



## Transmittal

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**DATE** September 11, 2020

**TO** Joy Chang, City of Sherwood  
Erika Palmer, City of Sherwood

**FROM** Shayna Rehberg and Joe Dills, Angelo Planning Group

**RE** Willamette Water Supply System Water Treatment Plant (WTP)  
Land Use Application Submittal

**CC** Dave Kraska, WWSP  
Christina Walter, WWSP  
Jill Chomycia, WWSP  
Corianne Burnett and Matthew Gribbins, WWSP  
Marlys Mock and David Marciniak, WWSP  
Sarah Betz, Ethan Rosenthal, and Suzanne Carey, David Evans and Associates  
Tommy Brooks, Cable Huston

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On behalf of the Willamette Water Supply Program (WWSP) and the Willamette Water Supply System (WWSS) Commission, Angelo Planning Group is submitting a land use application package for the WWSS Water Treatment Plant (WTP). This package includes the following application materials:

- One original and three (3) copies of the land use application form
- Three (3) copies of the subject property tax map
- Two (2) sets of mailing labels of property owners within 1,000 feet of the subject property, in addition to other stakeholders; *note*: the same mailing list was used for mailing Neighborhood Meeting notice
- Three (3) copies of a vicinity map
- One (1) copy 8.5" x 11" and three (3) copies 11" x 17" of a reduced site plan; *note*: the Site Layout Plan Area A and Tree Protection Overall Plan are included as reduced site plans
- One (1) copy of property title report
- One (1) copy of property deed
- One (1) copy of Portland General Electric (PGE) Encroachment Agreement
- Three (3) copies of a SW Blake Street Block Length Engineering Design Modification Request; *note*: a SW 124<sup>th</sup> Avenue Frontage Improvements Engineering Design Modification Request will be forthcoming

## Applicant Transmittal Dated 9-11-20 including Narrative

- Three (3) copies of an application narrative, with the following exhibits:
  - Exhibit A: Land Use Plan Set (under separate cover)
  - Exhibit B: Technical Review Plan Set (under separate cover); *note*: included in electronic copy only
  - Exhibit C: Pre-Application Conference Notes
  - Exhibit D: Tree Inventory and Habitat Assessment
  - Exhibit E: Construction Management Plan
  - Exhibit F: Traffic Impact Analysis; *note*: appendices included in electronic copy only
  - Exhibit G: Stormwater Report; *note*: appendices included in electronic copy only
  - Exhibit H: Response to Clean Water Services Comments and Clean Water Services Site Assessment, including Oregon Department of State Lands Concurrence Reports (WD # 2017-0008 and WD #2018-0040)
  - Exhibit I: Tualatin Valley Fire & Rescue Service Provider Letter Documentation
  - Exhibit J: Clean Water Services Service Provider Letter Documentation; *note*: Service Provider Letter pending (later in September 2020)
  - Exhibit K: Neighborhood Meeting Documentation
  - Exhibit L: Geotechnical Report; *note*: appendices included in electronic copy only
  - Exhibit M: Radio Facility Sample Image (Monopole Structure)
  - Exhibit N: U.S. Army Corps of Engineers Permit and Oregon Department of State Lands Permit
- An electronic copy of the application package; *note*: this will be provided via Dropbox
  - Includes Exhibit B, a large plan set for technical review and reference
  - Includes the appendices of the Traffic Impact Analysis, Stormwater Report, and Geotechnical Report
- A check for the application fee (\$15,958.34); *note*: includes \$2,233.84 (Conditional Use fee), \$8,789.76 (Site Plan Type IV fee, based on approximately 219,000 square feet of building footprint), \$4,468.74 (Variance Class A fee), and \$466 (publication/distribution of Type IV notice)

We will provide the Clean Water Services Service Provider Letter and SW 124<sup>th</sup> Frontage Improvements Engineering Design Modification Request as soon as they are available.

Please contact us (Shayna Rehberg, 503-227-3678, [srehberg@angeloplanning.com](mailto:srehberg@angeloplanning.com) or Joe Dills, 503-224-8225, [jdills@angeloplanning.com](mailto:jdills@angeloplanning.com)) if you have any questions or need additional information.

We appreciate your time and consideration. The City's guidance has been extremely helpful to preparing this comprehensive submittal – thank you.



Home of the Tualatin River National Wildlife Refuge

Applicant Transmittal Dated 9-11-20 including Narrative

Case No. \_\_\_\_\_  
Fee \_\_\_\_\_  
Receipt # \_\_\_\_\_  
Date \_\_\_\_\_  
TYPE \_\_\_\_\_

### City of Sherwood Application for Land Use Action

**Type of Land Use Action Requested: (check all that apply)**

- Annexation
- Plan Amendment (Proposed Zone \_\_\_\_\_)
- Planned Unit Development
- Site Plan (square footage of building and parking area)
- Variance (list standards to be varied in description)
- Conditional Use
- Partition (# of lots \_\_\_\_\_)
- Subdivision (# of lots \_\_\_\_\_)
- Other: \_\_\_\_\_

*By submitting this form the Owner, or Owner's authorized agent/ representative, acknowledges and agrees that City of Sherwood employees, and appointed or elected City Officials, have authority to enter the project site at all reasonable times for the purpose of inspecting project site conditions and gathering information related specifically to the project site.*

Note: See City of Sherwood current Fee Schedule, which includes the "Publication/Distribution of Notice" fee, at [www.sherwoodoregon.gov](http://www.sherwoodoregon.gov). Click on Government/Finance/Fee Schedule.

**Owner/Applicant Information:**

Applicant: Willamette Water Supply Program (WWSP)  
Applicant Address: 1850 SW 170th Avenue, Beaverton, OR 97003  
Owner: Willamette Water Supply System Commission  
Owner Address: 1850 SW 170th Avenue, Beaverton, OR 97003  
Contact for Additional Information: Matt Gribbins, Matt.Gribbins@twwd.org; Shayna Rehberg, sreberg@angeloplanning.com

Phone: 503-840-3830 (209) 298-6539 cell  
Email: christina.walter@twwd.org  
Phone: 503-941-4561  
Email: david.kraska@twwd.org

**Property Information:**

Street Location: 21309 SW 124th Avenue, Sherwood, OR 97140  
Tax Lot and Map No: 2S128D001200  
Existing Structures/Use: vacant  
Existing Plan/Zone Designation: EI - Employment Industrial  
Size of Property(ies) approx. 46 acres

**Proposed Action:**

**Purpose and Description of Proposed Action:**

Development of Willamette Water Supply System Water Treatment Plant, including approx. 219,000 sf of building area (footprint), landscaping, parking and circulation, preservation of trees and open space, and right-of-way improvements. Applications/actions: Conditional Use, Site Plan Review, and Class A Variance (for Visual Corridor requirements in Section 16.142.020).

Proposed Use: Water Treatment Plant

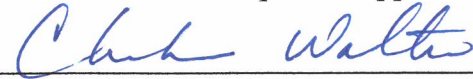
Proposed No. of Phases (one year each): n/a

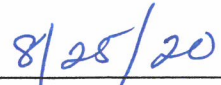
**Authorizing Signatures:**


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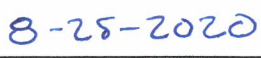
I am the owner/authorized agent of the owner empowered to submit this application and affirm that the information submitted with this application is correct to the best of my knowledge.

I further acknowledge that I have read the applicable standards for review of the land use action I am requesting and understand that I must demonstrate to the City review authorities compliance with these standards prior to approval of my request.

  
 Applicant's Signature

  
 Date

  
 Owner's Signature

  
 Date

**The following materials must be submitted with your application or it will not be accepted at the counter.** Once taken at the counter, the City has up to 30 days to review the materials submitted to determine if we have everything we need to complete the review. Applicant can verify submittal includes specific materials necessary for the application per checklist.

**3 Copies of Application Form\*** completely filled out and signed by the property owner (or person with authority to make decisions on the property).

**Copy of Deed** to verify ownership, easements, etc.

**At least 3 folded** sets of plans\*

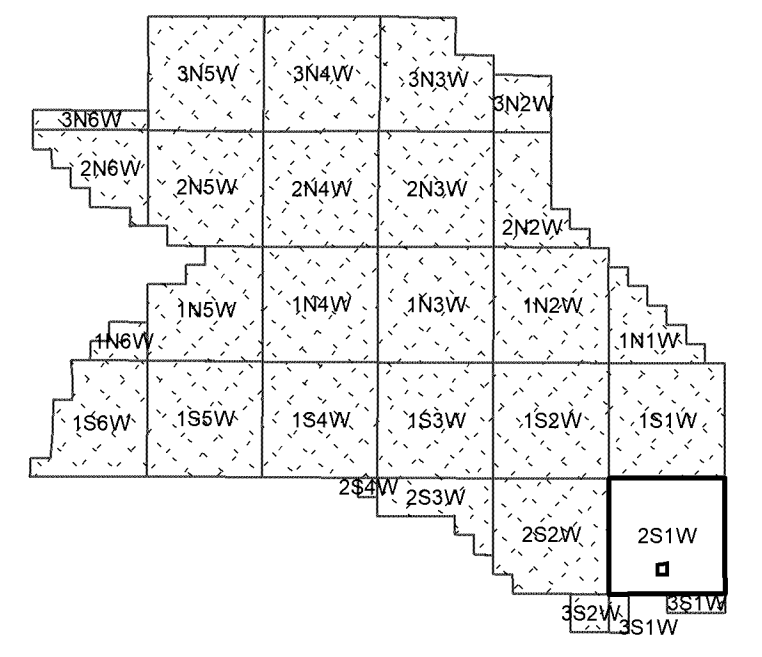
**At least 3 copies** of narrative addressing application criteria\*

**Fee** (along with calculations utilized to determine fee if applicable)

**Neighborhood Meeting Verification** including affidavit, sign-in sheet and meeting summary (required for Type III, IV and V projects)

\* **Note** that the required numbers of copies identified on the checklist are required for completeness; however, upon initial submittal applicants are encouraged to submit only 3 copies for completeness review. Prior to completeness, the required number of copies identified on the checklist and one full electronic copy will be required to be submitted.

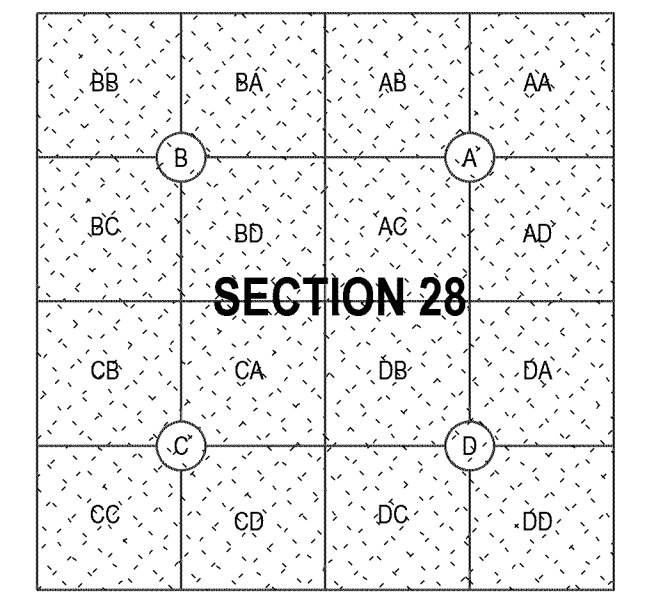




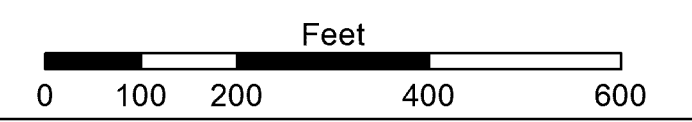
**WASHINGTON COUNTY OREGON**  
**SE 1/4 SECTION 28 T2S R1W W.M.**  
**SCALE 1" = 200'**

36	31	32	33	34	35	36	31
1	6	5	4	3	2	1	6
12	7	8	9	10	11	12	7
13	18	17	16	15	14	13	18
24	19	20	21	22	23	24	19
25	30	29	28	27	26	25	30
36	31	32	33	34	35	36	31
1	6	5	4	3	2	1	6

FOR ADDITIONAL MAPS VISIT OUR WEBSITE AT  
[www.co.washington.or.us](http://www.co.washington.or.us)



Cancelled Taxlots For: 2S128D  
 101, 100.



**WASHINGTON COUNTY OREGON**  
**Assessment**  
**CARTOGRAPHY**  
**Taxation**

**PLOT DATE: 6/18/2020**  
 Rotation: 0  
**FOR ASSESSMENT PURPOSES**  
**ONLY - DO NOT RELY ON**  
**FOR OTHER USE**

Map areas delineated by either gray shading or a cross-hatched pattern are for reference only and may not indicate the most current property boundaries. Please consult the appropriate map for the most current information.

Applicant Transmittal Dated 9-11-20 including Narrative

2S127C000850

2S128D000400  
WOODS CINDY R  
PO BOX 1488  
SHERWOOD, OR 97140

2S128D000400  
WOODS CINDY R  
21370 SW DAHLKE LN  
SHERWOOD, OR 97140-8325

2S128D000500

ENDICOTT WOODS ENTERPRISES INC  
PO BOX 1537  
TUALATIN, OR 97062

2S128D000500

ENDICOTT WOODS ENTERPRISES INC  
21410 SW DAHLKE LN  
SHERWOOD, OR 97140-8316

2S128D000601

LIZARRAGA ULDO GEOVANNI  
21905 SW DAHLKE LN  
SHERWOOD, OR 97140

2S128D000900

OREGON ASPHALTIC PAVING LLC  
PO BOX 4810  
TUALATIN, OR 97062

2S128D000900

OREGON ASPHALTIC PAVING LLC  
21940 SW DAHLKE LN  
SHERWOOD, OR 97140

2S128D001000

TUALATIN CITY OF  
18880 SW MARTINAZZI AVE  
TUALATIN, OR 97062

2S128D001000

TUALATIN CITY OF  
20940 SW DAHLKE LN  
SHERWOOD, OR 97140-9661

2S128D001100

, OR

2S1330000100

TUALATIN VALLEY SPORTSMENS CLUB  
7430 SW VARNS ST  
TIGARD, OR 97223

2S1330000100

TUALATIN VALLEY SPORTSMENS CLUB  
13050 SW TONQUIN RD  
SHERWOOD, OR 97140-7933

2S1330000101

OREGON ASPHALTIC PAVING LLC  
PO BOX 4810  
TUALATIN, OR 97062

2S134B000150

TIGARD SAND & GRAVEL LLC  
PO BOX 4810  
TUALATIN, OR 97062

2S134B000152

TIGARD SAND & GRAVEL LLC  
PO BOX 4810  
TUALATIN, OR 97062

2S127C000500

PORTLAND GENERAL ELECTRIC CO ATTN:  
1WTC0510-CORP TAX DEPT  
121 SW SALMON ST  
PORTLAND, OR 97204

2S127C000500

PORTLAND GENERAL ELECTRIC CO ATTN:  
1WTC0510-CORP TAX DEPT  
12345 SW BLAKE ST  
TUALATIN, OR 97062

2S128D000602

MUNGER DOUGLAS S REV LIV TRUST BY  
DOUGLAS S MUNGER TR  
21775 SW DAHLKE LN  
SHERWOOD, OR 97140

2S128D000600

MOREY DON F & MOREY CORBY A  
21825 SW DAHLKE LN  
SHERWOOD, OR 97140

2S128D000700

RIVERA RICHARD & RIVERA CARLA  
PO BOX 688  
SHERWOOD, OR 97140

2S128D000700

RIVERA RICHARD & RIVERA CARLA  
21680 SW DALKE LN  
SHERWOOD, OR 97140-9868

2S128D000800

GRONLI STEVE & WILDER RENEE  
21700 SW DAHLKE LN  
SHERWOOD, OR 97140

TRNWR ATTN. LARRY KLIMEK

19255 SW PACIFIC HWY  
SHERWOOD, OR 97140

TUALATIN RIVERKEEPERS ATTN. RUBY  
BUCHHOLTZ  
11675 SW HAZELBROOK RD  
TUALATIN, OR 97062

TUALATIN RIVERKEEPERS ATTN. KRIS BALLIET  
11675 SW HAZELBROOK RD  
TUALATIN, OR 97062

WASHINGTON COUNTY ATTN. STEPHEN  
ROBERTS  
155 N 1ST AVE, #350-16  
HILLSBORO, OR 97124

T-V FIRE & RESCUE  
ATTN. KIM HAUGHN  
11945 S.W. 70TH AVENUE  
TIGARD, OR 97223-8566

SHERWOOD SCHOOL DISTRICT ATTN. JIM  
ROSE  
23295 SW MAIN ST  
SHERWOOD, OR 97140

SHERWOOD CHAMBER OF COMMERCE ATTN.  
LANA PAINTER  
PO BOX 805  
SHERWOOD, OR 97140

Applicant Transmittal Dated 9-11-20 including Narrative

CITY OF TUALATIN ATTN. Aquilla Hurd-Ravich  
18880 SW MARTINAZZI AVE.  
TUALATIN, OR 97062

CITY OF TUALATIN ATTN. JEFF FUCHS  
18880 SW MARTINAZZI AVE.  
TUALATIN, OR 97062

CITY OF SHERWOOD ATTN. JOESPH GALL  
22560 SW PINE STREET  
SHERWOOD, OR 97140

CITY OF SHERWOOD ATTN. BOB GALATI  
22560 SW PINE STREET  
SHERWOOD, OR 97140

CITY OF SHERWOOD ATTN. JULIA HAJDUK  
22560 SW PINE STREET  
SHERWOOD, OR 97140

CITY OF TIGARD ATTN. BRIAN RAGER, PUBLIC  
WORKS DEPARTMENT  
13125 SW HALL BLVD.,  
TIGARD, OR 97223

CITY OF TIGARD  
ATTN. MARTY WINE, CITY MANAGER  
13125 SW HALL BLVD.,  
TIGARD, OR 97223

TRAMMELL CROW PORTLAND  
DEVELOPMENT, INC. ATTN. STEVE WELLS  
1300 SW 5TH AVE., SUITE 3050  
PORTLAND, OR 97201

FLEETPRIDE ATTN. DOUG LANE, BRANCH  
MANAGER  
12350 SW CIMINO ST  
TUALATIN, OR 97062

REXEL ATTN. JOSH CORRA  
12370 SW CIMINO ST  
TUALATIN, OR 97062

SHIELDS MANUFACTURING ATTN. JEFF  
WRIGHT  
12320 SW CIMINO STREET  
TUALATIN, OR 97062

COLUMBIA CORRUGATED BOX ATTN. TOM  
WOLFF  
12777 SW TUALATIN-SHERWOOD RD  
TUALATIN, OR 97062-8051

CONRAD LUMBER CO. ATTN.. CASEY GIRT  
13025 SW TUALATIN-SHERWOOD RD  
SHERWOOD, OR 97140

TRIMET ATTN. BERNIE BOTTOMLY  
1800 SW 1ST AVE., SUITE 300  
PORTLAND, OR 97201

TUALATIN CHAMBER OF COMMERCE ATTN.  
LINDA MOHOLT  
8101 SW NYBERG ST #102,  
TUALATIN, OR 97062

CLEAN WATER SERVICES ATTN. MARK  
JOCKERS  
2550 SW HILLSBORO HIGHWAY,  
HILLSBORO, OR 97113

Newmark Knight Frank ATTN. Bradford H.  
Fletcher  
760 SW 9th Ave., Suite 200  
Portland, OR 97205

2S128A000400  
CHAVEZ ALAN J & CHAVEZ DEANNA  
PO BOX 1363  
SHERWOOD, OR 97140

2S128A000400  
CHAVEZ ALAN J & CHAVEZ DEANNA  
13025 SW TUALATIN SHERWOOD RD  
SHERWOOD, OR 97140-8223

WASHCOMM COMMUNICATIONS - (Attn:  
Melissa De Lyser)  
155 N 1ST AVE, #350-16  
HILLSBORO, OR 97124

CPOPROGRAM CPO COORDINATORS MS # 20  
155 N 1ST AVE, STE #200  
HILLSBORO, OR 97124

2S127C000700  
DTI PROPERTIES LLC BY DAYNE BARRETT  
INGRAM  
15836 SW MADRONA LN  
SHERWOOD, OR 97140

2S127C000700  
DTI PROPERTIES LLC BY DAYNE BARRETT  
INGRAM  
12350 SW TUALATIN SHERWOOD RD  
TUALATIN, OR 97062-6831

2S128D000200  
ENDICOTT CINDY R & ENDICOTT RONALD L  
PO BOX 261  
TUALATIN, OR 97062

2S127BC90111  
ICC 2 LLC 4200 SE COLUMBIA WAY STE F  
VANCOUVER, WA 98661

2S127BC90121  
ICC 2 LLC 4200 SE COLUMBIA WAY STE F  
VANCOUVER, WA 98661

2S127BC90131  
ICC 2 LLC 4200 SE COLUMBIA WAY STE F  
VANCOUVER, WA 98661

2S127C000701  
ITEL, KENNETH E 12155 SW TUALATIN-  
SHERWOOD RD  
TUALATIN, OR 97062

2S128D000300  
ENDICOTT RONALD LESLIE & PEGGY 21050  
SW DAHLKE LN  
SHERWOOD, OR 97140

2S128A000601, 2S128A001200  
NSA PROPERTY HOLDINGS LLC BY KEVIN  
HOWARD REAL ESTATE INC  
5005 MEADOWS RD STE 420  
LAKE OSWEGO, OR 97035

Applicant Transmittal Dated 9-11-20 including Narrative

2S128A000601, 2S128A001200  
NSA PROPERTY HOLDINGS LLC BY KEVIN  
HOWARD REAL ESTATE INC  
20475 SW CIPOLE RD  
SHERWOOD, OR 97140-8339

2S128A000601, 2S128A001200  
NSA PROPERTY HOLDINGS LLC BY KEVIN  
HOWARD REAL ESTATE INC  
20865 SW WILDROSE PL  
SHERWOOD, OR 97140-9625

2S128A001800, 2S128A001900,  
2S128A000503  
CIPOLE LLC  
20605 SW CIPOLE RD  
SHERWOOD, OR 97140-8339

2S128A001800, 2S128A001900,  
2S128A000503  
CIPOLE LLC  
450 NEWPORT CENTER DR STE 405  
NEWPORT BEACH, CA 92660

2S128A001800, 2S128A001900,  
2S128A000503  
CIPOLE LLC  
13115 SW TUALATIN SHERWOOD RD  
SHERWOOD, OR 97140-9703

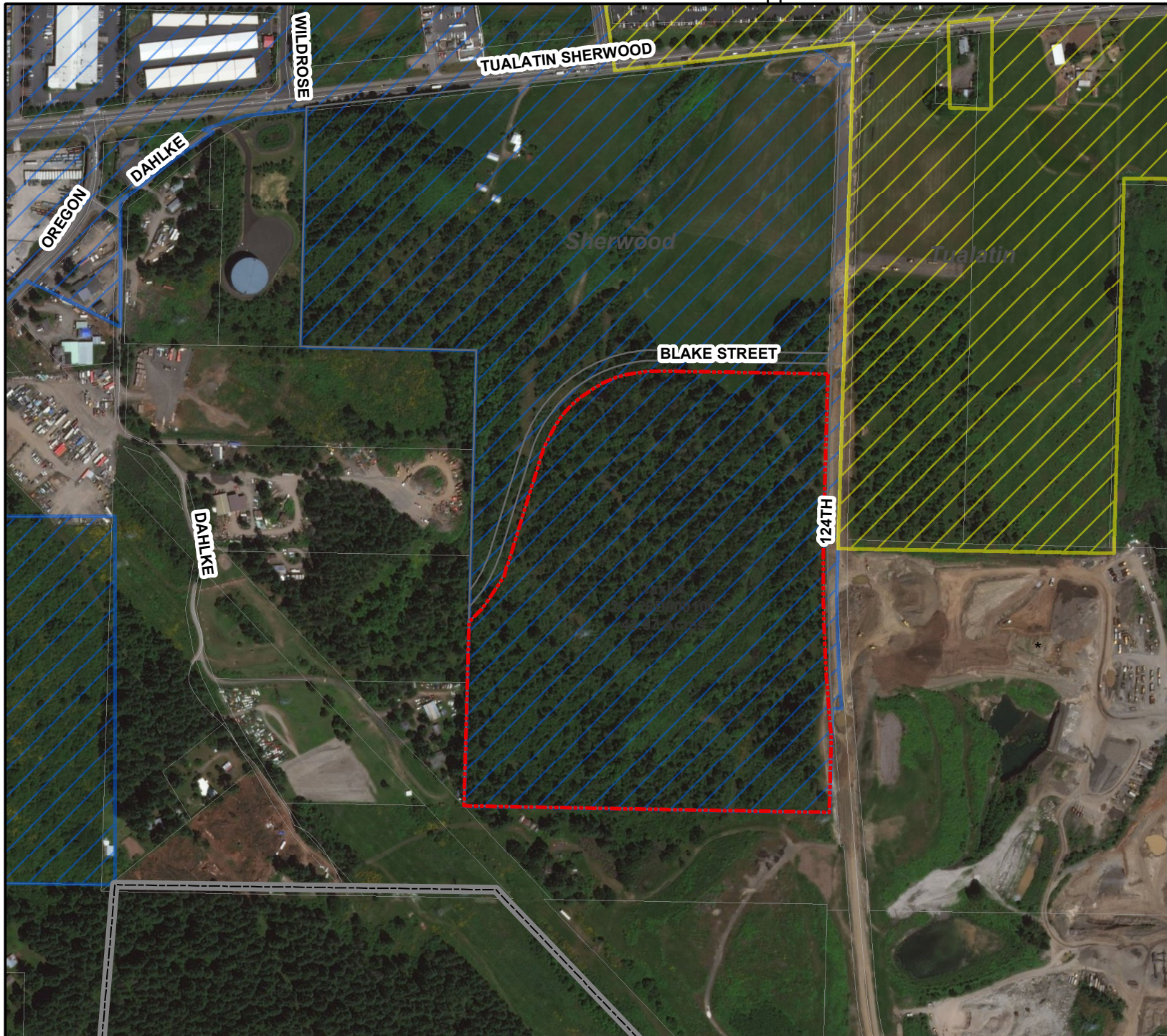
2S128A001800, 2S128A001900,  
2S128A000503  
CIPOLE LLC  
12905 SW TUALATIN SHERWOOD RD  
SHERWOOD, OR 97140-9714










SHERWOOD SCHOOL DISTRICT  
23295 SW MAIN ST  
SHERWOOD, OR 97140

2S128A001300  
BULLFROG LLC  
3309 N SECOND ST  
PHOENIX, AZ 85012

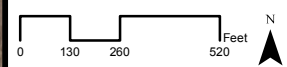
2S128A001300  
BULLFROG LLC  
20707 SW WILDROSE PL  
SHERWOOD, OR 97140-9625





- Legend**
-  WTP Site
  -  Pipeline PLM\_3.0
  -  Pipeline PLM\_4.2
  -  Taxlots
  -  Sherwood City Limits
  -  Tualatin City Limits
  -  UGB
  -  Streets
  -  Blake Street

\* Washington County Zoning Map shows this site as FD-20.



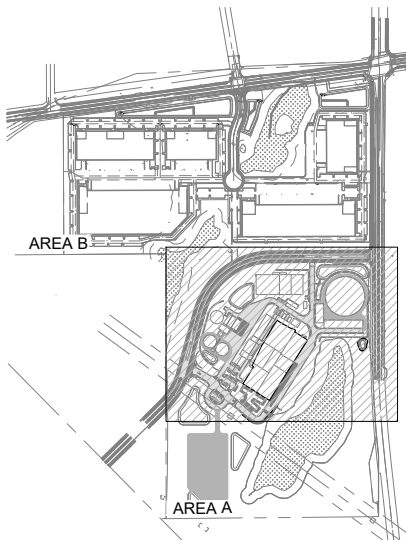
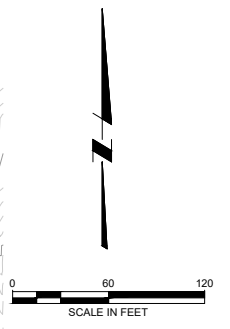
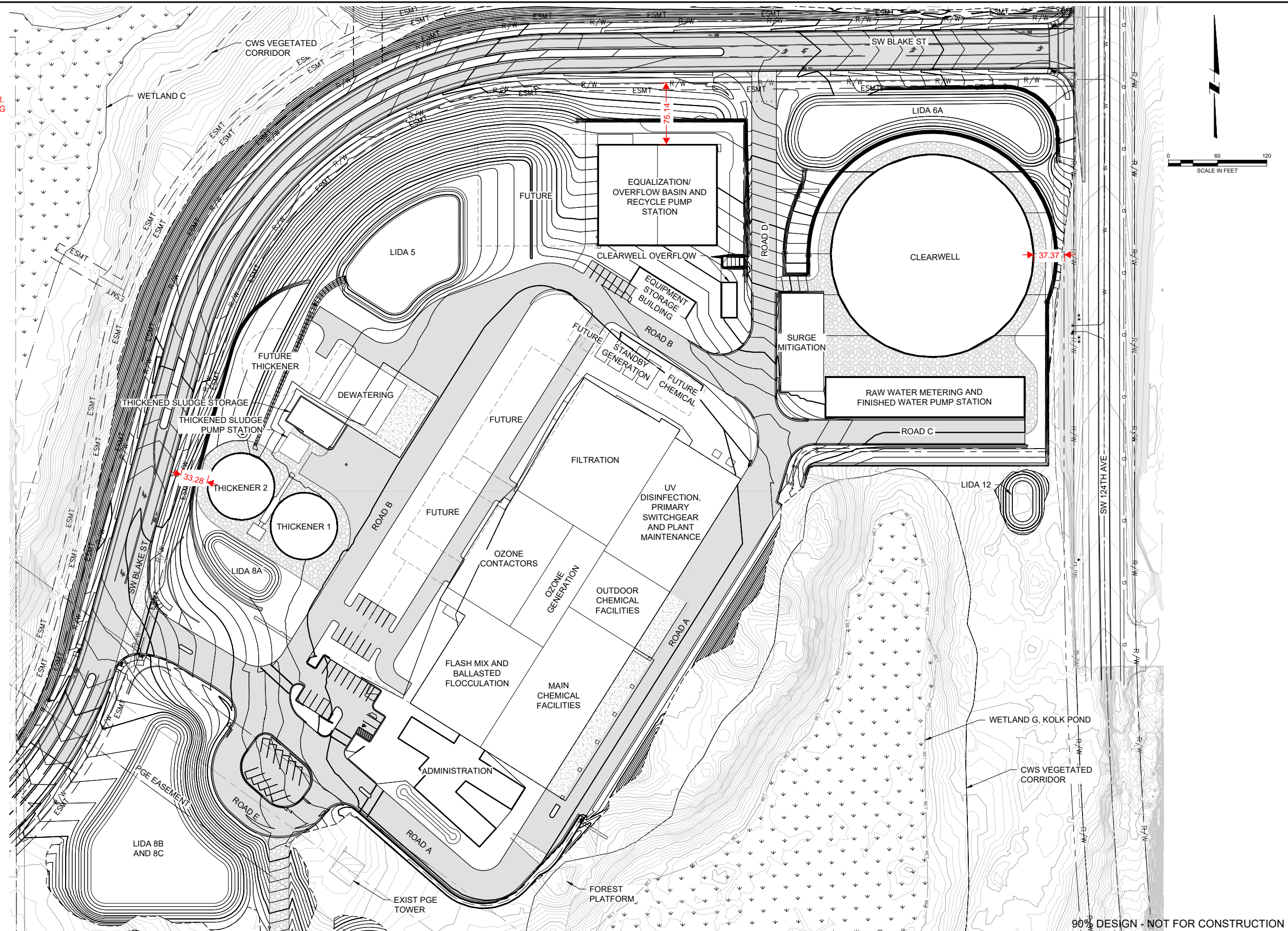
Prepared By: Angelo Planning Group Date: 09/02/2020

Coordinate System: NAD 1983 HARN StatePlane Oregon North FIPS 3601 Feet Intl Data Sources: Metro RLIS, WWSP

This map is intended for informational purposes only. While this map represents the best data available at the time of publication, APG makes no claims, representations, or warranties as to its accuracy or completeness. Metadata available upon request. County zoning within Beaverton is interim.



- NOTES:
1. FINISH AND EXISTING GRADE CONTOUR INTERVAL IS SHOWN AT 1 FEET.
  2. SITE AREA IS 42.95 ACERS, PACEL SOUTH OF PROPOSED SW BLAKE STREET RIGHT-OF-WAY.
  3. THE NET BUILDING AREA IS 34.73 ACRES, OR THE TOTAL SITE AREA MINUS WETLAND G AND ITS WETLAND BUFFER. WETLAND G (KOLK POND) IS 8.22 ACRES WHEN INCLUDING THE WETLAND BUFFER.



KEY MAP  
NTS

DSGN	B FOSTER					
DR	M ESTEP					
CHK	C JAIN					
APVD	M HICKEY	NO.	DATE	REVISION	BY	APVD

VERIFY SCALE  
BAR IS ONE INCH ON  
ORIGINAL DRAWING.  
IF NOT ONE INCH ON  
THIS SHEET, ADJUST  
SCALES ACCORDINGLY.



**Willamette Water Supply**  
*Our Reliable Water*  
WILLAMETTE WATER SUPPLY PROGRAM  
WATER TREATMENT PLANT\_1.0

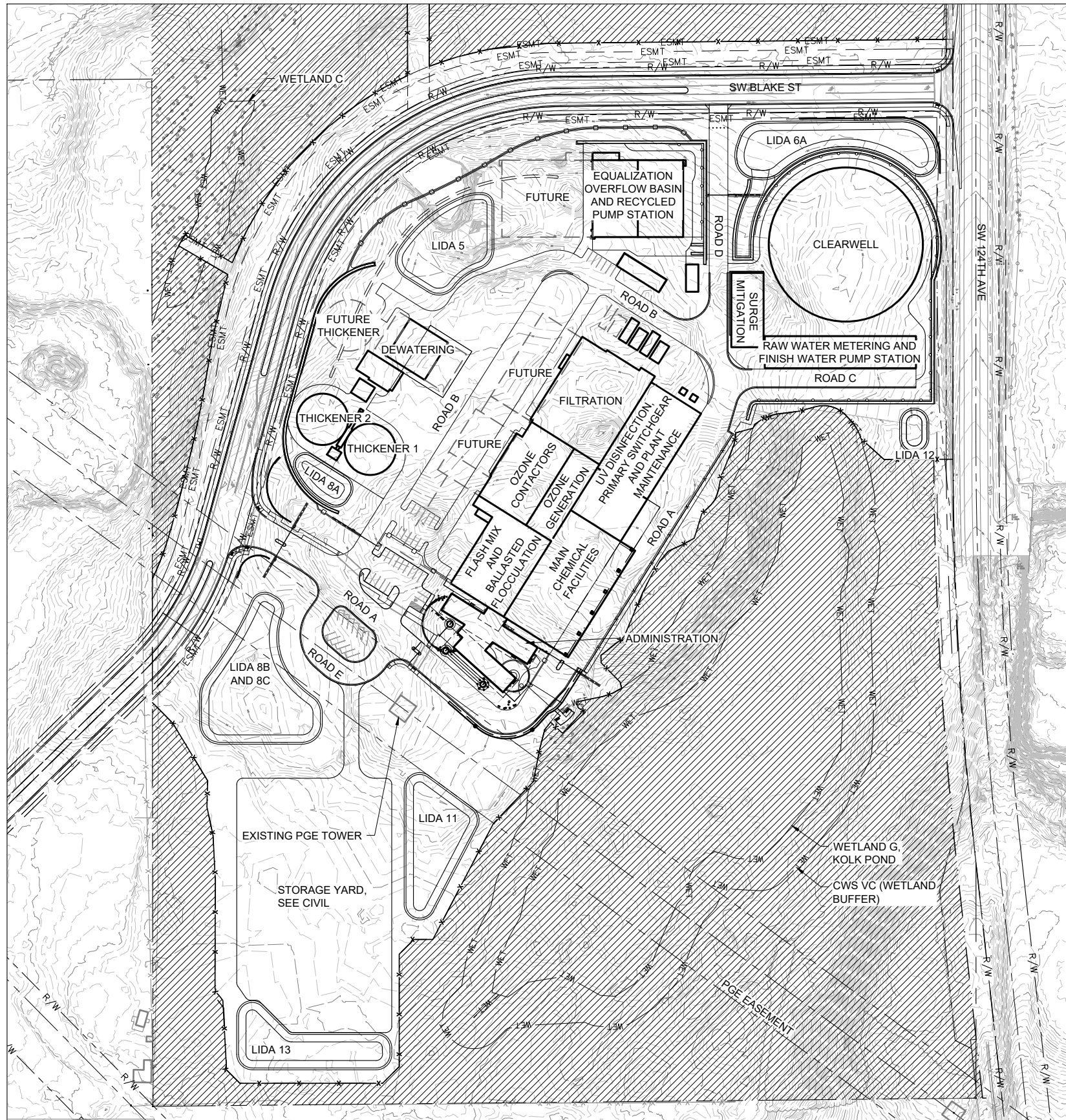
**CDM Smith**  
1220 SW Morrison Street, Suite 200  
Portland, OR 97205  
Tel: (503) 232-1800

SITE  
CIVIL  
SITE LAYOUT PLAN AREA A

SHEET	
DWG	03-C-22002
DATE	AUG 2020
PROJ	WTP_1.0

DWG FILE: C:\cdm\ben.foster@murraysmith.us\0274278\WTP1-03-C-22002.dwg  
 PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM  
 BY: BEN FOSTER





**OVERALL PLAN**  
SCALE: 1" = 100'-0"

DSGN	B DEAN					
DR	B DEAN					
CHK	D WALTERS					
APVD	M FAHA	NO.	DATE	REVISION	BY	APVD

VERIFY SCALE  
BAR IS ONE INCH ON  
ORIGINAL DRAWING.  
IF NOT ONE INCH ON  
THIS SHEET, ADJUST  
SCALES ACCORDINGLY.



**GreenWorks, P.C.**  
Landscape Architecture  
Environmental Design  
24 NW 2nd Avenue, Suite 100  
Portland, Oregon 97209  
PH: 503.222.5810/F: 503.222.2283  
Email: info@greenworkspc.com



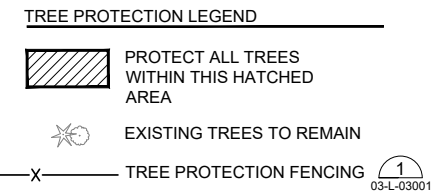
**Willamette Water Supply**  
*Our Reliable Water*  
WILLAMETTE WATER SUPPLY PROGRAM  
WATER TREATMENT PLANT\_1.0

**CDM Smith**  
1220 SW Morrison Street, Suite 200  
Portland, OR 97205  
Tel: (503) 232-1800

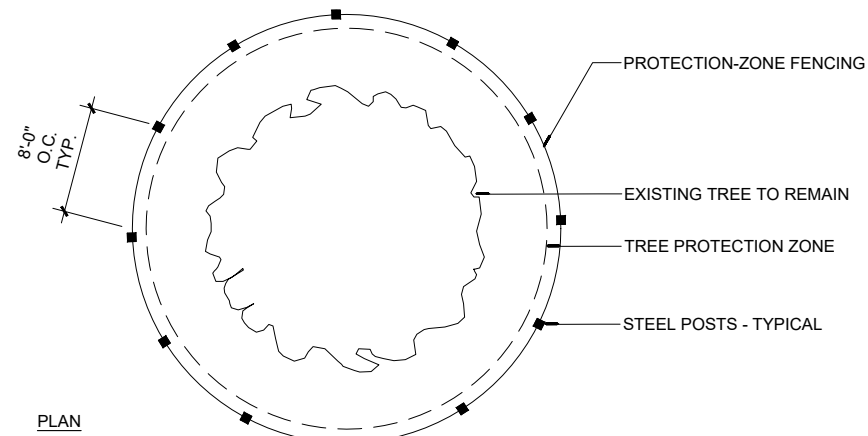
SITE  
LANDSCAPE ARCHITECTURE  
TREE PROTECTION  
OVERALL PLAN, LEGEND & NOTES

SHEET	DWG # 03-L-03001
DATE	AUG 2020
PROJ	WTP_1.0

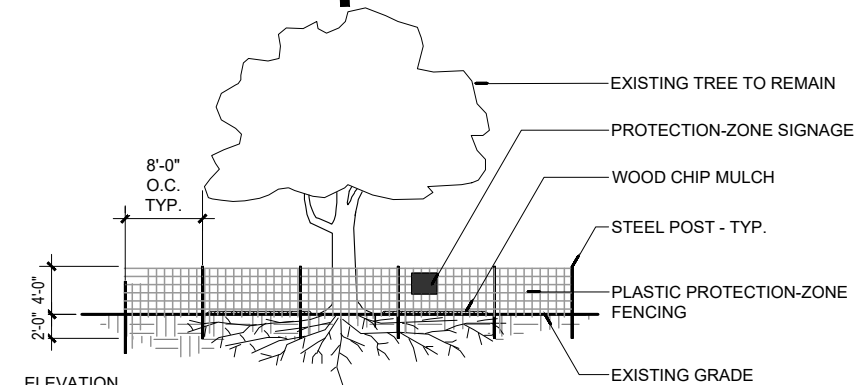
PLOT DATE AND TIME: 8/21/2020 1:10 PM



- NOTES:**
- MANY EXISTING TREES TO REMAIN ARE NOT REPRESENTED ON THE SITE SURVEY. CONTRACTOR IS RESPONSIBLE FOR PRESERVING AND PROTECTING ALL TREES WITHIN HATCHED AREA.
  - REFER TO SHEET 03-C-2208 FOR TREE REMOVAL PLAN.



