construction.

7.3.5 Drain Material

Backfill for subsurface trench drains and for a minimum 1-foot-wide zone against the back of retaining walls should consist of drain rock meeting the specifications provided in ODOT SS 00430.11 – Granular Drain Backfill Material. A pre-fabricated drain board can be substituted for the drain rock. The drain rock should be wrapped in a geotextile fabric meeting the specifications provided in ODOT SS 2320.20 for soil separation and/or stabilization. The geotextile should be installed in conformance with ODOT SS 00350.40 – Geosynthetic Construction.

7.3.6 Floor Slab Base Rock

Base aggregate for floor slabs should be clean, crushed rock or crushed gravel. The base aggregate should contain no deleterious materials, meet specifications provided in ODOT SS 02630.10 – Dense Graded Aggregate 1"-0", and have less than 5% by weight passing the U.S. Standard No. 200 Sieve. The imported granular material should be placed in one lift and compacted to at least 95% of the maximum dry density, as determined by ASTM D 1557.

7.3.7 Pavement Base Aggregate

Imported base aggregate for roads and parking lots should be clean, crushed rock or crushed gravel. The base aggregate should meet the gradation defined in ODOT SS 02630.10 – Dense Graded Aggregate 1"-0", with the exception that the aggregate should have less than 5% passing a U.S. Standard No. 200 Sieve. The base aggregate should be compacted to at least 95% of the maximum dry density, as determined by ASTM D 1557.

7.4 Drainage Considerations

The Contractor shall be made responsible for temporary drainage of surface water and groundwater as necessary to prevent standing water and/or erosion at the working surface. We recommend removing only the foliage necessary for construction to help minimize erosion.

The ground surface around the structures should be sloped to create a minimum gradient of 2% away from the building foundations for a distance of at least 5 feet. Surface water should be directed away from all buildings into drainage swales or into a storm drainage system. "Trapped" planting areas should not be created next to any building without providing means for drainage. The roof downspouts should discharge onto splash blocks or pavement surfaces which direct water away from the buildings, or into smooth-walled underground drain lines that carry the water to appropriate discharge locations at least 10 feet away from any buildings.

8.0 CONSTRUCTION OBSERVATION RECOMMENDATIONS

Satisfactory earthwork performance depends on the quality of construction. Sufficient monitoring of the contractor's activities is a key part of determining the work is completed in accordance with the construction drawings and specifications. We recommend a geotechnical engineer be retained to observe general excavation, stripping, fill placement, deep foundation installation, footing subgrades, temporary shoring, and subgrades and base rock for floor slabs and pavements. The geotechnical engineer should confirm suitable bearing conditions and evaluate footing subgrades prior to placement of any structural fill for the new structures.

9.0 LIMITATIONS

This report has been prepared for the exclusive use of the addressee and engineers, and for aiding in the design of the proposed project as discussed above. The opinions, comments, and conclusions presented in this report were based upon information derived from our literature review, field investigation, and laboratory testing. Conditions between or beyond our explorations may vary

from those encountered. Unanticipated soil conditions and seasonal soil moisture variations are commonly encountered and cannot be fully determined by merely taking soil samples or soil explorations. Such variations may result in changes to our recommendations and may require additional expenditures be made to attain a properly constructed project.

If there is a substantial lapse of time between the submission of this report and the start of work at the site, if conditions have changed due to natural causes or construction operations at or adjacent to the site, or if the basic project scheme is significantly modified from that assumed, it is recommended this report be reviewed to determine the applicability of the conclusions and recommendations.

10.0 RESTRICTIONS

This report is for the exclusive use of the client for design of the development, as described in our proposal for this particular project, and this report is not to be relied upon by other parties. It is not to be photographed, photocopied, or similarly reproduced, in total or in part, without the expressed written consent of the client and ROG.

Sincerely,
RhinoOne Geotechnical

Levi Good, EIT
Staff Geotechnical Engineer

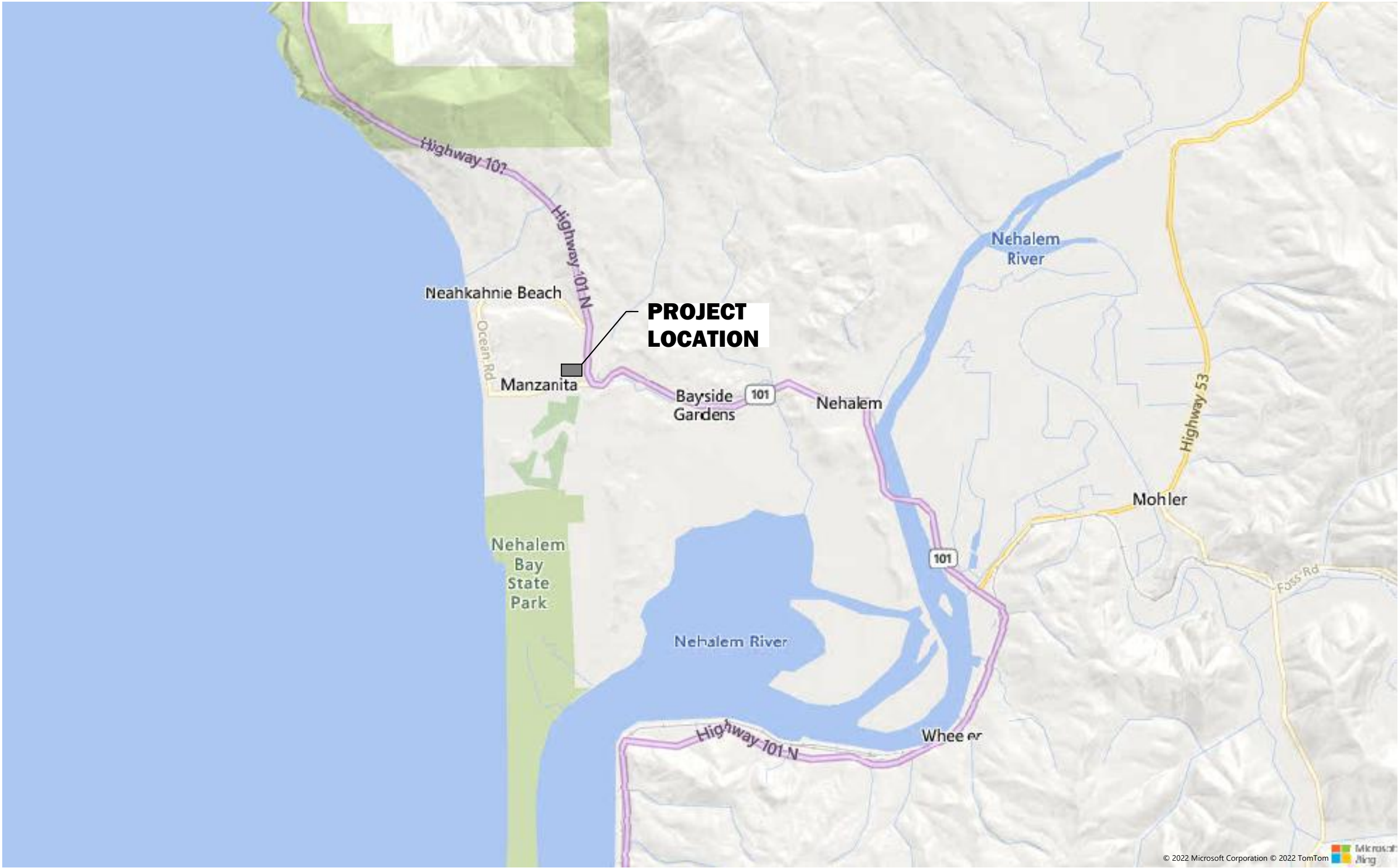
Rajiv Ali, PE, GE
Principal Geotechnical Engineer