PLAN

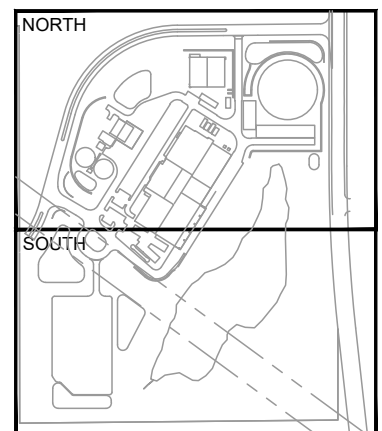


ELEVATION

- NOTES:**
- DO NOT INSTALL ANY COMPONENT OF TREE PROTECTION FENCING WITHIN TREE PROTECTION ZONES UNLESS INDICATED ON THE DRAWINGS OTHERWISE.
  - THE FOLLOWING PRACTICES ARE PROHIBITED WITHIN TREE PROTECTION ZONES: STORAGE OF CONSTRUCTION MATERIALS, DEBRIS, OR EXCAVATED MATERIAL; CLEANING OF MATERIALS OR EQUIPMENT; MOVING OR PARKING VEHICLES OR EQUIPMENT; FOOT TRAFFIC; ERECTION OF STRUCTURES; IMPOUNDMENT OF WATER; EXCAVATION OR OTHER DIGGING UNLESS OTHERWISE INDICATED; ATTACHMENT OF SIGNS TO OR WRAPPING MATERIALS AROUND TREES; USE OF FASTENERS OF ANY TYPE INTO THE TREE.
  - THE CITY OF SHERWOOD SHALL BE NOTIFIED WITHIN 24 HOURS OF ANY SUSPECTED DAMAGE TO EXISTING TREES WITHIN THE PROJECT AREA THAT WERE NOT IDENTIFIED AND APPROVED FOR REMOVAL OR RELOCATION. IF DAMAGE OCCURS DURING CONSTRUCTION, THE CONSTRUCTION APPLICANT SHALL HAVE THE TREE RESTORED WITHIN 24 HOURS BY A **CERTIFIED ARBORIST**.

**TREE PROTECTION FENCING**  
NOT TO SCALE

**KEY MAP**



90% DESIGN - NOT FOR CONSTRUCTION



1433 SW 6th Avenue  
(503)646-4444

**OWNERSHIP AND ENCUMBRANCES REPORT WITH GENERAL INDEX LIENS**  
Informational Report of Ownership and Monetary and Non-Monetary Encumbrances

**To ("Customer"):** HDR, Inc.  
660 Hawthorne Avenue SE, Suite 220  
Salem, OR 97301

**Customer Ref.:** 472518006087  
**Order No.:** 472520007573  
**Effective Date:** September 1, 2020 at 08:00 AM  
**Charge:** \$350.00

The information contained in this report is furnished by Chicago Title Company of Oregon (the "Company") as a real property information service based on the records and indices maintained by the Company for the county identified below. THIS IS NOT TITLE INSURANCE OR A PRELIMINARY TITLE REPORT FOR, OR COMMITMENT FOR, TITLE INSURANCE. No examination has been made of the title to the herein described property, other than as specifically set forth herein. Liability for any loss arising from errors and/or omissions is limited to the lesser of the charge or the actual loss, and the Company will have no greater liability by reason of this report. THIS REPORT IS SUBJECT TO THE LIMITATIONS OF LIABILITY STATED BELOW, WHICH LIMITATIONS OF LIABILITY ARE A PART OF THIS REPORT.

**THIS REPORT INCLUDES MONETARY AND NON-MONETARY ENCUMBRANCES.**

**Part One - Ownership and Property Description**

**Owner.** The apparent vested owner of property ("the Property") as of the Effective Date is:  
Willamette Water Supply System Commission, an Oregon intergovernmental entity

**Premises.** The Property is:

**(a) Street Address:**

12900 SW Tualatin-Sherwood Road, Sherwood, OR 97140

**(b) Legal Description:**

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF



**Part Two - Encumbrances**

**Encumbrances.** As of the Effective Date, the Property appears subject to the following monetary and non-monetary encumbrances of record, not necessarily listed in order of priority, including liens specific to the subject property and general index liens (liens that are not property specific but affect any real property of the named person in the same county):

**EXCEPTIONS**

**SPECIFIC ITEMS AND EXCEPTIONS:**

1. The subject property is under public ownership and is exempt from ad valorem taxation. Any change in ownership prior to delivery of the assessment roll may result in tax liability.

Tax Account No.: R2212728  
Map No.: 2S128D001200  
Levy Code: 088.20

2. Property taxes in an undetermined amount, which are a lien but not yet payable, including any assessments collected with taxes to be levied for the fiscal year 2020-2021.
3. City Liens, if any, in favor of the City of Sherwood.
4. Rights of the public to any portion of the Land lying within the limits of roads and highways.
5. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:  
Granted to: Portland General Electric Company  
Purpose: Transmission line, access and right to remove danger trees  
Recording Date: April 18, 1963  
Recording No: Book 485, Page 83  
Affects: 125 feet in width as described therein-also delineated on Partition Plat No.2019-029
6. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:  
Granted to: Washington County  
Purpose: Right of Way, Slope, Wall and Drainage  
Recording Date: September 4, 2015  
Recording No: 2015-075486  
Affects: Northeasterly and Eastery portion of the subject property also delineated on Partition Plat No. 2019-029
7. An unrecorded Purchase and Sale Agreement and Joint Escrow Instructions with certain terms, covenants, conditions and provisions set forth therein as disclosed by the document  
  
Entitled: Memorandum of Agreement  
Buyer: Trammell Crow Portland Development, Inc., a Delaware corporation  
Seller: Tualatin Valley Water District and City of Hillsboro  
Recording Date: November 1, 2017  
Recording No.: 2017-086559  
Affects: Additional property also
8. Encroachment License Agreement, including the terms and provisions thereof  
Executed by: City of Hillsboro and Tualatin Valley Water District and Steve Gronli and Renee Wilder  
Recording Date: September 19, 2019  
Recording No.: 2019-064345

9. Water, Storm and Sewer Utility Easement Agreement, including the terms and provisions thereof  
Executed by: Trammell Crow Portland Development, Inc. and Willamette Water Supply System  
Commission  
Recording Date: June 22, 2020  
Recording No.: 2020-054603  
Affects:
10. Please be advised that our search did not disclose any open Deeds of Trust of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.
11. Existing leases and tenancies, if any, and any interests that may appear upon examination of such leases.
12. Matters set forth on ALTA/NSPS survey prepared by Northwest Surveying, Inc., dated April 14, 2017 and last revised October 20, 2017, Job No. 1648 as follows:  
  
[a.] A 4' hogwire fence extends into the surveyed property up to 9.7' along the southwesterly property line, as shown. Ownership of this fence is unknown.  
  
[b.] The wood entry way for a mobile home extends up to 2.3 feet onto the surveyed property from Tax Lot 800. A plastic chicken coop also extends up to 0.4' onto the surveyed property.  
  
Disclosed by Warranty Deed recorded November 1, 2017 as Recording No. 2017-086558.

**End of Reported Information**

There will be additional charges for additional information or copies. For questions or additional requests, contact:

Tony Schadle  
5034694150  
Tony.Schadle@TitleGroup.FNTG.com  
Chicago Title Company of Oregon  
1433 SW 6th Avenue  
Portland, OR 97201

Applicant Transmittal Dated 9-11-20 including Narrative  
**EXHIBIT "A"**  
Legal Description

Parcel 2, PARTITION PLAT NO. 2019-029, according to the plat recorded September 19, 2019 as Document No. 2019-064346, in Washington County, Oregon.

**LIMITATIONS OF LIABILITY**

"CUSTOMER" REFERS TO THE RECIPIENT OF THIS REPORT.

CUSTOMER EXPRESSLY AGREES AND ACKNOWLEDGES THAT IT IS EXTREMELY DIFFICULT, IF NOT IMPOSSIBLE, TO DETERMINE THE EXTENT OF LOSS WHICH COULD ARISE FROM ERRORS OR OMISSIONS IN, OR THE COMPANY'S NEGLIGENCE IN PRODUCING, THE REQUESTED REPORT, HEREIN "THE REPORT." CUSTOMER RECOGNIZES THAT THE FEE CHARGED IS NOMINAL IN RELATION TO THE POTENTIAL LIABILITY WHICH COULD ARISE FROM SUCH ERRORS OR OMISSIONS OR NEGLIGENCE. THEREFORE, CUSTOMER UNDERSTANDS THAT THE COMPANY IS NOT WILLING TO PROCEED IN THE PREPARATION AND ISSUANCE OF THE REPORT UNLESS THE COMPANY'S LIABILITY IS STRICTLY LIMITED. CUSTOMER AGREES WITH THE PROPRIETY OF SUCH LIMITATION AND AGREES TO BE BOUND BY ITS TERMS

THE LIMITATIONS ARE AS FOLLOWS AND THE LIMITATIONS WILL SURVIVE THE CONTRACT:

ONLY MATTERS IDENTIFIED IN THIS REPORT AS THE SUBJECT OF THE REPORT ARE WITHIN ITS SCOPE. ALL OTHER MATTERS ARE OUTSIDE THE SCOPE OF THE REPORT.

CUSTOMER AGREES, AS PART OF THE CONSIDERATION FOR THE ISSUANCE OF THE REPORT AND TO THE FULLEST EXTENT PERMITTED BY LAW, TO LIMIT THE LIABILITY OF THE COMPANY, ITS LICENSORS, AGENTS, SUPPLIERS, RESELLERS, SERVICE PROVIDERS, CONTENT PROVIDERS AND ALL OTHER SUBSCRIBERS OR SUPPLIERS, SUBSIDIARIES, AFFILIATES, EMPLOYEES, AND SUBCONTRACTORS FOR ANY AND ALL CLAIMS, LIABILITIES, CAUSES OF ACTION, LOSSES, COSTS, DAMAGES AND EXPENSES OF ANY NATURE WHATSOEVER, INCLUDING ATTORNEY'S FEES, HOWEVER ALLEGED OR ARISING, INCLUDING BUT NOT LIMITED TO THOSE ARISING FROM BREACH OF CONTRACT, NEGLIGENCE, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF WARRANTY, EQUITY, THE COMMON LAW, STATUTE OR ANY OTHER THEORY OF RECOVERY, OR FROM ANY PERSON'S USE, MISUSE, OR INABILITY TO USE THE REPORT OR ANY OF THE MATERIALS CONTAINED THEREIN OR PRODUCED, **SO THAT THE TOTAL AGGREGATE LIABILITY OF THE COMPANY AND ITS AGENTS, SUBSIDIARIES, AFFILIATES, EMPLOYEES, AND SUBCONTRACTORS SHALL NOT IN ANY EVENT EXCEED THE COMPANY'S TOTAL FEE FOR THE REPORT.**

CUSTOMER AGREES THAT THE FOREGOING LIMITATION ON LIABILITY IS A TERM MATERIAL TO THE PRICE THE CUSTOMER IS PAYING, WHICH PRICE IS LOWER THAN WOULD OTHERWISE BE OFFERED TO THE CUSTOMER WITHOUT SAID TERM. CUSTOMER RECOGNIZES THAT THE COMPANY WOULD NOT ISSUE THE REPORT BUT FOR THIS CUSTOMER AGREEMENT, AS PART OF THE CONSIDERATION GIVEN FOR THE REPORT, TO THE FOREGOING LIMITATION OF LIABILITY AND THAT ANY SUCH LIABILITY IS CONDITIONED AND PREDICATED UPON THE FULL AND TIMELY PAYMENT OF THE COMPANY'S INVOICE FOR THE REPORT.

THE REPORT IS LIMITED IN SCOPE AND IS NOT AN ABSTRACT OF TITLE, TITLE OPINION, PRELIMINARY TITLE REPORT, TITLE REPORT, COMMITMENT TO ISSUE TITLE INSURANCE, OR A TITLE POLICY, AND SHOULD NOT BE RELIED UPON AS SUCH. THE REPORT DOES NOT PROVIDE OR OFFER ANY TITLE INSURANCE, LIABILITY COVERAGE OR ERRORS AND OMISSIONS COVERAGE. THE REPORT IS NOT TO BE RELIED UPON AS A REPRESENTATION OF THE STATUS OF TITLE TO THE PROPERTY. THE COMPANY MAKES NO REPRESENTATIONS AS TO THE REPORT'S ACCURACY, DISCLAIMS ANY WARRANTY AS TO THE REPORT, ASSUMES NO DUTIES TO CUSTOMER, DOES NOT INTEND FOR CUSTOMER TO RELY ON THE REPORT, AND ASSUMES NO LIABILITY FOR ANY LOSS OCCURRING BY REASON OF RELIANCE ON THE REPORT OR OTHERWISE.

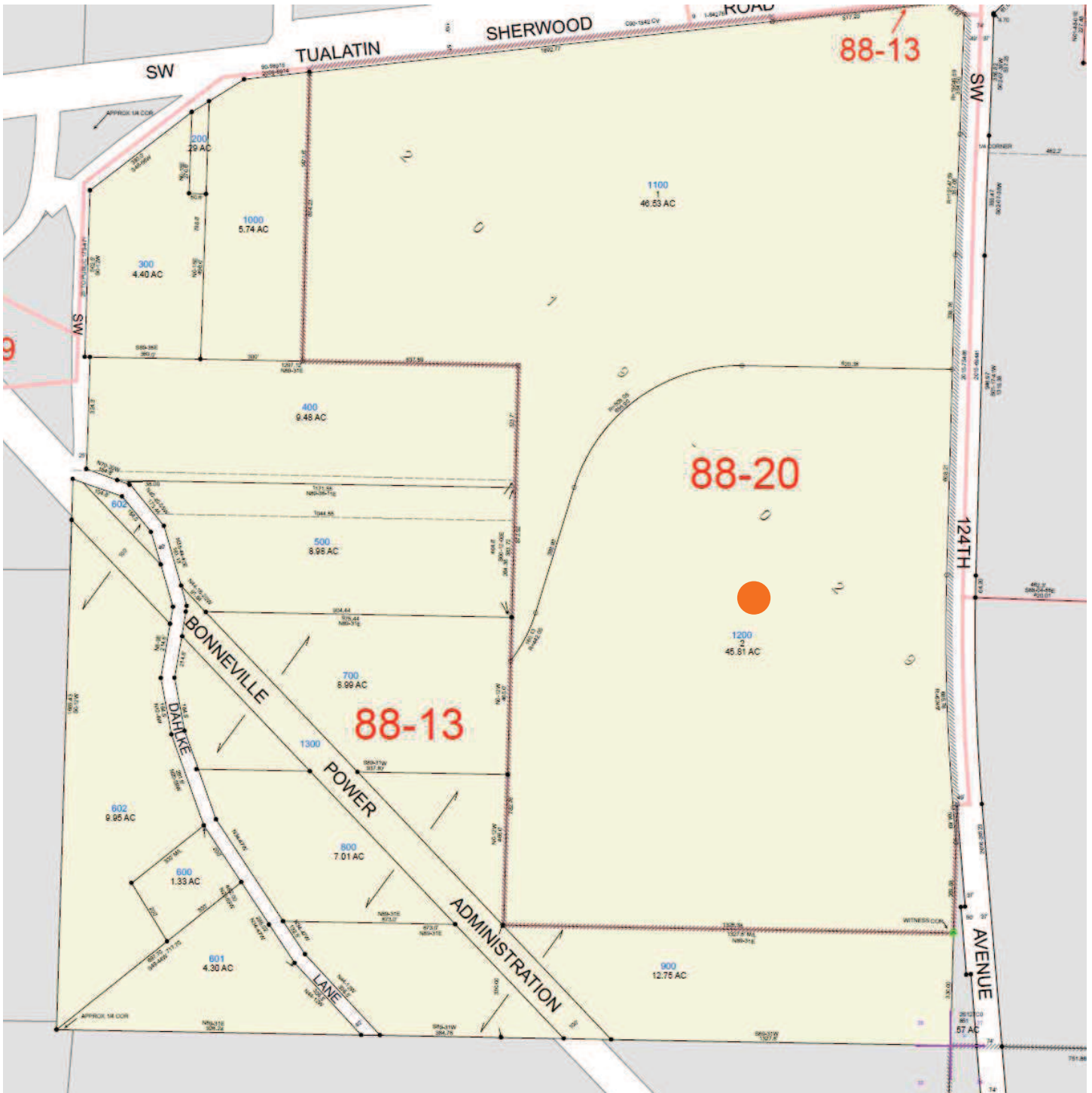


IF CUSTOMER (A) HAS OR WILL HAVE AN INSURABLE INTEREST IN THE SUBJECT REAL PROPERTY, (B) DOES NOT WISH TO LIMIT LIABILITY AS STATED HEREIN AND (C) DESIRES THAT ADDITIONAL LIABILITY BE ASSUMED BY THE COMPANY, THEN CUSTOMER MAY REQUEST AND PURCHASE A POLICY OF TITLE INSURANCE, A BINDER, OR A COMMITMENT TO ISSUE A POLICY OF TITLE INSURANCE. NO ASSURANCE IS GIVEN AS TO THE INSURABILITY OF THE TITLE OR STATUS OF TITLE. CUSTOMER EXPRESSLY AGREES AND ACKNOWLEDGES IT HAS AN INDEPENDENT DUTY TO ENSURE AND/OR RESEARCH THE ACCURACY OF ANY INFORMATION OBTAINED FROM THE COMPANY OR ANY PRODUCT OR SERVICE PURCHASED.

NO THIRD PARTY IS PERMITTED TO USE OR RELY UPON THE INFORMATION SET FORTH IN THE REPORT, AND NO LIABILITY TO ANY THIRD PARTY IS UNDERTAKEN BY THE COMPANY.

CUSTOMER AGREES THAT, TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT WILL THE COMPANY, ITS LICENSORS, AGENTS, SUPPLIERS, RESELLERS, SERVICE PROVIDERS, CONTENT PROVIDERS, AND ALL OTHER SUBSCRIBERS OR SUPPLIERS, SUBSIDIARIES, AFFILIATES, EMPLOYEES AND SUBCONTRACTORS BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT, PUNITIVE, EXEMPLARY, OR SPECIAL DAMAGES, OR LOSS OF PROFITS, REVENUE, INCOME, SAVINGS, DATA, BUSINESS, OPPORTUNITY, OR GOODWILL, PAIN AND SUFFERING, EMOTIONAL DISTRESS, NON-OPERATION OR INCREASED EXPENSE OF OPERATION, BUSINESS INTERRUPTION OR DELAY, COST OF CAPITAL, OR COST OF REPLACEMENT PRODUCTS OR SERVICES, REGARDLESS OF WHETHER SUCH LIABILITY IS BASED ON BREACH OF CONTRACT, TORT, NEGLIGENCE, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTIES, FAILURE OF ESSENTIAL PURPOSE, OR OTHERWISE AND WHETHER CAUSED BY NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF CONTRACT, BREACH OF WARRANTY, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE OR ANY OTHER CAUSE WHATSOEVER, AND EVEN IF THE COMPANY HAS BEEN ADVISED OF THE LIKELIHOOD OF SUCH DAMAGES OR KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY FOR SUCH DAMAGES.

END OF THE LIMITATIONS OF LIABILITY



This map/plat is being furnished as an aid in locating the herein described Land in relation to adjoining streets, natural boundaries and other land, and is not a survey of the land depicted. Except to the extent a policy of title insurance is expressly modified by endorsement, if any, the Company does not insure dimensions, distances, location of easements, acreage or other matters shown thereon.

AFTER RECORDING RETURN TO:

Willamette Water Supply System  
Commission  
1850 SW 170<sup>th</sup> Avenue  
Beaverton, OR 97003  
Attn: Clark Balfour

Washington County, Oregon	<b>2019-053467</b>
<b>D-DW</b>	
Stn=10 A DUYCK	<b>08/13/2019 03:48:37 PM</b>
\$30.00 \$11.00 \$5.00 \$60.00	<b>\$106.00</b>
I, Richard Hobernicht, Director of Assessment and Taxation and Ex-Officio County Clerk for Washington County, Oregon, do hereby certify that the within instrument of writing was received and recorded in the book of records of said county.	
Richard Hobernicht, Director of Assessment and Taxation, Ex-Officio	

UNTIL A CHANGE IS REQUESTED,  
ALL TAX STATEMENTS SHALL BE  
SENT TO THE FOLLOWING ADDRESS:

Willamette Water Supply System  
Commission  
1850 SW 170<sup>th</sup> Avenue  
Beaverton, OR 97003  
Attn: Clark Balfour

**STATUTORY SPECIAL WARRANTY DEED**

TUALATIN VALLEY WATER DISTRICT and the CITY OF HILLSBORO, together, Grantor, conveys and specially warrants to WILLAMETTE WATER SUPPLY SYSTEM COMMISSION, an Oregon intergovernmental entity, Grantee, the real property described on the attached Exhibit A, free of encumbrances created or suffered by the Grantor, except as shown in the public record or as may be disclosed by a survey of such property, including, without limitation, a Memorandum of Agreement, including the terms and provisions thereof, executed by the City of Hillsboro, Tualatin Valley Water District and Trammell Crow Portland Development, Inc., recorded on November 1, 2017, as Recording No.: 2017-086559, which agreement, as amended, provides for a non-exclusive utility easement across the herein described property providing for the construction and on-going operation and maintenance of utilities, with such easement in a location, size and using construction materials and design reasonably acceptable to the parties to the above-referenced agreement and sufficient to allow the herein described property to be annexed to the City of Sherwood.

The true and actual consideration for this conveyance consists of or includes other consideration, which is the whole consideration.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO

DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.

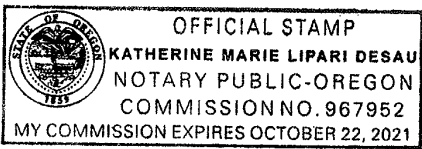
DATED this 12<sup>th</sup> day of August, 2019.

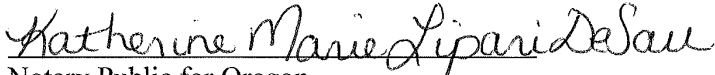
TUALATIN VALLEY WATER DISTRICT

By:   
Tom Hickmann, Chief Executive Officer

STATE OF OREGON                    )  
                                                  ) ss  
COUNTY OF WASHINGTON        )

This instrument was acknowledged before me on this 8<sup>th</sup> day of August, 2019, by Tom Hickmann, as Chief Executive Officer of Tualatin Valley Water District, on behalf of said district.

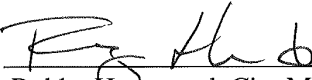


  
Notary Public for Oregon  
My Commission Expires: October 22, 2021

[Additional Grantor signature attached.]

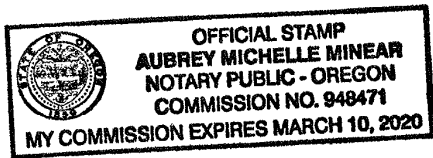


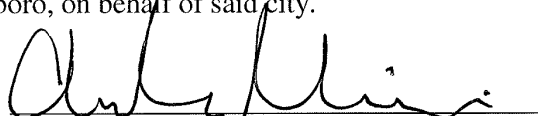
CITY OF HILLSBORO

By:   
Robby Hammond, City Manager

STATE OF OREGON                    )  
                                                  ) ss  
COUNTY OF WASHINGTON        )

This instrument was acknowledged before me on this 12 day of August, 2019, by Robby Hammond as City Manager of City of Hillsboro, on behalf of said city.



  
Notary Public for Oregon  
My Commission Expires: March 10, 2020

The foregoing conveyance is hereby accepted by Grantee:

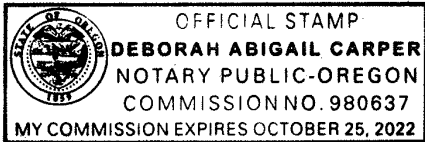
WILLAMETTE WATER SUPPLY SYSTEM  
COMMISSION, an Oregon  
intergovernmental entity

By:   
Name: David Kraska  
Title: General Manager

STATE OF OREGON                    )  
                                                  ) ss  
COUNTY OF WASHINGTON        )

This instrument was acknowledged before me on this 12<sup>th</sup> day of August, 2019, by David Kraska as General Manager of Willamette Water Supply System Commission, an Oregon intergovernmental entity.

  
Notary Public for Oregon  
My Commission Expires: 10/25/2022



**Exhibit A**  
**Legal Description**

A parcel of land situated in Section 28, Township 2 South, Range 1 West of the Willamette Meridian, in the County of Washington and State of Oregon, being more particularly described as follows:

Beginning at a point 20 rods North of the Southeast corner of said Section 28; thence West 79 rods; thence North 101 rods; thence West 40 rods; thence North 41 rods, more or less, to the center of the Dayton and Portland County Road; thence Northeasterly and Easterly, following the centerline of said Dayton and Portland County, to the point of intersection of the centerline of said road with the East line of said Section 28; thence South, along the East line of said Section 28, a distance of 30 rods to the quarter section corner between said Section 28 and Section 27, said Township and Range; thence continuing along the section line on the East side of said Section 28 to the point of beginning.

EXCEPTING THEREFROM those portions lying within the boundaries of SW Tualatin-Sherwood Road, including but not limited to, those portions described in deeds recorded November 19, 1991 as Recording No. 91064273 and September 4, 2015 as Recording No. 2015-075486.



**Certification of Charges Paid**  
(2015 Oregon Laws Chapter 96)

Certification # 2019-031
-----------------------------

All charges against the real property have been paid for the property that is the subject of the deed between:

Grantor Tualatin Valley Water District
-------------------------------------------

Grantee Water Supply Commission
------------------------------------

Signed on (date)	and for consideration of
	\$ 0

Assessor's signature <i>Lisa Cheng</i>	Date 8-13-19
-------------------------------------------	-----------------

AFTER RECORDING RETURN TO:

Willamette Water Supply System  
Commission  
1850 SW 170<sup>th</sup> Avenue  
Beaverton, OR 97003  
Attn: Clark Balfour

Washington County, Oregon	<b>2019-053467</b>
<b>D-DW</b>	
Stn=10 A DUYCK	<b>08/13/2019 03:48:37 PM</b>
\$30.00 \$11.00 \$5.00 \$60.00	<b>\$106.00</b>
I, Richard Hobernicht, Director of Assessment and Taxation and Ex-Officio County Clerk for Washington County, Oregon, do hereby certify that the within instrument of writing was received and recorded in the book of records of said county.	
Richard Hobernicht, Director of Assessment and Taxation, Ex-Officio	

UNTIL A CHANGE IS REQUESTED,  
ALL TAX STATEMENTS SHALL BE  
SENT TO THE FOLLOWING ADDRESS:

Willamette Water Supply System  
Commission  
1850 SW 170<sup>th</sup> Avenue  
Beaverton, OR 97003  
Attn: Clark Balfour

**STATUTORY SPECIAL WARRANTY DEED**

TUALATIN VALLEY WATER DISTRICT and the CITY OF HILLSBORO, together, Grantor, conveys and specially warrants to WILLAMETTE WATER SUPPLY SYSTEM COMMISSION, an Oregon intergovernmental entity, Grantee, the real property described on the attached Exhibit A, free of encumbrances created or suffered by the Grantor, except as shown in the public record or as may be disclosed by a survey of such property, including, without limitation, a Memorandum of Agreement, including the terms and provisions thereof, executed by the City of Hillsboro, Tualatin Valley Water District and Trammell Crow Portland Development, Inc., recorded on November 1, 2017, as Recording No.: 2017-086559, which agreement, as amended, provides for a non-exclusive utility easement across the herein described property providing for the construction and on-going operation and maintenance of utilities, with such easement in a location, size and using construction materials and design reasonably acceptable to the parties to the above-referenced agreement and sufficient to allow the herein described property to be annexed to the City of Sherwood.

The true and actual consideration for this conveyance consists of or includes other consideration, which is the whole consideration.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO

DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.

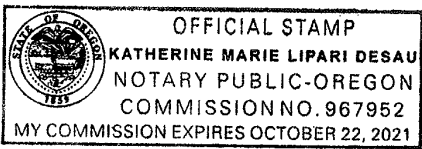
DATED this 12<sup>th</sup> day of August, 2019.

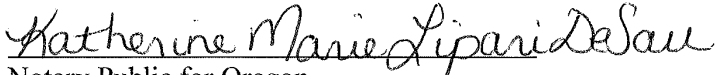
TUALATIN VALLEY WATER DISTRICT

By:   
Tom Hickmann, Chief Executive Officer

STATE OF OREGON                    )  
                                                  ) ss  
COUNTY OF WASHINGTON        )

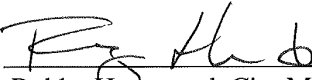
This instrument was acknowledged before me on this 8<sup>th</sup> day of August, 2019, by Tom Hickmann, as Chief Executive Officer of Tualatin Valley Water District, on behalf of said district.



  
Notary Public for Oregon  
My Commission Expires: October 22, 2021

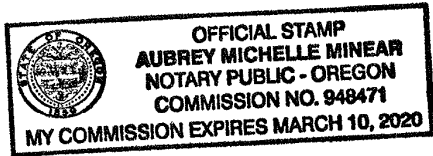
[Additional Grantor signature attached.]

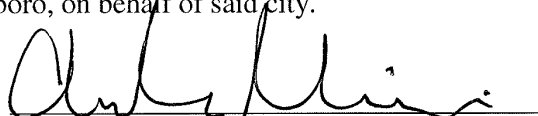
CITY OF HILLSBORO

By:   
Robby Hammond, City Manager

STATE OF OREGON                    )  
                                                  ) ss  
COUNTY OF WASHINGTON        )

This instrument was acknowledged before me on this 12 day of August, 2019, by Robby Hammond as City Manager of City of Hillsboro, on behalf of said city.



  
Notary Public for Oregon  
My Commission Expires: March 10, 2020




The foregoing conveyance is hereby accepted by Grantee:

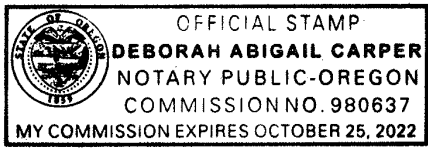
WILLAMETTE WATER SUPPLY SYSTEM  
COMMISSION, an Oregon  
intergovernmental entity

By:   
Name: David Kraska  
Title: General Manager

STATE OF OREGON                    )  
                                                  ) ss  
COUNTY OF WASHINGTON        )

This instrument was acknowledged before me on this 12<sup>th</sup> day of August, 2019, by David Kraska as General Manager of Willamette Water Supply System Commission, an Oregon intergovernmental entity.

  
Notary Public for Oregon  
My Commission Expires: 10/25/2022



**Exhibit A**  
**Legal Description**

A parcel of land situated in Section 28, Township 2 South, Range 1 West of the Willamette Meridian, in the County of Washington and State of Oregon, being more particularly described as follows:

Beginning at a point 20 rods North of the Southeast corner of said Section 28; thence West 79 rods; thence North 101 rods; thence West 40 rods; thence North 41 rods, more or less, to the center of the Dayton and Portland County Road; thence Northeasterly and Easterly, following the centerline of said Dayton and Portland County, to the point of intersection of the centerline of said road with the East line of said Section 28; thence South, along the East line of said Section 28, a distance of 30 rods to the quarter section corner between said Section 28 and Section 27, said Township and Range; thence continuing along the section line on the East side of said Section 28 to the point of beginning.

EXCEPTING THEREFROM those portions lying within the boundaries of SW Tualatin-Sherwood Road, including but not limited to, those portions described in deeds recorded November 19, 1991 as Recording No. 91064273 and September 4, 2015 as Recording No. 2015-075486.



**Certification of Charges Paid**  
(2015 Oregon Laws Chapter 96)

Certification # 2019-031
-----------------------------

All charges against the real property have been paid for the property that is the subject of the deed between:

Grantor Tualatin Valley Water District
-------------------------------------------

Grantee Water Supply Commission
------------------------------------

Signed on (date)	and for consideration of
	\$ 0

Assessor's signature <i>Lisa Cheng</i>	Date 8-13-19
-------------------------------------------	-----------------



**ENCROACHMENT AGREEMENT**

**McLoughlin-Pearl-Sherwood Transmission Line (Audit 20459-00)**

This ENCROACHMENT AGREEMENT (this “**Agreement**”) is effective as of August 31, 2020 (the “**Effective Date**”) by and between **PORTLAND GENERAL ELECTRIC COMPANY**, an Oregon corporation (“**PGE**”) with an address of 121 SW Salmon Street, Portland, Oregon 97204, and the **WILLAMETTE WATER SUPPLY SYSTEM COMMISSION**, an Oregon intergovernmental entity (“**Grantee**”) with an address of 1850 SW 170<sup>th</sup> Avenue, Beaverton, OR 97006.

**RECITALS**

A. PGE holds a non-exclusive easement interest in certain real property located in Washington County, Oregon, by virtue of and described in the Electric Transmission Line Easement dated April 11, 1963, and recorded on April 18, 1963, in Book 485, Page 83, in the Official Records of Washington County (the “**PGE Easement**”). The property is commonly known as 21309 SW 124<sup>th</sup> Ave, Sherwood, OR 97140 and is owned in fee title by Grantee pursuant to the Statutory Special Warranty Deed dated and recorded August 13, 2019 as Document No. 2019-053467, in the Official Records of Washington County, Oregon (the “**Property**”). PGE may maintain on the Property appurtenances, equipment, structures, poles, transformers, and facilities for the purpose of transmission, distribution, and sale of electricity and communication (the “**PGE Facilities**”).

B. Grantee is the successor in interest to the original grantor of the PGE Easement. The PGE Easement reserves to Grantee the right to use the portion of the Property subject to the PGE Easement “for all purposes not inconsistent with the uses and purposes” set forth in the PGE Easement, except Grantee “shall not build or erect any structures upon the right of way without the prior written consent of” PGE.

C. Grantee owns and is developing a facility on a portion of the Property. Grantee has plans to use a portion of the PGE Easement for driveway, parking, fencing, stormwater facilities, and landscaping, as depicted on Exhibit A as attached hereto (the “**Encroachment Area**”).

D. PGE is willing to consent to Grantee’s use of the Encroachment Area for the foregoing purposes, solely in accordance with, and subject to the terms, conditions and limitations of, this Agreement, and as more specifically described in Exhibit B as attached hereto.

NOW, THEREFORE, for valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties each agree as follows:

**AGREEMENT**

1. **Grant and Use of Encroachment Area.** PGE hereby consents Grantee’s use of the Encroachment Area for driveway, parking, stormwater facilities, and landscaping (“**Grantee’s Improvements**”), subject to the terms and conditions set forth in this Agreement. Any changes to the location, height, or character of Encroachment Area or the construction and/or location of any additional facilities not specifically described in this Agreement will require the prior written consent by PGE in each instance and, subject to Grantee’s right to cure pursuant to Paragraph 10, will be considered a default under the terms of this Agreement unless and until said consent is granted.

1.1 ANY RIGHTS GRANTED TO GRANTEE BY PGE PURSUANT HERETO ARE SUBJECT TO THE NECESSARY APPROVAL OF ALL APPLICABLE GOVERNMENTAL ENTITIES AS WELL AS TO EXISTING RIGHTS, IF ANY, OF OTHER PARTIES, AND THE AGREEMENT IS GRANTED TO THE EXTENT THAT PGE HAS AUTHORITY TO DO SO AND SHALL NOT BE CONSTRUED AS CONSENT OF GOVERNMENTAL ENTITIES, THE LANDOWNER (IF OTHER THAN PGE) OR ANY OTHER INTEREST HOLDER. GRANTEE SHALL OBTAIN ALL NECESSARY CONSENT(S) AT GRANTEE’S EXPENSE, EACH UPON TERMS AND CONDITIONS ACCEPTABLE TO PGE.

1.2 Grantee will comply strictly with all applicable laws, rules, and regulations (including without limitation all procedural and substantive environmental requirements) of all federal, state, and local governmental bodies having jurisdiction over Grantee's activities occurring within the Encroachment Area and if applicable, on adjoining or adjacent property interests of PGE. Grantee may not use the Encroachment Area for the handling, storage, disposal, or discharge of hazardous substances, toxic materials or any substance or material regulated by federal, state or local environmental protection laws, rules and regulations. In addition, Grantee shall comply with all master plans, restrictive covenants, and obligations created by private contracts that affect the use and operation of the Encroachment Area, if any. Grantee shall not dump, dispose of, or burn garbage or refuse on the Encroachment Area. Grantee shall not hunt or allow any hunting or grazing on the Encroachment Area. All clearances (equipment, fences, facilities and structures) and the grounding of all structures, equipment and personnel shall satisfy the requirements established by the National Electrical Safety Code, and any similar requirements established by PGE and provided to Grantee prior to construction of Grantee's Improvements. All materials must be of non-conductive material or appropriately grounded by a licensed electrician.

2. **Consideration.** Consideration for this Agreement shall be the mutual promises made herein.

3. **Term & Termination.** This Agreement shall commence on the Effective Date set forth above and shall continue until terminated in accordance with the terms of this Agreement (the "Term"). Upon termination of the Agreement, Grantee shall immediately quit the Encroachment Area and shall remove or cause to be removed from the Encroachment Area all of Grantee's Improvements; and the Encroachment Area and the Property shall be promptly returned to the condition that existed prior to the commencement of the Term. Notwithstanding anything to the contrary contained herein, this Agreement shall be terminated immediately upon the termination of the PGE Easement. PGE shall also have the continuing right and option to terminate this Agreement or modify the Encroachment Area at any time, without cause, by giving written notice to Grantee, specifying the date and time of termination or the modification, as the case may be. In the absence of an emergency, notice shall be given no less than one hundred twenty (120) days prior to the date of termination, modification, or relocation. The Agreement shall also automatically terminate upon the transfer or conveyance of Grantee's interest in the Property, the attempted transfer of this Agreement by Grantee, or in the event Grantee uses the Encroachment Area for any use other than which is specified in Section 1 above.

4. **Grantee to Bear Entire Expense.** Grantee shall bear the entire cost and expense incurred with respect to all of Grantee's activities on or associated with the PGE Easement, and in particular in connection with the operation, construction, maintenance, and repair necessitated by Grantee's use of the Encroachment Area, including any and all reasonable expense, supported by appropriate backup information, that may be incurred by PGE for supervision, inspection, safety or security concerns, or otherwise.

5. **Grantee's Acceptance of Encroachment Area.** Grantee accepts the Encroachment Area "AS IS" in the condition now existing with no improvement, alteration or other work to be performed by PGE. PGE has not made any promise to alter or remodel, repair or improve the Encroachment Area or the PGE Facilities, and PGE is not obligated to provide any utility service to the Encroachment Area. Grantee acknowledges that neither PGE nor any agent of PGE has made any representations concerning the suitability of the Encroachment Area for Grantee's purposes. No representation, express or implied, respecting any matter or thing relating to the Encroachment Area, the PGE Facilities or this Agreement, including without limitation the condition of the Encroachment Area, has been made to Grantee by PGE other than as may be contained herein. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE HEREBY DISCLAIMED, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, HABITABILITY, OR THAT THE ENCROACHMENT AREA IS SAFE, HEALTHFUL, OR SUITABLE FOR GRANTEE'S INTENDED PURPOSE. Grantee, for and on behalf of itself, its successors and assigns, waives and releases any right, claim, or cause of action which Grantee has now, or which Grantee may have in the future against, and covenants not to sue or challenge in any administrative proceeding, PGE or its past, present, and future officers, officials, directors, employees, agents, sublessees, successors and assigns on the grounds that the construction, maintenance, upgrade, or operation of the PGE Facilities, now



or in the future, in compliance with applicable laws and regulations, constitutes a public or private nuisance, or in any way negatively impacts the value of Grantee's business or the value of this Agreement to Grantee.

6. **Existing/Continuing Rights.** Subject to the terms of the PGE Easement, PGE reserves the right to change PGE's use of the PGE Easement and the PGE Facilities as PGE may deem appropriate. Grantee shall not interfere with access to the PGE Easement or the operations thereon or quiet enjoyment of PGE or any other owner or user of the PGE Easement or the PGE Facilities without prior written consent to PGE. Subject to the terms of the PGE Easement, Grantee's rights shall at all times be subject and subordinate to PGE's rights to use the PGE Easement, the PGE Facilities and the Encroachment Area, as well as the operational, safety, security, and efficiency concerns of PGE. This Agreement is also subject to all outstanding rights of third parties, whether recorded or unrecorded, and the right of PGE to grant, renew and extend the same, as well as applicable Oregon Public Utility Commission regulations, and all other applicable laws and regulations. Grantee shall not have the right to alter or expand the Encroachment Area, or any portion thereof, or alter or change Grantee's use of the Encroachment Area except as expressly described in Exhibit A and authorized by this Agreement. No fill from the excavation or from any other source can be placed, even temporarily, in the PGE Easement. This Agreement is granted without covenant of title or for quiet enjoyment in favor of Grantee. PGE reserves the right, in its sole discretion to enter the Encroachment Area at any time to determine Grantee's compliance with this Agreement and for such other reasonable purposes as PGE may deem necessary or desirable. PGE further reserves the right to monitor and record without prior notice any aspects of the PGE Easement, PGE Facilities, and the Encroachment Area when and by any means deemed appropriate by PGE. No right of PGE hereunder shall lapse or be waived in the event PGE fails to use the PGE Easement, or any portion thereof, on a continuous basis.

7. **Damages.** Grantee assumes the sole risk of loss, damage, or injury which may result from the use of or presence upon the Encroachment Area of Grantee or Grantee's employees, agents, guests, contractors or invitees, or other persons on the Encroachment Area with Grantee's permission or knowledge (collectively, "**Grantee Parties**"). Grantee shall be responsible for any claim, loss, damage, cost, liability or expense (including attorney fees) arising out of or related to the acts or omissions of the Grantee Parties, or the breach of this Agreement, including without limitation any damage to any PGE Facilities or injury to persons, and Grantee shall indemnify, defend and hold PGE harmless therefrom. Grantee acknowledges that PGE operates and maintains the PGE Facilities on the PGE Easement, and that PGE is not liable for any damage to the property, facilities or any equipment of the Grantee Parties or any injury to persons as a result of the presence or operation of any PGE Facilities or PGE's activities in connection therewith, unless and to the proportional extent resulting from PGE's negligence or willful misconduct. Grantee will, upon the request of PGE and at the Grantee's sole expense defend any action, suit, or proceeding of any kind arising hereunder. In addition, Grantee shall reimburse and pay PGE for any loss, damages, or expenses of any kind, including attorney's fees and costs incurred by PGE.

8. **Cathodic Protection.** Grantee acknowledges that metallic structures which come into contact with any forms of electrically conducting environments (i.e., environments containing enough ions to conduct electricity such as soil and water) will corrode and deteriorate at an accelerated pace. Grantee shall be responsible for determining, implementing, monitoring, and maintaining all means of grounding and cathodic protection with respect to any activities of the Grantee Parties on or near the Encroachment Area and the PGE Easement. Grantee shall indemnify and hold PGE harmless from any and all actions of Grantee Parties in or near the Encroachment Area relating to determining, implementing, monitoring, and maintaining all means of grounding and cathodic protection.

9. **Insurance.** Prior to commencement of the Term, Grantee shall provide to PGE proof of, and continuously maintain during the Term comprehensive broad-form commercial general liability insurance against claims and liability for personal injury, death, or property damage arising from the use, occupancy, disuse or condition of the Encroachment Area, improvements or adjoining areas or ways, or from any other cause with a combined single limit sufficient to cover any claim or liability which may result from any obligation of Grantee pursuant to or in any way associated with this Agreement, but in no event less than Two Million Dollars (\$2,000,000.00), written in a form acceptable to PGE, with PGE and PGE's affiliates, directors, officers, employees and agents, named as additional insureds. In addition, Grantee and Grantee's

contractors shall maintain workers' compensation insurance in compliance with the laws of the State of Oregon. Grantee shall be required to maintain the insurance required by this Paragraph 7 throughout the Term of this Agreement.

10. **Default & Remedies.** No party shall be deemed to be in default under the terms of this Agreement unless that party fails to observe, keep or perform any term of this Agreement within ninety (90) days after the receipt from the other party specifying such failure; provided however, that no party shall be considered in default so long as that party commences to cure the failure in a diligent manner and that party shall thereafter be allowed such additional time as reasonably necessary to correct the failure. Each party shall have the right to enforce this Agreement by any legal or equitable proceedings, including but not limited to collection of damages and all equitable remedies, including the right to enjoin any activity on, or use of, the Encroachment Area or any portion thereof. The remedies provided for in this Agreement are cumulative and in addition to any other remedy available to the parties at law or in equity and may be exercised singularly or concurrently. The insurance, release and indemnity obligations of Grantee, the right of the parties to enforce remedies hereunder, as well as all provisions of this Agreement which contemplate performance after the expiration or termination, shall survive any such expiration or termination, remain enforceable and apply equally to all parents, subsidiaries, and affiliates of each party as well as the owner the PGE Facilities if such person or entity is not PGE. UNDER NO CIRCUMSTANCES SHALL PGE'S OBLIGATIONS OR LIABILITY UNDER OR WITH RESPECT TO THIS AGREEMENT EXCEED THE SUM OF ONE THOUSAND DOLLARS (\$1,000.00) OR THE ACTUAL AMOUNT OF LICENSE FEES ACTUALLY RECEIVED BY PGE PURSUANT TO THIS AGREEMENT DURING THE ONE YEAR PERIOD IMMEDIATELY PRECEDING THE CLAIM, WHICHEVER IS GREATER. PGE SHALL NOT BE LIABLE TO GRANTEE OR TO ANY THIRD PARTY IN CONNECTION WITH THIS AGREEMENT FOR ANY DIRECT DAMAGES IN EXCESS OF THE FOREGOING LIMITATION, OR FOR ANY LOST OR PROSPECTIVE PROFITS OR ANY SPECIAL, PUNITIVE, EXEMPLARY, CONSEQUENTIAL, INCIDENTAL OR INDIRECT LOSSES OR DAMAGES (IN TORT, CONTRACT, OR OTHERWISE) UNDER OR IN RESPECT OF THIS AGREEMENT OR FOR ANY FAILURE OF PERFORMANCE RELATED HERETO HOWSOEVER CAUSED, EXCEPT AND UNLESS ARISING FROM PGE'S GROSS NEGLIGENCE OR WILFUL MISCONDUCT, WHETHER OR NOT PGE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

11. **Miscellaneous Provisions.** All provisions of this Agreement have been negotiated at arm's length and each party has had the opportunity to have legal counsel review and approve the form and content of this Agreement. This Agreement shall not be construed for or against any party by reason of the authorship or alleged authorship. Upon the Effective Date, any prior lease, sublease, license, permit, acquiescence or the like, if any, granted by PGE to any Grantee Party with respect to all or any portion of the Encroachment Area, shall be terminated and superseded in its entirety by this Agreement; provided, however, this Agreement shall not operate to waive, release, or relieve Grantee of any obligation to PGE or to any third party to the extent such obligation accrued prior to the Effective Date hereof. Grantee shall not, either voluntarily or by operation of law, transfer or assign all or any part of its rights hereunder in any fashion, license or sublet the Encroachment Area or any portion thereof, or encumber or pledge all or any portion of this Agreement or Grantee's rights hereunder, without PGE's express prior written consent, in each instance, which consent may be withheld or issued subject to conditions, in PGE's sole discretion. This Agreement shall be governed by and construed in accordance with the laws of the State of Oregon, and any suit, action or proceeding relating to this Agreement shall take place in Multnomah County, Oregon. The prevailing party in any action to enforce or interpret this Agreement, including on appeal, shall be entitled to recover attorney's fees and all other fees, costs, and expenses actually and reasonably incurred in connection therewith. Grantee shall be responsible for compliance with this Agreement by all of its employees, agents, invitees, Grantees, clients, customers, and guests. Any right of PGE to restrict any right of Grantee shall extend to all Grantee Parties. PGE may record this Agreement or a suitable memorandum hereof at its option. This Agreement constitutes the entire agreement between the parties with respect to the subject matter herein. Time is of the essence.

12. **Effect on PGE Easement.** Notwithstanding any provision of this Agreement, this Agreement is not intended to modify either party's rights or obligations under the PGE Easement. In the event of a conflict



between the terms of this Agreement and the terms of the PGE Easement, the terms of the PGE Easement shall prevail.

*[Signature Pages Follow]*



**EXHIBIT A**  
**Encroachment Area**

(see attached figures)

**EXHIBIT B**  
**Additional Conditions**

In addition to the terms contained in the Encroachment Agreement, Grantee and/or Grantee's contractor shall at all times observe and comply with the following:

Grantee shall not interfere with or obstruct access to transmission line structures by PGE personnel. Notwithstanding the foregoing, PGE acknowledges that portions of the Property outside of the area encumbered by the PGE Easement may be gated as depicted in Exhibit A.

Equipment, machinery, and vehicles traveling on the Property shall come no closer than twenty-five (25) feet to any PGE conductor, pole structure or guy anchor ground attachment point.

Fourteen (14) days prior to any construction Grantee shall contact PGE's Transmission General Foreman by phone at 503-742-8292. If an emergency should arise requiring immediate attention, Grantee shall provide as much notice as practicable to PGE before commencing any work. In all other situations, Grantee shall notify PGE in writing at least fourteen (14) days (or such other time as PGE may allow) in advance of the commencement of any work upon property of PGE in connection with the construction, maintenance, repair, renewal, modification, reconstruction, relocation or removal of the Improvements. All such work shall be completed in a timely manner.

Any collection lines shall be located a minimum of fifty (50) feet away from the transmission towers. PGE shall be notified of any damage to the tower grounding system.

Grantee shall be responsible for any damage to PGE's counterpoise that may already be present below grade. Grantee shall notify PGE of any damage to the counterpoise and Grantee shall be responsible for any repairs, caused by Grantee, necessary.

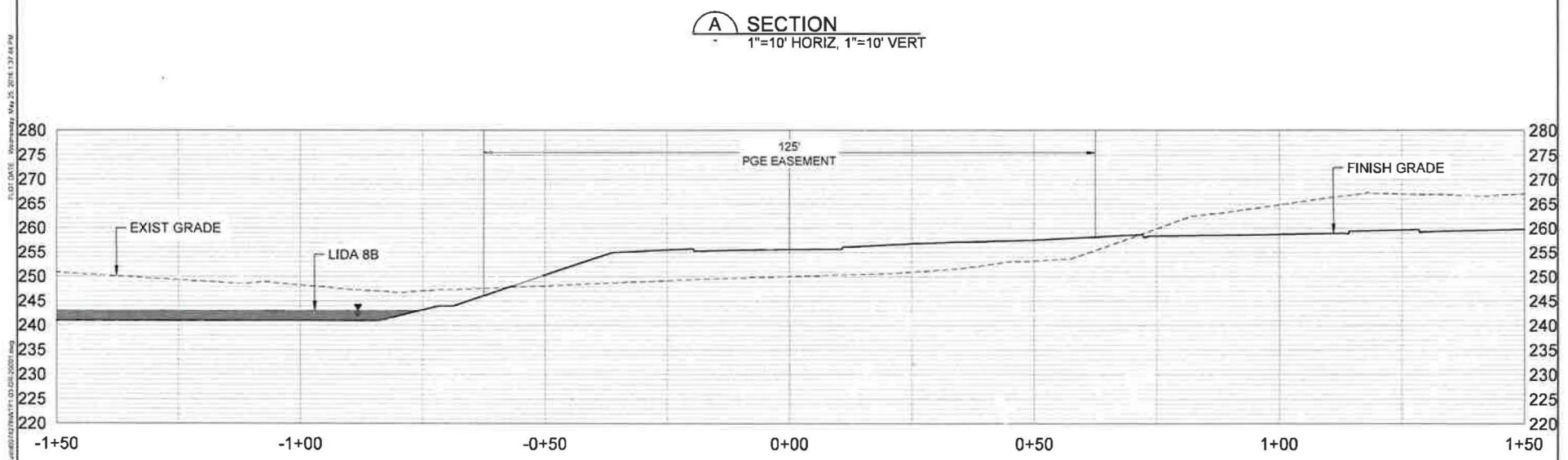
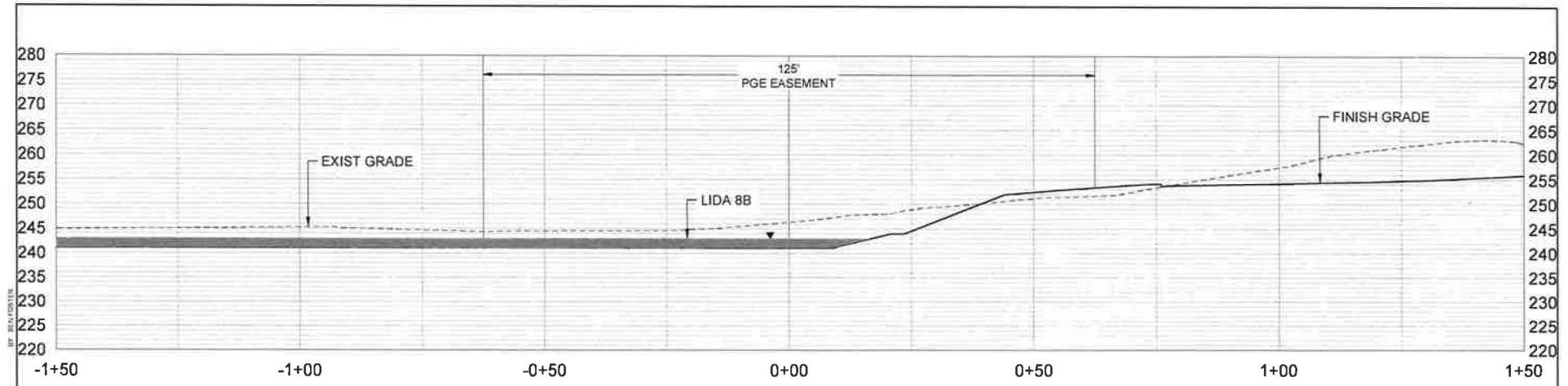
Grantee shall keep and maintain the soil over Grantee's Improvements thoroughly compacted and the grade even with the adjacent surface of the ground. No grade changes to facilitate disposal of overburden shall be allowed. If the approved design of Grantee's Improvements requires cutting or filling, the elevations of the proposed finished grade and original ground grade shall be submitted to PGE for final approval.

Grantee shall notify PGE's Forestry Department at either [Forestry@pgn.com](mailto:Forestry@pgn.com) or by phone at 503-736-5460 prior to any tree removal within the PGE Easement area.



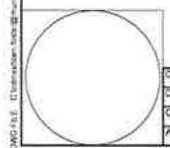






**DRAFT**

90% DESIGN - NOT FOR CONSTRUCTION



DESIGN	K USAGAWA								
DIR	M ESTEP								
CHK	B FOSTER								
APVD	M HICKEY	NO.	DATE	REVISION	BY	APVD			

VERIFY SCALE  
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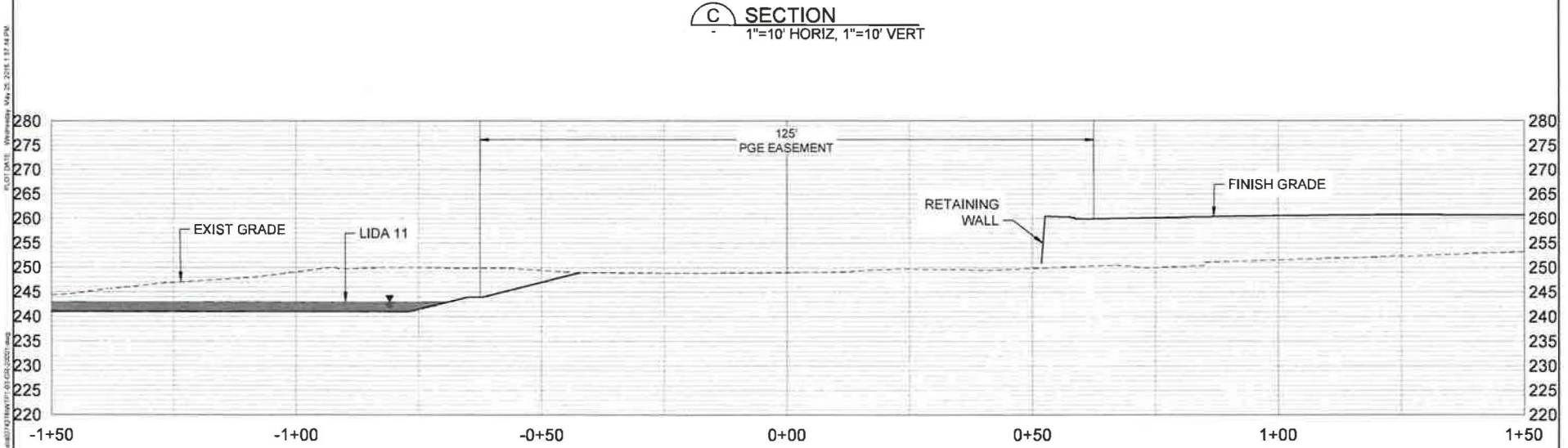
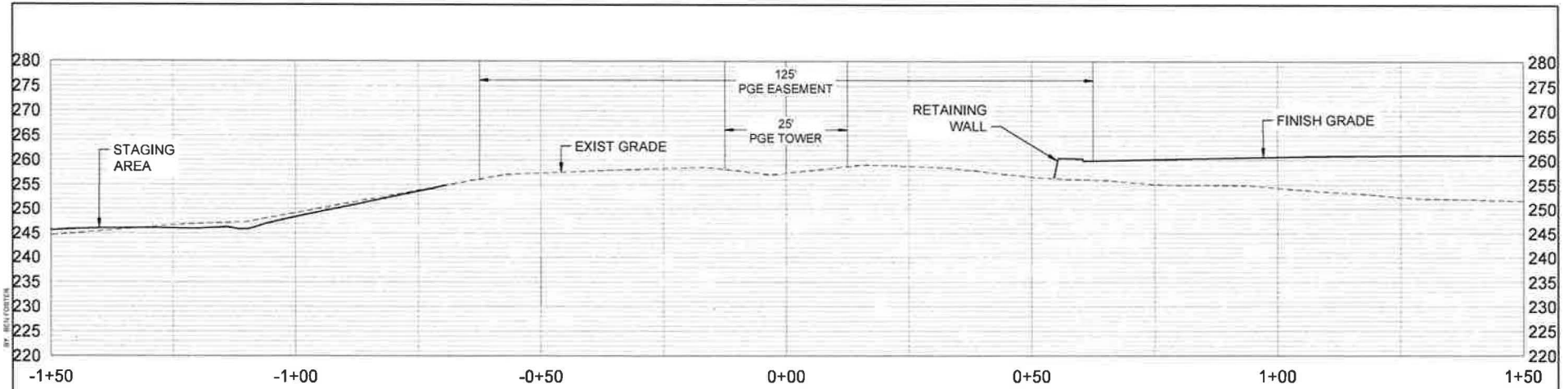


SITE  
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AREA A

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DATE	DECEMBER 2020	
PROJ	WTP_1.0	

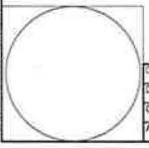






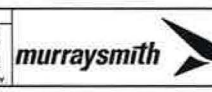
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90% DESIGN - NOT FOR CONSTRUCTION



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DR	M ESTEP				
CHK	B FOSTER				
APVD	M HICKEY	NO.	DATE	REVISION	BY

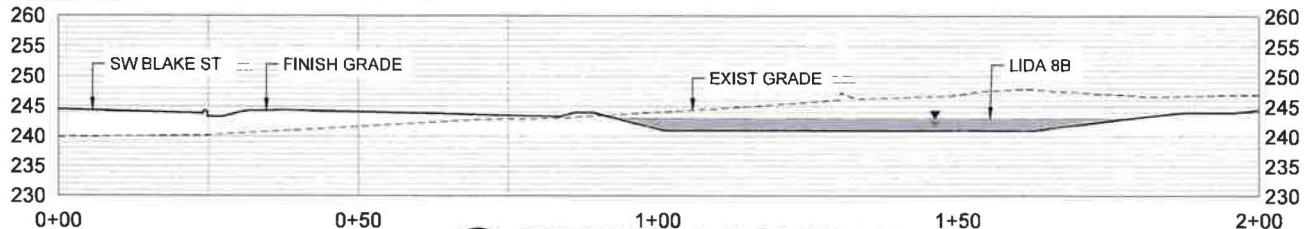
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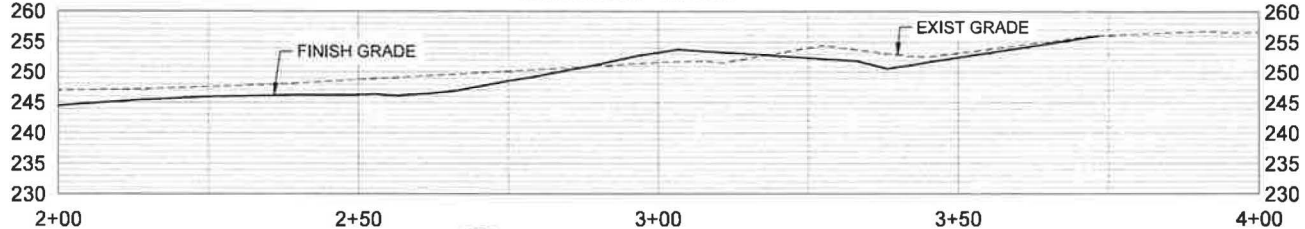
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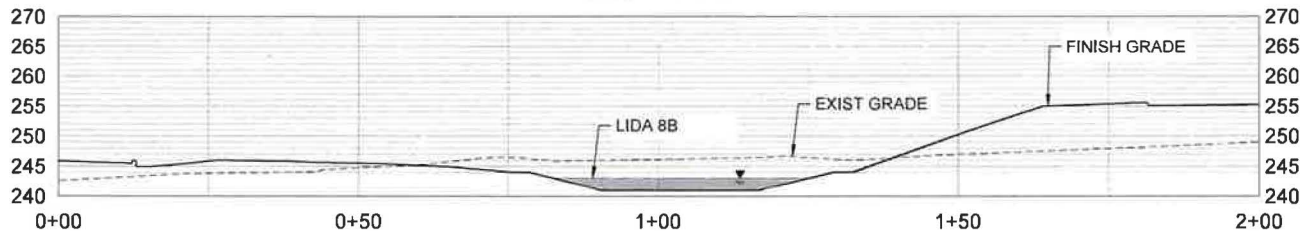




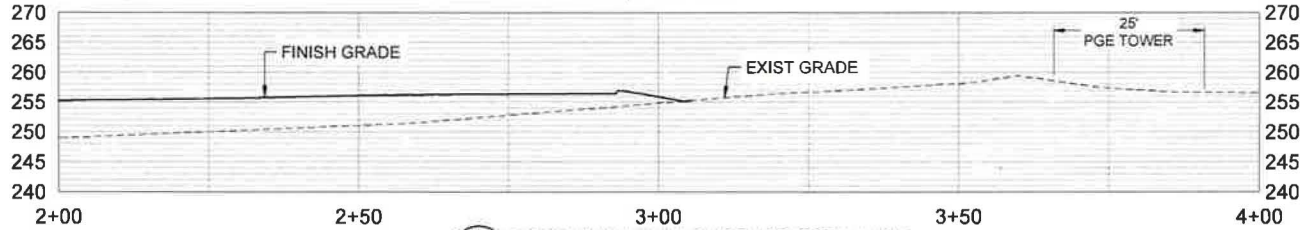
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1"=10' HORIZ, 1"=10' VERT



**E** SECTION STA 2+00 TO STA 4+00  
1"=10' HORIZ, 1"=10' VERT



**F** SECTION STA 0+00 TO STA 2+00  
1"=10' HORIZ, 1"=10' VERT



**F** SECTION STA 2+00 TO STA 4+00  
1"=10' HORIZ, 1"=10' VERT

**DRAFT**

90% DESIGN - NOT FOR CONSTRUCTION

DESIGN	K USAGAWA								
DR	M ESTEP								
CHK	B FOSTER								
APVD	M HICKEY	NO.	DATE	REVISION	BY	APVD			

**murraysmith**



**Willamette Water Supply**  
Our Reliable Water  
WILLAMETTE WATER SUPPLY PROGRAM  
WATER TREATMENT PLANT, 1.0

**CDM Smith**  
1222 SW Morrison Street, Suite 200  
Portland, OR 97205  
Tel: (503) 224-8822

SITE  
GRADING PGE CROSS SECTIONS - 3  
AREA A

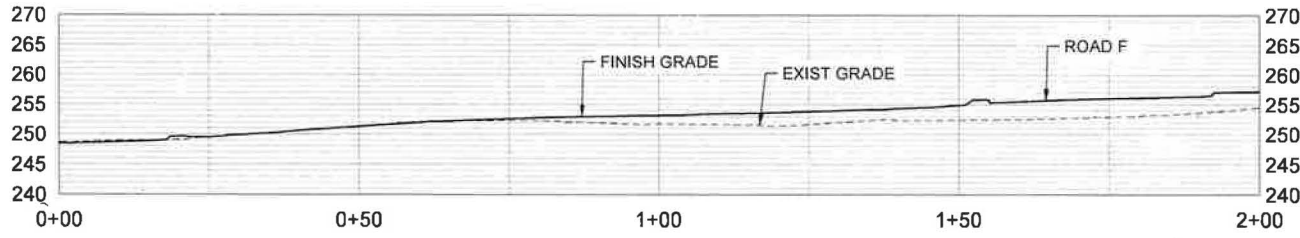
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DATE	DECEMBER 2020
PROJ	WTP_1.0

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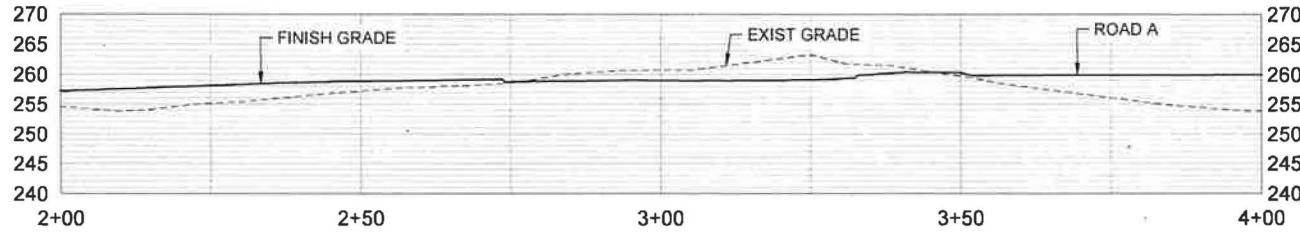
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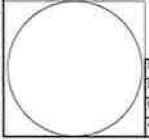
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1"=10' HORIZ, 1"=10' VERT



**G** SECTION STA 2+00 TO STA 4+00  
1"=10' HORIZ, 1"=10' VERT

**DRAFT**

80% DESIGN - NOT FOR CONSTRUCTION



DESIGN	K USAGAWA				
DR	M ESTEP				
CHK	B FOSTER				
APVD	M HICKEY	NO.	DATE	REVISION	BY

VERIFY SCALE  
 1/8"=1' ON ORIGINAL DRAWING  
 1/4"=1' ON THIS SHEET, ADJUST SCALE AS APPROPRIATE



**Willamette Water Supply**  
*Our Reliable Water*  
 WILLAMETTE WATER SUPPLY PROGRAM  
 WATER TREATMENT PLANT\_1.0



SITE  
 GRADING PGE CROSS SECTIONS - 4  
 AREA A

SHEET	DWG	PGE X-SECT 4
DATE	DECEMBER 2020	
PRQJ	WTP_1.0	

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**Memorandum**

*To: Bob Galati, P.E.  
City Engineer, City of Sherwood*

*From: Greg Lindstadt, CDM Smith*

*Date: September 8, 2020*

*Subject: Design Modification Request for Blake Street Block Length*

Location of Requested Design Modification

The future SW Blake Street (previously called Blake Road) from SW 124<sup>th</sup> Avenue to western property edge of the Willamette Water Supply System (WWSS) Water Treatment Plant (WTP) Property (Tax Lot ID 2S128D001200) and the connection of future roads from either the north or the south as presented in the Sherwood Tonquin Employment Area and SW Tualatin Conceptual Road Layout Figure 17, April 2018, Attachment A.

Current Standards

Section 16.106.030.B.3 of the City of Sherwood Development Code and Section 210.6 E of the City of Sherwood Engineering Manual states the minimum and maximum distance between streets.

Street Classification	Roadways and Driveways Spacing (max)	Full Access Intersections Spacing (min)	Limited Access* Intersections Spacing (min)	Driveway Spacing (min)
Major Arterial	N/A	1,000 feet	500 feet	500 feet
Minor Arterial	N/A	600 feet	300 feet	300 feet
Collector	530 feet	400 feet	400 feet	200 feet
Neighborhood	530 feet	200 feet	N/A	N/A
Local	530 feet	200 feet	N/A	N/A

Note: Street Classifications are identified in the City TSP

\*Limited Access – Vehicles are restricted to right-in/right-out turn movements. In some cases, left-in turn movements may be permitted.

1. Distance between streets is measured from the centerline of the subject street to the centerline of the adjacent street.
2. Local street connections are based on the METRO RTP requirements for new residential or mixed used developments.

Design Modification Request for Blake Street Block Length

September 8, 2020

Page 2

3. Provide full street connections with spacing of no more than 530 feet between connections except where prohibited by barriers.
4. Provide bike and pedestrian access ways in-lieu-of streets with spacing of no more than 330 feet except where prevented by barriers.

Design Modification Being Requested

A block length of 1,850 feet from the intersection of future SW Blake Street and SW 124<sup>th</sup> Avenue to the western property edge the WWSS WTP Property is requested. We are requesting approval for SW Blake Street, classified as a collector, to exceed the 530 feet maximum roadway and driveway spacing for connection of roads on both the north and south sides of future SW Blake Street. Approval for SW Cipole Place to not connect to future SW Blake Street was granted through Trammel Crow's Land Use Case (No 2020-001 SP, CUP, VAR, SUB decided on September 2, 2020.)

Existing Conditions

The existing WWSS WTP site is an undeveloped site, consisting of forested sections, existing wetlands and other sensitive areas, rock outcroppings, and a PGE easement which limits the development of the site. See Attachment B for WWSS WTP property encumbrances.

Result of Meeting Standards

To meet the City's standard block length of 530 feet on the north side of future SW Blake Street, SW Cipole Place's alignment would need to be extended from the cul-de-sac, southward to future SW Blake Street. This alignment would require extensive grading that would impact wetlands, wetland buffers and approved building layouts of the future Trammel Crow property, as presented in Attachment C, Design Modification Request for SW Cipole Block Length on Blake Road (March 4, 2020, DOWL).

To meet the City's standard block length of 530 feet on the south side of future SW Blake Street, a road would be required to be located through the middle of the WTP site and building layouts, resulting in security concerns and a significant hardship for the WTP site building layout. Additionally, connecting a road to the south of the WTP site would result in significant impacts to an existing wetland and significant natural resource.

Proposed Design Modification

The proposed SW Cipole Place will not connect to the future SW Blake Street at the maximum 530-foot block length to avoid impacting existing wetland, vegetated corridors and approved building layout for the future Trammel Crow Property. Proposed roads to the south of future SW Blake Street will not connect to avoid impacting existing wetland, vegetated corridors and proposed building layout for the WWSS WTP Property.



Design Modification Request for Blake Street Block Length  
September 8, 2020  
Page 3

Reason Why Design Request Should be Approved

Due to existing topography, environmentally sensitive areas and encumbrances within the WWSS WTP property, providing a connection to future SW Blake Street from the south would impose significant hardship on the WWSP WTP building layout and would significantly impact existing wetlands, in particular the large, contiguous Wetland G. A connection is not needed by the WTP or for access to the property to the south. Future access is not precluded if needed.

Due to existing topography and environmentally sensitive areas and within the future Trammel Crow property, not providing a connection to future SW Blake Street from the north avoids significant hardship on the future Trammel Crow building layout impacting existing wetlands, and a significant road slope required for connection. Additionally, we would like the City to consider that the modification to not connect future Cipole Place to future SW Blake Street was already approved through Land Use Case No 2020-001 SP, CUP, VAR, SUB decided on September 2, 2020.



09/08/2020

\_\_\_\_\_  
Design Engineer

\_\_\_\_\_  
Date

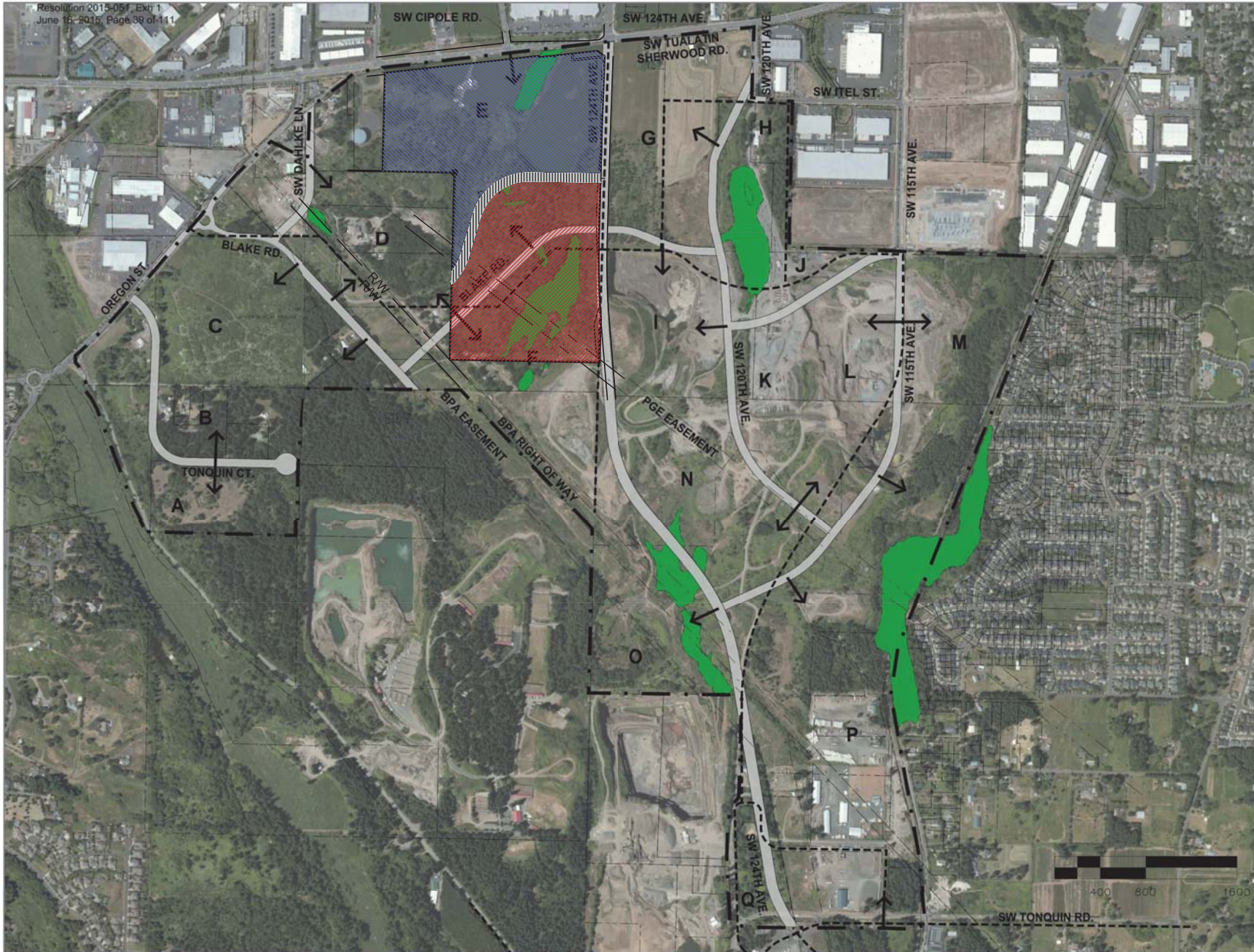
\_\_\_\_\_  
Craig Christensen, P.E. - City Project Manager

\_\_\_\_\_  
Date

- Approved
- Approved with Conditions (conditions below or on attached sheet)
- Denied

\_\_\_\_\_  
Bob Galati, P.E. - City Engineer

\_\_\_\_\_  
Date



**SHERWOOD TONQUIN  
 EMPLOYMENT AREA  
 AND SW TUALATIN  
 CONCEPTUAL  
 ROAD LAYOUT**

**Washington County, OR  
 FIGURE 17**

**LEGEND:**

- SHERWOOD-TUALATIN JOINT PLAN AREA BOUNDARY: - · - · -
- CONCEPT PLAN ROAD ALIGNMENTS: - - - - -
- PROPOSED REFINED ROAD ALIGNMENTS: ————
- WETLANDS AND 50 FOOT BUFFER: (Green shaded area)
- ANTICIPATED ACCESS: →
- DEVELOPMENT NODE: A
- PROPOSED BLAKE ROAD ALIGNMENT: (Hatched pattern)
- PARCEL 1: (Red hatched pattern)
- PARCEL 2: (Blue hatched pattern)

0 400 800 1,600 Feet  
 1 inch = 800 feet

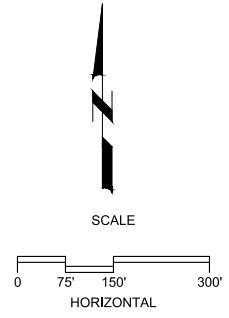
SOURCE DATA: Metro Plus Line Base Data, Nov 2014  
 GEOGRAPHIC PROJECTION: NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 6/4/2015 Map Created By: GF  
 Project No: 2130069.04

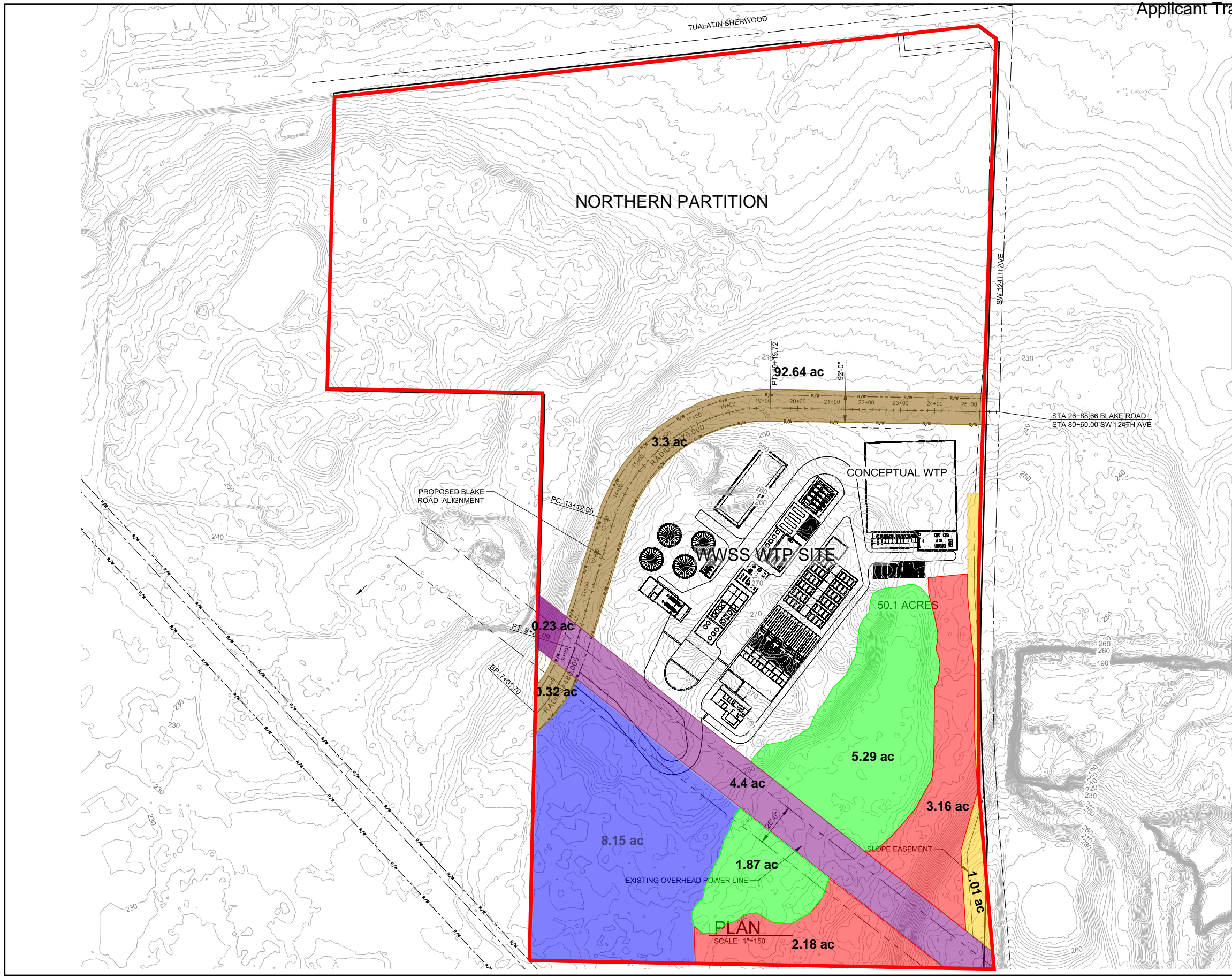


ACCESS PLAN  
 APRIL 2018





KEY	
	PROPERTY BOUNDARY
	BLAKE RD
	WETLAND
	PGE EASEMENT
	SLOPE EASEMENT
	PARTIALLY ISOLATED LAND
	SUBSTANTIALLY ISOLATED LAND





# MEMORANDUM

TO: Bob Galati, P.E. – City Engineer  
City of Sherwood

FROM: Ryan Halvorson, P.E. – Design Engineer

DATE: March 4<sup>th</sup>, 2020

SUBJECT: Design Modification Request for SW Cipole Block Length on Blake Road

## Location of Requested Design Modification

The new SW Cipole Place street connecting to future Blake Road.