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APPENDIX A

Site Location Map
Site Exploration Plan
Quaternary Fault Map



12308 NE 56th Street, #1107
Vancouver, WA 98682
360-258-1738

MANZANITA TOWN HALL
MANZANITA AVENUE AND DIVISION STREET
MANZANITA, TILLAMOOK COUNTY, OREGON 97130


FIGURE 1 - SITE LOCATION MAP

PROJECT
COM-2022-001

DATE
NOV 2022



LEGEND

 **B-0#**
TEST BORING NUMBER AND
APPROXIMATE LOCATION



12308 NE 56th Street, #1107
Vancouver, WA 98682
360-258-1738

MANZANITA TOWN HALL
MANZANITA AVENUE AND DIVISION STREET
MANZANITA, TILLAMOOK COUNTY, OREGON 97130

FIGURE 2 - SITE EXPLORATION PLAN

PROJECT
COM-2022-001

DATE
NOV 2022

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U.S. Geological Survey Quaternary Faults



10/27/2022, 10:38:23 AM

Fault Areas

Class B

historic

late Quaternary

latest Quaternary

middle and late Quaternary

National Database

Historic (< 150 years), well constrained location

Historic (< 150 years), moderately constrained location

Historic (< 150 years), inferred location

Latest Quaternary (<15,000 years), well constrained location

Latest Quaternary (<15,000 years), moderately constrained location

Latest Quaternary (<15,000 years), inferred location

Late Quaternary (< 130,000 years), well constrained location

Late Quaternary (< 130,000 years), moderately constrained location

Late Quaternary (< 130,000 years), inferred location

Middle and late Quaternary (< 750,000 years), well constrained location

Middle and late Quaternary (< 750,000 years), moderately constrained location

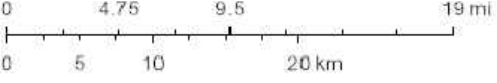
Middle and late Quaternary (< 750,000 years), inferred location

Undifferentiated Quaternary (< 1.6 million years), well constrained location

Undifferentiated Quaternary (< 1.6 million years), moderately constrained location

Undifferentiated Quaternary (< 1.6 million years), inferred location

1:577,791



National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

USGS

National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp. | USGS |



12308 NE 56th Street, #1107
Vancouver, WA 98682
360-258-1738

MANZANITA TOWN HALL
MANZANITA AVENUE AND DIVISION STREET
MANZANITA, TILLAMOOK COUNTY, OREGON 97130

FIGURE 3 - QUATERNARY FAULTS MAP

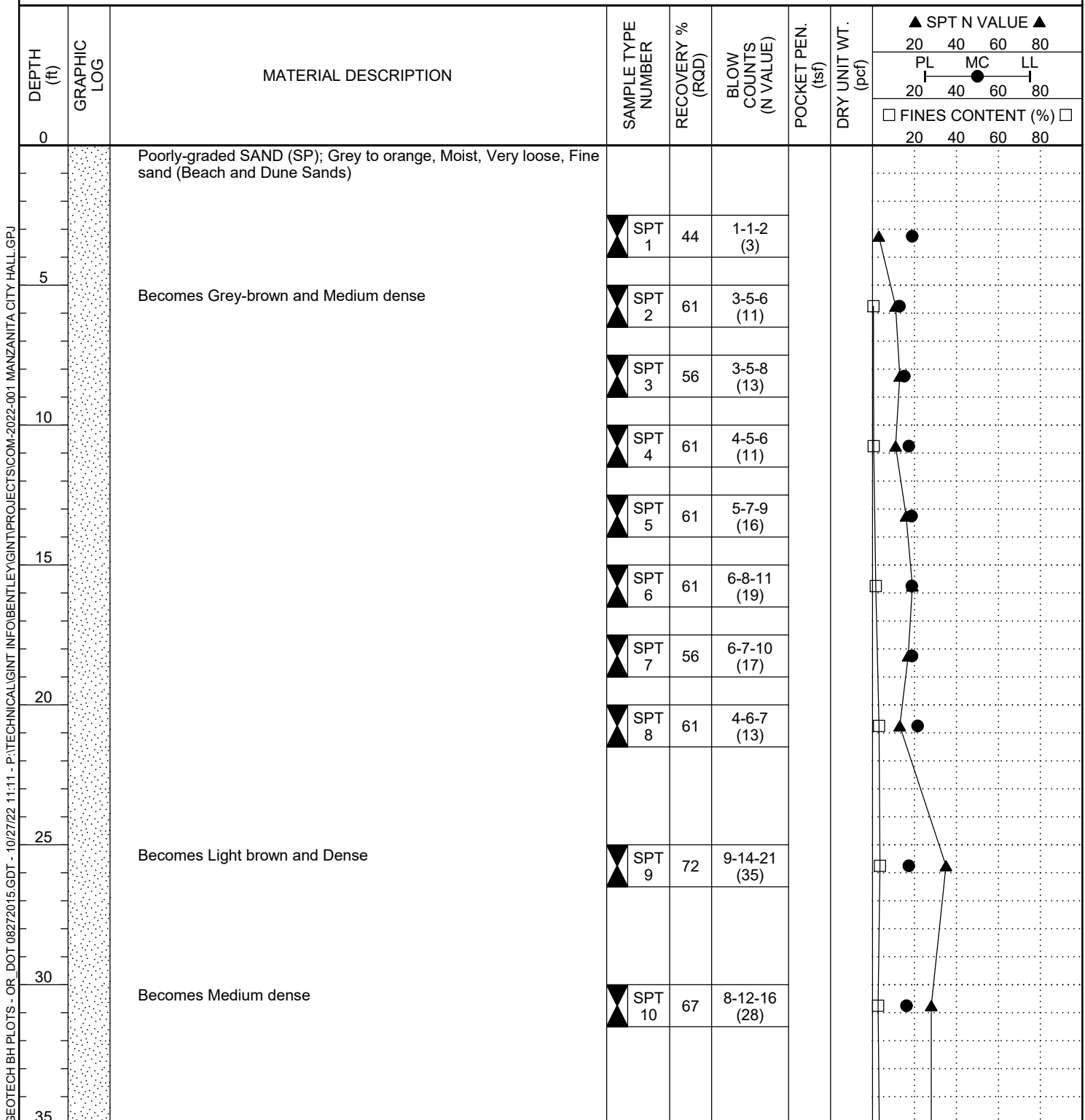
PROJECT
COM-2022-001

DATE
NOV 2022

APPENDIX B

Interpreted Summary Boring Logs
Results of Laboratory Testing

CLIENT <u>City of Manzanita</u>	PROJECT NAME <u>Manzanita City Hall</u>
PROJECT NUMBER <u>COM-2022-001</u>	PROJECT LOCATION <u>Manzanita, OR</u>
DATE STARTED <u>10/10/22</u> COMPLETED <u>10/10/22</u>	NORTH _____ EAST _____
DRILLING CONTRACTOR <u>Crisman Pacific Strata Drilling LLC</u>	GROUND ELEVATION <u>104 ft</u> HOLE SIZE <u>4 inches</u>
DRILLING METHOD <u>Mud Rotary with Auto Hammer</u>	GROUND WATER LEVELS:
LOGGED BY <u>LG</u> CHECKED BY <u>PH</u>	AT TIME OF DRILLING <u>--- Not Observed</u>
NOTES _____	AFTER DRILLING <u>---</u>