## Current Standards

Section 210.6.E of the City of Sherwood Engineering Manual states the minimum and maximum distance between streets.

Street Classification	Roadways & Driveways Spacing (max)	Full Access Intersections Spacing (min)	Limited Access* Intersections Spacing (min)	Driveway Spacing (min)
Major Arterial	N/A	1,000 feet	500 feet	500 feet
Minor Arterial	N/A	600 feet	300 feet	300 feet
Collector	530 feet	400 feet	400 feet	200 feet
Neighborhood	530 feet	200 feet	N/A	N/A
Local	530 feet	200 feet	N/A	N/A

Note: Street Classifications are identified in the City TSP

\*Limited Access – Vehicles are restricted to right-in/right-out turn movements. In some cases, left-in turn movements may be permitted.

1. Distance between streets is measures form the centerline of the subject street to the centerline of the adjacent street.
2. Local street connections are based on the Metro RTP requirements for new residential or mixed used developments.
3. Provide full street connections with spacing of no more than 530 feet between connections except where prohibited by barriers.
4. Provide bike and pedestrian access ways in-lieu-of streets with spacing of no more than 330 feet except where prevented by barriers.

## Design Modification Being Requested

The block length being 800 feet from the intersection of future Blake Road and SW 124<sup>th</sup> Ave. We are requesting approval for SW Cipole Place not to connect to future Blake Road (collector) and exceeding the 530-foot maximum roadway spacing.

**Existing Conditions**

The existing site is an undeveloped site, consisting of forested sections and grass land sloping from the southwest corner to the north east corner. In addition to the site being undeveloped, there are existing sensitive area consisting of wetlands and vegetated corridor buffers are located on the site limiting the development of the site.

Where Cipole Place cul-de-sac is proposed, the existing topography of the site is approximately 3 percent. As a result, the proposed Cipole Place is proposed at 3 percent grade and has minimal impact to sensitive areas, only impacting a small section of vegetated corridor. The topography from the end of the cul-de-sac to the future Blake Road is approximately 37 feet. This results in an average slope of 9 percent and would require significant earthworks.

**Result of Meeting Standards**

To meet the City's standard block length of 530 feet on future Blake Rd, SW Cipole Place's alignment would need to be extended southward to Blake and its alignment would need to be revised east ward, impacting the existing wetlands and vegetated corridor located on the site. SW Cipole Road would need to be revised approximately 300 feet east encroaching further into the existing vegetated corridor and impacting the existing wetlands (see attached EX-1 Cipole Extension Site Impact Exhibit – Option A).

The road grade from Tualatin-Sherwood Road to the main vehicular entries at the cul-de-sac bulb is set at 3 percent to facilitate truck maneuvering and allow reasonable access to the lots without having to impact the wetlands. From the main vehicular entries to connect to Blake Rd, the road profile would need to be at 14.9 percent slope, thus requiring City Engineer approval (City standard dictate slope cannot exceed 15 percent, and any slopes above 12 percent require special approval from the City Engineer). Vertical curves required for the road profile would be designed at minimum K values (meeting AASHTO and City of Sherwood standards) and street lighting would be required (see attached EX-2 Cipole Extension Site Impact Exhibit – Profile View Option A).

In addition to the general non-desire for a 14.9 percent road, a secondary issue is safety. The 14.9 percent road presents a steep grade for vehicular traffic navigating the road, especially any potential truck traffic. Truck traffic navigating from Blake Rd on to Cipole and being able to stop on the steep grade for any vehicles leaving the main access driveway points is a safety concern, as increased stopping sight distance is needed to make the stop. In conjunction, standard vehicles traveling from Blake to Cipole will not be able to see the full access driveway due to the vertical curve, only being able to see the driveways once the vehicle has crested the vertical curve. Both situations create a hazardous traffic condition for the connection to Blake.

**Proposed Design Modification**

The proposed SW Cipole Place will not connect to the future Blake Road at the maximum 530-foot block length to avoid impacting the existing wetlands and vegetated corridor.



**MEMORANDUM****Reason Why Design Request Should be Approved**

The design exception meets the criteria of Section 145.1.5.A.2 because the existing topography and sensitive areas within the site cause a hardship of connecting SW Cipole Place to Future Blake Road. The existing topography from the end of the cul-de-sac to the future Blake Road will require a road profile of the connection is beyond the City's and AASHTO normal design standards. Whereas the 14.9 percent road grade and comfort vertical curves could be approved under a special exemption, the local industrial traffic makes this an unsafe roadway to exempt out of the standard. In addition, this extension of Cipole Place would impact additional vegetated corridor for the additional grading. This allow for the maximum developable area, minimize impacts to the existing sensitive areas (vegetated corridor and wetland) on the site, and maintain a safe road for the public, we propose not connecting SW Cipole Place to Blake Road.

Additionally, the design exception meets the criteria of Section 145.1.5.A.3 because the connection of SW Cipole Place to future Blake Road will impose undue hardship of the project and have no material benefit to the public. The Kittelson & Associates Traffic Impact Analysis, dated January 15, 2020, found if Cipole Place were to connect to Blake Rd, there would no material change in the traffic volumes going to all of the intersections evaluated. The TIS shows the connection does not provide significant volumes going to Blake Rd and the traffic volumes will utilize the intersection at Tualatin-Sherwood Rd.

In addition, TVF&R Fire Marshal has indicated a secondary connection to a public street is not required to provide coverage to the site, and the cul-de-sac is allowed if the buildings are fully sprinklered (all the proposed buildings are to be fully sprinklered).

  
 \_\_\_\_\_  
 - Design Engineer

3/4/2020  
 \_\_\_\_\_  
 Date

\_\_\_\_\_  
 Craig Christensen, P.E. - City Project Manager

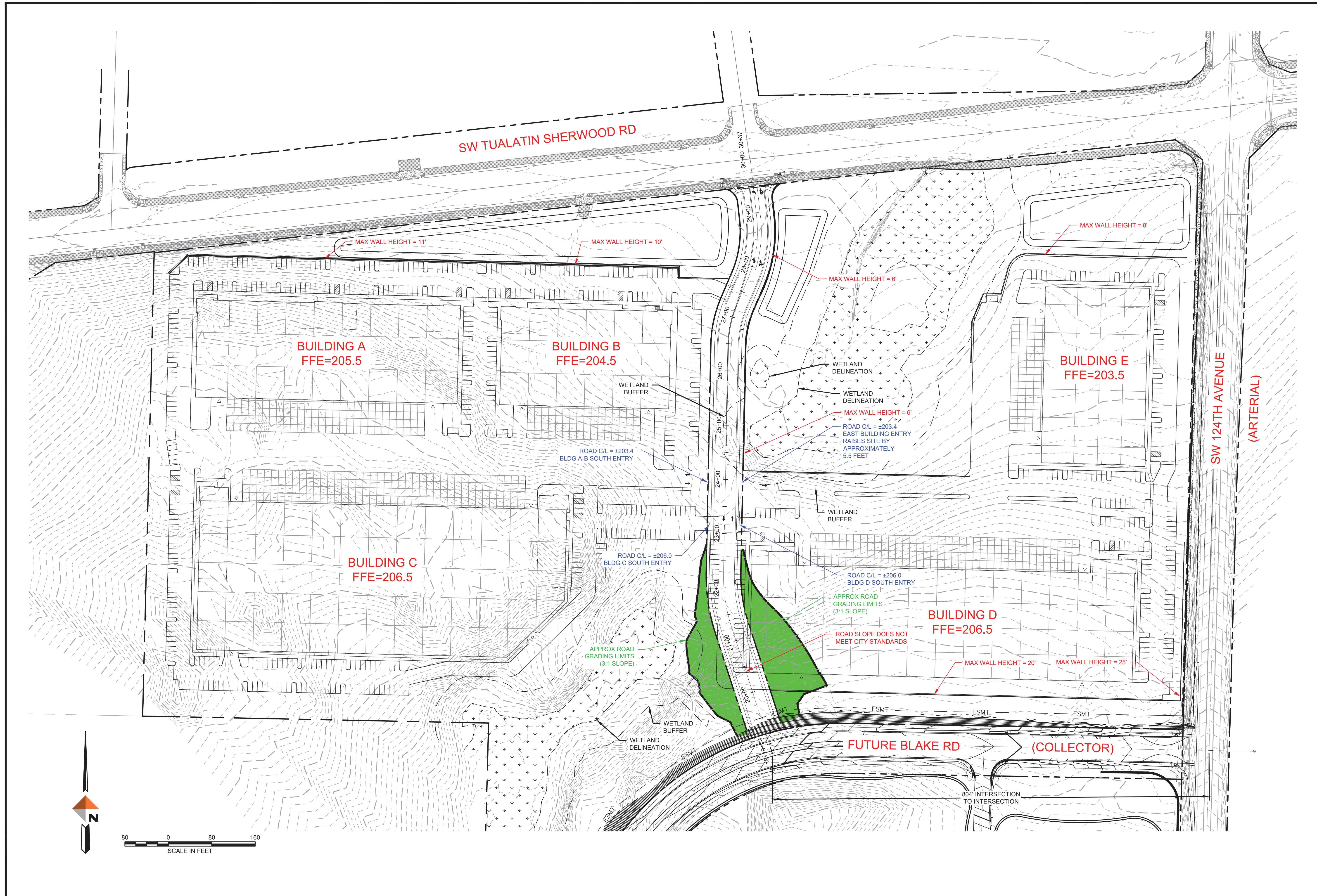
\_\_\_\_\_  
 Date

- Approved
- Approved with Conditions (conditions below or on attached sheet)
- Denied

\_\_\_\_\_  
 Bob Galati, P.E. - City Engineer

\_\_\_\_\_  
 Date





REV	DATE	DESCRIPTION	BY

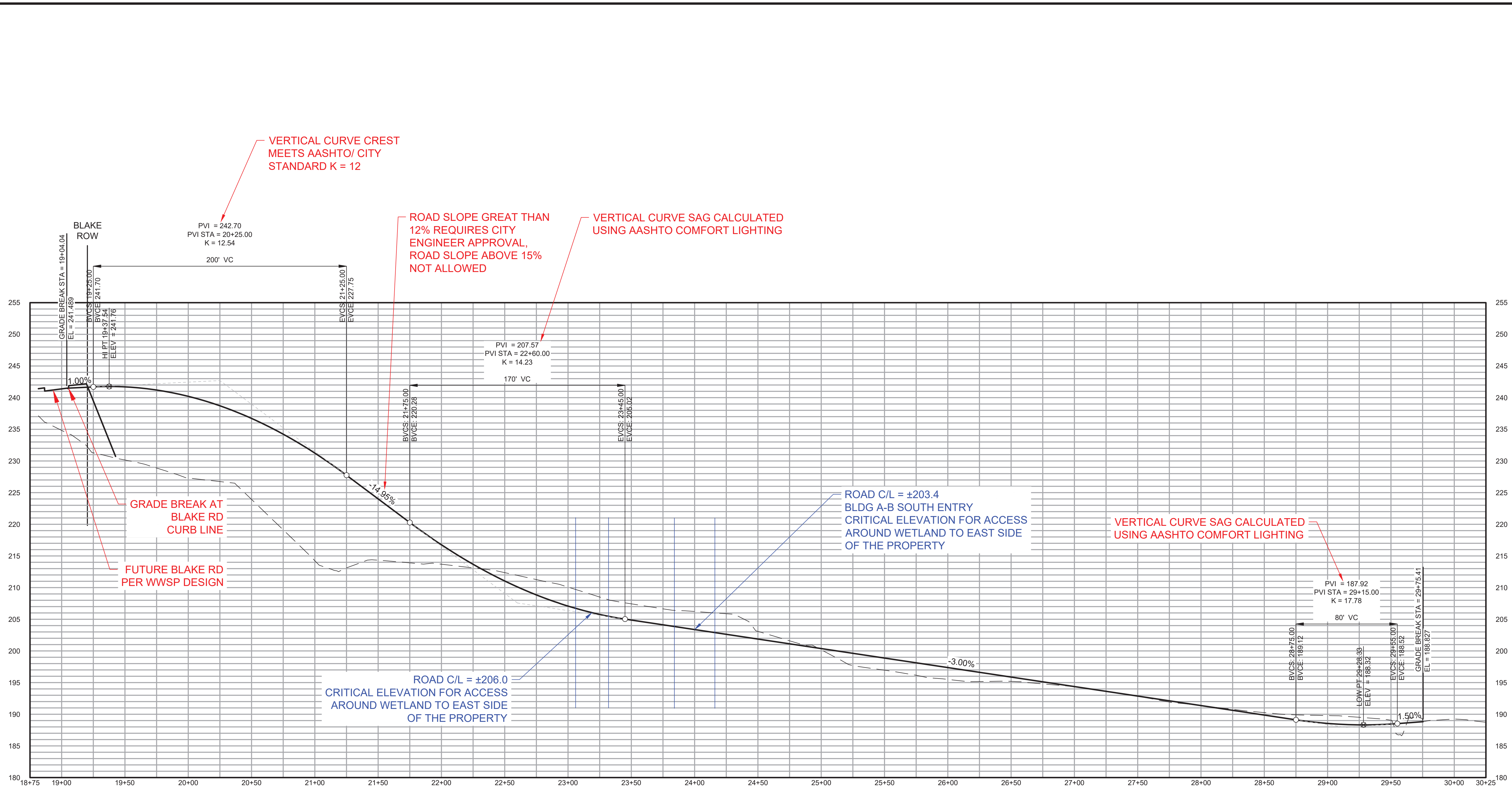
**DOWL**  
 720 SW Washington Street, #750  
 Portland, Oregon 97205  
 971-280-8641  
[www.dowl.com](http://www.dowl.com)

SHERWOOD INDUSTRIAL PARK  
 SHERWOOD, OREGON  
**CIPOLE EXTENSION SITE IMPACT EXHIBIT -  
 PLAN VIEW OPTION A**

PROJECT 14347-01  
 DATE 01/08/2020

©DOWL 2019  
 SHEET





VERTICAL CURVE CREST MEETS AASHTO/ CITY STANDARD K = 12

ROAD SLOPE GREAT THAN 12% REQUIRES CITY ENGINEER APPROVAL, ROAD SLOPE ABOVE 15% NOT ALLOWED

VERTICAL CURVE SAG CALCULATED USING AASHTO COMFORT LIGHTING

VERTICAL CURVE SAG CALCULATED USING AASHTO COMFORT LIGHTING

CIPOLE ROAD SITE IMPACT - PROFILE

SCALE: 1"=40' (H)  
1"=5' (V)

RED = ROAD DESIGN TO CITY OF SHERWOOD ROADWAY STANDARDS

BLUE = CRITICAL TIE-IN LOCATIONS FOR BUILDINGS AND WETLANDS

REV	DATE	DESCRIPTION	BY

**DOWL**  
www.dowl.com  
720 SW Washington Street, #750  
Portland, Oregon 97205  
971-280-8641

SHERWOOD INDUSTRIAL PARK  
SHERWOOD, OREGON  
CIPOLE EXTENSION SITE IMPACT EXHIBIT -  
PROFILE VIEW OPTION A  
SHERWOOD, OREGON

PROJECT 14347-01  
DATE 01/08/2020

©DOWL 2019  
SHEET



# MEMORANDUM

TO: Bob Galati, P.E. – City Engineer  
City of Sherwood

FROM: Ryan Halvorson, P.E. – Design Engineer

DATE: March 4<sup>th</sup>, 2020

SUBJECT: Design Modification Request to Exclude Sidewalk and PUE on East Side of Street

---

## **Location of Requested Design Modification**

The new SW Cipole Place street between Tualatin-Sherwood Rd and future Blake Rd.

## **Current Standards**

Standard Drawing RD-1 of the City of Sherwood Engineering Manual states for Standard Commercial/Industrial Streets Not Exceeding 3,000 Vehicles Per Day are to have 6-foot sidewalks on both sides of the street.

Under Section 16.118.020.B of the Sherwood Zoning and Community Development Code states public utility easements shall be a minimum of eight (8) feet in width unless a reduced with is specifically exempted by the City Engineer. An eight-foot-wide public utility easement (PUE) shall be provided on private property along all public street frontages. This standard does not apply to developments within the Old Town Overlay.

## **Design Modification Being Requested**

We are requesting approval to exclude the 6-foot sidewalk and 8-foot PUE on the east side of SW Cipole Place.

## **Existing Conditions**

The existing site is an undeveloped site, consisting of forested sections and grass land sloping from the southwest corner to the north east corner. In addition to the site being undeveloped, there are existing sensitive area consisting of wetlands and vegetated corridor buffers are located on the site limiting the development.

## **Result of Meeting Standards**

To meet the City's standard with having an 6-foot sidewalk on the east side of SW Cipole Place would place the sidewalk over existing vegetated corridor. As a result, the 6-foot sidewalk would impact additional vegetated corridor.

To meet the City's standard with having an 8-foot PUE on the east side of SW Cipole Place would place the PUE over existing vegetated corridor. As a result, the 8-foot PUE would impact additional

# *Willamette Water Supply System Water Treatment Plant*

*Conditional Use  
Site Design Review  
Variance*

**Prepared for:** Willamette Water Supply System Commission

**Willamette Water Supply**  
*Our Reliable Water*

**Prepared by:** Angelo Planning Group



**Submitted to:** City of Sherwood Planning Division  
**Submitted on:** September 11, 2020

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**Application Team for  
Willamette Water Supply Program:  
Willamette Water Supply System Water Treatment Plant**

**Applicant:** Christina Walter, Permitting Coordinator  
Willamette Water Supply Program  
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Phone: (503) 840-3830  
Email: [Christina.Walter@twwd.org](mailto:Christina.Walter@twwd.org)

**Land Use Planning/  
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**Application Summary Information for  
Willamette Water Supply Program:  
Willamette Water Supply System Water Treatment Plant**

**Address:** 21309 SW 124<sup>th</sup> Avenue, Sherwood, OR 97062  
**Tax lot IDs:** 2S128D001200  
**Tax lot Acres:** Approx. 46 acres  
**Current Zoning:** Employment Industrial (EI)  
**Applications Submitted for:** Conditional Use, Site Design Review, and Variance

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## **FIGURES**

Figure 1: Willamette Water Supply System

Figure 2: WTP Vicinity Map

Figure 3: WTP Zoning Map

Figure 4: Existing WTP Site Tree Canopy

Figure 5: Proposed WTP Site Tree Canopy

Figure 6: Wetlands and Vegetated Corridors (VCs) on the WTP Site

Figure 7: Metro Regionally Significant Fish and Wildlife Habitat on the WTP Site

## **TABLES**

Table 1: Summary of Outreach and Coordination

Table 2: Proposed Canopy (Post-Development for Net Development Site)

Table 3: Vegetated Corridor (VC) Characteristics Summary

## ***EXHIBITS***

**Exhibit A:** Land Use Plan Set (under separate cover)

**Exhibit B:** Technical Review Plan Set (under separate cover)

**Exhibit C:** Pre-Application Conference Notes

**Exhibit D:** Tree Inventory and Habitat Assessment

**Exhibit E:** Construction Management Plan

**Exhibit F:** Traffic Impact Analysis

**Exhibit G:** Stormwater Report

**Exhibit H:** Response to Clean Water Services Comments and Clean Water Services Site Assessment, including Oregon Department of State Lands Concurrence Reports (WD # 2017-0008 and WD #2018-0040)

**Exhibit I:** Tualatin Valley Fire & Rescue Service Provider Letter Documentation

**Exhibit J:** Clean Water Services Service Provider Letter Documentation

**Exhibit K:** Neighborhood Meeting Documentation

**Exhibit L:** Geotechnical Report

**Exhibit M:** Radio Facility Sample Image (Monopole Structure)

**Exhibit N:** U.S. Army Corps of Engineers Permit and Oregon Department of State Lands Permit



## **ACRONYMS AND ABBREVIATIONS**

ADA	Americans with Disabilities Act
ADT	average daily traffic
BPA	Bonneville Power Administration
cfs	cubic feet per second
CMU	concrete masonry unit
CUP	Conditional Use Permit
CWS	Clean Water Services
DBH	diameter at breast height
DFO	Diesel Fuel Oil
DOGAMI	Department of Geology and Mineral Industries
DSL	(Oregon) Department of State Lands
EDM	Engineering Design Manual
EI	Employment Industrial
FD-20	Future Development 20 Acres
FWPS	Finished Water Pump Station
gpm	gallons per minute
JPA	Joint Permit Application
LIDA	Low Impact Development Approach
LOD	Limits of Disturbance
LUBA	Land Use Board of Appeals
MDS	mechanically dewatered solids
mgd	million gallons per day
mph	miles per hour
OAR	Oregon Administrative Rules
ODOT	Oregon Department of Transportation
OSHA	(Oregon) Occupational Health and Safety Administration
PGE	Portland General Electric
PPE	personal protective equipment
PRV	pressure release valve
PUE	public utility easement
RWF	Raw Water Facilities
SLOPES	Standard Local Operating Procedure for Endangered Species
SND	microsand
SPL	Service Provider Letter
SZCDC	Sherwood Zoning and Community Development Code
SWPPP	Stormwater Pollution and Prevention Plan
TEA	Tonquin Employment Area
TIA	Traffic Impact Analysis
TSP	Transportation System Plan
TVF&R	Tualatin Valley Fire & Rescue
TVWD	Tualatin Valley Water District
UGB	Urban Growth Boundary

***ACRONYMS AND ABBREVIATIONS***

USACE	U.S. Army Corps of Engineers
UV	ultraviolet
VC	Vegetated Corridor
WCCDC	Washington County Community Development Code
WRWTP	Willamette River Water Treatment Plant
WTP	Water Treatment Plant
WWSP	Willamette Water Supply Program
WWSS	Willamette Water Supply System

## **1 GENERAL INFORMATION**

### **1.1 PROJECT PROPOSAL**

The Willamette Water Supply System Commission is a partnership of the Tualatin Valley Water District (TVWD), City of Hillsboro (Hillsboro), and City of Beaverton (Beaverton), formed to design and build the Willamette Water Supply System (WWSS), illustrated in Figure 1. The Willamette Water Supply Program (WWSP) is the project staff and authorized agent for the WWSS Commission for the purpose of building the system.

The WWSP is seeking land use approvals from the City of Sherwood (City or Sherwood) in order to develop a Water Treatment Plant (WTP). The requested approvals are for the following: Conditional Use; Site Design Review; and Variance.<sup>1</sup> The proposed facilities and improvements are described below in Section 1.2.2.

As an agent of the property owner of record, the WWSP is authorized to file an application for this site pursuant to Sherwood Zoning and Community Development Code (SZCDC) Section 16.70.030 and 16.70.040. For the purposes of this application, “applicant” refers to both the WWSS Commission as project owner and WWSP as its agent.

### **1.2 PROJECT CONTEXT**

#### **1.2.1 Willamette Water Supply System Context**

The WWSS will provide a resilient and redundant water supply for the TVWD-Hillsboro service area and partnering urban areas, including the City of Beaverton. When complete, the WWSS will be one of Oregon’s most seismically resilient water systems – built to better withstand natural disasters, protect public health, and speed regional economic recovery by restoring critical services more quickly than existing systems.

The Willamette River will be the new water supply source for the WWSS. The Raw Water Facilities (RWF), which includes the water intake, will be located at the site of the existing Willamette River Water Treatment Plant (WRWTP) in Wilsonville. The WRWTP was originally developed in partnership between the City of Wilsonville and TVWD in 2002. From the RWF, raw water will be pumped to the proposed WTP in the Tonquin Employment Area (TEA), which is the subject of this application, where state-of-the-art treatment processes will produce high-quality drinking water. Drinking water will be pumped to the Reservoir Facilities on Cooper Mountain and then gravity-fed to the existing distribution system serving users, or it will be pumped to the east side of TVWD’s service area via the Metzger Pipeline East (MPE)\_1.0 pipeline. Construction of the WWSS is planned

<sup>1</sup> The Variance is requested for design flexibility to the City’s visual corridor requirements in Section 16.142.020. Please see the responses to criteria in Section 16.84 for additional information.

to be completed by 2026. Other water providers in the region are considering participating in the WWSP.

### **1.2.2 Summary of Proposed Facilities**

Construction of a new, seismically resilient WTP is essential to the WWSS. The proposed WWSS WTP site in the TEA in Sherwood meets several important criteria, including that it is: geologically stable; in the Urban Growth Boundary (UGB); an adequate size for required treatment facilities; and, in close proximity to the existing WWSS pipeline alignment. The rock and stable soils on this site mean that the WWSS WTP will have superior seismic resiliency and will be better able to withstand a catastrophic natural disaster – a major goal of the WWSS. The WWSS WTP will initially produce up to 60 million gallons of water per day (mgd) and is designed for maximum production of 120 mgd, following expansion of select process areas and structures. A separate land use approval will be sought for that expansion.

The WWSS WTP will use similar treatment processes and the same water source as the Willamette River Water Treatment Plant in Wilsonville, which has been delivering safe and reliable water to Wilsonville and Sherwood since April 2002. The WWSS WTP will employ multiple treatment steps to meet drinking water standards including coagulation, ballasted flocculation, ozonation, filtration with granular activated carbon, and ultraviolet (UV) and chlorine disinfection.

The facilities and improvements proposed in this application include the following:

- Treatment plant buildings and structures:
  - Administration Building including office space, a control room, lockers, and an analytical laboratory
  - Central Access Corridor
  - Chemical Storage and Feed Areas, Maintenance Area, UV Area, and Primary Switchgear Electrical Room, all located in a building
  - Ozone Generation Room
  - Flash Mix/Flow Split Facility
  - Ballasted Flocculation Basins, Ozone Contact Basins, Gravity Filters, and associated galleries, blower room, and electrical rooms
  - Pre-Stressed Concrete Clearwell
  - Finished Water Pump Station with associated mechanical and electrical rooms and surge tanks
  - Thickeners, Sludge Storage Tanks, and Sludge Pump Station
  - Dewatering Building including screw presses and polymer feed systems
  - Equalization/Overflow Basins with associated recycle pumps and electrical building
  - Standby Generators and Fuel Storage
  - Equipment Shed
- A radio facility (monopole) for communications between the WTP and other WWSS facilities;
- Site features including landscaping, storage yard, fencing, gates, circulation roads, vehicle and bicycle parking, and stormwater facilities;

- Right-of-way dedication of and full-street improvements for the new SW Blake Street, including stormwater planters and other plantings;
- Right-of-way dedication and half-street improvements on SW 124<sup>th</sup> Avenue; and
- A publicly accessible forest platform along the edge of the forested vegetated corridor associated with the wetland that occupies the southeastern portion of the site.

To accommodate on-site grades and access to facilities, segments of on-site roadways will require retaining walls – e.g., “Road C,” which extends alongside the Finished Water Pump Station (FWPS). Sidewalks will provide pedestrian access along SW Blake Street and in limited public-facing areas on-site near the primary (west) entrance and Administration Building, extending to the proposed forest platform. Americans with Disabilities Act (ADA) requirements will be met for these sidewalks, for walkways around the Administration Building, in the main parking area in the southwest portion of the site, and in access to structures that may be used by the public (i.e., the Administration Building).

See the Site Layout Plan Area A and the Transportation/Circulation Plans (Exhibit A, Sheets B-017, B-028, and B-029) for the locations of the above-described facilities on the site.

### **1.2.3 Existing Land Use Context**

General information about the subject property is summarized below. A vicinity map and zoning map are presented in Figure 2 and Figure 3.

- Tax lot ID: 2S128D001200
- Site address: current address 21309 SW 124<sup>th</sup> Avenue, Sherwood, OR 97062
- Lot area: approx. 46 acres
- Zoning: Employment Industrial (EI)

The project site is shown in Figure 2 and Figure 3 and in the Existing Conditions plan and aerial views in Exhibit A (Sheets B-024 through B-027). The treatment plant itself will occupy approximately 20 acres of the 46-acre parcel. Roadway improvements, setbacks, and natural resource and habitat preservation account for most of the remaining 26 acres.

The WTP site is essentially a hill with rough terrain, rock outcroppings, and shallow soil. The northern portion of the site slopes down generally to the north and the southern portion slopes down generally to the south. The elevation of the high point on the site is approximately 270 feet, just over 40 feet above the current elevation of 228.6 feet at the intersection of SW 124<sup>th</sup> Avenue and SW Blake Street. Vegetation on the site features Oregon Oak, Douglas Fir, Pacific Madrone, and underbrush including Poison Oak.

The WWSS WTP site is within the UGB and was annexed to the City in December 2019, whereupon it was zoned EI. In terms of existing land uses, the site is currently vacant, forested in the northern

portion and featuring mixed vegetation and wetlands in its southern portion. Existing surrounding land uses include the following:

- To the west: undeveloped land, light industrial, and residential uses;
- To the south: Bonneville Power Administration (BPA) right-of-way (with power lines and towers) and gravel and rock extraction;
- To the east (across SW 124th Avenue, Tualatin): gravel and rock extraction and undeveloped land; and
- To the north (across SW Blake Street and SW Tualatin-Sherwood Road): light industrial and other employment uses.

The site will be accessed by SW Blake Street, a new City collector street that the applicant will fully construct to the western edge of its property. SW Blake Street intersects with SW 124<sup>th</sup> Avenue, an existing Washington County arterial street, which was initially constructed using an interim 3-lane design and for which the applicant will provide right-of-way dedication and half-street improvements adjacent to the WTP site. North of SW Blake Street, SW 124<sup>th</sup> Avenue intersects with SW Tualatin-Sherwood Road.

#### **1.2.4 Planning Context**

The site has been included in previous land use planning-related actions, including the actions outlined below.

##### ***Tonquin Employment Area Plans***

The City has planned the area through the TEA Concept Plan (October 2010) and followed that effort with the TEA Market Analysis, Business Recruitment Strategy, and Implementation Plan, dated June 5, 2015. The Implementation Plan provides comprehensive planning guidance for land use, water-sewer-storm water infrastructure, transportation, natural resources, development phasing, and infrastructure funding. This application narrative discusses the consistency of the proposed development with the land use, infrastructure, transportation, and natural resource guidance provided in the Implementation Plan and embodied in the City's development requirements.

##### ***Prior Land Use Approvals***

Formerly, the site was part of a roughly 100-acre parcel, which was partitioned so that the northern parcel could be developed for industrial park uses and the southern parcel for the WTP and resource preservation. The partition was administered by Washington County because the parent parcel was located in unincorporated Washington County at the time. The partition (Casefile No. 18-276-P/M) was approved on October 31, 2018. Annexation of the WTP site to the City followed, approved by City Council on December 3, 2019 (Case No. 19-03).

The Trammel Crow Company (TCC), developer for the parcel to the north, also applied for annexation of that parcel, which was approved by City Council on December 3, 2019 (Case No. 19-02). TCC has since applied and received approval for industrial park development on that parcel; the Sherwood Planning Commission approved the application on June 9, 2020 (Case No. 2020-001 SP, CUP, VAR, SUB). Utility planning for both parcels has been extensively coordinated among TCC, WWSP, and the City.

### ***Water Master Plans***

The need and plans for the proposed WTP have been established in the 2018 TVWD Water Master Plan Update and the 2019 City of Hillsboro Water Master Plan. The TVWD Water Master Plan incorporates the WTP in its Willamette Supply Integration chapter and by including the WWSP Program Formulation Summary. The WWSS's role in regional water provision is integrated throughout the Hillsboro Water Master Plan, with Hillsboro's contribution toward WWSS projects called out in the Capital Improvement Program chapter. The City of Beaverton, which joined the partnership in 2019, has not yet updated its Water Master Plan to reflect the WWSP. However, the City of Beaverton 2020-2021 Capital Improvement Plan includes programming for the WWSP.

### ***Other Master Plans***

The Ice Age Tonquin Trail, as identified in Metro's 2013 Ice Age Tonquin Trail Master Plan, is a 22-mile trail system currently in the planning stages. The trail will eventually connect Wilsonville, Tualatin, and Sherwood. The trail will provide an educational opportunity and a public amenity for users, particularly pedestrians and cyclists, with an emphasis on the landscape features created by the Missoula Ice Age floods such as glacial erratics, scablands, flood channels, and kolk ponds.

The WTP site is within the Tonquin Geologic Area that was created by the Missoula Floods. Kolk ponds, a type of wetland created by floodwaters at the end of the last ice age, are present across the site. The largest, Wetland G (the kolk wetland), will be preserved as part of the WTP development. While the WTP site is not directly on the planned Tonquin Trail alignment, alignment segments are nearby on SW Oregon Street and SW Tualatin-Sherwood Road. The proposed sidewalks on SW Blake Street will connect the site to adjacent areas and future roads that connect to the Ice Age Tonquin Trail.

### ***1.2.5 Summary of Outreach and Coordination***

Prior to the submittal of this land use application, the WWSP conducted outreach activities with neighbors and others in Sherwood to create awareness about the proposed WTP project (including the pipeline leading to and from the WTP) and provide early opportunities for input. The WWSP communications staff have worked with nearby neighbors and City staff on preliminary pipeline design since 2014 and WTP facility design since 2017.



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Table 1 below provides a detailed summary of public outreach and coordination related to the WTP and pipeline leading to and from the WTP. (Note: Activities that do not specifically indicate that the WTP or pipeline was the focus addressed both the WTP and pipeline.)

**Table 1: Summary of Outreach and Coordination**

<b>Outreach/Coordination Activity</b>	<b>Date</b>
Held Sherwood/Tigard/Tualatin pipeline route option open house	November 15, 2014
Held City of Sherwood technical briefing with staff on pipeline route options	January 2015
Presented WWSP briefing at Sherwood City Council	March 2015
Held 124 <sup>th</sup> Avenue groundbreaking event east of Sherwood at WTP site	November 2015
Postcard mailer and individual letters to property owners about upcoming right-of-entry process beginning for pipeline areas	Spring 2016
PLM 4.0 pipeline route change update mailer	October 12, 2016
Information mailer with project and permitting update	February 2017
Coordinated with City staff on developing and implementing WTP outreach strategy	November 2017
Posted public signs that TVWD now manages the WTP property	November 2017
Presented WWSP briefing at Sherwood City Council	March 2017
Presented WWSP briefing at Sherwood City Council	November 2017
Knocked on doors of most directly impacted WTP neighbors and distributed information	November 2017
Mailed WTP update letter about surveying and latest activities to surrounding area	December 2018
Set up a WTP project page on WWSP website	November 2017
Briefed WWSP Community Liaisons including Sherwood staff in Sherwood	March 2018
Developed and began distributing fact sheet about new WTP	October 2017
Held Sherwood Rotary 124 <sup>th</sup> Avenue Construction and pre-WTP tour	July 2018
Knocked on doors to neighbors along Dahlke Ln to update neighbors about WTP partition	May 2018
Held City of Tualatin WTP and pipeline update meeting with nearby Tualatin neighbor	May 2018
Mailed WTP update and partition neighborhood meeting invitation to surrounding area	May 2018
Coordinated and staffed WTP lot partition Neighborhood Meeting	June 2018
Sent update letters to most immediate WTP neighbors	November 2018
City of Sherwood update meeting	November 2018
Performed neighborhood courtesy calls prior to WTP surveying activities	December 2018
Updated CPO 4B about the project	May 23, 2019
Updated CPO 4K about the project	June 3, 2019
Staffed information booth with Washington County LUT during Cruisin' Sherwood event	June 2019
Staffed Sherwood Robinhood Festival to share information with the public	July 2019
Sherwood City Council Update	August 6, 2019
Hosted information booth at Washington County LUT Open House about road widening and WTP activities	August 21, 2019
Contacted WTP immediate neighbors and door knocked about upcoming demolition activities	August 2019
Presented information update to Sherwood Rotary	November 15, 2019
Updated immediate WTP neighbors along Dahlke Lane	December 2019
Contacted immediate WTP neighbors to update them about design plans	July 2020

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Mailed WTP Neighborhood Meeting notice to properties within 1,000 feet of WTP site; posted WWSP website information for Neighborhood Meeting	August 6, 2020
Held WTP Neighborhood Meeting (virtual) for the Site Plan Review/Conditional Use application	August 20, 2020

The WWSP has worked closely with City Engineering and Planning staff during the design process. Since 2016, there has been coordination on a regular basis. An early pre-application conference was held with staff on January 10, 2019. That was followed by a formal pre-application conference on April 2, 2020 (notes included in Exhibit C); a follow-up meeting with Engineering staff on April 23, 2020; and an informal work session with Planning staff focused on architecture and landscape on May 28, 2020.<sup>2</sup>

### **1.3 PROJECT TIMELINE**

Notice to Proceed for the WTP Construction Package 1 is currently scheduled for March 22, 2022, a date that drives all the other dates in the project timeline.<sup>3</sup> Construction is slated to begin in Spring 2022, although it could begin as early as Fall 2021; it is scheduled to be completed by the end of 2025.

<sup>2</sup> Notes from the April 23, 2020 and May 28, 2020 meetings are available upon request.

<sup>3</sup> Depending on progress on permitting and final project design, Notice to Proceed could occur earlier (late 2021).