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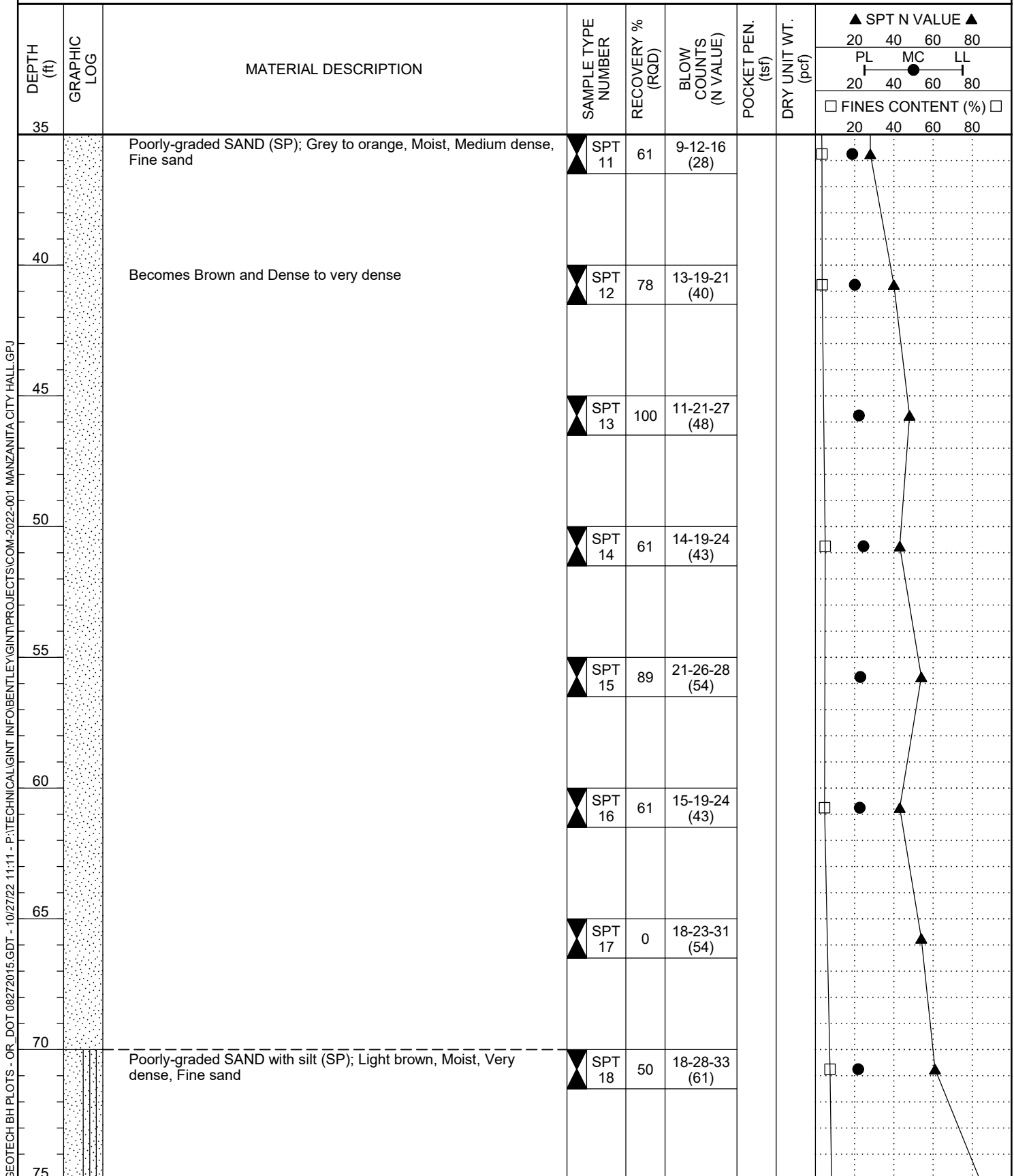


CLIENT City of Manzanita

PROJECT NAME Manzanita City Hall

PROJECT NUMBER COM-2022-001

PROJECT LOCATION Manzanita, OR



(Continued Next Page)

CLIENT City of Manzanita PROJECT NAME Manzanita City Hall
 PROJECT NUMBER COM-2022-001 PROJECT LOCATION Manzanita, OR

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲
								20 40 60 80
								PL MC LL
75								20 40 60 80
		Poorly-graded SAND with silt (SP); Light brown, Moist, Very dense, Fine sand (<i>continued</i>)	▲ SPT 19	67	22-39-49 (88)			20 40 60 80
80			▲ SPT 20	89	36-46-58 (104)			20 40 60 80

Bottom of borehole at 81.5 feet.














CLIENT City of Manzanita **PROJECT NAME** Manzanita City Hall
PROJECT NUMBER COM-2022-001 **PROJECT LOCATION** Manzanita, OR
DATE STARTED 10/11/22 **COMPLETED** 10/11/22 **NORTH** _____ **EAST** _____
DRILLING CONTRACTOR Crisman Pacific Strata Drilling LLC **GROUND ELEVATION** 106 ft **HOLE SIZE** 4 inches
DRILLING METHOD Mud Rotary with Auto Hammer **GROUND WATER LEVELS:**
LOGGED BY LG **CHECKED BY** PH **AT TIME OF DRILLING** --- Not Observed
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
0								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
		Poorly-graded SAND (SP); Light brown, Moist, Loose, Fine sand (Beach and Dune Sands)									
5			▲ SPT 1	44	3-3-5 (8)						
			▲ SPT 2	61	2-4-5 (9)						
			▲ SPT 3	44	3-5-4 (9)						
10		Becomes Medium dense to Loose	▲ SPT 4	50	3-5-6 (11)						
			▲ SPT 5	50	3-4-5 (9)						
15		Becomes Orange-brown and Medium dense	▲ SPT 6	67	5-9-10 (19)						
		Becomes Light brown	▲ SPT 7	56	6-6-9 (15)						
20			▲ SPT 8	56	5-6-8 (14)						
25			▲ SPT 9	50	6-8-9 (17)						
30			▲ SPT 10	61	9-12-14 (26)						
35											

(Continued Next Page)



CLIENT City of Manzanita PROJECT NAME Manzanita City Hall
 PROJECT NUMBER COM-2022-001 PROJECT LOCATION Manzanita, OR

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								20	40	60	80
								□ FINES CONTENT (%) □			
35								20	40	60	80
		Poorly-graded SAND (SP); Light brown, Moist, Medium dense, Fine sand	 SPT 11	56	9-13-15 (28)						
40											
		Becomes Dense to very dense	 SPT 12	61	10-14-19 (33)						
45											
			 SPT 13	72	16-24-36 (60)						
50											
			 SPT 14	67	14-16-20 (36)						

Bottom of borehole at 51.5 feet.

CLIENT <u>City of Manzanita</u>	PROJECT NAME <u>Manzanita City Hall</u>
PROJECT NUMBER <u>COM-2022-001</u>	PROJECT LOCATION <u>Manzanita, OR</u>
DATE STARTED <u>10/11/22</u> COMPLETED <u>10/11/22</u>	NORTH _____ EAST _____
DRILLING CONTRACTOR <u>Crisman Pacific Strata Drilling LLC</u>	GROUND ELEVATION <u>105 ft</u> HOLE SIZE <u>4 inches</u>
DRILLING METHOD <u>Mud Rotary with Auto Hammer</u>	GROUND WATER LEVELS:
LOGGED BY <u>LG</u> CHECKED BY <u>PH</u>	AT TIME OF DRILLING <u>--- Not Observed</u>
NOTES _____	AFTER DRILLING <u>---</u>

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
0								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
		Poorly-graded SAND (SP); Brown, Moist, Medium dense, Fine sand (Beach and Dune Sands)									
5		Becomes Loose	SPT 1	78	6-7-7 (14)						
		Becomes Medium dense	SPT 2	61	3-3-4 (7)						
10			SPT 3	67	3-4-6 (10)						
			SPT 4	56	3-5-6 (11)						
15			SPT 5	56	4-5-8 (13)						
			SPT 6	50	4-7-9 (16)						

Bottom of borehole at 16.5 feet.



CLIENT <u>City of Manzanita</u>	PROJECT NAME <u>Manzanita City Hall</u>
PROJECT NUMBER <u>COM-2022-001</u>	PROJECT LOCATION <u>Manzanita, OR</u>
DATE STARTED <u>10/11/22</u> COMPLETED <u>10/11/22</u>	NORTH _____ EAST _____
DRILLING CONTRACTOR <u>Crisman Pacific Strata Drilling LLC</u>	GROUND ELEVATION <u>104 ft</u> HOLE SIZE <u>4 inches</u>
DRILLING METHOD <u>Mud Rotary with Auto Hammer</u>	GROUND WATER LEVELS:
LOGGED BY <u>LG</u> CHECKED BY <u>PH</u>	AT TIME OF DRILLING <u>--- Not Observed</u>
NOTES _____	AFTER DRILLING <u>---</u>

GEOTECH BH PLOTS - OR_DOT 08272015.GDT - 10/27/22 11:11 - P:\TECHNICAL\GINT INFO\BENTLEY\GINT PROJECTS\COM-2022-001 MANZANITA CITY HALL.GPJ

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
0								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
		Poorly-graded SAND (SP); Brown, Moist, Loose, Fine sand (Beach and Dune Sands)									
5		Becomes Very loose	▲ SPT 1	56	2-3-4 (7)						
		Becomes Grey and Medium dense	▲ SPT 2	56	2-1-2 (3)						
10		Becomes Light brown	▲ SPT 3	56	2-4-8 (12)						
			▲ SPT 4	67	4-6-7 (13)						

Bottom of borehole at 11.5 feet.



CLIENT <u>City of Manzanita</u>	PROJECT NAME <u>Manzanita City Hall</u>
PROJECT NUMBER <u>COM-2022-001</u>	PROJECT LOCATION <u>Manzanita, OR</u>
DATE STARTED <u>10/11/22</u> COMPLETED <u>10/11/22</u>	NORTH _____ EAST _____
DRILLING CONTRACTOR <u>Crisman Pacific Strata Drilling LLC</u>	GROUND ELEVATION <u>105 ft</u> HOLE SIZE <u>4 inches</u>
DRILLING METHOD <u>Mud Rotary with Auto Hammer</u>	GROUND WATER LEVELS:
LOGGED BY <u>LG</u> CHECKED BY <u>PH</u>	AT TIME OF DRILLING <u>---</u> Not Observed
NOTES _____	AFTER DRILLING <u>---</u>

GEOTECH BH PLOTS - OR_DOT 08272015.GDT - 10/27/22 11:11 - P:\TECHNICAL\GINT INFO\BENTLEY\GINT\PROJECTS\COM-2022-001 MANZANITA CITY HALL.GPJ

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
0								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
		Poorly-graded SAND (SP); Grey to orange-brown, Moist, Loose, Fine sand (Beach and Dune Sands)									
5		Becomes Brown to light brown	▲ SPT 1	50	0-1-4 (5)						
			▲ SPT 2	50	3-4-4 (8)						
		Becomes Medium dense	▲ SPT 3	61	5-6-7 (13)						
10			▲ SPT 4	61	5-8-10 (18)						
			▲ SPT 5	72	5-8-11 (19)						
15			▲ SPT 6	78	7-10-11 (21)						
			▲ SPT 7	67	7-8-10 (18)						
20			▲ SPT 8	56	7-12-11 (23)						

Bottom of borehole at 21.5 feet.

Project Name:	City of Manzanita	Date:	12-Oct-22
Project Number:	COM-2022-001	Tested By:	RA
Location:	Manzanita, Oregon	Laboratory Number:	2022M 0176

Boring Number	Depth			Tare Number	Weight of Tare	Weight of Tare + Wet Soil	Weight of Tare + Dry Soil	Weight of Dry Soil	Weight of Water	Water Content by Weight
B-01	2.5	-	4	001	51.25	163.04	145.29	94.04	17.75	18.9%
	5	-	6.5	002	51.58	154.31	142.66	91.08	11.65	12.8%
	7.5	-	9	003	51.25	182.42	165.2	113.95	17.22	15.1%
	10		11.5	004	51.36	174.69	156.49	105.13	18.2	17.3%
	12.5	-	14	005	51.73	179.69	159.6	107.87	20.09	18.6%
	15		16.5	006	51.12	176.14	156.42	105.3	19.72	18.7%
	17.5		19	007	51.72	189.98	168.13	116.41	21.85	18.8%
	20		21.5	008	51.82	154.41	136.28	84.46	18.13	21.5%
	25		26.5	009	51.49	155.01	139.77	88.28	15.24	17.3%
	30		31.5	010	51.56	161.06	145.82	94.26	15.24	16.2%
	35		36.5	011	51.61	161.43	144.07	92.46	17.36	18.8%
	40		41.5	012	51.54	150.23	133.7	82.16	16.53	20.1%
	45		46.5	013	50.29	152.29	133.73	83.44	18.56	22.2%
	50		51.5	014	51.22	155.08	134.65	83.43	20.43	24.5%
	55		56.5	015	51.55	181.77	157.51	105.96	24.26	22.9%
	60		61.5	016	51.66	167.27	145.99	94.33	21.28	22.6%
	70		71.5	018	51.58	185.86	161.8	110.22	24.06	21.8%
	75		76.5	019	51.37	195.95	170.3	118.93	25.65	21.6%
	80		81.5	020	51.76	170.67	148.99	97.23	21.68	22.3%
B-02	2.5		4	021	51.01	189.55	175.64	124.63	13.91	11.2%
	5		6.5	022	51.79	167.7	156.94	105.15	10.76	10.2%
	7.5		9	023	51.75	154.35	143.85	92.1	10.5	11.4%
	10		11.5	024	51.7	162.19	152.13	100.43	10.06	10.0%
	12.5		14	025	51.66	183.92	160.38	108.72	23.54	21.7%
	15		16.5	026	51.94	171.09	160.14	108.2	10.95	10.1%