Figure 1: Willamette Water Supply System





Figure 2: WTP Vicinity Map

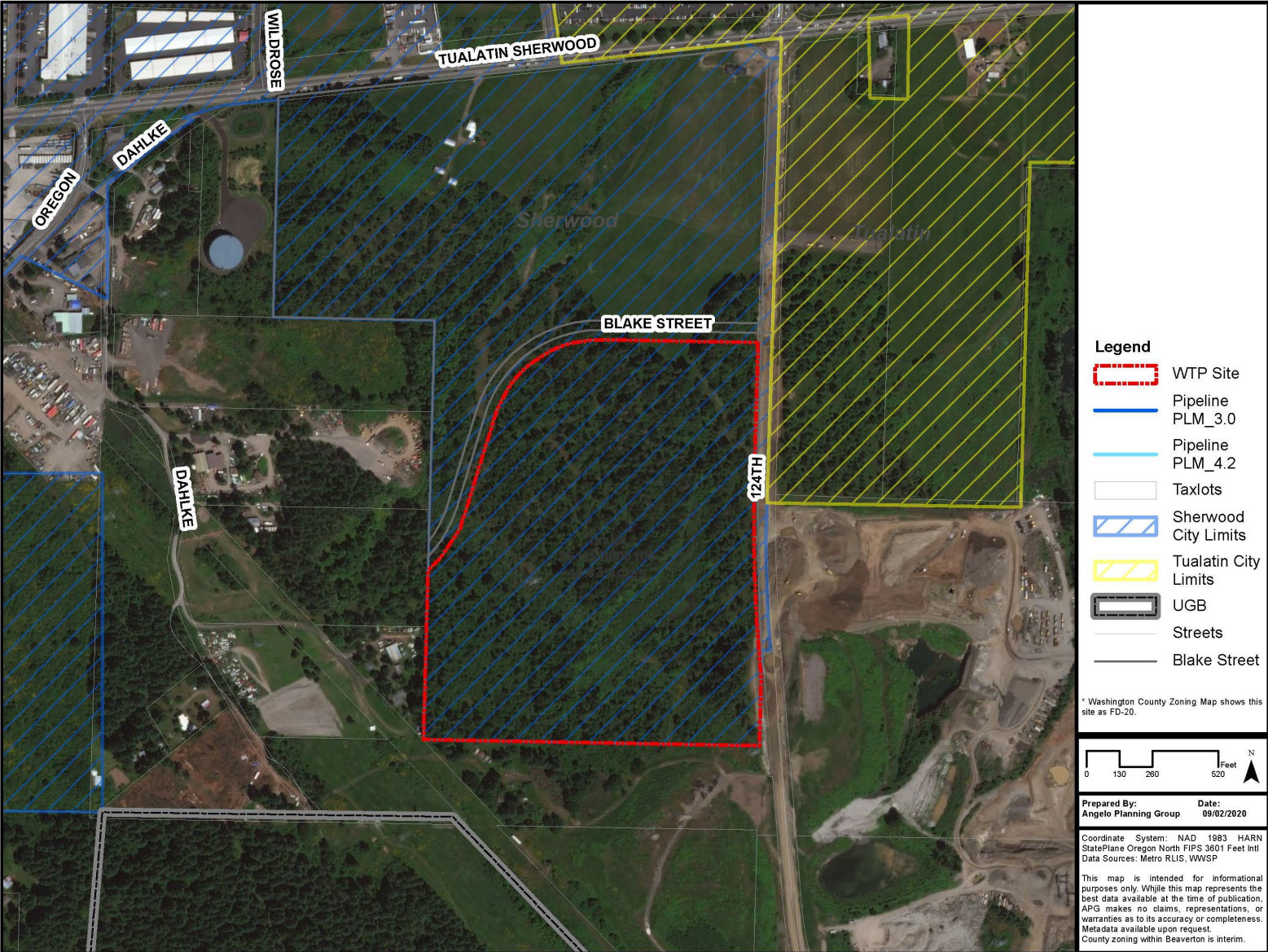
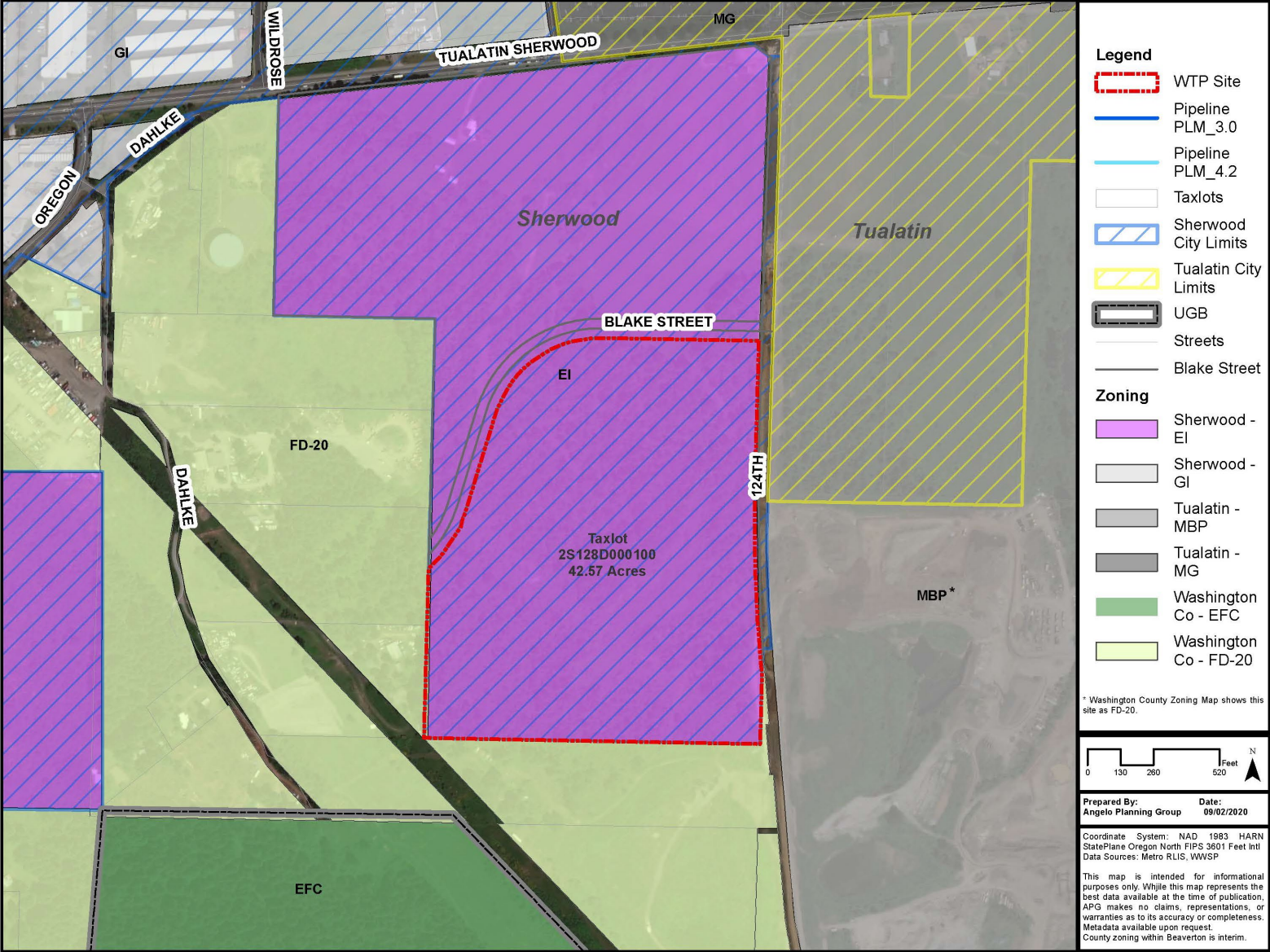




Figure 3: WTP Zoning Map





## **2 CONFORMANCE WITH THE APPLICABLE REVIEW CRITERIA**

This section of the application narrative demonstrates how this application is consistent with the applicable standards and regulations of the Sherwood Zoning and Community Development Code (SZCDC), Title 16 of the Sherwood Municipal Code.

### **2.1 SHERWOOD ZONING AND COMMUNITY DEVELOPMENT CODE**

#### **Division II. - LAND USE AND DEVELOPMENT**

##### *Chapter 16.31 - INDUSTRIAL LAND USE DISTRICTS*

###### *16.31.010 - Purpose*

*A. Employment Industrial (EI) - The EI zoning district provides employment areas that are suitable for, and attractive to, key industries and industry clusters that have been identified by the State of Oregon and the City's economic development strategy as important to the state and local economy. The following are preferred industry sectors for areas zoned EI: Clean Technology; Technology and Advanced Manufacturing; and Outdoor Gear and Active Wear.*

*Land zoned EI shall provide for large and medium-sized parcels for industrial campuses and other industrial sites that can accommodate a variety of industrial companies and related businesses. Areas zoned EI are also intended to provide the opportunity for flex building space within small- and medium-sized industrial campuses and business parks to accommodate research and development companies, incubator/emerging technology businesses, related materials and equipment suppliers, and/or spin-off companies and other businesses that derive from, or are extensions of, larger campus users and developments. Retail and commercial uses are allowed only when directly supporting area employers and employees.*

*Industrial establishments and support services shall not have objectionable external features and shall feature well-landscaped sites and attractive architectural design, as determined by the Hearing Authority.*

**Response:** The WTP is an industrially scaled use that is conditionally permitted in the EI zone and is compatible with other industrial uses approved and planned for the TEA and EI zone. Within the TEA and EI zone, the WTP site is characterized by very shallow bedrock and a large wetland in the southeast portion of the site. The shallow rock, while posing significant costs for site preparation, serves as a strong and seismically resilient foundation on which to build the WTP. As a public entity providing a public service, the applicant and owner (the WWSS Commission) have a long-term commitment to this site and are in a unique position to absorb costs that may otherwise prove deterring or infeasible to other industrial developers. In addition, the applicant is constructing SW Blake Street and half-street improvements for SW 124<sup>th</sup> Avenue, providing major transportation components of and benefits for the TEA.

Buildings on the site, while functional industrial buildings, have been thoughtfully designed to reflect an attractive modern style and the agricultural history of the region with building features like shed roofs. The buildings themselves are largely screened from view on the street given the site topography and generous proposed landscaping, consistent with the EI purpose statement and Sherwood’s industrial design requirements. The large wetland area in the southeastern portion of the site, along with its mature trees and vegetation, will be preserved; developed areas of the site have been very intentionally planned and circumscribed to protect that area.

Therefore, the proposed development is consistent with the purpose of the EI zone.

*16.31.020 - Uses*

*A. The table below identifies the land uses that are permitted outright (P), permitted conditionally (C) and not permitted (N) in the industrial zoning districts. The specific land use categories are described and defined in Chapter 16.88.*

*B. Uses listed in other sections of this Code, but not within this specific table are prohibited.*

*C. Any use not otherwise listed that can be shown to be consistent or associated with the uses permitted outright or conditionally in the industrial zones or contribute to the achievement of the objectives of the industrial zones may be permitted outright or conditionally, utilizing the provisions of Chapter 16.88.*

*D. Additional limitations for specific uses are identified in the footnotes of this table.*

<b>Uses</b>	<b>EI <sup>1</sup></b>
<b>CIVIC</b>	
<ul style="list-style-type: none"> <li>Public and private utility structures, including but not limited to telephone exchanges, electric substations, gas regulator stations, treatment plants, water wells, and public work yards</li> </ul>	C
<b>WIRELESS COMMUNICATION FACILITIES</b>	
<ul style="list-style-type: none"> <li>Radio, television, and similar communication stations, including associated transmitters</li> </ul>	C

<sup>1</sup> See special criteria for the EI zone, 16.31.030 and the Tonquin Employment Area (TEA), 16.31.040.

**Response:** The proposed WWSS Water Treatment Plant and associated radio facility are civic and wireless communication facility uses permitted conditionally in the EI zone.

16.31.030 - Development Standards

A. Generally

No lot area, setback, yard, landscaped area, open space, off-street parking or loading area, or other site dimension or requirement, existing on, or after, the effective date of this Code shall be reduced below the minimum required by this Code. Nor shall the conveyance of any portion of a lot, for other than a public use or right-of-way, leave a lot or structure on the remainder of said lot with less than minimum Code dimensions, area, setbacks or other requirements, except as permitted by Chapter 16.84 (Variances and Adjustments).

**Response:** Lot area, setbacks, yard, landscaped area, open space, off-street parking and loading areas, and other site dimensions and requirements, after dedication of right-of-way, meet or exceed minimums required by this Code except as proposed for visual corridors, as described in the portion of this narrative addressing Chapter 16.84 (Variances and Adjustments). Therefore, this standard is met.

B. Development Standards

Except as otherwise provided, required minimum lot areas and dimensions and setbacks shall be:

<b>Development Standards by Zone</b>	<b>EI</b>
<i>Lot area - Industrial Uses:</i>	<i>3 acres<sup>9</sup></i>
<i>Lot area - Commercial Uses (subject to Section 16.31.050):</i>	<i>10,000 SF</i>
<i>Lot width at front property line:</i>	<i>100 feet</i>
<i>Lot width at building line:</i>	<i>100 feet</i>
<i>Front yard setback<sup>11</sup></i>	<i>20 feet</i>
<i>Side yard setback<sup>10</sup></i>	<i>None</i>
<i>Rear yard setback<sup>11</sup></i>	<i>None</i>
<i>Corner lot street side<sup>11</sup></i>	<i>20 feet</i>
<i>Height<sup>11</sup></i>	<i>50 feet</i>

<sup>9</sup> Lots within the EI zone that were legal lots of record prior to October 5, 2010 and smaller than the minimum lot size required in the table below may be developed if found consistent with other applicable

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requirements of Chapter 16.31 and this Code. Further subdivision of lots smaller than three (3) acres shall be prohibited unless Section 16.31.050 applies.

<sup>10</sup>When a yard is abutting a residential zone or public park, there shall be a minimum setback of forty (40) feet provided for properties zoned Employment Industrial and Light Industrial Zones, and a minimum setback of fifty (50) feet provided for properties zoned General Industrial.

<sup>11</sup> Structures located within one-hundred (100) feet of a residential zone shall be limited to the height requirements of that residential zone.

**Response:** The proposed development and site design include the areas and dimensions listed in the table below. See the Overall Site Plan (Exhibit A, Sheet B-017), the Overall Key Plan (Exhibit A, Sheet B-016), Facilities Key Plan (Exhibit A, Sheet B-018, and the Ballasted Flocculation Building Architectural Elevations (Exhibit B, Sheet B-082). Therefore, these standards are met.

<b><i>Development Standards by Zone</i></b>	<b><i>EI Standard</i></b>	<b><i>Proposal</i></b>
<i>Lot area - Industrial Uses:</i>	<i>3 acres<sup>9</sup></i>	Approx. 46 acres
<i>Lot area - Commercial Uses:</i>	<i>10,000 SF</i>	Not applicable
<i>Lot width at front property line:</i>	<i>100 feet</i>	Approx. 1,325 feet
<i>Lot width at building line:</i>	<i>100 feet</i>	Approx. 1,325 feet
<i>Front yard setback<sup>11</sup></i>	<i>20 feet</i>	The building closest to SW Blake Street (the Clearwell) is set back approximately 33 feet.
<i>Side yard setback<sup>10</sup></i>	<i>None</i>	The site does not abut a public park or residential zone (see Figure 3). Therefore, a minimum side yard setback on the west side of the lot is not required. However, approximately 100 feet is proposed between the west property line and the westernmost development on the site, a Low Impact Development Approach (LIDA) facility.
<i>Rear yard setback<sup>11</sup></i>	<i>None</i>	The site is not within 100 feet of a residential zone (see Figure 3). Therefore, a minimum rear yard setback on the south side of the lot is not required. However,

<b><i>Development Standards by Zone</i></b>	<b><i>EI Standard</i></b>	<b>Proposal</b>
		approximately 60 feet is proposed between the rear property line and the southernmost development on the site, a LIDA facility.
<i>Corner lot street side</i> <sup>11</sup>	<i>20 feet</i>	The site is not within 100 feet of a residential zone. Therefore, the minimum street side yard setback of 20 feet applies on the SW 124 <sup>th</sup> Avenue frontage. The building closest to 124 <sup>th</sup> Avenue (the Clearwell) is set back approximately 37 feet.
<i>Height</i> <sup>11</sup>	<i>50 feet</i>	<p>The site is not within 100 feet of a residential zone. Therefore, the maximum height requirement of 50 feet applies. The tallest building proposed on the site is the Ballasted Flocculation Building, at approximately 45 feet in height.</p> <p>Pursuant to Section 16.62.010, height limits in this Code do not apply to radio antennas, towers, and wireless communication facilities 200 feet in height or less. Radio facilities over 200 feet in height are addressed by Conditional Use criteria in Chapter 16.82.</p>

*16.31.040 - Employment Industrial (EI) Restrictions*

*A. Use Restrictions*

*1. Retail and professional services that cater to daily customers, such as restaurants and financial, insurance, real estate, legal, medical and dental offices, shall be limited in the EI zone.*

*[...]*

*2. Notwithstanding the provisions of Section 16.31.050 "Commercial Nodes Use Restrictions," commercial development permitted under 16.31.050(1)(a) may only be proposed concurrent with or after industrial development on the same parcel. Commercial development may not occur prior to industrial development on the same parcel.*

**Response:** Commercial development, including retail and professional services, is not proposed. Therefore, these standards are not applicable.

*B. Land Division Restrictions*

**Response:** Land division is not proposed. Therefore, these standards are not applicable.

*16.31.050 - Tonquin Employment Area (TEA) Commercial Nodes Use Restrictions*

*A. Within the Tonquin Employment Area (TEA), only commercial uses that directly support industrial uses located within the TEA are permitted as conditional uses.*

*B. Commercial development, not to exceed a total of five (5) contiguous acres in size, may be permitted.*

*C. Commercial development may not be located within three hundred (300) feet of SW 124th Avenue or SW Oregon Street, and must be adjacent to the proposed east-west collector street.*

**Response:** Commercial development is not proposed. Therefore, these standards are not applicable.

*Chapter 16.58 - CLEAR VISION AND FENCE STANDARDS*

*16.58.010 - Clear Vision Areas*

*A. A clear vision area shall be maintained on the corners of all property at the intersection of two (2) streets, intersection of a street with a railroad, or intersection of a street with an alley or private driveway.*

**Response:** These clear vision standards apply to the following three locations on the site: (1) the northeast corner of the site at the intersection of SW Blake Street and SW 124<sup>th</sup> Avenue; (2) the intersection of the emergency site access road ("Road D") and SW Blake Street on the north side of the site; and (3) the intersection of the primary site access road ("Road A") and SW Blake Street on the northwest side of the site. (See Transportation/Circulation Plan 1, Exhibit A, Sheet B-028 .) See the responses below for specific compliance for each of these locations.

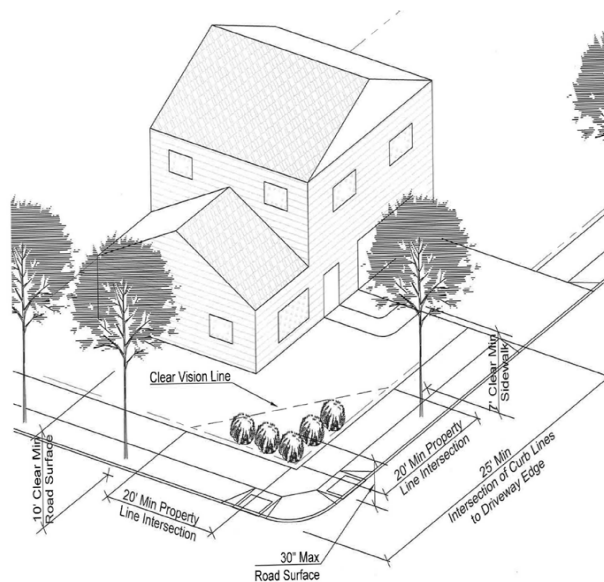
*B. A clear vision area shall consist of a triangular area, two (2) sides of which are lot lines measured from the corner intersection of the street lot lines for a distance specified in this regulation; or, where the lot lines have rounded corners, the lot lines extended in a straight line to a point of intersection, and so measured, and the third side of which is a line across the corner of the lot joining the non-intersecting ends of the other two (2) sides.*



C. A clear vision area shall contain no planting, sight obscuring fence, wall, structure, or temporary or permanent obstruction exceeding two and one-half (2½) feet in height, measured from the top of the curb, or where no curb exists, from the established street center line grade, except that trees exceeding this height may be located in this area, provided all branches and foliage are removed to the height of seven (7) feet above the ground on the sidewalk side and ten (10) feet on the street side.

The following requirements shall govern clear vision areas:

1. In all zones, the minimum distance shall be twenty (20) feet.
2. In all zones, the minimum distance from corner curb to any driveway shall be twenty-five (25) feet.
3. Where no setbacks are required, buildings may be constructed within the clear vision area.



**Response:** The following addresses clear vision standards.

- Clear vision areas of 20 feet – As shown in the Transportation/Circulation Plan (Exhibit A, Sheet B-028), Planting Overall Plan, and Planting Plans Areas A2, A3, and A7 (Exhibit A, Sheets B-030, B-032, B-033, and B-037), vegetation and structures are limited in a triangular area whose legs are 20 feet by 20 feet at the intersections of SW Blake Street and SW 124<sup>th</sup> Avenue; eastern driveway (Road D) and SW Blake Street; and western driveway (Road A) and SW Blake Street.
- 25 feet from corner curb to driveway – As shown in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029), there is at least 400 feet between the intersection of SW Blake Street and SW 124<sup>th</sup> Avenue and the first, easternmost driveway on the WTP site (Road D).

- Buildings constructed in clear vision area where no setbacks are required – The only property lines where setbacks are not required are the south and west property lines. There are no intersections on these property lines and, therefore, these standards are not applicable.

Therefore, these standards are met or are not applicable.

*16.58.020 - Fences, Walls and Hedges.*

*B. Applicability:*

*The following standards apply to walls, fences, hedges, lattice, mounds, and decorative toppers. These standards do not apply to sound walls and landscape features that are not hedges.*

*C. Fences, Walls, and Hedges in Residential Zones:*

**Response:** The proposed development is not in a residential zone. Therefore, these standards are not applicable.

*D. Location—Non-Residential Zone:*

*1. Fences up to eight (8) feet high are allowed along front, rear and side property lines, subject to Section 16.58.010. (Clear Vision Areas) and building department requirements.*

**Response:** Fencing is not proposed in clear vision areas on the corners of the intersections of the western driveway and SW Blake Street, the eastern driveway and SW Blake Street, and SW Blake Street and SW 124<sup>th</sup> Avenue, as shown the Hardscape Overall Plan (Exhibit A, Sheet B-046). Fencing proposed on-site – including along property lines or within required setbacks from property lines – does not exceed 8 feet in height, as shown and noted in the Landscape Architectural Site Details 3 and 4 (Exhibit A, Sheets B-075 and B-076). Therefore, this standard is met.

*2. A sound wall is permitted when required as a part of a development review or concurrent with a road improvement project. A sound wall may not be taller than twenty (20) feet.*

**Response:** A sound wall is not proposed. Therefore, this standard is not applicable.

*3. Hedges up to twelve (12) feet tall are allowed.*

**Response:** Trees, fencing, and retaining walls are proposed around the perimeter of the site, and not hedges (Planting Overall Plan and Hardscape Overall Plan, Exhibit A, Sheets B-030 and B-046). Therefore, this standard is not applicable.

*E. General Conditions—All Fences:*

- 1. Retaining, masonry, concrete, and modular retaining walls may not be constructed within the eight-foot public utility easement (PUE) located on the front and corner street side yards, without approval from the City Engineer.*

**Response:** Retaining walls proposed along SW Blake Street and SW 124<sup>th</sup> Avenue are not located within public utility easements (PUEs). See the Transportation/Circulation Plan 2 in Exhibit A, Sheet B-029. Therefore, this standard is met.

- 2. Fences must be structurally sound and maintained in good repair. A fence may not be propped up in any way from the exterior side.*

**Response:** The fencing proposed for the perimeter of the site will be black ornamental picket fencing, as illustrated in Site Visualizations (Exhibit A, Sheets B-003 through B-004), the Hardscape Overall Plan (Exhibit A, Sheet B-046), and Landscape Architectural Site Details 3 and 4 (Exhibit A, Sheets B-075 through B-076). The fencing will be structurally sound, in good repair, and free-standing. Therefore, this standard is and will be met.

- 3. Chain link fencing is not allowed in any required residential front yard setback.*

**Response:** Chain link fencing (8 feet tall plus three strands barbed wire) is proposed exclusively between the plant and the kolk wetland, and will not be visible from anywhere outside the site. Therefore, this standard is met.

- 4. The finished side of the fence must face the street or the neighboring property. This does not preclude finished sides on both sides.*

**Response:** The proposed fencing is metal fencing that is finished on both sides. See Site Visualizations (Exhibit A, Sheets B-001 through B-007), the Hardscape Overall Plan (Exhibit A, Sheet B-046), and Landscape Architectural Site Details 3 and 4 (Exhibit A, Sheets B-075 through B-076). Therefore, this standard is met.

- 5. Buffering: If a proposed development is adjacent to a dissimilar use such as a commercial use adjacent to a residential use, or development adjacent to an existing farming operation, a buffer plan that includes, but is not limited to, setbacks, fencing, landscaping, and maintenance*

*via a homeowner's association or managing company must be submitted and approved as part of the preliminary plat or site plan review process per Section 16.90.020 and Chapter 16.122.*

**Response:** Adjacent uses are varying types of industrial, including the following:

- To the west: undeveloped land, light industrial, and residential uses;
- To the south: Bonneville Power Administration (BPA) right-of-way (with power lines and towers) and gravel and rock extraction;
- To the east (across SW 124th Avenue, Tualatin): gravel and rock extraction and undeveloped land; and
- To the north (across SW Blake Street and SW Tualatin-Sherwood Road): approved light industrial and other employment uses.

The proposed WTP will be industrial in form, which is not dissimilar to, or incompatible with, adjacent uses. The above buffering requirement does not apply. However, the proposed site design meets other standards and expectations of Sherwood regarding landscaping, setbacks, open space, and other features, as described below.

Buffering along the front and east side property lines (the SW Blake Street and SW 124<sup>th</sup> Avenue frontages, respectively) will be landscaped areas within the setbacks, which exceed the minimum required setbacks for the EI zone. These buffer areas are shown in the Overall Site Plan (Exhibit A, Sheet B-017). The buffering includes fencing, retaining walls, and landscaping (including visual corridor landscaping) shown in the Planting Overall Plan (Exhibit A, Sheet B-030) and Hardscape Overall Plan (Exhibit A, Sheet B-046).

Buffering along the west side property line includes a setback of almost 100 feet from the property line to two stormwater facilities (LIDA Facility 8B and 8C). It consists of approximately 50 feet of existing trees and other vegetation adjacent to the property line; graveling of the proposed temporary staging area between the existing vegetation and the LIDA facility; and fencing.

Buffering along the south property line includes a setback of approximately 600 feet (with approximately 60 feet to the LIDA facility nearest the southern property line in the southwest corner), and will be preserved as a large natural area comprised of trees, other vegetation, and the kolk pond wetland. See the Site Layout Plan, Tree Protection Overall Plan, Planting Overall Plan, and Figure 3 in the Tree Inventory and Habitat Assessment (Exhibit A, Sheets B-017, B-021, and B-030, and Exhibit D).

Therefore, this standard is met.

*6. In the event of a conflict between this Section and the clear vision standards of Section 16.58.010, the standards in Section 16.58.010 prevail.*

**Response:** A conflict between this Section and Section 16.58.010 has not been identified. However, it is understood that, in the case that there were, Section 16.58.010 would prevail.

*7. The height of a fence or wall is measured from the actual adjoining level of finished grade measured six (6) inches from the fence. In the event the ground is sloped, the lowest grade within six (6) inches of the fence is used to measure the height.*

*8. Call before you dig (811) if placing a fence within the public utility easement (PUE) to have your utility lines located. This easement area is usually located eight (8) feet across the front yard and the side yard setback on a corner lot. Utility lines can be buried just beneath the surface.*

**Response:** It is understood that fence and wall heights are to be measured 6 inches from their base and that the local power company is to be contacted (via 811) before excavating in a public utility easement. Therefore, these standards will be met.

#### *Chapter 16.62 - CHIMNEYS, SPIRES, ANTENNAS, AND SIMILAR STRUCTURES*

##### *16.62.010 - Heights*

*Except as otherwise provided, the height limits established by this Code shall not apply to chimneys, stacks, water towers, radio or television antennas, towers, windmills, grain elevators, silos, elevator penthouses, monuments, domes, spires, belfries, hangars, solar heating devices, and to wireless communication facilities two hundred (200) feet in height or less.*

**Response:** A radio facility monopole 200 to 250 feet in height is proposed on the site (see Exhibit A, Sheet B-169, and Exhibit M). A radio, wireless facility up to 200 feet in height is permitted pursuant to this provision, "except as otherwise provided." The need for the radio facility and its height are addressed and provided for through Conditional Use criteria in Chapter 16.82.

##### *16.62.020 - Permit Required*

*Notwithstanding Section 16.62.010, a conditional use permit shall be required for all such structures that exceed the height limitations of a zoning district, except as specifically otherwise permitted in that district.*

**Response:** The applicant is seeking a Conditional Use permit for the radio facility because radio facilities are conditionally permitted in the EI zone, pursuant to Section 16.31.020. Pursuant to this provision, it is understood that the proposed radio facility is also conditionally permitted if it exceeds the height limit of 50 feet established for the EI zone (Section 16.31.030).

*16.62.030 - Parapets*

*A parapet wall not exceeding four (4) feet in height may be erected above the height limit of the building on which it rests.*

**Response:** A parapet wall, 42-inches-high, is proposed on the Outdoor Chemical Building (Exhibit B, Sheet B-088). However, even with the parapet, the building is less than 35 feet tall, which is well below the 50-foot height limit in the EI zone. Therefore, this standard is not applicable.

*Chapter 16.66 - TRANSPORTATION FACILITIES AND IMPROVEMENTS*

*16.66.010 - Generally*

*A. Except as otherwise noted, transportation facilities and improvements as defined in Section 16.10.020 will be a permitted use in all zoning districts.*

*B. A Conditional Use Permit is required for Transportation Facilities and Improvements that are:*

- 1. Not designated in the adopted City of Sherwood Transportation System Plan (TSP); or*
- 2. Not designed and constructed as part of an approved land use application.*

**Response:** Section 16.10.020 defines transportation facilities and improvements. Right-of-way dedication and full-street improvements (landscaping, sidewalk, planting strip, lighting, curbs, gutters, bike lanes, paved roadway, and median) are proposed for SW Blake Street. Right-of-way dedication and half-street improvements (landscaping, multi-use path, planting strip, lighting, curbs, and roadway to centerline) are proposed for SW 124<sup>th</sup> Avenue as part of this application. See the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029.)

The City adopted SW Blake Street as a 3-lane collector in the 2010 TEA Concept Plan, 2014 Sherwood Transportation System Plan,<sup>4</sup> and 2015 TEA Implementation Plan. SW 124<sup>th</sup> Avenue is designated as a 5-lane arterial in the adopted 2019 Washington County Transportation System Plan and was built out initially as an interim 2-lane arterial through the County's Major Streets Transportation Improvement Program.

The proposed improvements to SW Blake Street and SW 124<sup>th</sup> Avenue are consistent with adopted plans.

<sup>4</sup> Tonquin Employment Area East-West Collector (Project D20)



### Division III. - ADMINISTRATIVE PROCEDURES

#### Chapter 16.72 - PROCEDURES FOR PROCESSING DEVELOPMENT PERMITS

##### 16.72.010 - Generally

##### A. Classifications

*Except for Final Development Plans for Planned Unit Developments, which are reviewed per Section 16.40.030, all quasi-judicial development permit applications and legislative land use actions shall be classified as one of the following:*

##### 1. Type I

*The following quasi-judicial actions shall be subject to a Type I review process:*

- a. **Signs;** [emphasis added]
- b. *Property line adjustments;*
- c. *Interpretation of similar uses;*
- d. *Temporary uses;*
- e. *Final subdivision and partition plats;*
- f. *Final site plan review;*
- g. *Time extensions of approval, per Sections 16.90.020; 16.124.010;*
- h. *Class A home occupation permits;*
- i. *Interpretive decisions by the city manager or his/her designee;*
- j. *Tree removal permit—Street trees over five inches DBH, per section 16.142.050.B.2 and 3;*
- k. *Adjustments;*
- l. *Re-platting, lot consolidations and vacations of plats;*
- m. *Minor modifications to approved site plans;*
- n. *Accessory dwelling units.*

**Response:** A sign is proposed at the primary entrance of the WTP site on SW Blake Street. (See site visualization, sign elevation, and plan view in Exhibit A, Sheets B-004 and B-078 and Exhibit B, Sheet B-053). Therefore, a Type I review is required pursuant to this Section. The proposed sign is illustrated and indicated in plan and elevation views in Exhibits A and B to show the applicant's intent.

##### 2. Type II

*The following quasi-judicial actions shall be subject to a Type II review process:*

- a. *Land Partitions*

- b. *Expedited Land Divisions - The Planning Director shall make a decision based on the information presented, and shall issue a development permit if the applicant has complied with all of the relevant requirements of the Zoning and Community Development Code. Conditions may be imposed by the Planning Director if necessary to fulfill the requirements of the adopted Comprehensive Plan, Transportation System Plan or the Zoning and Community Development Code.*
- c. *"Fast-track" Site Plan review, defined as those site plan applications which propose less than 15,000 square feet of floor area, parking or seating capacity of public, institutional, commercial or industrial use permitted by the underlying zone, or up to a total of 20% increase in floor area, parking or seating capacity for a land use or structure subject to a Conditional Use Permit, except as follows: auditoriums, theaters, stadiums, and those applications subject to Section 16.72.010.A.4.*
- d. *"Design Upgraded" Site Plan review, defined as those site plan applications which propose between 15,001 and 40,000 square feet of floor area, parking or seating capacity and which propose a minimum of eighty percent (80%) of the total possible points of design criteria in the "Commercial Design Review Matrix" found in Section 16.90.020.D.6.d.*
- e. *Industrial "Design Upgraded" projects, defined as those site plan applications which propose between 15,001 and 60,000 square feet of floor area, parking or seating capacity and which meet all of the criteria in Section 16.90.020.D.7.b.*
- f. *Homeowner's association street tree removal and replacement program extension.*
- g. *Class B Variance*
- h. **Street Design Modification** [emphasis added]
- i. *Subdivisions between 4—10 lots*
- j. *Medical marijuana dispensary permit*

**Response:** The applicant is seeking a Transportation Facilities Modification in order to modify dimensions for planting strips and sidewalks on SW 124<sup>th</sup> Avenue. Therefore, a Type II review is required pursuant to this Section.

3. *Type III*

*The following quasi-judicial actions shall be subject to a Type III review process:*

- a. **Conditional Uses** [emphasis added]
- b. *Site Plan Review — between 15,001 and 40,000 square feet of floor area, parking or seating capacity except those within the Old Town Overlay District, per Section 16.72.010.A.*
- c. *Subdivisions between 11—50 lots.*

**Response:** The proposed WTP and radio facility are permitted conditionally in the EI zone. Therefore, a Type III review is required pursuant to this Section.

4. *Type IV*

*The following quasi-judicial actions shall be subject to a Type IV review process:*

- a. *Site Plan review and/or "Fast Track" Site Plan review of new or existing structures in the Old Town Overlay District.*
- b. *All quasi-judicial actions not otherwise assigned to a Hearing Authority under this section.*
- c. **Site Plans — Greater than 40,000 square feet of floor area, parking or seating capacity.**  
[emphasis added]
- d. *Site Plans subject to Section 16.90.020.D.6.f.*
- e. *Industrial Site Plans subject to Section 16.90.020.D.7.b.*
- f. *Subdivisions — over 50 lots.*
- g. **Class A Variance** [emphasis added]

**Response:** The proposed WTP involves development of more than 40,000 square feet of floor area and parking. A Class A Variance is needed to address modifications of visual corridor requirements. Therefore, a Type IV review is required pursuant to this Section.

5. *Type V*

*The following legislative actions shall be subject to a Type V review process:*

- a. *Plan Map Amendments*
- b. *Plan Text Amendments*
- c. *Planned Unit Development — Preliminary Development Plan and Overlay District.*

**Response:** Plan Map Amendments, Plan Text Amendments, and Planned Unit Development are not proposed. Therefore, a Type V review is not required.

B. *Hearing and Appeal Authority*

1. *Each Type V legislative land use action shall be reviewed at a public hearing by the Planning Commission with a recommendation made to the City Council. The City Council shall conduct a public hearing and make the City's final decision.*

**Response:** A Type V land use action is not proposed. Therefore, this standard is not applicable.

2. *Each quasi-judicial development permit application shall potentially be subject to two (2) levels of review, with the first review by a Hearing Authority and the second review, if an appeal is filed, by an Appeal Authority. The decision of the Hearing Authority shall be the City's final decision, unless an appeal is properly filed within fourteen (14) days after the date on which the Hearing Authority took final action. In the event of an appeal, the decision of the Appeal Authority shall be the City's final decision.*

**Response:** The applicant understands that this quasi-judicial development application may be subject to two levels of review and the regulations that apply accordingly pursuant to this Section.

3. *The quasi-judicial Hearing and Appeal Authorities shall be as follows:*

a. *The Type I Hearing Authority is the Planning Director and the Appeal Authority is the Planning Commission.*

(1) *The Planning Director's decision shall be made without public notice or public hearing. Notice of the decision shall be provided to the applicant.*

(2) *The applicant may appeal the Planning Director's decision.*

b. *The Type II Hearing Authority is the Planning Director and the Appeal Authority is the Planning Commission.*

(1) *The Planning Director's decision shall be made without a public hearing, but not until at least fourteen (14) days after a public notice has been mailed to the applicant and all property owners within 1,000 feet of the proposal. Any person may submit written comments to the Planning Director which address the relevant approval criteria of the Zoning and Development Code. Such comments must be received by the Planning Department within fourteen (14) days from the date of the notice.*

(2) *Any person providing written comments may appeal the Planning Director's decision.*

c. *The Type III Hearing Authority is the Hearings Officer and the Appeal Authority is the Planning Commission.*

(1) *The Hearings Officer shall hold a public hearing following public notice in accordance with Sections 16.72.020 through 16.72.080.*

(2) *Any person who testified before the Hearings Officer at the public hearing or submitted written comments prior to the close of the record may appeal the Hearings Officer's decision.*

d. *The Type IV Hearing Authority is the Planning Commission and the Appeal Authority is the City Council.*

*(1) The Planning Commission shall hold a public hearing following public notice in accordance with Sections 16.72.020 through 16.72.080.*

*(2) Any person who testified before the Planning Commission at the public hearing or submitted written comments prior to the close of the record may appeal the Planning Commission's decision.*

*e. The Type V Hearing Authority is the City Council, upon recommendation from the Planning Commission and the Appeal Authority is the Land Use Board of Appeals (LUBA).*

**Response:** This application package consists of Conditional Use, Site Plan Review, and Class A Variance applications. Given the highest level of review to which these applications are subject is a Type IV review, it is understood that the combined application package will be reviewed according to Type IV procedures. Therefore, it is understood that the Hearing Authority will be the Planning Commission; the Appeal Authority, as needed, will be the City Council; and regulations in this Section related to Type IV review procedures apply.

*C. Approval Criteria*

*1. The approval criteria for each development permit application shall be the approval standards and requirements for such applications as contained in this Code. Each decision made by a Hearing Authority or Appeal Authority shall list the approval criteria and indicate whether the criteria are met. It is the applicant's burden to demonstrate to the Hearing Authority and Appeal Authority how each of the approval criteria are met. An application may be approved with conditions of approval imposed by the Hearing Authority or Appeal Authority. On appeal, the Appeal Authority may affirm, reverse, amend, refer, or remand the decision of the Hearing Authority.*

*2. In addition to Section 1 above, all Type IV quasi-judicial applications shall also demonstrate compliance with the Conditional use criteria of Section 16.82.020.*

**Response:** The applicant understands that the approval criteria for the proposed applications will be the standards and requirements in this Code and is providing this application narrative accordingly to demonstrate compliance with those standards and requirements. Demonstration of compliance with Conditional Use criteria are provided in responses to Section 16.82.020 criteria in this narrative. Therefore, this standard is met.

## **Division IV. - PLANNING PROCEDURES**

### *Chapter 16.82 - CONDITIONAL USES*

#### *16.82.010 - Generally*

*A. Authorization*

*Uses permitted in zoning districts as conditional uses may be established, enlarged, or altered by authorization of the Commission in accordance with the standards and procedures established in this Chapter. If the site or other conditions are found to be inappropriate for the use requested, the Commission or Hearings Officer (cited below as Hearing Authority) may deny the conditional use.*

**Response:** The proposed WTP and radio facility are permitted conditionally in the EI zone pursuant to Section 16.31.020 and in accordance with the standards and procedures in this Chapter. Therefore, this standard is met.

*B. Changes in Conditional Uses*

*Changes in use or expansion of a legal non-conforming use, structure or site, or alteration of structures or uses classified as conditional uses, that either existed prior to the effective date of this Code or were established pursuant to this Chapter shall require the filing of a new application for review conforming to the requirements of this Chapter if the proposed changes would increase the size, square footage, seating capacity or parking of existing permitted improvements by twenty percent (20%) or more.*

**Response:** Changes in use or expansion of a legal non-conforming use, structure or site, or alteration of structures or uses classified as conditional uses are not proposed. Therefore, this standard is not applicable.

*C. Application and Fee*

*An application for a Conditional Use Permit (CUP) shall be filed with the City and accompanied by the appropriate fee pursuant to Section 16.74.010. The applicant is responsible for submitting a complete application which addresses all criteria of this Chapter and other applicable sections of this Code.*

**Response:** The applicant has filed a Conditional Use Permit application and appropriate fee with the City. Therefore, this standard is met.

*16.82.020 - Permit Approval*

*A. Hearing Authority Action*

*1. The Hearings Authority shall conduct a public hearing pursuant to Chapter 16.72 and take action to approve, approve with conditions, or deny the application. Conditions may be imposed by the Hearings Authority if necessary to fulfill the requirements of the adopted Comprehensive*



*Plan, Transportation System Plan, or the Code. The decision shall include appropriate findings of fact as required by this Section, and an effective date.*

*2. Conditional uses may be approved at the hearing for a larger development (i.e. business campus or industrial park), to include future tenants of such development, if the range of uses allowed as conditional uses are considered, and specifically approved, at the time of original application.*

*B. Final Site Plan*

*Upon approval of a conditional use by the Hearing Authority, the applicant shall prepare a final site plan for review and approval pursuant to Section 16.90. The final site plan shall include any revisions or other features or conditions required by the Hearing Authority at the time of the approval of the conditional use.*

**Response:** It is understood that conditions of approval may be imposed and a Final Site Plan will need to be prepared and approved following approval of a conditional use.