Project Name:	City of Manzanita	Date:	12-Oct-22
Project Number:	COM-2022-001	Tested By:	RA
Location:	Manzanita, Oregon	Laboratory Number:	2022M 0176

Boring Number	Depth			Tare Number	Weight of Tare	Weight of Tare + Wet Soil	Weight of Tare + Dry Soil	Weight of Dry Soil	Weight of Water	Water Content by Weight
	17.5		19	027	51.58	158.67	144.64	93.06	14.03	15.1%
	20		21.5	028	51.48	176.64	160.94	109.46	15.7	14.3%
	25		26.5	029	51.55	163.89	142.23	90.68	21.66	23.9%
	30		31.5	030	51.67	173.68	160.27	108.6	13.41	12.3%
	35		36.5	031	51.46	150.15	137.35	85.89	12.8	14.9%
	40		41.5	032	50.88	156.96	143.72	92.84	13.24	14.3%
	45		46.5	033	50.88	176.66	159.43	108.55	17.23	15.9%
	50		51.5	034	52	164.64	143.1	91.1	21.54	23.6%
B-03	2.5		4	036	51.17	176.92	160.83	109.66	16.09	14.7%
	5		6.5	038	51.82	183.22	164.73	112.91	18.49	16.4%
	7.5		9	001	51.25	154.01	139.51	88.26	14.5	16.4%
	10		11.5	002	51.58	196.73	176.85	125.27	19.88	15.9%
	12.5		14	003	51.25	167.4	156.49	105.24	10.91	10.4%
	15		16.5	004	51.36	152.29	139.82	88.46	12.47	14.1%
B-04	2.5		4	005	51.73	150.93	140.28	88.55	10.65	12.0%
	5		6.5	006	51.12	157.61	147.32	96.2	10.29	10.7%
	7.5		9	007	51.72	151.62	137.8	86.08	13.82	16.1%
	10		11.5	008	51.82	185.43	165.68	113.86	19.75	17.3%
B-05	2.5		4	009	51.49	167.83	151.81	100.32	16.02	16.0%
	5		6.5	010	51.56	155.12	144.82	93.26	10.3	11.0%
	7.5		9	011	51.61	162.51	149.9	98.29	12.61	12.8%
	10		11.5	012	51.54	175.36	157.69	106.15	17.67	16.6%
	12.5		14	013	50.29	183.18	162.04	111.75	21.14	18.9%
	15		16.5	014	51.22	178.86	158.29	107.07	20.57	19.2%

Project Name:	City of Manzanita				Date:	12-Oct-22				
Project Number:	COM-2022-001				Tested By:	RA				
Location:	Manzanita, Oregon				Laboratory Number:	2022M 0176				
Boring Number	Depth			Tare Number	Weight of Tare	Weight of Tare + Wet Soil	Weight of Tare + Dry Soil	Weight of Dry Soil	Weight of Water	Water Content by Weight
	17.5		19	015	51.55	179.05	161.31	109.76	17.74	16.2%
	20		21.5	016	51.66	189.97	165.27	113.61	24.7	21.7%

Project Name:	Manzanita City Hall	Date:	
Project Number:	COM-2022-001	Tested By:	
Location:	Manzanita Ave & Classic St	Laboratory Number:	

Boring Number	Depth	Tare	Weight of Tare	Weight of Tare + Wet Soil	Weight of Tare + Dry Soil	Weight of Dry Soil	Weight of Water	Water Content by Weight
B-1	5.0 - 6.5	B	196.06	329.85	313.84	117.78	16.01	13.6%
B-1	10.0 - 11.5	M	193.65	312.08	297.31	103.66	14.77	14.2%
B-1	15.0 - 16.5	J	193.37	314.02	294.95	101.58	19.07	18.8%
B-1	20.0 - 21.5	N	193.30	369.27	338.26	144.96	31.01	21.4%
B-1	25.0 - 26.5	Q	193.79	353.85	331.07	137.28	22.78	16.6%
B-1	30.0 - 31.5	R	192.91	321.80	304.06	111.15	17.74	16.0%
B-1	35.0 - 36.5	F	194.98	346.41	322.58	127.60	23.83	18.7%
B-1	40.0 - 41.5	D	194.80	351.63	324.15	129.35	27.48	21.2%
B-1	50.0 - 51.5	K	186.10	370.88	335.87	149.77	35.01	23.4%
B-1	60.0 - 61.5	L	193.24	386.19	348.17	154.93	38.02	24.5%
B-1	70.0 - 71.5	P	193.15	372.90	340.21	147.06	32.69	22.2%
B-1	80.0 - 81.5	H	193.93	439.29	395.62	201.69	43.67	21.7%

Post Wash					
Weight of Dry Soil + Tare > #200	Weight of Dry Soil > #200	Weight of Dry Soil > #4	Percent Gravels	Percent Sands	Percent Fines
313.26	117.20	0.00	0.0%	99.5%	0.5%
296.66	103.01	0.00	0.0%	99.4%	0.6%
293.29	99.92	0.00	0.0%	98.4%	1.6%
333.79	140.49	0.00	0.0%	96.9%	3.1%
326.13	132.34	0.00	0.0%	96.4%	3.6%
301.01	108.10	0.00	0.0%	97.3%	2.7%
318.32	123.34	0.00	0.0%	96.7%	3.3%
319.59	124.79	0.00	0.0%	96.5%	3.5%
328.45	142.35	0.00	0.0%	95.0%	5.0%
340.91	147.67	0.00	0.0%	95.3%	4.7%
329.19	136.04	0.00	0.0%	92.5%	7.5%
376.92	182.99	0.00	0.0%	90.7%	9.3%



Nehalem Bay Fire & Rescue District

36375 Hwy 101 N.
Nehalem, OR 97131
(503) 368-7590 Bus.
(503) 368-7580 Fax
www.nehalembyfirerescue.org

11/09/2023

Scott Gebhart

City of Manzanita

sgebhart@ci.manzanita.or.us

Re: City Hall Project Plan Review

After reviewing the plans for the City Hall Project, the following items are recommended by the Fire District.

- Classic Street, located on the northside of the proposed building, is considered a fire access road, requiring a minimum of 20' width. Parking is not allowed on either side of the roadway. A load rating of at least 75,000 GVW is required for all fire access roads.
 - **3.5 Road Widths-** *Access roadways for streets in a development shall comply with the provisions of Chapter 5, Section 503.2.1 through 503.2.8, Appendix D and Tillamook County Road Standards. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet. *TCFDB Road Access Guidelines*
- The proposed fence for the west side of the property could inhibit access in the event of an emergency and is discouraged without justification other than aesthetics. If it is installed it will have to comply with section 5 of the *TCFDB Road Access Guidelines*.
- The optimal placement of the FDC for fire access is the southeast corner of the property away from the main building in the landscape near the road. If that is not feasible, a suitable alternative would be the southeast corner of the main building near the mechanical room.
- The purchase and placement of a Knoxbox for emergency access by the Fire District in the event of an emergency.

I am encouraged by the City's efforts to build a new city hall and police station in the fire district, and I look forward to the continued partnership with the City of Manzanita. I am available to discuss the above items in further detail as needed.

Respectfully,

Frank E. Knight III

Captain/Fire Prevention

Nehalem Bay Fire & Rescue

f.knight@nbfrd.org



Nehalem Bay Wastewater Agency
SEWER AVAILABILITY

Date: 10/18/2023
To: City of Manzanita Building Department
From: Nehalem Bay Wastewater Agency
RE: Sewer Availability & System Development Charges and Fees

As an Agent of Nehalem Bay Wastewater Agency, I confirm that sewer is available to the following lot within our service area boundary:

3N1029AD TL 02500

Owner of Record: City of Manzanita
Project Information: Commercial Complex-Manzanita City Hall

This letter shall not create a liability on the part of Nehalem Bay Wastewater Agency, or by an agent, or employee thereof, for the services described above.

Fees must be paid in full, to Nehalem Bay Wastewater Agency, along with completed sewer connection application and a copy of the building permit, before any connection to the sewer can be completed.

\$12,774.00 System Development Charge (\$4,258 per EDU)

\$20.00 Permit Fee (\$20)

\$54.00 Inspection Fee (\$54)

Sewer Saddle (\$110 = 4", \$145 = 6")

Tap Machine Rental (\$85 per rental)

\$12,848.00 Total Paid in Full with original connections 1976/1988

Keri Scott, Executive Assistant NBWA

35755 Seventh/PO Box 219 Nehalem Oregon 97131 p(503)368-5125 f(503)368-7211

Nehalem Bay Wastewater Agency is an equal opportunity provider



CITY OF MANZANITA

P.O. Box 129, Manzanita, OR 97130-0129
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STAFF REPORT

TO: Manzanita Planning Commission

FROM: Scott Fregonese, Contract City Planner

SUBJECT: Planning File 23029– City Hall Design Review

DATE: December 4, 2023

I. BACKGROUND

- A. **APPLICANT:** Bearing Architecture. C/O Chris Keane
- B. **PROPERTY LOCATION:** The subject site is located on the north side of Manzanita Avenue, along the intersection with Division Street. The property address is 655 Manzanita Avenue, and the Assessor map places the property within Township 3 North; Range 10 West; Section 29AD; Tax Lot #02500.
- C. **PARCEL SIZE:** The subject site contains 2.66 acres.
- D. **EXISTING DEVELOPMENT:** Manzanita Farmers Market.
- E. **ZONING:** The parcel is zoned Commercial (C-1).
- F. **ADJACENT ZONING AND LAND USE:** Property to the west, north and east are zoned R-2 which includes residential housing. Land to the south is zoned C-1 Commercial and is developed with existing commercial businesses.
- G. **REQUEST:** The applicant is requesting Design Review approval to construct a single story, City Hall and Council Chambers building as well as a Police station building.
- H. **DECISION CRITERIA:** This application will be evaluated against the design review standards listed in Sections 4.080, 4.090 and 4.137 through 4.156 of Ordinance 95-4, and the standards for the Commercial (C-1) zone listed in Section 3.040 of Ordinance 95-4.

II. APPLICATION SUMMARY

- A. The subject Tax Lot is the location of the proposed City Hall and Police Station buildings. The applicant has submitted a Design review application for the proposed development on site. This Design review includes the proposed layout for the site.
- B. The Subject site will include the following features:
1. The proposed City Hall building will be located along the south end of the property facing Manzanita Avenue with a rear Police Station building located within the interior of the lot.
 2. The proposed 17,121 total square feet of impervious surface will be 4,529 square feet less than the site currently has existing which is 21,650 square feet. The site intends to serve as City Hall and Police Station uses.
 3. The site will include 38 total parking spaces. 25 are to be located on the western portion of the site. The other 11 will be located behind the City Hall building, to the east of the police building. Two (2) are included in the proposed garage.
 4. The primary exterior finish is vertical cedar siding, with Board and Batten siding at the entry. The structure is topped with a seamed metal roof.
 5. The 25 space parking lot at the west of the site has access from Manzanita Avenue and will be served by an existing driveway. The proposed 11 parking spaces behind the City Hall building will be served by an 11' wide access road that will be built to street standards and can eventually serve as the continuation of Classic Street.
 6. Perimeter Landscaping will be used to shield the western side of the site from any illumination obstructions from the parking lot.
- C. The City sent notice of this application to area property owners and affected agencies on November 16, 2023, 25 days in advance of the hearing which meets the 20 day notice as required in Section 10.040 of the Manzanita Zoning Ordinance. No comments were received at the time of this report.
- D. Section 4.150 requires a Design Review for all new construction commercial and mixed-use development in Manzanita's commercial zone. This action is subject to a public hearing and review by the Planning Commission.

III. CRITERIA AND FINDINGS –DESIGN REVIEW

- A. Section 3.040(3) of Ordinance 95-4 contains the development requirements for the C-1 zone. The following summarizes items applicable to the request:
1. The proposed building meets the minimum setback requirements of 10-feet for the front yard, and 5-feet for the remaining yards.
 2. The City Building Official determined the buildings proposed height of 17 feet 2 ¾ inches does not exceed the maximum 28-feet 6-inch height

- limitation of the zone.
3. At least 10% of the 115,869 square foot site must be landscaped, or a minimum of 11,586 square feet. The site plan identifies 22,740 square feet of landscaped area along the western side yard portion of the site with an additional 21,712 square feet of landscaped area along the east side yard that will remain primarily in its natural state. There is 7,500 square feet of landscaped area included in the front yard setback that will replace the existing asphalt and gravel area.
 4. Signs, awnings, marquees, and sidewalk coverings shall extend not more than 10-feet from a building or more than 5 feet over a sidewalk, whichever is less. No part of the building violates these limitations.
 5. Submitted material includes a storm water plan and calculations. Site improvements work with the existing terrain directing stormwater to the north, south, and west where landscape rock infiltration trenches will manage stormwater. The plans also appear to direct some drainage toward an existing storm drainage improvement in Manzanita Avenue.
 6. The Ordinance requires a design review which is addressed in the following sections of this report.
 7. The Floor Area Ratio of .065 is far below the .65 maximum allowed ratio in this zone.
 8. Signs must conform to Section 4.070 of the Manzanita Zoning Ordinance. The applicant may address this as a separate permit.

Based on the above findings, the building conforms to the provisions of the C-1 zone.

- B. Section 4.080 establishes the City's parking requirements. It specifically notes that "At the time a new structure is erected, or the use of an existing structure is changed or enlarged, off-street parking spaces, loading areas and access thereto shall be provided as set forth in this section unless greater requirements are otherwise established."

FINDINGS: The subject lot will contain a newly constructed single commercial space and the site contains more than 5,000 square feet in area. Therefore, parking is required for the commercial space.

A driveway will need to be provided for the purpose of providing parking for City Hall and the Police Station. The site contains 38 parking spaces – two ADA spaces and 36 regular spaces. Two of the 36 non ADA parking spaces are proposed to be located within the garage of the City Hall building.