*C. Use Criteria*

*No conditional use shall be granted unless each of the following is found:*

*1. All public facilities and services to the proposed use, including but not limited to sanitary sewers, water, transportation facilities, and services, storm drains, electrical distribution, park and open space and public safety are adequate; or that the construction of improvements needed to provide adequate services and facilities is guaranteed by binding agreement between the applicant and the City.*

**Response:** As found in responses to applicable requirements in Division VII (Public Infrastructure), existing and proposed infrastructure improvements and services are adequate to serve the proposed development and will be extended to the site. Therefore, this standard is met.

*2. Proposed use conforms to other standards of the applicable zone and is compatible with abutting land uses in regard to noise generation and public safety.*

**Response:** The proposed WTP and radio facility conform to standards of the EI zone, as demonstrated in the responses to applicable requirements in Chapter 16.31. Per the code definition, abutting land uses (land uses not separated by a roadway) are found to the west and south of the WTP site; they include undeveloped land, light industrial uses, residential uses, BPA right-of-way with power lines and towers, and gravel and rock extraction. Abutting land is zoned Future Development 20 Acres (FD-20) by Washington County as a holding zone until the land annexes into the City and is zoned EI.

The WTP and radio facility monopole are compatible with abutting land uses, in terms of noise and public safety, in the following ways:

- Radio facility monopole – The radio facility is necessary for public safety – for communications between the WTP and other WWSS facilities, particularly in the case of an emergency. The radio facility will be a monopole structure rather than a traditional tower (see Exhibit M for a sample image). A PGE electrical transmission tower is already located on the site to the northeast of where the radio facility is proposed (see Exhibit A, Sheet B-169); the radio monopole structure will be visually simpler and more attractive as compared to the tower. The structure's neutral galvanized grey color and neighboring tall trees (addressed in responses to Chapter 16.142 in this narrative, including in Figure 6 in those responses) will soften the presence of the radio facility. The facility does not emit sound; thus, it presents no noise impacts.
- Plant operations noise – Operations equipment is almost entirely located within structures or enclosures and, thus, will emit only minimal noise that would be detectible outdoors on the WTP site or from adjacent public rights-of-way. Equipment noise is restricted by equipment specifications to a maximum of 80 dBA, as measured 3 feet from the equipment, in compliance with Oregon Occupational Health and Safety Administration (OSHA) guidelines.
- Hazardous materials – Chemicals and hazardous materials necessary for water treatment processes and emergency back-up procedures will be subject to safety measures including the following: interior containment sumps in chemical storage areas, sized to accommodate more than one full tank if catastrophic failure occurs; outdoor chemical containment sumps at the truck offloading area; dedicated leak containment at discrete points of chemical injection; environmental monitoring of outdoor chemical storage areas; and, secondary containment. Chemical and hazardous materials storage and handling is further addressed in response to materials storage criteria in Section 16.98.030.C.
- Plant failure – In the unlikely event that internal WTP processes fail while raw water cannot be stopped from continued pumping to the site, overflow basins proposed on the site will manage overflow. Proposed stormwater systems on the site and existing stormwater systems to which the proposed systems will connect will provide secondary management of overflow. Emergency overflow is addressed in more detail in response to stormwater capacity criteria in Section 16.114.020.A.
- Site security – The WTP site will be secure, with fencing (curved at the top to deter climbing), gates, and gabion walls around the perimeter of operations and surveillance technology (e.g., cameras). See the Planting Overall Plan (Exhibit A, Sheet B-030) and the fence and wall images (Exhibit A, Sheets B-073 through B-078).

The WTP will enhance public safety and welfare overall by providing a sustainable, resilient, and reliable new source of potable water.

Therefore, this standard is met for the proposed development.

The Construction Management Plan (Exhibit E) addresses noise and public safety during construction. The plan notes that noise mitigation measures will be needed only for construction blasting and that the contractor will work with neighbors and local agencies to comply with local regulations and limit the time needed for blasting. Regarding traffic noise, trucks traveling to the site will include aggregate trucks (permitted between 7:00 a.m. and 4:00 p.m. weekdays) and redi-mix concrete trucks. During large concrete placements, redi-mix trucks will be needed in the early morning; however, the plan states that these trucks do not make noise beyond standard trucks and will use arterials including SW Tualatin-Sherwood Road and SW 124<sup>th</sup> Avenue, meaning no special permit should be needed. A noise permit will be needed and will be obtained if noise greater than 80 dB is generated at the site's fence line.

The practices laid out in the Traffic Management section and Emergency Response and Emergency Action Plan section (which refers to the contractor's Safety Plan) will also make the project compatible regarding public safety.

Based on the above findings, this standard is met for the proposed construction activities.

*3. The granting of the proposal will provide for a facility or use that meets the overall needs of the community and achievement of the goals and/or policies of the Comprehensive Plan, the adopted City of Sherwood Transportation System Plan and this Code.*

**Response:** Comprehensive Plan policies for the TEA include the following:

4. Permit light industrial uses not associated with the preferred industry sectors in Employment Industrial areas provided that such uses are not incompatible with the types of industry preferred for these areas.
7. Encourage aesthetically attractive, well designed industrial uses and sites within development approved for construction in the Employment Industrial areas.
9. Encourage future development designs that are sensitive to the existing natural features of the area and support development proposals that incorporate, preserve, and enhance natural features.

The WTP is an industrial-scale use that is compatible with other industrial uses approved and planned for the TEA and EI zone. Within the TEA and EI zone, the WTP site is characterized by very shallow bedrock and a large wetland in the southeast portion of the site. The shallow rock, while posing significant costs for site preparation, serves as a strong and seismically resilient foundation on which to build the WTP. With its long-term commitment to this use and site, the applicant and owner are in a unique position to absorb costs that may otherwise prove deterring or infeasible to other industrial developers. In addition to making beneficial use of a site that is challenging to develop, the coordinated planning with the TCC site to the north maximized the commercial development potential for that site and further demonstrates compatibility with industrial uses and the intent of Comprehensive Plan Policy 4.

The proposed WTP will contribute to the industrial growth of the area by building needed transportation improvements. The applicant is constructing SW Blake Street and half-street improvements for SW 124<sup>th</sup> Avenue, major infrastructure components of the TEA. The City adopted SW Blake Street as a 3-lane collector in the 2010 TEA Concept Plan, 2014 Sherwood Transportation System Plan, and 2015 TEA Implementation Plan. SW 124<sup>th</sup> Avenue is designated as a 5-lane arterial in the adopted 2019 Washington County Transportation System Plan and was built out initially as an interim 2-lane arterial through the County's Major Streets Transportation Improvement Program. As addressed in response to Traffic Impact Analysis (TIA) requirements in Section 16.106.080, traffic projected to be generated both during construction and during permanent operations is not significant enough to warrant recommending permanent traffic mitigation measures. (Note: The TIA included in this application (Exhibit F) does, however, recommend temporary traffic control measures for the construction period.) The proposed transportation improvements further demonstrate the compatibility of the proposed WTP development with industrial uses and the TEA, and consistency with Comprehensive Plan Policy 9.

Buildings on the site, while functional industrial buildings, have been thoughtfully designed to reflect an attractive modern style and the contextual history of the region with building features like shed roofs. Further detail is provided in responses to building design criteria in Section 16.90.020.D.7. The proposed site and architectural design meet these building design criteria and, therefore, demonstrate compliance with Comprehensive Plan Policy 7.

The large wetland area in the southeastern portion of the site, along with its mature trees and vegetation, will be preserved. The development footprint of the WTP has been limited to the extent possible and very intentionally planned to protect this natural area. See the Site Layout Plan and Tree Protection Overall Plan in Exhibit A (Sheets B-017 and B-021). The kolk wetland area is strongly incorporated into and emphasized in the development design in the publicly accessible forest platform that is proposed – a significant community benefit. Sheets B-007 and B-059 in Exhibit A provide images and the location of the forest platform. These measures demonstrate compliance with Comprehensive Plan Policy 9.

Therefore, this standard is met.

*4. Surrounding property will not be adversely affected by the use, or that the adverse effects of the use on the surrounding uses, the neighborhood, or the City as a whole are sufficiently mitigated by the conditions proposed.*

**Response:** As found in response to Criteria 1-3 above, the proposed use is compatible with abutting uses and is consistent with policies in the City's Comprehensive Plan and Code. Surrounding uses to the north and east include an approved industrial park, gravel and rock extraction, and land planned for industrial use. The proposed WTP will not interfere with those uses and, in fact, provides critical infrastructure for

the area – full SW Blake Street improvements and half SW 124<sup>th</sup> Avenue improvements adjacent to the WTP site.

In addition, the applicant has coordinated proposed infrastructure with TCC's approved industrial park to the north. Specifically, potable water, sewer, stormwater, and fiber are routed through the parcel to the north in an area where TCC will be constructing public utilities. Waterlines have been looped per City requirements; looping is accomplished by a water line that runs down the west side of SW 124<sup>th</sup> Avenue in the PUE. The proposed use will not adversely affect surrounding uses, the neighborhood, or the city. Therefore, this standard is met, and mitigating conditions of approval should not be necessary.

*5. The impacts of the proposed use of the site can be accommodated considering size, shape, location, topography and natural features.*

**Response:** As established above, the proposed use is consistent with City policies and is compatible with surrounding uses. The WTP has been carefully designed to respond to site features, including using shallow rock on the site as a seismically resilient foundation for the WTP (which may otherwise be a cost-prohibitive feature for other development) and constraining its footprint to the northern portion of the site in order to preserve the large wetland area on the southern portion of the site. Therefore, this standard is met.

*6. The use as proposed does not pose likely significant adverse impacts to sensitive wildlife species or the natural environment.*

**Response:** Sensitive wildlife species have not been identified on the WTP site. The site's natural environment is addressed, in particular, in responses to criteria in Chapter 16.144 (Wetlands, Habitat and Natural Areas).

Existing wetlands located throughout the WTP site will be reduced only as necessary for development of this critical water infrastructure facility. The WTP development has been very intentionally designed to be tightly clustered in the northern portion of the site, which removes smaller and isolated wetlands. However, avoiding these wetlands would render the site undevelopable. In clustering the development in the north, the project is able to preserve the large valuable wetland and its Vegetated Corridor (VC) and surrounding area in the south.

The US Army Corps of Engineers (USACE) and Oregon Department of State Lands (DSL) have approved mitigation of all of these wetland impacts through the purchase of mitigation bank credits, which are designed to offset the loss of wetland functions, values, and acreage. On-site mitigation is proposed to account for a small impact on the VC around the kolk wetland in constructing the forest platform as part of this development. (See narrative responses in Chapter 16.144.)

The WTP site plan and development incorporates and emphasizes the kolk wetland area in proposing the publicly accessible forest platform at the forested wetland's edge. Educational tours, casual visitors, and WTP employees will all benefit from this environmentally focused amenity. Rendered images and the location of the forest platform are provided in Exhibit A, Sheets B-007 and B-059. The site layout, tightly clustered development, forest platform location, and preserved kolk wetland area are all shown in the Site Layout Plan and Tree Protection Overall Plan in Exhibit A (Sheets B-017 and B-021).

The proposed development will limit its impacts and will protect and promote natural resources. Therefore, this standard is met.

*7. For wireless communication facilities, no Conditional Use Permit will be granted unless the following additional criteria is found:*

*a. The applicant demonstrates to the satisfaction of the City that the wireless communication facility cannot be located in an IP zone due to the coverage needs of the applicant.*

*b. The proposed wireless communication facility is designed to accommodate co-location or it can be shown that the facility cannot feasibly accommodate co-location.*

*c. The applicant demonstrates a justification for the proposed height of the tower or antenna and an evaluation of alternative designs which might result in lower heights.*

*d. The proposed wireless communication facility is not located within one-thousand (1,000) feet of an existing wireless facility or that the proposed wireless communication facility cannot feasibly be located on an existing wireless communication facility.*

*e. The proposed wireless communication facility is located a minimum of three-hundred (300) feet from residentially zoned properties.*

**Response:** The proposed radio facility (Exhibit A, Sheet B-169 and Exhibit M) is needed for communication between WWSS facilities including the WTP, Raw Water Facilities in Wilsonville, and the Reservoir Storage Facilities on Cooper Mountain in Washington County. As such, it must be located on the WTP site (i.e., not in the IP zone or co-located with another wireless communication facility).

The WTP radio facility will allow for communication using handheld radios throughout the WWSS – from the system's terminus at Highway 26 in Hillsboro down to the Raw Water Facilities in Wilsonville, including critical communications during and following emergencies. The project's managing partner has conducted a radio study that indicates that, in conjunction with the system's existing radio facilities, the addition of a facility at the WTP site (a monopole) will allow for continuous "line of sight" communications coverage throughout the entire WWSS system. The facility's height will be approximately 200 to 250 feet. The height of the facility is necessary to provide "line of sight" between the new WTP radio facility and the existing radio facilities.



There is no residential zoning within 300 feet of the proposed radio facility site, as shown in the zoning map in Figure 3.

Therefore, this standard is met.

*8. The following additional criteria apply to transportation facilities and improvements subject to Conditional Use approval per Chapter 16.66. These are improvements and facilities that are (1) not designated in the adopted City of Sherwood Transportation System Plan (TSP), and are (2) not designed and constructed as part of an approved land use application.*

**Response:** This application does not involve transportation facilities and improvements subject to Conditional Use approval. Therefore, this standard is not applicable.

*D. Additional Conditions*

*In permitting a conditional use or modification of an existing conditional use, additional conditions may be applied to protect the best interests of the surrounding properties and neighborhoods, the City as a whole, and the intent of this Chapter. These conditions may include but are not limited to the following:*

- 1. Mitigation of air, land, or water degradation, noise, glare, heat, vibration, or other conditions which may be injurious to public health, safety or welfare in accordance with environmental performance standards.*
- 2. Provisions for improvement of public facilities including sanitary sewers, storm drainage, water lines, fire hydrants, street improvements, including curb and sidewalks, and other above and underground utilities.*
- 3. Increased required lot sizes, yard dimensions, street widths, and off-street parking and loading facilities.*
- 4. Requirements for the location, number, type, size or area of vehicular access points, signs, lighting, landscaping, fencing or screening, building height and coverage, and building security.*
- 5. Submittal of final site plans, land dedications or money-in-lieu of parks or other improvements, and suitable security guaranteeing conditional use requirements.*
- 6. Limiting the number, size, location, height and lighting of signs.*
- 7. Requirements for the protection and preservation of existing trees, soils, vegetation, watercourses, habitat areas and drainage areas.*
- 8. Requirements for design features which minimize potentially harmful environmental impacts such as noise, vibration, air pollution, glare, odor and dust.*

**Response:** As demonstrated in responses to other Conditional Use criteria in this Section, as well as to criteria for the EI zone, industrial building design, signs, landscaping, transportation, utilities, and environmental resources in other Sections, the proposed development is compatible with surrounding uses and is consistent with City policies and requirements. The proposed development will provide necessary utility and transportation facilities, including full-street improvements of SW Blake Street and right-of-way dedication and half-street improvements for SW 124<sup>th</sup> Avenue that are critical to the area. The applicant has demonstrated that the project is strongly compatible with surrounding properties and the city as a whole; additional conditions for compatibility do not appear to be necessary. The WWSS has worked collaboratively with neighbors and the Sherwood community to date, and intends to continue as a positive and contributing member of the community in the future. Therefore, this standard is met without additional conditions.

*E. Time Limits*

*Unless approved under Section 16.82.020.A.2 for a larger development to include future tenants of such development, authorization of a conditional use shall be void after two (2) years or such lesser time as the approval may specify unless substantial construction, in the City's determination, has taken place. The Hearing Authority may extend authorization for an additional period, not to exceed one (1) year, upon a written request from the applicant showing adequate cause for such extension, and payment of an extension application fee as per Section 16.74.010.*

**Response:** Time limits on a Conditional Use approval and extension are understood.

*F. Revocation*

*Any departure from approved plans not authorized by the Hearing Authority shall be cause for revocation of applicable building and occupancy permits. Furthermore, if, in the City's determination, a condition or conditions of CUP approval are not or cannot be satisfied, the CUP approval, or building and occupancy permits, shall be revoked.*

**Response:** It is understood that departures from approved plans not authorized by the Planning Commission could lead to revocation of permits.

*Chapter 16.84 - VARIANCES*

*16.84.010 - Purpose*

*This Chapter provides standards and procedures for variances, which are modifications to land use or development standards that are not otherwise permitted elsewhere in this Code as*

*exceptions to Code standards. This Chapter provides flexibility, while maintaining the purposes and intent of the Code. No variances shall be granted to allow the use of property for a purpose not authorized within the zone in which the proposed use is located. In granting a variance, conditions may be imposed when necessary to protect the best interests of surrounding properties and neighborhoods, and otherwise achieve the purposes of the adopted Comprehensive Plan, the Transportation System Plan, and other Code provisions.*

*16.84.020 - Applicability*

*A. Exceptions and Modifications versus Variances*

*A code standard or approval criterion may be modified without approval of a variance if the applicable code section expressly allows exceptions or modifications. If the code provision does not expressly provide for exceptions or modifications then a variance is required to modify that code section and the provisions of Chapter 16.84 apply.*

**Response:** Visual corridor requirements in Section 16.142.020 do not include provisions for exceptions or modifications. As described above, a variance to the requirement for trees to be planted uniformly is needed, for security reasons and due to Portland General Electric (PGE) requirements within the powerline easement that runs through the site. A variance to allow the proposed retaining walls is needed due to site topography. Therefore, a variance is being sought to vary from visual corridor requirements.

*B. Combining Variances with Other Approvals; Permit Approvals by Other Agencies.*

*Variance requests may be combined with and reviewed concurrently by the City approval body with other land use and development applications (e.g., development review, site plan review, subdivision, conditional use, etc.); however, some variances may be subject to approval by other permitting agencies, such as ODOT in the case of State Highway access.*

**Response:** The applicant is requesting that the variance be reviewed concurrently with the other applications in this package: Site Plan Review and Conditional Use.

*C. Adjustments and variances cannot be applied to change any existing Planned Unit Development (PUD).*

**Response:** This proposal does not involve a Planned Unit Development. Therefore, this standard is not applicable.

*16.84.030 - Types of Variances*

*As provided in this Section, there are three types of variances: Adjustments, Class A variance and Class B variance; the type of variance required depends on the extent of the variance request and the discretion involved in the decision making process.*

*A. Adjustments*

*1. Applicability: The following variances are reviewed using a Type I procedure, as governed by Chapter 16.72, using the approval criteria in Subsection 2, below:*

*a. Front yard setbacks Up to a 10 percent change to the front yard setback standard in the land use district.*

*b. Interior setbacks Up to a 10 percent reduction of the dimensional standards for the side and rear yard setbacks required in the base land use district so long as the three foot setback is maintained based on Building Code requirements where applicable.*

*c. Landscape area Up to a 10% reduction in landscape area (overall area or interior parking lot landscape area).*

*d. A 5% increase or decrease in other Code standards or dimensions not otherwise specifically identified in this section and not applicable at the time of the subdivision or partition approval.*

**Response:** Roughly 6,500 square feet of the 14,500 square feet of the visual corridor on SW Blake Street cannot be planted with trees or will include a retaining wall. Roughly 6,000 square feet of the 8,500 square feet of the visual corridor on the developed length of SW 124<sup>th</sup> Avenue cannot be planted with trees or will include a retaining wall. The proposed variance does not meet the threshold for an Adjustment.

*B. Class B Variances*

*1. Generally*

*a. The Class B variance standards apply to individual platted and recorded lots only.*

*b. A variance shall not be approved that would vary the "permitted uses" or "prohibited uses" of a land use zoning district.*

*c. Front yard setbacks: Up to a 20 percent change to the front yard setback standard in the land use district.*

*d. Interior setbacks: Up to a 20 percent reduction of the dimensional standards for the side and rear yard setbacks required in the base land use district so long as the three foot setback is maintained if required by the Building Code requirements.*

*e. A 20% or less increase or decrease in other Code standards or dimensions not otherwise specifically identified in this section.*

**Response:** The proposed variance does not meet the definition for Class B variance.

*C. Class A Variances*

*1. Generally*

*a. The Class A variance procedure may be used to modify a standard for three (3) or fewer lots, including lots yet to be created through a partition process.*

*b. An applicant who proposes to vary a standard for lots yet to be created through a subdivision process may not utilize the Class A variance procedure. Approval of a Planned Unit Development shall be required to vary a standard for lots yet to be created through a subdivision process, where a specific code section does not otherwise permit exceptions.*

*c. A Class A Variance shall not be approved that would vary the "permitted, conditional or prohibited uses" of a land use district.*

**Response:** A Class A Variance is being requested to modify a standard for only one lot. The lot has already been created through a partition process. The variance does not propose to vary the permitted, conditional, or prohibited uses of a land use district. Therefore, these standards are met.

*2. Approval Process:*

*a. Class A Variances shall be processed using a Type IV procedure, as governed by Chapter 16.84, using the approval criteria in subsection 3, below.*

*b. In addition to the application requirements contained in Chapter 16.72.010, the applicant shall provide a written narrative describing the reason for the variance, why it is required, alternatives considered, and compliance with the criteria in subsection 3.*

**Response:** It is understood that the requested Class A Variance, along with the other applications in this package, will be processed using a Type IV procedure. Compliance with application requirements in Chapter 16.72.010 is demonstrated in the responses to those requirements earlier in this narrative. The reasons for the requested variance and alternatives considered are addressed below. Compliance with subsection 3 criteria is addressed in the next response.

*Reasons for the Variance and Alternatives Considered*

The following findings address where trees cannot be provided uniformly throughout the visual corridors on SW Blake Street and SW 124<sup>th</sup> Avenue and where retaining walls must be located within the visual corridors. See the Planting Overall Plan and Planting Plan Area A1 through A7 in Exhibit A (Sheets



B-030 through B-037 for the location of visual corridors, the PGE easement, retaining walls, fences, and proposed plantings.

- **Legal restrictions** – Tree planting is extremely limited in PGE easements. Therefore, only low-growing vegetation can be planted in the section of WTP frontage that overlaps with a PGE easement on SW Blake Street, directly to the west of the primary WTP entrance (Road A). There are no alternatives to PGE's legal restriction. The applicant is proposing to robustly plant the PGE easement area with shrubs and ground cover.
- **Site topography and natural resources** – The developable area of the site is bounded by SW Blake Street on the north, SW 124<sup>th</sup> Avenue on the east, and the kolk wetland and its VC on the south. Within this area, there are significant elevation changes, with approximately 30-40 feet of change between the high points in the western and central areas of the site and the low points along SW 124<sup>th</sup> Avenue. Retaining walls within portions of the visual corridor are necessary to develop the WTP within these boundaries and topographic constraints. The retaining walls also serve as perimeter security walls.

Prior to the two-lot partition that created the subject property and the industrial parcel to the north, the applicant evaluated variations and alternatives for the location of SW Blake Street. The location of the intersection with SW 124<sup>th</sup> Avenue was driven by sight distance standards coordinated with Washington County and the City. The alignment of SW Blake Street was established to enable sufficient acreage for both the treatment plant and the industrial property to the north, in compliance with County policy for pre-annexation land divisions in the TEA. In summary, a variance for retaining walls is needed due to the above-described physical constraints: topography; the specific alignment of SW Blake Street that is necessitated by street and lot design factors; the "hard edge" of SW 124<sup>th</sup> Avenue; and, the intent to preserve the kolk pond and VC south of the treatment plant. Proposed mitigation includes planting shrubs and ground cover in front of the walls where possible and planting large shrubs and/or trees on top of the walls. See the Planting Overall Plan (Exhibit A, Sheet B-030) and site visualizations from roadways (Exhibit A, Sheets B-001 through B-004).

There are no feasible alternatives to the placement of retaining walls in the visual corridors on SW Blake Street and SW 124<sup>th</sup> Avenue because the full set of buildings needed for water treatment, required internal circulation widths, and preservation of the kolk wetland must be accommodated.

- **Security** – The security of the site and water treatment facilities, and hence the drinking water they produce, is a vital objective. Best practice security measures do not allow trees near perimeter security walls and fences for two reasons: trees must not provide a way to surmount a security wall or fence; and distance must be kept between trees and security walls

and fences so that security cameras have clear, unobstructed views around the perimeter. Alternatives include setting walls and fences farther back on the site so that there is more distance between the walls, fences, and edge of the site in order to provide trees. However, as addressed above in relation to site topography, there is not sufficient space to pull walls and fences back and still accommodate the necessary buildings, internal circulation, and preserved wetland and natural resources. Thus, it is proposed that the areas in front of walls and fences still be planted, but that they be planted with shrubs and ground cover instead of trees.

Therefore, these standards are met.

*3. Approval Criteria: The City shall approve, approve with conditions, or deny an application for a Class A Variance based on the following criteria:*

*a. The proposed variance will not be materially detrimental to the purposes of this Code, to any other applicable policies and standards, and to other properties in the same land use district or vicinity;*

**Response:** The proposed variance relates to the visual corridor criteria in Section 16.142.040. As noted in the responses to those criteria, the proposed plantings, fences, and walls will serve the purpose of visual corridors to provide a visual and acoustic buffer between proposed uses and major streets. Visualizations of the site from SW Blake Street and SW 124<sup>th</sup> Avenue illustrate how this purpose is served (Exhibit A, Sheets B-001 through B-004). The buffering that can still be achieved with the variance helps ensure that the proposed development will not adversely affect or be materially detrimental to surrounding development.

Permitting this variance (retaining walls in the visual corridor and trees not uniformly provided throughout the corridor) does not interfere with complying with other applicable requirements, as is demonstrated in the other responses in this narrative.

Therefore, this criterion is met.

*b. A hardship to development exists which is peculiar to the lot size or shape, topography, or other similar circumstances related to the property over which the applicant has no control, and which are not applicable to other properties in the vicinity (e.g., the same land use district);*

**Response:** The proposed variance is driven by physical constraints that are unique to the site as compared to surrounding properties, namely: the combination of the sloping of the site to the north and south from the center; significant grade differences between the site and adjacent SW Blake Street and SW 124<sup>th</sup> Avenue rights-of-way; and, a large contiguous wetland and surrounding Clean Water Services

(CWS) VC in the southern portion of the site. (See the Existing Conditions plan and aerial views in Exhibit A, Sheets B-024 through B-027.)

As described in response to Subsection 2 above, the site is limited in pulling retaining walls and fences back and away from visual corridors and allowing continuous tree planting in the corridors. If this were done, the necessary treatment structures and internal circulation could not be accommodated without pushing into the large contiguous wetland and CWS buffer to the south. Therefore, this criterion is met.

*c. The use proposed will be the same as permitted under this title and City standards will be maintained to the greatest extent that is reasonably possible while permitting reasonable economic use of the land;*

**Response:** The requested variance does not change or affect the proposed use, which is permitted in the EI zone pursuant to Section 16.31.020. The requested variance also does not affect the proposal's ability to comply with other City standards; compliance with other applicable code standards is demonstrated in this narrative. Therefore, this criterion is met.

*d. Existing physical and natural systems, such as but not limited to traffic, drainage, natural resources, and parks will not be adversely affected any more than would occur if the development occurred as specified by the subject Code standard;*

**Response:** The visual corridor sections with retaining walls and without uniform tree plantings will not have adverse effects on traffic and drainage. Transportation and drainage facilities will be adequate and meet or exceed City standards, as demonstrated by the responses to criteria in Chapter 16.106 (Transportation Facilities) and Chapter 16.114 (Storm Water) and in the TIA and Preliminary Stormwater Report included in this application (Exhibit F and Exhibit G).

Internal circulation and natural resources could be adversely affected if the variance is not granted. As described in previous responses to criteria in this Section, if retaining walls, in particular, had to be moved away from the east and north borders of the site to prevent any section of a retaining wall from being in the visual corridor or to provide more space for continuous tree planting, this would push the treatment plant's structures and internal circulation to the south, significantly impacting the large contiguous wetland and CWS VC buffer to the south. Alternatively, if attempting to prevent moving the development footprint to the south, the dimensions of site features such as internal circulation would need to be reduced, which cannot be done while maintaining functionality and compliance with City and Tualatin Valley Fire & Rescue (TVF&R) standards.

Therefore, this criterion is met.

*e. The hardship is not self-imposed; and*

**Response:** The requested variance is driven by the existing constrained conditions of the site, including the sloping of the site to the north and south from the center; significant grade differences between the site and adjacent SW Blake Street and SW 124<sup>th</sup> Avenue rights-of-way; and a large contiguous wetland and surrounding CWS VC in the southern portion of the site. (See the Existing Conditions plan and aerial views in Exhibit A, Sheets B-024 through B-027.) Project designers have maximized the concentration of proposed development in the northern portion of the site in order to work within the constraints of the site and preserve the large wetland. The hardship is due to existing site conditions and is not self-imposed. Therefore, this criterion is met.

*f. The variance requested is the minimum variance that would alleviate the hardship.*

**Response:** The requested variance to visual corridor requirements is the minimum necessary to allow the water treatment facilities and internal circulation to be feasibly provided within the topographic constraints of the site, while providing security for the water treatment facility and protecting the large wetland in the southern portion of the site.

In a virtual meeting with City Engineering and Planning staff on April 23, 2020, the applicant and City staff discussed how the applicant will provide continuous plantings in the visual corridors – at a minimum, ground cover and shrubs where trees cannot feasibly be provided. Plantings (shrubs or trees) will also be provided atop the retaining walls, small sections of which are proposed in the visual corridors. The applicant will also plant street trees, in the planting strip adjacent to the roadway on SW Blake Street and SW 124<sup>th</sup> Avenue as well as in a median on SW Blake Street. The plantings overall will provide a highly green and vegetated buffer between the proposed uses and adjacent streets. See the Planting Overall Plan and the visualizations from the roadways in Exhibit A (Sheets B-030 and B-001 through B-004).

## **Division V. - COMMUNITY DESIGN**

### *Chapter 16.90 - SITE PLANNING*

#### *16.90.020.D Required Findings*

*No site plan approval will be granted unless each of the following is found:*

- 1. The proposed development meets applicable zoning district standards and design standards in Division II, and all provisions of Divisions V, VI, VIII and IX.*

**Response:** The proposed development meets applicable zoning district and design standards as demonstrated in responses to those standards in Divisions II, V, VI, and VIII in this narrative. Therefore, this standard is met.

*2. The proposed development can be adequately served by services conforming to the Community Development Plan, including but not limited to water, sanitary facilities, storm water, solid waste, parks and open space, public safety, electric power, and communications.*

**Response:** As found in responses to applicable requirements in Division VII (Public Infrastructure), existing and proposed infrastructure improvements and services are or will be adequate to serve the proposed development. Therefore, this standard is and will be met.

*3. Covenants, agreements, and other specific documents are adequate, in the City's determination, to assure an acceptable method of ownership, management, and maintenance of structures, landscaping, and other on-site features.*

**Response:** The applicant, as an agent for the property owner, can assure ownership, management, and maintenance of proposed structures, landscaping, and other on-site features. Therefore, this standard is met.

*4. The proposed development preserves significant natural features to the maximum extent feasible, including but not limited to natural drainage ways, wetlands, trees, vegetation (including but not limited to environmentally sensitive lands), scenic views, and topographical features, and conforms to the applicable provisions of Division VIII of this Code and Chapter 5 of the Community Development Code.*

**Response:** The proposed development preserves significant natural features to the maximum extent feasible and conforms to the applicable provisions of Division VIII as demonstrated in the responses to criteria in Division VIII in this narrative.

The responses in Division VIII demonstrate that the proposal:

- Preserves a large area of natural resources south of the water treatment plant. This roughly 20-acre area includes the kolk wetland and its VC, which are significant natural resources.
- Preserves and provides tree canopy of approximately 44 percent across the site, as estimated using code standards. This canopy area exceeds the City's required standard of 30 percent. Canopy preserved south of the treatment plant contributes to the ecological functions and values of that area. Canopy preserved at the southwest corner of the site provides a "green edge" and buffer to adjacent properties.
- Preserves and provides tree canopy beyond what the code canopy calculation standard allows. Trees in the large kolk wetland and its surrounding VC are not included in the canopy

calculation, nor are proposed street trees. Trees in these areas provide at least another 5.5 acres of tree canopy on the WTP site.

- Preserves contiguous vegetation in the southeast portion of the site that consists of trees and undergrowth and that provides upland habitat in the area.

See mapping of existing and proposed tree canopy and habitat areas in Figure 2 through Figure 4 in the Tree Inventory and Habitat Assessment (Exhibit D) and mapping of proposed wetland and natural resource preservation in Figure 3 of the CWS Site Assessment (Exhibit H).

Therefore, this standard is met.

*5. For developments that are likely to generate more than 400 average daily trips (ADTs), or at the discretion of the City Engineer, the applicant must provide adequate information, such as a traffic impact analysis (TIA) or traffic counts, to demonstrate the level of impact to the surrounding transportation system. The developer is required to mitigate for impacts attributable to the project, pursuant to TIA requirements in Section 16.106.080 and rough proportionality requirements in Section 16.106.090. The determination of impact or effect and the scope of the impact study must be coordinated with the provider of the affected transportation facility.*

**Response:** City Engineering specified in the Pre-Application Conference Notes (Exhibit C) that a TIA would be required for the project. The applicant prepared a TIA consistent with applicable standards in Section 16.106.080 (Exhibit F). See the responses to criteria Section 16.106.080 that address this standard. Therefore, this standard is met.

*6. The proposed commercial, multi-family, institutional or mixed-use development is oriented to the pedestrian and bicycle, and to existing and planned transit facilities...*

**Response:** The proposed development is not a commercial, multi-family, institutional or mixed-use development. Therefore, these standards are not applicable.

*7. Industrial developments provide employment opportunities for citizens of Sherwood and the region as a whole. The proposed industrial development is designed to enhance areas visible from arterial and collector streets by reducing the "bulk" appearance of large buildings. Industrial design standards include the following:*



*a. Portions of the proposed industrial development within 200 feet of an arterial or collector street and visible to the arterial or collector (i.e. not behind another building) must meet any four of the following six design criteria:*

*(1) A minimum 15% window glazing for all frontages facing an arterial or collector.*

*(2) A minimum of two (2) building materials used to break up vertical facade street facing frontages (no T-111 or aluminum siding).*

*(3) Maximum thirty-five (35) foot setback for all parts of the building from the property line separating the site from all arterial or collector streets (required visual corridor falls within this maximum setback area).*

*(4) Parking is located to the side or rear of the building when viewed from the arterial or collector.*

*(5) Loading areas are located to the side or rear of the building when viewed from the arterial or collector. If a loading area is visible from an arterial or collector, it must be screened with vegetation or a screen made of materials matching the building materials.*

*(6) All roof-mounted equipment is screened with materials complimentary to the building design materials.*

**Response:** Portions of the buildings listed in the table below are within 200 feet of SW 124<sup>th</sup> Avenue (an arterial) or SW Blake Street (a collector). They meet four of the six design criteria as follows and, therefore, these standards are met:

	<b>Administration Building</b>	<b>Finished Water Pump Station</b>	<b>EQ/ Overflow Pumping Facility</b>	<b>Dewatering Facility</b>
1. Min. 15% window glazing	20%			
2. Min. 2 building materials	Glass and metal panels	Concrete, glass, metal panels	Metal panel 1, metal panel 2	Concrete, metal panel, glass
3. Max. 35' setback				
4. Parking on side or rear of building		Side	Side	Side
5. Loading areas on side or rear of building	Rear	Side	Side	Side

	Administration Building	Finished Water Pump Station	EQ/ Overflow Pumping Facility	Dewatering Facility
6. Roof-mounted equipment screened	Roofline, louvers	Equipment indoors, no additional screening needed	Equipment indoors, no additional screening needed	Louvers

*b. As an alternative to Section 16.90.020.D.7.a, an applicant may opt to have a design review hearing before the Planning Commission to demonstrate how the proposed development meets or exceeds the applicable industrial design objectives below (this design review hearing will be processed as a Type IV review)...*

**Response:** The proposed development meets the criteria in Section 16.90.020.D.7.a. Therefore, this alternative is not needed, and these standards are not applicable.

*8. Driveways that are more than twenty-four (24) feet in width shall align with existing streets or planned streets as shown in the Local Street Connectivity Map in the adopted Transportation System Plan (Figure 17), except where prevented by topography, rail lines, freeways, pre-existing development, or leases, easements, or covenants.*

**Response:** The two driveways proposed for the WTP site are more than 24 feet wide (Transportation/Circulation Plans, Exhibit A, Sheets B-028 and B-029). However, there are no existing or planned streets on the other side of SW Blake Street with which they can align. Therefore, this standard is not applicable.

*E. Approvals*

*The application is reviewed pursuant to Chapter 16.72 and action taken to approve, approve with conditions, or deny the application for site plan review. Conditions may be imposed by the Review Authority if necessary to fulfill the requirements of the adopted Comprehensive Plan, Transportation System Plan or the Zoning and Community Development Code. The action must include appropriate findings of fact as required by Section 16.90.020. The action may be appealed to the Council in accordance with Chapter 16.76.*

**Response:** It is understood that the Review Authority may impose conditions of approval. Appropriate findings of fact are provided in this narrative. Therefore, this standard is met.

*F. Time Limits*

*Site plan approvals are void after two (2) years unless construction on the site has begun, as determined by the City. The City may extend site plan approvals for an additional period not to exceed one (1) year, upon written request from the applicant showing adequate cause for such extension, and payment of an extension application fee as per Section 16.74.010. A site plan approval granted on or after January 1, 2007 through December 31, 2009, is extended until December 31, 2013.*

**Response:** Site plan approval expiration and extensions are understood.

*Chapter 16.92 - LANDSCAPING*

*16.92.010 - Landscaping Plan Required*

*All proposed developments for which a site plan is required pursuant to Section 16.90.020 shall submit a landscaping plan that meets the standards of this Chapter. All areas not occupied by structures, paved roadways, walkways, or patios shall be landscaped or maintained according to an approved site plan.*

**Response:** A site plan is required pursuant to Section 16.90.020 and, therefore, a landscaping plan is required that meets the standards of this Chapter. Areas not occupied by structures, roadways, walkways, and patios will be landscaped or maintained according to an approved site plan. Therefore, this standard is and will be met.

*16.92.020 - Landscaping Materials*

*A. Type of Landscaping*

*Required landscaped areas shall include an appropriate combination of native evergreen or deciduous trees and shrubs, evergreen ground cover, and perennial plantings. Trees to be planted in or adjacent to public rights-of-way shall meet the requirements of this Chapter. Plants may be selected from the City's "Suggested Plant Lists for Required Landscaping Manual" or suitable for the Pacific Northwest climate and verified by a landscape architect or certified landscape professional.*

**Response:** The proposed landscaping includes a combination of evergreen and deciduous trees, shrubs, and ground cover as shown in the Landscape Plans and Planting Legends (Exhibit A, Sheets B-030 and B-042 through B-045). Trees are proposed adjacent to public rights-of-way consistent with the requirements in this Chapter as demonstrated in the responses below. Proposed plants have been

selected from the City's suggested plant list or have otherwise been deemed suitable by Greenworks, the project's landscape architect. Therefore, this standard is met.

*1. Ground Cover Plants*

*a. All of the landscape that is not planted with trees and shrubs must be planted in ground cover plants, which may include grasses. Mulch is not a substitute for ground cover, but is allowed in addition to the ground cover plants.*

*b. Ground cover plants other than grasses must be at least the four-inch pot size and spaced at distances appropriate for the plant species. Ground cover plants must be planted at a density that will cover the entire area within three (3) years from the time of planting.*

**Response:** Ground cover is proposed where there are no trees or shrubs proposed for landscaping. See the Planting Overall Plan and Planting Legends (Exhibit A, Sheets B-030 and B-042 through B-045). Ground cover plants included in "right-of-way landscape," "enhanced landscape," and "seeded lawn" landscape areas are grasses. As noted in the Planting Legends, the ground cover is planned for full coverage. Therefore, these standards are met.

*2. Shrubs*

*a. All shrubs must be of sufficient size and number to be at full growth within three (3) years of planting.*

*b. Shrubs must be at least the one-gallon container size at the time of planting.*

**Response:** Proposed shrub species have been selected and spaced to be mature within 3 years of planting and provide robust coverage. The proposed container sizes are 1-2 gallons. See the Planting Legends in Exhibit A, Sheets B-042 and B-043.

*3. Trees*

*a. Trees at the time of planting must be fully branched and must be a minimum of two (2) caliper inches and at least six (6) feet in height.*

*b. Existing trees may be used to meet the standards of this chapter, as described in Section 16.92.020.C.2.*

**Response:** Trees fully branched and a minimum of either 2 caliper inches or 6 feet in height are proposed. See the Planting Legend in Exhibit A, Sheet B-042. Existing trees are preserved primarily in and around the kolk wetland in the southern portion of the property, as addressed in response to tree- and natural resource-related criteria in Section 16.142.070 and Chapter 16.144. Therefore, this standard is met.

*B. Plant Material Selection and Preparation*

*1. Required landscaping materials shall be established and maintained in a healthy condition and of a size sufficient to meet the intent of the approved landscaping plan. Specifications shall be submitted showing that adequate preparation of the topsoil and subsoil will be undertaken.*

**Response:** Landscaping materials will be established and maintained in a healthy condition and of a size consistent with the approved landscaping plan. Soil preparation is addressed in the Planting Legend and Notes (Exhibit A, Sheets B-042 and B-043). Therefore, this standard is met.

*2. Landscape materials should be selected and sited to produce a hardy and drought-resistant landscape area. Selection of the plants should include consideration of soil type, and depth, the amount of maintenance required, spacing, exposure to sun and wind, the slope and contours of the site, and compatibility with existing native vegetation preserved on the site.*

**Response:** The proposed landscape materials are drought-resistant, low-maintenance, hardy, and either native or compatible with native vegetation. See the Planting Legends in Exhibit A, Sheets B-042 and B-043. Therefore, this standard is met.

*C. Existing Vegetation*

*1. All developments subject to site plan review per Section 16.90.020 and required to submit landscaping plans per this section shall preserve existing trees, woodlands and vegetation on the site to the maximum extent possible, as determined by the Review Authority, in addition to complying with the provisions of Section 16.142.(Parks, Trees and Open Space) and Chapter 16.144 (Wetland, Habitat, and Natural Resources).*

**Response:** The proposed development and staging areas have been tightly constrained to the northern and southwestern portions of the site, allowing for large blocks of existing vegetation in the southwest corner and southeast portion to be preserved. See the Tree Protection Plan in Exhibit A, Sheets B-021 through B-023. Compliance with the provisions of Chapter 16.142 and Chapter 16.144 is demonstrated in responses to applicable criteria from those Chapters later in this narrative. Therefore, this standard is met.

*2. Existing vegetation, except those plants on the Nuisance Plants list as identified in the "Suggested Plant Lists for Required Landscaping Manual" may be used to meet the landscape standards, if protected and maintained during the construction phase of the development.*

*a. If existing trees are used, each tree six (6) inches or less in diameter counts as one (1) medium tree.*

*b. Each tree that is more than six (6) inches and up to nine (9) inches in diameter counts as two (2) medium trees.*

*c. Each additional three (3) inch diameter increment above nine (9) inches counts as an additional medium tree.*

**Response:** Existing trees proposed to be preserved are counted toward meeting tree canopy requirements in Section 16.142.070. See the responses to the criteria in that Section later in this narrative.

*D. Non-Vegetative Features*

*1. Landscaped areas as required by this Chapter may include architectural features interspersed with planted areas, such as sculptures, benches, masonry or stone walls, fences, rock groupings, bark dust, semi-pervious decorative paving, and graveled areas.*

*2. Impervious paving shall not be counted toward the minimum landscaping requirements unless adjacent to at least one (1) landscape strip and serves as a pedestrian pathway.*

*3. Artificial plants are prohibited in any required landscaped area.*

**Response:** Landscaped areas are proposed to include features such as the following:

- Fencing, gabion walls, and board-form finish concrete walls around the perimeter of the developed area of the site (Exhibit A, Sheets B-001 through B-004 and B-073 through B-078);
- Long-term graveling in the temporary staging area in the southwestern portion of the site (i.e. 'Storage Yard'), located between preserved vegetation and trees along the southwestern border of the site and in and around the large contiguous wetland in the southeastern border of the site (Planting Overall Plan, Exhibit A, Sheet B-030); and
- Benches, ornamental stone veneer walls, and stormwater basins in the courtyard areas at the front and back entrances of the Administration Building (Exhibit A, Sheets B-005 through B-007 and B-057 through B-059).

The proposed forest platform (Exhibit A, Sheets B-007 and B-059) features pervious grating and includes an impervious roof over a portion of it, but is elevated, allowing for vegetation and drainage around and under it. Artificial plants are not proposed in any landscaped areas.

Therefore, these standards are met.



*16.92.030 - Site Area Landscaping and Perimeter Screening Standards*

*A. Perimeter Screening and Buffering*

*1. Perimeter Screening Separating Residential Zones:*

*A minimum six-foot high sight-obscuring wooden fence, decorative masonry wall, or evergreen screen, shall be required along property lines separating single and two-family uses from multi-family uses, and along property lines separating residential zones from commercial, institutional/public or industrial zones subject to the provisions of Chapter 16.48.020 (Fences, Walls and Hedges).*

**Response:** The proposed development does not abut and is not adjacent to residential zones. Therefore, these standards are not applicable.

*2. Perimeter Landscaping Buffer*

*a. A minimum ten (10) foot wide landscaped strip comprised of trees, shrubs and ground cover shall be provided between off-street parking, loading, or vehicular use areas on separate, abutting, or adjacent properties.*

**Response:** Proposed off-street, loading, and vehicular use areas are primarily internal to the site than near the borders of the site. Thus, setbacks and landscaped areas of more than 10 feet separate these areas from abutting and adjacent streets and properties. See the Overall Site Plan and the Planting Overall Plan (Exhibit A, Sheets B-017 and B-030). Therefore, this standard is met.

*b. The access drives to a rear lots in the residential zone (i.e. flag lot) shall be separated from abutting property(ies) by a minimum of forty-two-inch sight-obscuring fence or a forty-two-inch to an eight (8) feet high landscape hedge within a four-foot wide landscape buffer. Alternatively, where existing mature trees and vegetation are suitable, Review Authority may waive the fence/buffer in order to preserve the mature vegetation.*

**Response:** The proposed development is not in a residential zone. Therefore, this standard is not applicable.

*3. Perimeter Landscape Buffer Reduction*

*If the separate, abutting property to the proposed development contains an existing perimeter landscape buffer of at least five (5) feet in width, the applicant may reduce the proposed site's required perimeter landscaping up to five (5) feet maximum, if the development is not adjacent to a residential zone. For example, if the separate abutting perimeter landscaping is five (5) feet,*

*then applicant may reduce the perimeter landscaping to five (5) feet in width on their site so there is at least five (5) feet of landscaping on each lot.*

**Response:** A buffer reduction is not needed or requested. Therefore, this standard is not applicable.

*B. Parking Area Landscaping*

*2. Definitions*

*a. Parking Area Landscaping: Any landscaped area on the site that is not required as perimeter landscaping § 16.92.030 (Site Landscaping and Screening).*

*b. Canopy Factor*

*(1) Landscape trees are assigned a canopy factor to determine the specific number of required trees to be planted. The canopy factor is calculated based on the following formula:*

*Canopy Factor = Mature Height (in feet) × Canopy Spread (in feet) × Growth Rate Factor × .01*

*(2) Growth Rate Factor: The growth rate factor is three (3) for fast-growing trees, two (2) for medium growing trees, and one (1) for slow growing trees. The growth rate of a tree is identified in the "Suggested Plant Lists for Required Landscaping Manual."*

*4. Amount and Type of Required Parking Area Landscaping*

*a. Number of Trees required based on Canopy Factor*

*Small trees have a canopy factor of less than forty (40), medium trees have a canopy factor from forty (40) to ninety (90), and large trees have a canopy factor greater than ninety (90);*

*(1) Any combination of the following is required:*

- (i) One (1) large tree is required per four (4) parking spaces;*
- (ii) One (1) medium tree is required per three (3) parking spaces; or*
- (iii) One (1) small tree is required per two (2) parking spaces.*
- (iv) At least five (5) percent of the required trees must be evergreen.*

*(2) Street trees may be included in the calculation for the number of required trees in the parking area.*

**Response:** A minimum of 23 new trees are proposed from the entrance gate to the area around the Administration Building. A combination of 28 parking spaces are located in the publicly accessible parking area near the Administration Building and 12 parking spaces in the adjacent, but gated, internal

(staff) parking area respectively, for a total of 40 parking spaces in these areas.<sup>5</sup> Thus, the minimum of one tree per 2 parking spaces (20 trees) is exceeded. Four of the 23 trees are evergreen (Willamette Valley ponderosa pine), exceeding the 5 percent minimum. See the Planting Overall Plan and Planting Legend (Exhibit A, Sheets B-030 and B-042 through B-045).

Proposed street trees were not included in these calculations but provide green and vegetation in addition to the landscaping trees proposed on the site.

Therefore, these standards are met.

*b. Shrubs:*

*(1) Two (2) shrubs are required per each space.*

*(2) For spaces where the front two (2) feet of parking spaces have been landscaped instead of paved, the standard requires one (1) shrub per space. Shrubs may be evergreen or deciduous.*

*c. Ground cover plants:*

*(1) Any remainder in the parking area must be planted with ground cover plants.*

*(2) The plants selected must be spaced to cover the area within three (3) years. Mulch does not count as ground cover.*

**Response:** Landscaping the front two feet of parking spaces is not proposed. However, “enhanced” and “seeded lawn” interior site landscaping is proposed around the parking spaces, with the exception of the 11 overflow parking spaces proposed between the Administration Building and LIDA Facilities 8B and 8C. This landscaping includes shrubs such as Kelsey dogwood and red-flowering currant. The shrubs, long grasses, and other grasses proposed for the enhanced and seeded lawn site landscaping are designed to provide coverage of these small areas so that other ground cover planting will not be needed. See the Planting Overall Plan and Planting Legends in Exhibit A (Sheets B-30 and B-042 through B-043).

Therefore, these standards are met.

*5. Individual Landscape Islands Requirements*

*a. Individual landscaped areas (islands) shall be at least ninety (90) square feet in area and a minimum width of five (5) feet and shall be curbed to protect the landscaping.*

*b. Each landscape island shall be planted with at least one (1) tree.*

<sup>5</sup> Another 7 staff parking spaces are proposed in the gated interior of the site adjacent to the Overflow Basin and Recycled Pump Station structures, for a total of 47 marked parking spaces proposed on the site overall. Proximity to these structures and other structures limits tree planting; however, “interior site” landscaping is proposed. See the Planting Overall Plan and Planting Legends (Exhibit A, Sheet B-030 and B-042 through B-045).

*c. Landscape islands shall be evenly spaced throughout the parking area.*

*d. Landscape islands shall be distributed according to the following:*

*(1) Residential uses in a residential zone: one (1) island for every eight (8) contiguous parking spaces.*

*(2) Multi or mixed-uses, institutional and commercial uses: one (1) island for every ten (10) contiguous parking spaces.*

*(3) Industrial uses: one (1) island for every twelve (12) contiguous parking spaces.*

*e. Storm water bio-swales may be used in lieu of the parking landscape areas and may be included in the calculation of the required landscaping amount.*

**Response:** Proposed parking spaces for this industrial-scale use are laid out so there are no more than 9 contiguous parking spaces. Therefore, this standard is not applicable.

While this standard is not applicable, proposed parking spaces (not including overflow parking located in the PGE easement) are surrounded by landscaping described in previous responses, in addition to LIDA facilities proposed south and west of the overflow parking spaces. See the Planting Overall Plan (Exhibit A, Sheet B-030) and the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029).

*f. Exception to Landscape Requirement*

*Linear raised or marked sidewalks and walkways within the parking areas connecting the parking spaces to the on-site buildings may be included in the calculation of required site landscaping provide that it:*

*(1) Trees are spaced a maximum of thirty (30) feet on at least one (1) side of the sidewalk.*

*(2) The minimum unobstructed sidewalk width is at least six (6) feet wide.*

*(3) The sidewalk is separated from the parking areas by curbs, bollards, or other means on both sides.*

**Response:** On-site walkways and sidewalks do not need to be included in calculations in order to meet landscaping requirements. Therefore, these standards are not applicable.

*6. Landscaping at Points of Access*

*When a private access-way intersects a public right-of-way or when a property abuts the intersection of two (2) or more public rights-of-way, landscaping shall be planted and maintained so that minimum sight distances shall be preserved pursuant to Section 16.58.010.*

**Response:** Landscaping is proposed to comply with vision clearance standards in Section 16.58.010. See the responses to the criteria in Section 16.58.010. Therefore, this standard is met.

*7.Exceptions*

*a. For properties with an environmentally sensitive area and/or trees or woodlands that merit protection per Chapters 16.142 (Parks, Trees and Open Space) and 16.144 (Wetland, Habitat and Natural Areas) the landscaping standards may be reduced, modified or "shifted" on-site where necessary in order to retain existing vegetation that would otherwise be removed to meet the above referenced landscaping requirements.*

*b. The maximum reduction in required landscaping buffer permitted through this exception process shall be no more than fifty (50) percent. The resulting landscaping buffer after reduction may not be less than five (5) feet in width unless otherwise permitted by the underlying zone. Exceptions to the required landscaping may only be permitted when reviewed as part of a land use action application and do not require a separate variance permit.*

**Response:** The applicant is not seeking exceptions to landscaping standards. Therefore, these standards are not applicable.

*C. Screening of Mechanical Equipment, Outdoor Storage, Service and Delivery Areas*

*All mechanical equipment, outdoor storage and manufacturing, and service and delivery areas, shall be screened from view from all public streets and any adjacent residential zones. If unfeasible to fully screen due to policies and standards, the applicant shall make efforts to minimize the visual impact of the mechanical equipment.*

**Response:** As addressed in response to industrial building design criteria in Section 16.90.020.D.7, roof-mounted mechanical equipment on any parts of buildings within 200 feet of SW 124<sup>th</sup> Avenue or SW Blake Street are screened from view by rooflines and louvers.

Outdoor manufacturing is not proposed on the site. Outdoor storage that may occur in the southwestern portion of the site where temporary staging will be located will be significantly set back from SW Blake Street to the north (at least 200 feet), with a buffer of street trees, a planted visual corridor, and LIDA facilities 8B and 8C. The area will be set back (at least 50 feet) and buffered to the west by preserved trees and vegetation. The area will be set back (at least 35 feet) and buffered to the south by preserved trees and vegetation. The area will be set back (at least 1,000 feet) and buffered to the east by preserved trees, vegetation, Wetland G (large kolk pond), and the surrounding VC.

Service and delivery areas are internal to the site and significantly set back (from roughly 300 feet to 600 feet) from SW Blake Street and SW 124<sup>th</sup> Avenue. In addition to significant setbacks, these areas are

buffered and screened from the roadways by proposed street trees, topography, proposed fencing and walls, proposed visual corridor plantings, other proposed on-site plantings, and proposed buildings. The site is not adjacent to residential zones.

See Planting Overall Plan (Exhibit A, Sheet B-030), Tree Protection Overall Plan (Exhibit A, Sheet B-021), and Grading Plans (Exhibit A, Sheets B-126 and B-127

Therefore, these standards are met.

#### *D. Visual Corridors*

*Except as allowed by subsection 6. above, new developments shall be required to establish landscaped visual corridors along Highway 99W and other arterial and collector streets, consistent with the Natural Resources and Recreation Plan Map, Appendix C of the Community Development Plan, Part II, and the provisions of Chapter 16.142 (Parks, Trees, and Open Space). Properties within the Old Town Overlay are exempt from this standard.*

**Response:** Visual corridors on SW Blake Street and SW 124<sup>th</sup> Avenue will be established as proposed in response to criteria in Section 16.142.040 (Visual Corridors) and Chapter 16.84 (Variances). Therefore, this standard is met.

#### *16.92.040 - Installation and Maintenance Standards*

##### *A. Installation*

*All required landscaping must be in-ground, except when in raised planters that are used to meet minimum Clean Water Services storm water management requirements. Plant materials must be installed to current nursery industry standards. Plant materials must be properly supported to ensure survival. Support devices such as guy wires or stakes must not interfere with vehicular or pedestrian movement.*

**Response:** Required landscaping is proposed in-ground, in addition to landscaping that is proposed in stormwater and LIDA facilities. Plantings will be installed to current nursery standards and will be supported for survival. See the Planting Overall Plan and planting notes in Exhibit A (Sheets B-030 and B-042 through B-043). Therefore, this standard is and will be met.

##### *B. Maintenance and Mitigation of Landscaped Areas*

*1. Maintenance of existing non-invasive native vegetation is encouraged within a development and required for portions of the property not being developed.*



*2. All landscaping shall be maintained in a manner consistent with the intent of the approved landscaping plan.*

**Response:** Existing native vegetation will be preserved in a large contiguous section in the southeast portion of the site (marked by the large wetland and surrounding vegetation), as well as in a section along the southwest border of the site. See Tree Protection Plan in Exhibit A, Sheets B-021 through B-023. Landscaping will be maintained consistent with the approved landscaping plan. Therefore, these standards are and will be met.

*3. Any required landscaping trees removed must be replanted consistent with the approved landscaping plan and comply with § 16.142, (Parks, Trees and Open Space).*

**Response:** There are no existing required landscaping trees on the site (i.e., trees required to be planted consistent with a prior land use approval). Therefore, this standard is not applicable.

#### *C. Irrigation*

*The intent of this standard is to ensure that plants will survive the critical establishment period when they are most vulnerable due to lack of watering. All landscaped areas must provide an irrigation system, as stated in Option 1, 2, or 3.*

*1.Option 1: A permanent built-in irrigation system with an automatic controller installed.*

*2.Option 2: An irrigation system designed and certified by a licensed landscape architect or other qualified professional as part of the landscape plan, which provides sufficient water to ensure that the plants become established. The system does not have to be permanent if the plants chosen can survive independently once established.*

*3.Option 3: Irrigation by hand. If the applicant chooses this option, an inspection will be required one (1) year after final inspection to ensure that the landscaping has become established.*

**Response:** As indicated in Planting Note #9 (Exhibit A, Sheet B-043), temporary irrigation will be provided in order for the proposed water quality and restoration plants to get established, as determined by a licensed landscape architect. This proposed irrigation method is consistent with Option 2 above. Permanent irrigation is proposed for all other site and right-of-way planting, as indicated in the Irrigation Overall Plan (Exhibit A, Sheet B-060). This proposed irrigation method is consistent with Option 1 above. Therefore, this standard is met.

#### *D. Deferral of Improvements*

*Landscaping shall be installed prior to issuance of occupancy permits, unless security equal to one hundred twenty-five (125) percent of the cost of the landscaping is filed with the City.*

*"Security" may consist of a performance bond payable to the City, cash, certified check, or other assurance of completion approved by the City. If the installation of the landscaping is not completed within one (1) year, the security may be used by the City to complete the installation.*

**Response:** Landscaping is not proposed to be deferred. Therefore, this standard is not applicable.

*Chapter 16.94 - OFF-STREET PARKING AND LOADING*

*16.94.010 - General Requirements*

*A. Off-Street Parking Required*

*No site shall be used for the parking of vehicles until plans are approved providing for off-street parking and loading space as required by this Code. Any change in uses or structures that reduces the current off-street parking and loading spaces provided on site, or that increases the need for off-street parking or loading requirements shall be unlawful and a violation of this Code, unless additional off-street parking or loading areas are provided in accordance with Section 16.94.020, or unless a variance from the minimum or maximum parking standards is approved in accordance with Chapter 16.84 Variances.*

**Response:** It is understood that the WTP site shall not be used for parking until plans for off-street parking and loading are approved. Proposed off-street parking and loading are addressed in the responses to criteria in this Chapter and are shown in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). Change in uses or structures are not proposed. Therefore, this standard is met.

*B. Deferral of Improvements*

*Off-street parking and loading spaces shall be completed prior to the issuance of occupancy permits, unless the City determines that weather conditions, lack of available surfacing materials, or other circumstances beyond the control of the applicant make completion impossible. In such circumstances, security equal to one hundred twenty five (125) percent of the cost of the parking and loading area is provided the City. "Security" may consist of a performance bond payable to the City, cash, certified check, or other assurance of completion approved by the City. If the installation of the parking or loading area is not completed within one (1) year, the security may be used by the City to complete the installation.*

**Response:** Deferral of off-street parking and loading spaces is not proposed. Therefore, this standard is not applicable.

C. *Options for Reducing the Required Parking Spaces*

**Response:** A reduction of required parking spaces is not proposed. Therefore, these standards are not applicable.

D. *Prohibited Uses*

*Required parking, loading and maneuvering areas shall not be used for long-term storage or sale of vehicles or other materials, and shall not be rented, leased or assigned to any person or organization not using or occupying the building or use served.*

**Response:** Parking, loading, and maneuvering areas will not be used for storage or sales and will not be rented, leased, or otherwise assigned to parties outside WWSS employees and contractors. Therefore, this standard is and will be met.

E. *Location*

1. *Residential off-street parking spaces...*

**Response:** The proposed use is not a residential use. Therefore, this standard is not applicable.

2. *For other uses, required off-street parking spaces may include adjacent on-street parking spaces, nearby public parking and shared parking located within five hundred (500) feet of the use. The distance from the parking, area to the use shall be measured from the nearest parking space to a building entrance, following a sidewalk or other pedestrian route. The right to use private off-site parking must be evidenced by a recorded deed, lease, easement, or similar written notarized letter or instrument.*

**Response:** Required off-street parking can be fully provided on-site, as demonstrated in responses to off-street parking below. Therefore, this standard is not applicable.

3. *Vehicle parking is allowed only on improved parking shoulders that meet City standards for public streets, within garages, carports and other structures, or on driveways or parking lots that have been developed in conformance with this code. Specific locations and types of spaces (car pool, compact, etc.) for parking shall be indicated on submitted plans and located to the side or rear of buildings where feasible.*

**Response:** Vehicle parking is proposed in parking areas on the WTP site designed in conformance with this code, as demonstrated in other responses to standards in this Chapter. Specific types of proposed off-street parking spaces are one ADA-accessible space near the entrance of the Administration Building

and 11 compact spaces that provide overflow parking southwest of the Administration Building, as indicated on the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029).

The parking for the most public WTP building – the Administration Building – can feasibly only be located to the front of the building given the tight development layout in the northern portion of the site. However, the parking is broken up into sections, has landscaping, and is significantly set back and screened from SW Blake Street. See the visualization from SW Blake Street and inside the fence line in Exhibit A (Sheets B-004 through B-006).

Therefore, these standards are met.

*a. All new development with forty (40) employees or more shall include preferential spaces for carpool/vanpool designation. Carpool and vanpool parking spaces shall be located closer to the main employee entrance than all other parking spaces with the exception of ADA parking spaces. Carpool/vanpool spaces shall be clearly marked as reserved for carpool/vanpool only.*

**Response:** It is estimated that the WTP will employ approximately 25 people. Therefore, this standard is not applicable.

*b. Existing development may redevelop portions of designated parking areas for multi-modal facilities (transit shelters, park and ride, and bicycle parking), subject to meeting all other applicable standards, including minimum space standards.*

**Response:** Redevelopment of an existing development is not proposed. Therefore, this standard is not applicable.

*F. Marking*

*All parking, loading or maneuvering areas shall be clearly marked and painted. All interior drives and access aisles shall be clearly marked and signed to show the direction of flow and maintain vehicular and pedestrian safety.*

**Response:** Parking and outdoor loading areas (two uncovered loading spaces) will be marked and painted, and circulation areas will be directionally marked and signed for truck routing and authorized personnel and emergency access, as shown in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). There are two loading areas that are covered, pull-through areas – one associated with the Chemical Building and one with the Dewatering Building – that will not need to be marked and painted.

*G. Surface and Drainage*

- 1. All parking and loading areas shall be improved with a permanent hard surface such as asphalt, concrete or a durable pervious surface. Use of pervious paving material is encouraged and preferred where appropriate considering soils, location, anticipated vehicle usage and other pertinent factors.*
- 2. Parking and loading areas shall include storm water drainage facilities approved by the City Engineer or Building Official.*

**Response:** Given large vehicle use of the circulation and loading areas, the areas will be surfaced with asphalt or concrete, as noted on the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). Parking and loading areas will include stormwater drainage facilities, including piping and on-site LIDA facilities. See Grading Plan Area A2 (Exhibit A, Sheet B-129). Therefore, these standards are met.

*H. Repairs*

*Parking and loading areas shall be kept clean and in good repair. Breaks in paved surfaces shall be repaired. Broken or splintered wheel stops shall be replaced. Painted parking space boundaries and directional symbols shall be maintained in a readable condition.*

**Response:** Parking and loading areas will be maintained and kept in good repair. Therefore, this standard will be met.

*I. Parking and Loading Plan*

*An off-street parking and loading plan, drawn to scale, shall accompany requests for building permits or site plan approvals, except for single and two-family dwellings, and manufactured homes on residential lots. The plan shall show but not be limited to:*

- 1. Delineation of individual parking and loading spaces and dimensions.*
- 2. Circulation areas necessary to serve parking and loading spaces.*
- 3. Location of accesses to streets, alleys and properties to be served, and any curb cuts.*
- 4. Landscaping as required by Chapter 16.92.*
- 5. Grading and drainage facilities.*
- 6. Signing and bumper guard specifications.*
- 7. Bicycle parking facilities as specified in Section 16.94.020.C.*
- 8. Parking lots more than one (1) acre in size shall provide street-like features including curbs, sidewalks, and street trees or planting strips.*

**Response:** Proposed parking spaces (with wheel stops), loading areas, circulation areas, road (SW Blake Street) accesses, and bicycle parking are shown in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). Proposed landscaping is presented in the Planting Overall Plan and Planting Legends and Notes (Exhibit A, Sheets B-030, B-042 and B-043). Grading and drainage facilities are shown in the Grading Plan for Areas A1 through A9 (Exhibit A, Sheet B-127) and Erosion Control Area A (Exhibit A, Sheet B-108). Therefore, these standards are met.

Per the Transportation/Circulation Plan, parking spaces are not all clustered into one parking area and the primary parking area in front of the Administration Building is not more than 1 acre. Therefore, Standard 8 above is not applicable.

*J. Parking Districts*

*The City may establish a parking district (i.e., permits or signage) in residential areas in order to protect residential areas from spillover parking generated by adjacent commercial, employment or mixed-use areas, or other uses that generate a high demand for parking. The district request shall be made to the City Manager, who will forward a recommendation to the City Council for a decision.*

**Response:** The WTP is not in or adjacent to a residential area. Therefore, this standard is not applicable.

*K. Structured parking and on-street parking are exempt from the parking space maximums in Section 16.94.020.A.*

**Response:** Structured parking and on-street parking are not proposed. Therefore, this standard is not applicable.

*16.94.020 - Off-Street Parking Standards*

*A. Generally*

*Where square feet are specified, the area measured shall be the gross building floor area primary to the functioning of the proposed use. Where employees are specified, persons counted shall be those working on the premises, including proprietors, during the largest shift at peak season. Fractional space requirements shall be counted as a whole space. The Review Authority may determine alternate off - street parking and loading requirements for a use not specifically listed in this Section based upon the requirements of comparable uses.*

*Table 1: Minimum and Maximum Parking Standards*

*(Metro spaces are based on 1 per 1,000 sq ft of gross leasable area)*



	<i>Minimum Parking Standard</i>	<i>Maximum Permitted Parking Zone A <sup>1</sup></i>	<i>Maximum Permitted Parking Zone B <sup>2</sup></i>
<i>Industrial</i>	<i>1.6</i>	<i>None</i>	<i>None</i>

**Response:** The Administration Building (9,634 square feet); the Maintenance portion of the UV, Switchgear, and Maintenance Building (approximately 4,100 square feet); and the Dewatering Building (5,148 square feet) comprise the gross area of the proposed development that will be occupied by plant operators and staff and, thus, is the area that will be “primary to the functioning of the proposed use.” At 18,882 square feet, 31 parking spaces will be required pursuant to this standard. A total of 47 marked parking spaces are proposed (Exhibit A, Sheet B-017). Therefore, this standard is met.

In addition, there are also approximately 20 spaces of unmarked parallel parking available on the edge of Road A opposite the Chemical Building, Outdoor Chemical Facilities, and UV, Switchgear, and Maintenance Building (labeled in the Transportation/Circulation Plan).

*B. Dimensional and General Configuration Standards*

*1. Dimensions For the purpose of this Chapter, a "parking space" means a stall nine (9) feet in width and twenty (20) feet in length. Up to twenty five (25) percent of required parking spaces may have a minimum dimension of eight (8) feet in width and eighteen (18) feet in length so long as they are signed as compact car stalls.*

**Response:** Proposed, marked parking spaces (47 in total) have dimensions of 9 feet by 20 feet as noted in Transportation/Circulation Plan 1 (Exhibit A, Sheet B-028). Therefore, this standard is met.

*2. Layout*

*Parking space configuration, stall and access aisle size shall be of sufficient width for all vehicle turning and maneuvering. Groups of more than four (4) parking spaces shall be served by a driveway so as to minimize backing movements or other maneuvering within a street, other than an alley. All parking areas shall meet the minimum standards shown in the following table and diagram.*

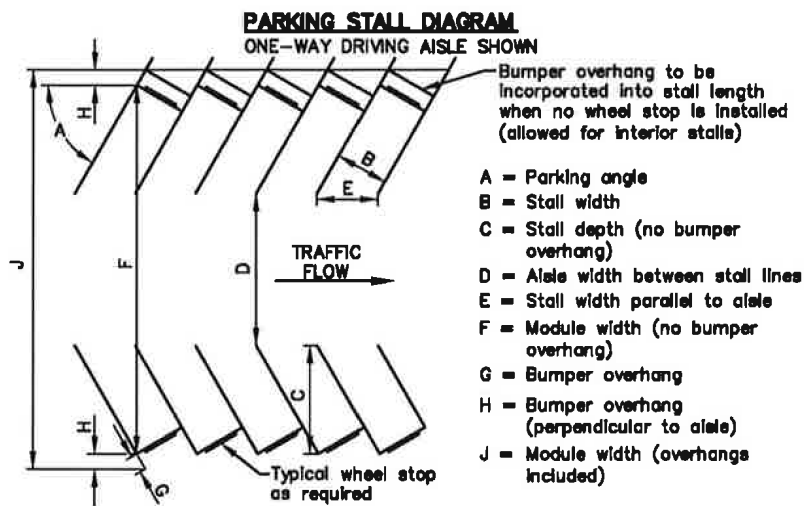


Table 2: Minimum Parking Dimension Requirements

One-Way Driving Aisle (Dimensions in Feet)

A	B	C	D	E	F	G	H	J
45°	8.0	16.5	13.0	11.3	46.0	3.0	2.5	51.0
	9.0	18.5	12.0	12.7	49.0	3.0	2.5	54.0
60°	8.0	17.0	18.0	9.2	52.0	3.0	2.5	57.0
	9.0	19.5	16.0	10.4	55.0	3.0	2.5	60.0
75°	8.0	16.5	26.0	8.3	59.0	3.0	3.0	65.0
	9.0	19.0	23.0	9.3	61.0	3.0	3.0	67.0
90°	8.0	18.0	26.0	8.0	56.0	3.0	3.0	62.0
	9.0	20.0	24.0	9.0	58.0	3.0	3.0	64.0

Table 3: Two-Way Driving Aisle

(Dimensions in Feet)

A	B	C	D	E	F	G	H	J
45°	8.0	16.5	24.0	11.3	57.0	3.0	2.5	62.0
	9.0	18.5	24.0	12.7	61.0	3.0	2.5	66.0
60°	8.0	17.0	24.0	9.2	58.0	3.0	2.5	63.0
	9.0	19.5	24.0	10.4	63.0	3.0	2.5	68.0
75°	8.0	16.5	26.0	8.3	59.0	3.0	3.0	65.0
	9.0	19.0	24.0	9.3	62.0	3.0	3.0	68.0
90°	8.0	18.0	26.0	8.0	56.0	3.0	3.0	62.0
	9.0	20.0	24.0	9.0	58.0	3.0	3.0	64.0

**Response:** The proposed 90-degree parking includes both standard and compact parking spaces. The standard spaces have dimensions of 9 feet by 20 feet and the compact spaces (in the overflow parking area) have dimensions of 9 feet by 18 feet. All spaces will have wheel stops set 3 feet from the top of the parking space. Drive aisles are a minimum of 24 feet between rows of standard spaces and 26 feet between rows of compact spaces. See the Transportation/ Circulation Plans (Exhibit A, Sheets B-028 and B-029). Therefore, these standards are met.

3. *Wheel Stops*

a. *Parking spaces along the boundaries of a parking lot or adjacent to interior landscaped areas or sidewalks shall be provided with a wheel stop at least four (4) inches high, located three (3) feet back from the front of the parking stall as shown in the above diagram.*

b. *Wheel stops adjacent to landscaping, bio-swailes or water quality facilities shall be designed to allow storm water runoff.*

**Response:** Wheel stops set three feet back from the front of the parking space will be provided, as shown in Transportation/Circulation Plan 1 (Exhibit A, Sheet B-028). Wheel stops adjacent to landscaping will not restrict drainage from being directed to catch basin inlets. (See parking area drainage in Grading Plan Area A7 in Exhibit B, Sheet B-134.) Therefore, these standards are met.

*c. The paved portion of the parking stall length may be reduced by three (3) feet if replaced with three (3) feet of low lying landscape or hardscape in lieu of a wheel stop; however, a curb is still required. In other words, the traditional three-foot vehicle overhang from a wheel stop may be low-lying landscaping rather than an impervious surface.*

**Response:** Low-lying landscape or hardscape is not proposed in lieu of a wheel stop. Therefore, this standard is not applicable.

#### *4. Service Drives*

*Service drives shall be clearly and permanently marked and defined through use of rails, fences, walls, or other barriers or markers, and shall have minimum vision clearance area formed by the intersection of the driveway center line, the street right-of-way line, and a straight line joining said lines through points fifteen (15) feet from their intersection.*

**Response:** Two driveways (access points) are proposed for the site on SW Blake Street. The east driveway closest to SW 124<sup>th</sup> Avenue (Road D) is considered a secondary, emergency access – it will be gated and equipment to ensure access for emergency responders will be coordinated with TVF&R and the City. Road D will also be used infrequently for egress of trucks servicing the plant. Both driveways are clearly and permanently demarcated by curbs and sidewalks and provide vision clearance on each corner consistent with Chapter 16.58. See the Transportation/Circulation Plans and the Planting Overall Plan (Exhibit A, Sheets B-028 through B-030).

#### *5. Credit for On-Street Parking*

**Response:** Credit for on-street parking is not being sought. Therefore, this standard is not applicable.

#### *6. Reduction in Required Parking Spaces*

*Developments utilizing Engineered storm water bio-swales or those adjacent to environmentally constrained or sensitive areas may reduce the amount of required parking spaces by ten (10) percent when twenty-five (25) through forty-nine (49) parking spaces are required, fifteen (15) percent when fifty (50) and seventy-four (74) parking spaces are required and twenty (20) percent when more than seventy-five (75) parking spaces are required, provided the area that would have been used for parking is maintained as a habitat area or is generally adjacent to an environmentally sensitive or constrained area.*

**Response:** A reduction in required parking spaces is not being proposed. Therefore, this standard is not applicable.

7. *Parking Location and Shared Parking*

*Owners of off-street parking facilities may post a sign indicating that all parking on the site is available only for residents, customers and/or employees, as applicable.*

**Response:** It is understood that the owner may post signs indicating parking being available only to employees and visitors.

C. *Bicycle Parking Facilities*

1. *General Provisions*

a. *Applicability. Bicycle parking spaces shall be provided for new development, changes of use, and major renovations, defined as construction valued at twenty-five (25) percent or more of the assessed value of the existing structure.*

**Response:** Bicycle parking will be provided given the proposed development is new development. Therefore, this standard is met.

b. *Types of Spaces. Bicycle parking facilities shall be provided in terms of short-term bicycle parking and long-term bicycle parking. Short-term bicycle parking is intended to encourage customers and other visitors to use bicycles by providing a convenient and readily accessible place to park bicycles. Long-term bicycle parking provides employees, students, residents, commuters, and others who generally stay at a site for at least several hours a weather-protected place to park bicycles.*

**Response:** Eight short-term spaces will be provided near the entrance of the Administration Building (Transportation/Circulation Plans, Exhibit A, Sheets B-028 and B-029). This type and number of bicycle parking spaces is consistent with Standards c and d below. Therefore, this standard is met.

c. *Minimum Number of Spaces. The required total minimum number of bicycle parking spaces for each use category is shown in Table 4, Minimum Required Bicycle Parking Spaces.*

Table 4: Minimum Required Bicycle Parking Spaces

<b>Use Categories</b>	<b>Minimum Required Spaces</b>
<i>Industrial Categories</i>	
<i>Industrial</i>	<i>2 or 1 per 40 spaces, whichever is greater</i>

**Response:** Given 31 vehicle parking spaces are required, 2 bicycle parking spaces would be the greater and applicable minimum number of required bicycle parking spaces. As shown in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029), 2 bicycle parking spaces (1 rack) will be provided between a front and side entrance to the Administration Building. Therefore, this standard is met.

*d. Minimum Number of Long-term Spaces. If a development is required to provide eight (8) or more required bicycle parking spaces in Table 4, at least twenty-five (25) percent shall be provided as long-term bicycle with a minimum of one (1) long-term bicycle parking space.*

**Response:** Eight or more bicycle parking spaces are not required. Therefore, long-term bicycle parking spaces are not required, and this standard is not applicable.

*e. Multiple Uses. When there are two or more primary uses on a site, the required bicycle parking for the site is the sum of the required bicycle parking for the individual primary uses.*

**Response:** There are not multiple uses proposed on the site. Therefore, this standard is not applicable.

## *2. Location and Design.*

### *a. General Provisions*

*(1) Each space must be at least two (2) feet by six (6) feet in area, be accessible without moving another bicycle, and provide enough space between the rack and any obstructions to use the space properly.*

*(2) There must be an aisle at least five (5) feet wide behind all required bicycle parking to allow room for bicycle maneuvering. Where the bicycle parking is adjacent to a sidewalk, the maneuvering area may extend into the right-of-way.*

*(3) Lighting. Bicycle parking shall be at least as well lit as vehicle parking for security.*

*(4) Reserved Areas. Areas set aside for bicycle parking shall be clearly marked and reserved for bicycle parking only.*

*(5) Bicycle parking in the Old Town Overlay District can be located on the sidewalk within the right-of-way. A standard inverted "U shaped" or staple design is appropriate. Alternative, creative designs are strongly encouraged.*

*(6) Hazards. Bicycle parking shall not impede or create a hazard to pedestrians. Parking areas shall be located so as to not conflict with vision clearance standards.*

**Response:** Eight bicycle parking spaces (four racks) are proposed near the front of the Administration Building in an extended corner between two rows of vehicle parking See the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029).

- Dimensions – The proposed spaces are 8 feet by 2 feet and at least 5 feet of space is provided on either side of where the racks are proposed.
- Lighting – As shown in the Photometric Site Plan Area A7 (Exhibit B, Sheet B-105), lighting levels in this area are similar to lighting levels for the rows of vehicle parking to either side of the bicycle parking.
- Reserved and hazards – Given the proposed location of racks in an extended corner between vehicle parking rows, the racks are out of the way (i.e., do not create impediments to pedestrian movement or intersection vision clearance) and are in a space that is easy to dedicate to bicycle parking only.

Therefore, these standards are met.

*b. Short-term Bicycle Parking*

*(1) Provide lockers or racks that meet the standards of this section.*

*(2) Locate inside or outside the building within thirty (30) feet of the main entrance to the building or at least as close as the nearest vehicle parking space, whichever is closer.*

**Response:** Proposed bicycle parking racks meet the standards of this Section, as demonstrated in the previous responses. The rack will be located in the entry courtyard of the Administration Building, as shown in the Transportation/ Circulation Plans (Exhibit A, Sheets B-028 and B-029). Therefore, these standards are met.

*c. Long-term Bicycle Parking*

*(1) Provide racks, storage rooms, or lockers in areas that are secure or monitored (e.g., visible to employees or customers or monitored by security guards).*

*(2) Locate the outside bicycle parking spaces within one hundred (100) feet of the entrance that will be accessed by the intended users.*

*(3) All of the spaces shall be covered.*

*d. Covered Parking (Weather Protection)*



*(1) When required, covered bicycle parking shall be provided in one (1) of the following ways: inside buildings, under roof overhangs or awnings, in bicycle lockers, or within or under other structures.*

*(2) Where required covered bicycle parking is not within a building or locker, the cover must be permanent and designed to protect the bicycle from rainfall and provide seven-foot minimum overhead clearance.*

*(3) Where required bicycle parking is provided in lockers, the lockers shall be securely anchored.*

**Response:** Long-term and covered bicycle parking are not required. Therefore, these standards are not applicable.

#### *16.94.030 - Off-Street Loading Standards*

##### *A. Minimum Standards*

*1. A driveway designed for continuous forward flow of passenger vehicles for the purpose of loading and unloading passengers shall be located on the site of any school, or other public meeting place, which is designed to accommodate more than twenty five (25) persons at one time.*

**Response:** The proposed use is not a school or public meeting place needing to accommodate more than 25 persons at one time. Therefore, this standard is not applicable.