To determine applicable ADA parking for this site, staff used the following table for the parking requirements. The result:

Use	Measurement	Use Size	Required Spaces
City Hall Council Chambers: Assembly	1 per 50 square feet of floor area used for assembly	1,372 sq. ft	27.44
City Hall: Business	1 per 400 square feet	2,715 sq. ft	6.79

Police: Business	1 per 400 square feet	1,434 sq. ft	3.59
		TOTAL	38 spaces

Per Section 4.090 subsection 3

8 of the 25 spaces located in the parking lot at western portion of the site will be gravel, this area is the rear part of the parking lot. Section 4.080 of the Manzanita Zoning Ordinance allows for off street parking to be either paved or gravel. There is also a proposed Electric Vehicle (EV) charging station in the parking lot at the western portion of the site. The proposed parking lot areas meets the total required parking spaces for the site given the mix of uses.

- C. Section 4.080 Off-Street Parking and Off-Street Loading Requirements (7) states that *Except for parking to serve dwelling uses, parking and loading areas adjacent to or within residential zones or adjacent to residential uses shall be designed to minimize disturbances of residents by the erection between the uses of a sight-obstructing fence of not less than 5 or more than 6 feet in height except where vision clearance is required.*

FINDINGS: This proposal does not include fencing on the west side of the southwest parking lot, which is adjacent to a residential use, therefore this requirement is not met. A letter describing Road Access issues of a proposed fence was received from the Fire Chief of Nehalem Bay Fire and Rescue, stating the fence could inhibit access in the event of an emergency. The applicant has proposed a solution to plant sight obscuring vegetation in lieu of a site obscuring fence. (231109 Letter – Fire Department, attached as exhibit A)

- D. Provisions in Sections 4.137 to 4.142 address site plan reviews (4.137), the use of fill for structural elevation (4.138), parking structures in the front yard (4.141) and matters regarding trees (4.142).

FINDINGS: This application and process are consistent with provisions in Section 4.137 which describes the submittal requirements. Significant fill is not required to construct the building (Section 4.138). Proposed parking spaces are located in the rear yard and side yard of the main City Hall building while the front yard contains vegetation and landscaping material (Section 4.141). There are existing trees on site. However, additional plantings (Forest Grass, Sweetbox, Wax Myrtle, and other shrubs) will be placed along the perimeter (Section 4.142).

- E. Section 4.150 identifies the purpose of the design review process:

“The purpose of Sections 4.150 through 4.158 is to provide design standards for commercial and mixed-use development in Manzanita’s commercial zones and in the High Density Residential/Limited Commercial zone. Design review provides aesthetic judgment over development projects in order to maintain the unique character of the community by keeping buildings to human scale and reflecting the natural beauty of the city’s setting, to encourage the traditional style of the Pacific Northwest, and to protect the viability of the commercial zones. The standards provide for originality, flexibility and innovation in site planning and development and encourage development where structures, use areas, artistic expression and

site elements are integrated in a manner that is harmonious within the site and with adjacent properties. Design review criteria shall be applicable to all new construction, alteration of site improvements, or exterior alteration of commercial and mixed-use development in the C-1, LC, and R-4 zones.”

FINDINGS: Section 4.150 seeks to determine whether the proposal maintains the unique characteristics of the community. The exterior will be primarily finished in vertical cedar siding. Trim pieces will include wood and metal features. Contrasting Board and Batten siding will be located at the main entry of the City Hall building. On balance, while the design is original, it generally fits into the area and does not offer a finish or color scheme that significantly contrasts with other structures in the vicinity.

- E. Section 4.151 lists applicable definitions while Section 4.152 identifies when a design review is required. The definitions are applicable to the design review process but do not by themselves establish design criteria (Section 4.151). Finally, as previously noted, a design review is required as the proposal involves the construction of a new building (Section 4.152).
- G. Section 4.153 outlines the review procedures. The City held a pre-application conference on November 18, 2023, and the applicant submitted the required material. Further, the City mailed notice to area property owners in compliance with applicable provisions.
- H. Section 4.154 outlines the purpose behind the design review criteria. This Section states *“(T)he design review criteria are intended to provide a frame of reference for the applicant in the development of site, building and landscape plans and to provide the city with a means of reviewing proposed plans. These criteria are not intended to be inflexible requirements nor are they intended to discourage creativity or innovation. The criteria do not intend to specify a particular architectural style.”* Further: *“(T)he Design Review Board is not authorized to approve projects which do not adhere to specific development standards provided by this ordinance (e.g., building height or setbacks.)”*
- I. Section 4.155 contains the specific decision criteria; each item is reviewed below:
 - 1. In terms of setback from street or sidewalk, the design creates a visually interesting and compatible relationship between the proposed structure and the surrounding area.

FINDINGS: The structure will be setback 10-feet from the front property line, complying with the setback requirement and prioritizes pedestrian-focused space fronting Manzanita Avenue. This area provides an entrance to City Hall surfaced with concrete paving. Generally, the setback space complements the building style and proposed finish.

- 2. The design incorporates existing features such as rocks, slopes and vegetation.

FINDINGS: The design works with the existing natural slope of the site,

which is generally flat in nature. The building's main entrance is oriented toward Manzanita Street with public-facing functions located off the main entrance. The existing condition of this lot includes two large structures and a pull through driveway. There are minimal naturally occurring features such as rocks or vegetation on the site, but there are several mature trees on the site that will be retained. The site will be cleared of the existing buildings to accommodate the new structure and parking and will include new tree and shrub plantings installed on the perimeter of the new building.

3. Where appropriate, the design relates or integrates the proposed landscaping/open space to the adjoining space in order to create pedestrian pathways and/or open system that connects other properties.

FINDINGS: The front includes a generous pedestrian pathway with plantings. The rear of the building includes multiple pathways to access the City Hall structure and Police station and is designed to include an outdoor seating area. The proposed design integrates with and to Manzanita Street to the south. The pedestrian access points are located to the south of the lot where the site meets Manzanita Avenue that makes easy pedestrian access to the building and also includes a pedestrian walkway to the parking lot to the west. The building can be easily accessed from the rear of the lot by a pathway running parallel to the parking lot and connecting to both the rear of the city hall building, and front door of the police station and the pathway to the front of the building. Side and rear yard landscaping will be integrated into the adjoining space that also enhances aesthetics to create welcoming environment.

4. The design gives attention to the placement of storage or mechanical equipment so as to screen it from view.

FINDINGS: Where possible, electrical, and mechanical equipment is placed in dedicated utility rooms within the building. Exterior mechanical and electrical equipment is strategically placed to not be visible from Manzanita Avenue, Division Street or from the public areas of the building.

5. All functions, uses and improvements are arranged to reflect and harmonize with the natural characteristics and limitations of the site and adjacent properties.

FINDINGS: The site improvements work with the existing terrain to optimize the natural slope, draining stormwater to the south, east and west where infiltration trenches manage stormwater. The layout and relationship of the roof line including transom windows and glazing along the pedestrian walkways provides for façade transparency as well as permitting more daylight into the City Hall building.

- J. Section 4.156 contains the decision criteria evaluating architectural and landscaping design; each item is reviewed below:

1. The design integrates and harmonizes the existing and proposed

development with the existing surroundings and future allowed uses. This standard shall be applied in a manner that encourages village design and visual diversity within development projects and the surrounding area. Corrugated siding is prohibited as it does not harmonize with siding used on most existing buildings.

FINDINGS: The building is generally consistent in finish, color and style with a majority of the buildings in the vicinity. The structure utilizes primarily cedar siding on the exterior consistent with many adjacent structures and throughout the city. There will be a small portion of Board and Batten along the entry of the City Hall building that will be in a contrasting color to provide visual diversity and delineates the main entrance. The buildings arrangement responds to the surrounding neighborhood with a focus on business activity to the front (Manzanita Ave) side of the site, and the police station at the back of the site where neighboring uses are more private in nature.

2. The landscape design acknowledges the growing conditions for the climatic zone, and provisions are made for the survival and continuous maintenance. The landscape design shall include the use of local native species of trees and shrubs.

FINDINGS: The applicant indicated Oregon and coastal native and adapted plants will be selected for the site. Proposed species include coast wax myrtle, forest grass, and coastal strawberry. The site will not include an irrigation system and plants which have gained priority are those that are hardy, drought tolerant and fit within the maintenance capability of the property ownership.

3. The minimum lot area required to be landscaped under Section 3.040(3)(d) for commercial, mixed use, or non-residential uses shall be located in the front and side yards and the portion of the lot adjacent to the front or street side yards and not within the foundation footprint or rear yard. Living plant material shall cover at least 50% of this required minimum landscape area. For corner lots, at least 25% of the living plant material required by this section shall face each street frontage.

FINDINGS: As noted, 11,575 square feet of landscaping is required, of which 50% or 5,788 square feet must be landscaped with plant material. The site contains 51,952 square feet of landscaping of which each frontage exceeds the 25% plant material requirement. The setback area in front of the building will be new landscaping and is a total of 7,500 square feet, just this area alone meets the 25% requirement.

4. The grading and contouring of the site, and on-site drainage facilities, shall be designed so there is no adverse effect on neighboring properties or public rights-of-way.

FINDINGS: Per the applicant, grading and contouring of the site were studied and designed to keep stormwater on-site. An approach of infiltration trenches

were designed to support infiltrating water on the site and prevent any flooding onto neighboring properties or streets. Plans also included the necessary calculations showing compliance with City standards.

5. The design avoids monotony and provides visual interest by giving sufficient attention to architectural details and to design elements.

FINDINGS: The building's one level, multiple buildings connected by trellis and differentiated materials at the main entrance creates visual interest, and this is enhanced with the pedestrian pathway and decorative dark colored window frame elements.

6. The design adequately addresses the pedestrian nature of the commercial area and places structures in relation to sidewalks and open areas to foster human interaction.

FINDINGS: The design effectively places pedestrian-centric functions adjacent to the street and provides clear connections to the adjacent neighborhood, open space of the lot to the north and provides clear connections to the adjacent commercial areas. The project's pedestrian pathways and outdoor space provide opportunities for human interaction.

7. Lighting is non-industrial and non-invasive in character and contributes to the village character.

FINDINGS: Plans and schematics for the structure placed the lighting primarily at the doorway entrances, along walkways and near outdoor seating. The lights are commercial in size and style and downward facing thereby ensuring lighting is not directed onto adjacent properties. Security lights are also included with this proposal as well as Bollard lights to illuminate the pathways. All lighting fixtures will ultimately meet the City of Manzanita's proposed Dark Sky Ordinance in accordance with sheet G3.03 of the submittal materials.

8. Compatibility. All new commercial and mixed-use buildings and exterior alterations shall be designed consistent with the architectural context in which they are located. This standard is met when the Design Review Board finds that all the criteria in a.- c., below, are met.

- a. There is compatibility in building sizes between new and existing commercial and mixed use buildings;
- b. The size, shape and scale of the structures are architecturally compatible with the site and with the village character of the surrounding neighborhood. Particular attention will be paid to addressing the visual impact of the structures on residential uses that are adjacent or on the opposite side of the same street.
- c. All buildings and developments shall provide human scale design. The design avoids a monolithic expanse of frontages and roof lines, diminishes the massing of buildings by breaking up building sections, and/or by use of such elements as visual planes, projections, bays, dormers, second floor setbacks or changes in the roof line, and/or similar features generally shown in the following figure (see

Ordinance). Changes in paint color and features that are not designed as permanent architectural elements, such as display cabinets, window boxes, retractable and similar mounted awnings or canopies, and other similar features will not independently satisfy this criterion.

FINDINGS: The applicant notes the building size is comparable and compatible with the structures on neighboring properties. The analysis indicates the building design is within the zoning code's height limitations and FAR restrictions. The roof forms and scale of structures are compatible with the adjacent properties. The Standing Seam Metal roof forms and vertical cedar wood siding fit with neighboring buildings that have similar characteristics. The design avoids creating a single monolithic structure by using canopies, material changes, contrasting siding around the entries, trellises, and multiple pathways connecting the site between both structures, the parking lot, and Manzanita Avenue. On balance, staff finds the improvement consistent with the intent of the design standards. While not an architectural "match" with surrounding structures, the design and finish are generally compatible with these structures.

- K. Section 4.158 includes performance assurance, including building permit requirements and time limitations.

FINDINGS: These are administrative requirements applicable to both the City and applicant.

IV. RECOMMENDATION AND CONDITIONS OF APPROVAL

City staff finds the proposal can comply with the applicable Design Review criteria and recommends Planning Commission approval subject to the following Conditions:

- A. The developer must demonstrate on construction documents, prior to issuance of building permits, site obscuring vegetation on the west boundary of the southwest parking lot. This site obscuring vegetation is intended to replace the fence to meet the screening requirement. At maturity, the vegetation shall be no less than 5' tall within the planting area.
- B. The developer shall submit a building permit for construction of the building, conforming to the applicable building code requirements. The submitted site plan shall substantially conform to the approved layout. While building plans may be simultaneously submitted with engineering plans, building permits shall not be issued until all engineering plans are reviewed and approved.
- C. Prior to receiving a building permit, the developer shall submit evidence of a utility and driveway permit.
- D. Prior to occupancy, the developer shall complete the following:
 - 1. Install and/or extend public facility improvements, consistent with City

- and/or Nehalem Bay Wastewater Agency approved engineering plans.
2. Install parking improvements consistent with approved building and engineering plans.
- E. The structure shall comply with the building permit requirements and substantially conform to the submitted site plan. The applicant is advised that substantial modifications to the approved plan may require a new design review application and decision.
- F. Compliance with these conditions, the requirements of the Manzanita Zoning Ordinance, Nehalem Bay Wastewater Agency, Nehalem Bay Fire & Rescue, Tillamook County Environmental Health, and applicable building code provisions shall be the sole responsibility of the developer.

V. PLANNING COMMISSION ACTION

- A. The Planning Commission has the following options:
1. Approve the application, adopting findings and conditions contained in the staff report; or
 2. Approve the application, adopting modified findings and/or conditions; or
 3. Deny the application, establishing findings as to why the application fails to comply with the decision criteria.
- B. Staff will prepare a document for the Chair's signature.