*2. The minimum loading area for non-residential uses shall not be less than ten (10) feet in width by twenty-five (25) feet in length and shall have an unobstructed height of fourteen (14) feet.*

**Response:** Two covered and two uncovered loading spaces are proposed for this non-residential use. One covered and two uncovered spaces are located adjacent to the Chemical Building and Outdoor Chemical Facilities behind the Administration Building that have dimensions of 28 feet by 203 feet, 25 feet by 200 feet, and 24 feet by 80.5 feet. A covered loading space adjacent to the Dewatering Building is 35 feet by 71 feet. See the spaces labeled on the Transportation/ Circulation Plans (Exhibit A, Sheets B-028 and B-029). In terms of height, an unobstructed height of 14 feet is provided at the transition to the dewatering building interior (via roll-up doors) with a minimum vertical clearance of 16 feet maintained for all other portions of the covered unloading area. Therefore, this standard is met.

*3. Multiple uses on the same parcel or adjacent parcels may utilize the same loading area if it is shown in the development application that the uses will not have substantially overlapping delivery times.*

**Response:** Multiple uses are not proposed on the site. Therefore, this standard is not applicable.

4. *The following additional minimum loading space is required for buildings in excess of twenty thousand (20,000) square feet of gross floor area:*

a. *Twenty thousand (20,000) to fifty (50,000) sq. ft. - five hundred (500) sq. ft.*

b. *Fifty (50,000) sq. ft. or more - seven hundred fifty (750) sq. ft.*

**Response:** Pursuant to Subsection 2 above, a minimum loading area of 250 square feet is required. Two structures – the Filtration Building and the Clearwell – are between 20,000 square feet and 50,000 square feet, according to areas of buildings and structures on the WTP site presented in a table on the Facilities Key Plan (Exhibit A, Sheet B-018). Thus, an additional 1,000 square feet of loading space is required, for a total of 1,250 square feet required. Per the response to Subsection 2 above, a total of 14,940 square feet of loading space is proposed. Therefore, this standard is met.

*B. Separation of Areas*

*Any area to be used for the maneuvering of delivery vehicles and the unloading or loading of materials shall be separated from designated off-street parking areas and designed to prevent the encroachment of delivery vehicles onto off-street parking areas or public streets. Off-street parking areas used to fulfill the requirements of this Chapter shall not be used for loading and unloading operations.*

**Response:** Four loading areas are proposed as part of or adjacent to the Dewatering Building, the Chemical Building, and the Outdoor Chemical Facilities, as labeled in the Transportation/ Circulation Plans (Exhibit A, Sheets B-028 and B-029). These areas are separated from the marked off-street parking spaces shown in the Transportation/Circulation Plans and will serve to avoid off-street parking spaces being used for loading and unloading operations. Therefore, this standard is met.

*C. Exceptions and Adjustments.*

*The review authority, through Site Plan Review, may approve loading areas within a street right-of-way in the Old Town Overlay District when all of the following conditions are met...*

**Response:** The proposed site is not in the Old Town Overlay District. Therefore, this standard is not applicable.

*Chapter 16.96 - ON-SITE CIRCULATION*

*16.96.010 - On-Site Pedestrian and Bicycle Circulation*

*B. Maintenance*

*No building permit or other City permit shall be issued until plans for ingress, egress and circulation have been approved by the City. Any change increasing any ingress, egress or circulation requirements, shall be a violation of this Code unless additional facilities are provided in accordance with this Chapter.*

**Response:** Plans for ingress, egress, and circulation on the WTP site presented in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029) are proposed for City review and approval. Given that the site is not currently developed and ingress, egress, and circulation do not exist, no changes to ingress, egress, or circulation are proposed. Therefore, this standard is met.

*C. Joint Access*

*Two (2) or more uses, structures, or parcels of land may utilize the same ingress and egress when the combined ingress and egress of all uses, structures, or parcels of land satisfied the other requirements of this Code, provided that satisfactory legal evidence is presented to the City in the form of deeds, easements, leases, or contracts to clearly establish the joint use.*

**Response:** Two or more uses or parcels are not proposed to use the same ingress and egress. Therefore, this standard is not applicable.

*D. Connection to Streets*

- 1. Except for joint access per this Section, all ingress and egress to a use or parcel shall connect directly to a public street, excepting alleyways with paved sidewalk.*
- 2. Required private sidewalks shall extend from the ground floor entrances or the ground floor landing of stairs, ramps or elevators to the public sidewalk or curb of the public street which provides required ingress and egress.*

**Response:** The two proposed driveways on the WTP site connect directly to a public street – a new street (SW Blake Street) that the applicant will construct. As indicated in arrows in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029), the sidewalk on the new SW Blake Street will connect to the entrance of the Administration Building and the forest platform via the western driveway and on-site pedestrian walkways. Therefore, this standard is met.

*E. Maintenance of Required Improvements*

*Required ingress, egress and circulation improvements shall be kept clean and in good repair.*

**Response:** The owner will keep the proposed ingress, egress, and circulation clean and in good repair. Therefore, this standard will be met.

*F. Access to Major Roadways*

*Points of ingress or egress to and from Highway 99W and arterials designated on the Transportation Plan Map, attached as Appendix C of the Community Development Plan, Part II, shall be limited as follows:*

- 1. Single and two-family uses and manufactured homes on individual residential lots developed after the effective date of this Code shall not be granted permanent driveway ingress or egress from Highway 99W and arterial roadways. If alternative public access is not available at the time of development, provisions shall be made for temporary access which shall be discontinued upon the availability of alternative access.*
- 2. Other private ingress or egress from Highway 99W and arterial roadways shall be minimized. Where alternatives to Highway 99W or arterials exist or are proposed, any new or altered uses developed after the effective date of this Code shall be required to use the alternative ingress and egress.*
- 3. All site plans for new development submitted to the City for approval after the effective date of this Code shall show ingress and egress from existing or planned local or collector streets, consistent with the Transportation Plan Map and Section VI of the Community Development Plan.*

**Response:** The site's ingress and egress are proposed on SW Blake Street, as shown in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). SW Blake Street, a new street that the applicant will construct, has been planned and designated as a collector street in the 2010 TEA Concept Plan, 2014 Sherwood Transportation System Plan, and 2015 TEA Implementation Plan. Ingress and egress on Highway 99W and arterial streets are not proposed. Therefore, this standard is met.

*G. Service Drives*

*Service drives shall be provided pursuant to Section 16.94.030.*

**Response:** Designed primarily as an emergency access, the eastern driveway on the WTP site may be considered a service drive. The response to the criterion in Section 16.94.030 demonstrates its compliance. Therefore, this standard is met.

*16.96.020 Minimum - Residential standards*

**Response:** The proposed development is not residential. Therefore, these standards are not applicable.

*16.96.030 - Minimum Non-Residential Standards*

*Minimum standards for private, on-site circulation improvements in non-residential developments:*

*A. Driveways*

*1. Commercial: Improved hard surface driveways are required as follows:*

**Response:** The proposed development is not commercial. Therefore, these standards are not applicable.

*2. Industrial: Improved hard surfaced driveways are required as follows:*

Required		Minimum Width	
Parking Spaces	# Driveways	One-Way Pair	Two-Way
1 - 249	1	15 feet	24 feet
250 & above	2	15 feet	24 feet

**Response:** The western two-way driveway (Road A) will be the publicly accessible, primary entrance to the WTP site. The eastern two-way driveway (Road D) will generally be considered an emergency access, with occasional usage by delivery and service trucks leaving the site. Forty-seven marked parking spaces are proposed on the WTP site. According to the table above, two-way driveways are required to be a minimum of 24 feet wide. The western driveway is approximately 40 feet wide and the eastern driveway is approximately 30 feet wide, as shown in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). Therefore, this standard is met.

*3. Surface materials are encouraged to be pervious when appropriate considering soils, anticipated vehicle usage and other pertinent factors.*

**Response:** The on-site circulation will be used by trucks, including large trucks, which require asphalt and concrete surface materials. Pervious pavers are typically not considered as durable as concrete pavement designed to accommodate heavy truck loads on a regular basis. Pervious surfaces wear down more quickly, are not ideal for high-traffic areas, and require additional long term maintenance to keep

pervious surfaces from clogging. Pervious pavers were considered for the site; however, infiltration rates (shallow bedrock) and costs of pervious pavers drove a design decision to not use this type of surface material.

*B. Sidewalks and Curbs*

*1. A private pathway/sidewalk system extending throughout the development site shall be required to connect to existing development, to public rights-of-way with or without improvements, to parking and storage areas, and to connect all building entrances to one another. The system shall also connect to transit facilities within five hundred (500) feet of the site, future phases of development, and whenever possible to parks and open spaces.*

**Response:** An on-site pedestrian walkway system, shown in the Transportation/ Circulation Plans (Exhibit A, Sheets B-028 and B-029), connects SW Blake Street to the Administration Building and forest platform. The walkways also connect to visitor vehicle and bicycle parking in front of the Administration Building. Other buildings on-site will be accessible only to the small number of WTP employees (gated areas), which they can access via an internal roadway system.

There are no transit facilities within 500 feet of the site nor future phases of development beyond the proposed site footprint with which to connect. While there are also no proximate parks and open spaces, the pedestrian connection of the site to SW Blake Street leads, in turn, to sidewalk connections on SW Blake Street and SW 124<sup>th</sup> Avenue to SW Tualatin-Sherwood Road. Sidewalks on this part of SW Tualatin-Sherwood Road are part of the Tonquin Ice Age Trail system.

Therefore, this standard is met.

*2. Curbs shall also be required at a standard approved by the Hearing Authority.*

**Response:** Standard curbs will be provided for the pedestrian circulation system on the WTP site (including connections between SW Blake Street, the Administration Building, the forest platform, and parking), which should satisfy Hearing Authority requirements. The pedestrian circulation system is indicated in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). Therefore, this standard is met.

*3. Private Pathway/Sidewalk Design. Private pathway surfaces shall be concrete, asphalt, brick/masonry pavers, or other pervious durable surface. Primary pathways connecting front entrances to the right of way shall be at least 6 feet wide and conform to ADA standards. Secondary pathways between buildings and within parking areas shall be a minimum of four (4) feet wide and/or conform to ADA standards. Where the system crosses a parking area, driveway*

*or street, it shall be clearly marked with contrasting paving materials or raised crosswalk (hump). At a minimum all crosswalks shall include painted striping.*

**Response:** As noted in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029), on-site pedestrian walkways will be at least 6 feet wide. The walkways will be built to ADA standards, including ramps, and will have concrete surfaces. The four locations where the pedestrian circulation system crosses parking areas and internal roadways will be clearly marked with painted striping and either contrasting paving materials or raised paving, as noted in the Transportation/Circulation Plans. Therefore, this standard is met.

*4. Exceptions. Private pathways/sidewalks shall not be required where physical or topographic conditions make a connection impracticable, where buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or pathways would violate provisions of leases, restrictions or other agreements.*

**Response:** There are no topographic conditions, existing development, and legal restrictions that preclude pedestrian connections between publicly accessible areas of the WTP site and SW Blake Street. Therefore, this standard is not applicable.

#### *16.96.040 - On-Site Vehicle Circulation*

##### *A. Maintenance*

*No building permit or other City permit shall be issued until plans for ingress, egress and circulation have been approved by the City. Any change increasing any ingress, egress or circulation requirements, shall be a violation of this Code unless additional facilities are provided in accordance with this Chapter.*

**Response:** Proposed plans for ingress, egress, and circulation are included in this application for City review and approval. There are no existing facilities to which to request changes. Therefore, this standard is met.

##### *B. Joint Access [See also Chapter 16.108]*

*Two (2) or more uses, structures, or parcels of land are strongly encouraged to utilize jointly the same ingress and egress when the combined ingress and egress of all uses, structures, or parcels of land satisfy the other requirements of this Code, provided that satisfactory legal evidence is presented to the City in the form of deeds, easements, leases, or contracts to clearly establish the joint use. In some cases, the City may require a joint access to improve safety, vision clearance, site distance, and comply with access spacing standards for the applicable street classification.*



**Response:** There are no adjacent uses, structures, or parcels with which to share access. Therefore, joint access is not proposed, and this standard is not applicable.

*C. Connection to Streets*

*1. Except for joint access per this Section, all ingress and egress to a use or parcel shall connect directly to a public street, excepting alleyways.*

*2. Required private sidewalks shall extend from the ground floor entrances or the ground floor landing of stairs, ramps or elevators to the public sidewalk or curb of the public street which provides required ingress and egress.*

**Response:** The two proposed driveways on the WTP site connect directly to a public street – the new SW Blake Street that the applicant will construct. As indicated in the Transportation/Circulation Plan (Exhibit A, Sheets B-028 and B-029), the sidewalk on the new SW Blake Street will connect to the entrance of the Administration Building and the forest platform via the western driveway and on-site pedestrian walkways. Therefore, this standard is met.

*D. Maintenance of Required Improvements*

*Required ingress, egress and circulation improvements shall be kept clean and in good repair.*

**Response:** The owner will keep the proposed ingress, egress, and circulation clean and in good repair. Therefore, this standard will be met.

*E. Service Drives*

*Service drives shall be provided pursuant to Section 16.94.030.*

**Response:** Designed primarily as an emergency access, the eastern driveway on the WTP site may be considered a service drive. The response to the criterion in Section 16.94.030 demonstrates its compliance. Therefore, this standard is met.

*Chapter 16.98 - ON-SITE STORAGE*

*16.98.010 - Recreational Vehicles and Equipment*

**Response:** Recreational vehicles and equipment will not be stored on the WTP site. Therefore, this standard is not applicable.

*16.98.020 - Solid Waste and Recycling Storage*

*All uses shall provide solid waste and recycling storage receptacles which are adequately sized to accommodate all solid waste generated on site. All solid waste and recycling storage areas and receptacles shall be located out of public view. Solid waste and recycling receptacles for multi-family, commercial, industrial and institutional uses shall be screened by six (6) foot high sight-obscuring fence or masonry wall and shall be easily accessible to collection vehicles.*

**Response:** The proposed waste and recycling storage enclosure will be adjacent to the Flash Mix, Flow Split, and Flocculation Building and the staff parking area, as shown in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). The enclosure will be a minimum 6 feet high by 10 feet deep by 20 feet wide, with CMU side walls and concrete back wall (against basin) and full-width chain link gates, consistent with Pride Disposal & Recycling standards. The enclosure area will also be obscured from public view given its location beyond the security fence between the Administration Building and the Flash Mix, Flow Split, and Flocculation Building. Access to the enclosure area will be via the primary entrance (western driveway) on SW Blake Street and through the secured staff parking area, passage to which will be granted by WTP staff. More than 75 feet of unobstructed access that is required by Pride Disposal & Recycling in front of the enclosure will be provided, based on dimensions noted in the Transportation/Circulation Plan. Therefore, this standard is met.

*16.98.030 - Material Storage*

*A. Generally. Except as otherwise provided herein, external material storage is prohibited, except in commercial and industrial zones where storage areas are approved by the Review Authority as part of a site plan or per Section 16.98.040.*

**Response:** A long-term outdoor storage yard is proposed in the southwestern portion of the site where temporary staging will be located during construction. See the Construction Staging and Storage Areas Plan (Exhibit A, Sheet B-019). This storage yard will be significantly set back from SW Blake Street to the north (at least 200 feet), with a buffer of street trees, a planted visual corridor, and LIDA facilities 8B and 8C. The area will be set back (at least 50 feet) and buffered to the west by preserved trees and vegetation. The area will be set back (at least 35 feet) and buffered to the south by preserved trees and vegetation. The area will be set back (at least 1,000 feet) and buffered to the east by preserved trees, vegetation, Wetland G (large kolk pond), and the surrounding VC. See the Planting Overall Plan and Tree Protection Overall Plan (Exhibit A, Sheets B-030 and B-021). As allowed for in the EI industrial zone, it is requested that the Review Authority approve this storage yard as part of the WTP site plan.

*B. Standards. Except as per Section 16.98.040, all service, repair, storage, and merchandise display activities carried on in connection with any commercial or industrial activity, and not conducted within an enclosed building, shall be screened from the view of all adjacent properties*

*and adjacent streets by a six (6) foot to eight (8) foot high, sight obscuring fence subject to chapter 16.58.020. In addition, unless adjacent parcels to the side and rear of the storage area have existing solid evergreen screening or sight-obscuring fencing in place, new evergreen screening no less than three (3) feet in height shall be planted along side and rear property lines. Where other provisions of this Code require evergreen screening, fencing, or a landscaped berm along side and rear property lines, the additional screening stipulated by this Section shall not be required.*

**Response:** A long-term outdoor storage yard is proposed in the southwestern portion of the site where temporary staging will be located during construction, as shown in the Construction Staging and Storage Areas Plan (Exhibit A, Sheet B-019). This storage yard will be significantly set back from SW Blake Street to the north (at least 200 feet), with a buffer of street trees, a planted visual corridor, and LIDA facilities 8B and 8C. The area will be set back and buffered to the west and south by preserved trees and vegetation, as well as a LIDA stormwater facility to the south. The area will be set back and buffered to the east by preserved trees, vegetation, large kolk wetland, and the surrounding VC. See the Tree Protection Overall Plan (Exhibit A, Sheet B-021) and the Planting Overall Plan (Exhibit A, Sheet B-030). Therefore, the proposal is consistent with the screening required by this standard.

*C. Hazardous Materials. Storage of hazardous, corrosive, flammable, or explosive materials, if such storage is otherwise permitted by this Code, shall comply with all local fire codes, and Federal and State regulations.*

**Response:** Water treatment processes require on-site storage, and use of chemicals, delivered by commercial tanker trucks, cryogenic tanker trucks, or flatbed trucks with expected frequencies ranging from once every two weeks to once annually.

The WTP is designed with several layers of protection (prevention and response) associated with “potential facilities failures” for the types of substances listed above, including:

- Interior containment sumps in chemical storage areas: Within the main Chemical Facilities, storage tanks are elevated above fixed, secondary containment sumps sized for over 100 percent of the full working tank volume. This strategy mitigates potential hazards associated with interior chemical storage failures impacting the public.
- Outdoor chemical containment sumps: Immediately outside of the main chemical facilities, a common “drive aisle” is provided for accepting, and safely facilitating, bulk chemical deliveries. Each chemical area (within the main Chemical Facilities) is provided with a dedicated outdoor chemical containment sump beneath the common drive aisle to capture any potential leaks/ruptures of chemical delivery trucks during delivery. This strategy mitigates potential hazards associated with chemical delivery failures impacting the public.

- Dedicated leak containment at discrete points of chemical injection: At all locations where treatment process chemicals are continuously injected into closed vessels or pipes, curbed containment is provided (with leak detection) to capture incidental volumes and allow plant personnel to respond in a controlled manner to address any potentially hazardous conditions that develop. This strategy mitigates potential hazards associated with chemical injection failures impacting the public.
- Environmental monitoring of outdoor chemical storage areas: Within outdoor chemical storage areas, environmental monitoring for potentially hazardous compounds (e.g., carbon monoxide, oxygen, etc.) is provided through dedicated monitoring that will alarm locally and at the plant's central control room. This strategy mitigates potential hazards associated with outdoor chemical storage failures impacting the public.

In addition to the process treatment chemicals listed above, other substances that will be subject to periodic delivery and/or pick-up at the WTP site, include the following:

- Mechanically dewatered solids (MDS) are designed to be collected in containers that are hauled off-site for disposal at a regional landfill. Personal protective equipment (PPE) to be used by plant staff while handling MDS on-site will mitigate potential hazards associated with MDS hauling impacting the public.
- Microsand (SND) is associated with the ballasted flocculation (high-rate clarification) treatment process and is an inert solid. There are no potential hazards to the public associated with its delivery, offloading (in contained supersacks), or handling – all of which will be accomplished indoors within a secured portion of the site.
- Diesel Fuel Oil (DFO) is exclusively used for stand-by generators that are needed only if primary power – in this case, from a new, adjacent regional substation – is lost. Though not expected to be used frequently, the standby generation system is critical to meeting resiliency goals established for the overall WWSS. As such, delivery, storage, and handling provisions such as secondary containment and dedicated oil/water separation are provided at the standby generator and diesel fuel oil storage area to effectively mitigate potential hazards to the public.

The measures outlined above will ensure compliance with applicable local fire codes as well as applicable federal and state regulations. Therefore, this standard is met.

*16.98.040 - Outdoor Sales and Merchandise Display*

**Response:** Outdoor sales and merchandise displays are not proposed. Therefore, this standard is not applicable.

*Chapter 16.100 - PERMANENT SIGNS*

*16.100.010 - Common Regulations*

*A. Sign Permits*

*1. Except as otherwise provided in this Section and in Chapter 16.102, a person may not construct, install, structurally alter or relocate any sign without first obtaining an administrative sign permit from the City as required by Chapter 16.72, including payment of the fee required by Section 16.74.010. In addition, all permitted illuminated signs are subject to the provisions of the State Electrical Code and any applicable permit fees.*

**Response:** This application includes a request for a sign permit, consistent with Chapter 16.72. The proposed sign will not be installed before securing this permit.

*B. Sign Application.*

*1. Application for a sign permit shall be made upon forms provided by the City and shall include the following information:*

*a. Name, address and telephone number of the applicant. Name, address, telephone number and signature of the property owner.*

*b. Location of the building structure, lot or parcel to which or upon which the sign is to be attached or erected.*

*c. A scaled drawing showing sign design including colors, dimensions, sign size, height above ground, method of attachment, construction and materials, type, source and intensity of illumination and the relationship to any building to which the sign will be attached.*

*d. A plot plan drawn to scale indicating the location of all buildings, property lines, existing signs, street lights, easements, and overhead power lines on the same premises.*

*e. Name, address and telephone number of the person or firm who will erect, construct and maintain the sign.*

**Response:** Forms completed with applicant and property owner information and signatures are included in this application package. These are the same parties that will be constructing and maintaining the sign.

The proposed sign will be located on a wall at the primary entrance (western driveway) for the WTP site. The location is indicated in the Hardscape Area A7 Plan (Exhibit A, Sheet B-053). An illustration of the sign design – including materials, dimensions, and height above ground – is provided in an elevation in Exhibit A (Sheet B-078).

Buildings, property lines, street lights, and easements are shown in the Overall Site Plan, Photometrics Site Plan, and Site Utilities Layout Plan Area A (Exhibit A, Sheets B-017, B-098 and B-144). There are no existing signs on the site or overhead power lines on the site, with the exception of the PGE corridor that runs through the site but not over the proposed sign location.

Therefore, these standards are met.

*C. Exceptions*

*1. The following signs do not require a permanent sign permit but shall conform to all other applicable provisions of this Chapter:*

- a. Traffic signs installed per the Manual of Uniform Traffic Control Devices and other federal, state and local traffic sign regulations.*
- b. Changes to the copy of a legally erected, painted or printed advertising sign, theater marquee or similar sign specifically designed for the use of replaceable copy that does not alter the dimensions of the sign.*
- c. On-site painting, repainting, cleaning and normal maintenance and repair of a sign.*
- d. A sign not exceeding four (4) square feet in size when cut into any masonry surface or when constructed of bronze or other noncombustible materials.*
- e. A sign that is accessory to a construction site and construction activities that does not exceed thirty-two (32) square feet in area, provided that such sign is removed within thirty (30) days from date of issuance of the final occupancy permit or within two (2) years, whichever is less.*
- f. Portable/temporary signs allowed per Chapter 16.102.*
- g. Public utility signs and other signs required by law.*
- h. Signs on private property three (3) square feet or less per sign face and under three (3) feet tall when freestanding and installed to be readable on private property.*

**Response:** These exceptions of signs that do not require a sign permit are understood.

*D. Violations*

*1. The City may order the removal of any sign erected or maintained in violation of the provisions of this Chapter. If the City orders the removal of a sign under this Section, the City shall give ninety (90) days written notice to the owner of the sign or, if the owner of the sign cannot be notified, to the owner of the building, structure or premises on which such sign is located, to remove the sign or to bring it into compliance. After ninety (90) days the City may*

*remove the sign at cost to the owner of the building, structure or premises. All costs incurred by the City will be a lien against the land or premises on which the sign is located and may be collected or foreclosed in the same manner as an assessment lien.*

**Response:** The proposed sign complies with the provisions in this Chapter, as demonstrated by the previous and following responses. Therefore, it is not anticipated that the sign will be in violation or will need to be removed.

*E. Nonconforming Signs*

- 1. Signs that do not conform to the provisions of this Chapter are regarded as non-conforming signs and shall be brought into compliance with this Code's standards.*
- 2. Except as exempted in subsection four (4) below, a nonconforming sign in existence on the effective date of Ordinance 2005-002, shall be brought into compliance within five (5) years of the effective date of Ordinance 2005-002. A nonconforming sign erected after the effective date of Ordinance 2005-002 or made non-conforming by subsequent sign ordinance amendments, shall be brought into compliance within five (5) years of the issuance of a building permit to construct the sign or adoption of the ordinance creating the non-conformity. A nonconforming sign that is not brought into compliance within five (5) years shall be removed at the expense of the sign owner or, at the City's discretion, the owner of the property upon which it is located.*
- 3. Except as exempted in subsection 4 below, a nonconforming sign that is structurally altered, relocated or replaced shall immediately be brought into compliance.*
- 4. A sign that is forty five (45) feet tall or less and that is three hundred (300) square feet or less in size is exempt from the requirement to come into compliance within five (5) years and may remain until: a.) structurally altered, relocated or replaced, or b.) until such time as the property on which it is located is developed or re-developed pursuant to a Type IV land use application.*

**Response:** A non-conforming sign does not exist on the WTP site and is not proposed. Therefore, these standards are not applicable.

*F. Abandoned Signs*

*A person who owns or leases a sign shall remove the sign when the business advertised is discontinued or moves. The City shall give the owner of the building, structure or premises upon which an abandoned sign is located ninety (90) days written notice to remove the sign. After ninety (90) days the City may remove the sign at cost to the owner of the building, structure or*



*premises. All costs incurred by the City may be a lien against the land or premises on which such sign is located and may be collected or foreclosed in the same manner as similar liens.*

**Response:** This proposal does not involve an abandoned sign. It is understood that the proposed sign would need to be removed if the proposed use is discontinued or moves.

*H. Construction and Maintenance*

*Except as otherwise provided in this Code, the construction of all signs or sign structures shall conform to applicable provisions of the Uniform Building Code. All signs, supports, braces, guys and anchors and sign sites shall be kept in good repair and maintained in a clean, safe condition.*

**Response:** The proposed sign will be part of a wall (which is partially free-standing and partially retaining) at the primary entrance of the WTP site and will conform to applicable provisions of the Uniform Building Code. The owner will keep the sign and its structure (wall) in good repair and clean, safe condition. Therefore, this standard will be met.

*16.100.015 Sign - Related definitions*

*[...]*

*I. Free-Standing Signs:*

*a. Monument Sign: A sign constructed so that it is erected on grade or set into a hillside. If the monument sign is supported by poles, the sign shall extend to cover the support poles to within four (4) inches of the grade. Each free-standing monument sign shall have no more than two (2) faces.*

*[...]*

**Response:** The type of sign proposed most closely fits the definition of a monument sign. The sign lettering will be incorporated into a textured concrete wall that is planned as a landscape accent at the primary WTP entrance (Exhibit A, Sheets B-004, B-053, and B078). The wall is a curved, partially free-standing, and partially retaining feature to be erected on grade.

*16.100.020 - Prohibited Signs*

*A. Unsafe or Unmaintained Signs*

*All signs and sign structures must be constructed, erected and maintained to withstand the wind, seismic and other loads as specified in the Uniform Building Code. No sign shall be constructed, erected or maintained in violation of the maintenance provisions of this Chapter.*

*B. Signs on Streets*

*No sign shall substantially obstruct free and clear vision along streets or by reason of the position, shape or color, may interfere with, obstruct the view of, or be confused with any authorized traffic signal or device. No sign shall use the words "stop", "look", "danger", or any other similar word, phrase, symbol or character that interferes with or misleads motorists, pedestrians or bicyclists.*

*C. Obstructing Signs*

*No sign or sign structure shall be located or constructed so that it obstructs access to any fire escape, exit doorway or other means of egress from a building. No sign or supporting structure shall cover, wholly or partially, any window or doorway in any manner that will substantially limit access to the building in case of fire.*

*D. Rotating or Revolving Signs*

*Rotating or revolving signs are prohibited.*

*E. Illuminated Signs*

*Flashing signs, exposed reflective type bulbs, strobe lights, rotary beacons, par spots, zip lights and similar devices are prohibited. No exposed incandescent lamp which exceeds twenty-five (25) watts shall be used on the exterior surface of any sign so as to expose the face of such bulb or lamp to a public street. All permitted signs shall bear an approved Underwriters Laboratory label or equivalent third party product safety testing and certification organization.*

*F. Changing Image Signs*

*Any sign that, through the use of moving structural elements, flashing or sequential lights, lighting elements, or other automated method, results in movement, the appearance of movement or change of sign image or message is prohibited. Changing image signs do not include otherwise static signs where illumination is turned off and back on at a maximum of once every thirty (30) seconds and such change does not involve movement or flashing.*

*G. Pole Signs, over six (6) feet in height*

*H. Signs on Vacant Land*

*Any sign on unimproved property, unless allowed as a portable or temporary sign under Chapter 16.102 is prohibited.*

*I. Permanent Residential Development Signs*

*J. Roof Signs*

**Response:** The proposed sign is, in essence, a free-standing monument sign. Prohibited signs are not proposed on the WTP site. Therefore, this standard is met.

*16.100.030 - Sign Regulations by Zone*

*A. Residential Zones*

**Response:** The WTP site is not located in a residential zone. Therefore, these standards are not applicable.

*B. Commercial Zones*

**Response:** The WTP site is not located in a commercial zone. Therefore, these standards are not applicable.

*C. Industrial Zones*

*No permanent sign requiring a permit shall be allowed in industrial zones except for the following:*

*1. Free Standing Signs*

*a. Industrial zoned properties that have an approved PUD and approval for permitted commercial uses, shall apply requirements in Section 16.100.030.8[sic].1—4.*

**Response:** The WTP property does not have an approved PUD nor an approval for permitted commercial uses. Therefore, these standards are not applicable.

*b. Other than allowed under (a) above, a property in an industrial zone may have one (1) multi-faced free-standing sign per street frontage provided the height does not exceed six (6) feet and the sign face does not exceed thirty-six (36) square feet per sign face for a maximum of seventy-two (72) square feet.*

**Response:** As shown in the sign elevation drawing(Exhibit A, Sheet B-078), the proposed sign text area is 14'-7" by 2'-5.5", or approximately 36 square feet. Therefore, this standard is met.

*2. Directional Signs*

*a. The requirements of Chapter 16.102 [Temporary, Portable and Banner Signs] shall apply.*

**Response:** Directional signs are not proposed as part of this application. Therefore, these standards are not applicable.

3. Wall Signs

**Response:** Wall signs are not proposed. Therefore, these standards are not applicable.

Chapter 16.106 - TRANSPORTATION FACILITIES

16.106.010 - Generally

A. Creation

Public streets shall be created in accordance with provisions of this Chapter. Except as otherwise provided, all street improvements and rights-of-way shall conform to standards for the City's functional street classification, as shown on the Transportation System Plan (TSP) Map (Figure 17) and other applicable City standards. The following table depicts the guidelines for the street characteristics.

Type of Street	Right of Way Width	Number of Lanes	Minimum Lane Width	On Street Parking Width	Bike Lane Width	Sidewalk Width	Landscape Strip (exclusive of Curb)	Median Width
Arterial	60-102'	2-5	12'	Limited	6 feet	6-8'	5'	14' if required
Collector	58-92'	2-3	11'	8' optional	6'	6-8'	5'	14' median turn lane

**Response:** The following narrative addresses the two public streets adjacent to the WTP site – SW Blake Street (proposed) and SW 124<sup>th</sup> Avenue (existing).

**SW Blake Street**

The applicant will construct a new City collector street – SW Blake Street – as part of this proposed development and as coordinated with the City. The alignment for SW Blake Street was coordinated as part of the partition that created the WTP site and the industrial development site directly north of the WTP. The City adopted SW Blake Street as a 3-lane collector in the 2010 TEA Concept Plan, 2014 Sherwood Transportation System Plan, and 2015 TEA Implementation Plan.

The proposed SW Blake Street cross section consists of the following elements and widths, as shown in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029) and Typical Roadway Sections – SW Blake Street (Exhibit A, Sheet B-168):

- 3 lanes and no on-street parking
- 11-foot travel lanes
- 14-foot median
- 6-foot bike lanes
- 5-foot planting strip
- 8-foot sidewalks
- 1-foot clearance back of walk
- 76-foot right-of-way

Given the range of sidewalk widths presented in the table above, Section 16.106.060.B.1 clarifies the sidewalk requirements by stating that commercial industrial areas must have a minimum 8-foot wide sidewalk. Therefore, this standard is met.

### **SW 124<sup>th</sup> Avenue**

SW 124<sup>th</sup> Avenue is designated as a 5-lane arterial street in the adopted 2019 Washington County Transportation System Plan and was built out initially as an interim 2-lane arterial through the County's Major Streets Transportation Improvement Program. As stated in the Pre-Application Conference Notes (Exhibit C), right-of-way dimension and dedication requirements for SW 124<sup>th</sup> Avenue must comply with Washington County requirements, with the caveat that frontage improvements on SW 124<sup>th</sup> Avenue must comply with City requirements. County and City Engineering staff held a series of discussions in order to determine SW 124<sup>th</sup> Avenue half-street improvements that would balance existing standards, requirements approved for the TCC site to the north, and the road's physical context. The right-of-way and roadway requirements they determined, which the applicant is proposing to construct and dedicate, include the following:

- 104-foot right-of-way (or 52 feet to centerline; allows for 34 feet of roadway improvements and 18 feet of frontage improvements)
- Half of 14-foot center lane (to be a median/turn lane)
- One of two 12-foot travel lanes
- One of two 15-foot outside travel lanes (with 3-foot shy distance from curb)

Per the table above and Section 16.106.060.B.1, City frontage improvement requirements for an arterial include a 5-foot-wide planting strip and an 8-foot-wide sidewalk. The proposed SW 124<sup>th</sup> Avenue cross section consists of the following elements and widths:

- 5-foot planter strip (includes 0.5 feet for curb line)
- 12-foot multi-use path
- 1-foot clearance from back of walk

Therefore, the proposed SW 124<sup>th</sup> Avenue cross section<sup>6</sup> will meet this standard, with approval of the requested Transportation Facilities Modification in Section 16.106.020.E and an Engineering Design Modification (attached to the application submittal) for frontage improvements.

*B. Street Naming*

- 1. All streets created by subdivision or partition will be named prior to submission of the final plat.*
- 2. Any street created by a public dedication shall be named prior to or upon acceptance of the deed of dedication.*
- 3. An action to name an unnamed street in the City may be initiated by the Council or by a person filing a petition as described in this Section.*
- 4. All streets named shall conform to the general requirements as outlined in this Section.*
- 5. At the request of the owner(s), the City may approve a private street name and address. Private streets are subject to the same street name standards as are public streets. All private street signs will be provided at the owner(s) expense.*

*C. Street Name Standards*

*D. Preferred Street Names*

**Response:** The street name for SW 124<sup>th</sup> Avenue, an existing roadway, has already been established and no changes to the name are proposed. SW Blake Street has been named in previous planning documents and confirmed by City staff, and no changes to the name are proposed. Therefore, this standard is met.

*16.106.020 - Required Improvements*

*A. Generally*

*Except as otherwise provided, all developments containing or abutting an existing or proposed street, that is either unimproved or substandard in right-of-way width or improvement, shall dedicate the necessary right-of-way prior to the issuance of building permits and/or complete acceptable improvements prior to issuance of occupancy permits. Right-of-way requirements are based on functional classification of the street network as established in the Transportation System Plan, Figure 17.*

**Response:** SW Blake Street's designation as a 3-lane collector requires 76 feet of right-of-way per the guidelines presented in the table above in Section 16.106.010.A. The applicant proposes 76 feet of right-

<sup>6</sup> Improvements proposed for SW 124<sup>th</sup> Avenue will be shown in drawings that will be provided for application completeness.

of-way to be improved and dedicated for SW Blake Street, as shown in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029).

Given SW 124<sup>th</sup> Avenue's designation as an urban 5-lane arterial in the County TSP, 98 feet of right-of-way (or 49 feet to centerline) would be required per the County's Road Design and Construction Standards minimum requirements and the partition plat and decision (Case File Number 18-276-P/M). County and City staff determined that 52 feet of right-of-way (to centerline) is required, which the applicant proposes to dedicate.

Therefore, this standard is met.

*B. Existing Streets*

*Except as otherwise provided, when a development abuts an existing street, the improvements requirement shall apply to that portion of the street right-of-way located between the centerline of the right-of-way and the property line of the lot proposed for development. In no event shall a required street improvement for an existing street exceed a pavement width of thirty (30) feet.*

**Response:** Except for a small portion on the southeastern side of the property, the east boundary of the WTP property abuts SW 124<sup>th</sup> Avenue, an existing street. The County has indicated that half-street roadway improvements are required. Right-of-way dedication and half-street improvements for SW 124<sup>th</sup> Avenue include meeting County right-of-way requirements and City frontage improvement requirements (behind the curb). As the County and City determined, required improvements consist of the following, which the applicant proposed to construct and dedicate:

- Right-of-way dedication (County): 52 feet (to centerline)
- Frontage improvements (City):
  - 5-foot planting strip (4.5-foot planting strip and 0.5-foot curb)
  - 12-foot multi-use path

Frontage improvements constructed to these specifications will require an Engineering Design Modification (attached to the application transmittal) and Transportation Facilities Modification, given existing standards for a 5-foot planting strip and 8-foot sidewalk in Section 16.0106.060.B.1.

Therefore, this standard is met, with approval of the requested Engineering Design Modification and Transportation Facilities Modification.



C. *Proposed Streets*

1. *Except as otherwise provided, when a development includes or abuts a proposed street, in no event shall the required street improvement exceed a pavement width of forty (40) feet.*
2. *Half Streets: When a half street is created, a minimum of 22 feet of driving surface shall be provided by the developer.*

**Response:** SW Blake Street is a proposed street, consistent with the Sherwood TSP and other planning documents. The applicant has agreed to provide the full-street improvements, which includes a paved width of 48 feet (a 14-foot median, two 11-foot travel lanes, and two 6-foot bike lanes). See the Transportation/ Circulation Plans (Exhibit A, Sheets B-028 and B-029). Therefore, this standard is met.

D. *Extent of Improvements*

1. *Streets required pursuant to this Chapter shall be dedicated and improved consistent with Chapter 6 of the Community Development Plan, the TSP and applicable City specifications included in the City of Sherwood Construction Standards. Streets shall include curbs, sidewalks, catch basins, street lights, and street trees. Improvements shall also include any bikeways designated on the Transportation System Plan map. Applicant may be required to dedicate land for required public improvements only when the exaction is directly related to and roughly proportional to the impact of the development, pursuant to Section 16.106.090.*

**Response:** For SW Blake Street, right-of-way dedications are to City standards. For SW 124<sup>th</sup> Avenue, right-of-way dedications and roadway improvements are to County standards and determinations (for right-of-way and roadway improvements) and City standards and determination (for frontage improvements). See the Transportation/Circulation Plans (Exhibit A, Sheets B-029 and B-029).

SW Blake Street and SW 124<sup>th</sup> Avenue include the following required improvements:

- Bike lanes, curbs, and sidewalks – Bike lanes, curbs, and sidewalks will be provided on SW Blake Street as shown in the Transportation/Circulation Plan. Curbs and a multi-use path will be provided on SW 124<sup>th</sup> Avenue as shown in the Transportation/Circulation Plan.
- Catch basins – Catch basins are included in what is shown as “inlet protection” in the Erosion and Control Plans for Area A and Subareas A1 through A7 (Exhibit A, Sheet B-108, and Exhibit B, Sheets B-110 through B-116).
- Street lights – Street lights are proposed on SW Blake Street and SW 124<sup>th</sup> Avenue; street lights on SW Blake Street are shown in the Photometric Site Plan (Exhibit A, Sheet B-098).<sup>7</sup>

<sup>7</sup> Streetlights proposed for SW 124th Avenue will be shown in drawings that will be provided for application completeness.

- Street trees – Street trees are proposed on SW Blake Street and SW 124<sup>th</sup> Avenue; street trees on SW Blake Street are shown in the Planting Overall Plan (Exhibit A, Sheet B-030).<sup>8</sup>

Therefore, this standard is met.

*2. If the applicant is required to provide street improvements, the City Engineer may accept a future improvements guarantee in lieu of street improvements if one or more of the following conditions exist, as determined by the City:*

- a. A partial improvement is not feasible due to the inability to achieve proper design standards;*
- b. A partial improvement may create a potential safety hazard to motorists or pedestrians.*
- c. Due to the nature of existing development on adjacent properties it is unlikely that street improvements would be extended in the foreseeable future and the improvement associated with the project under review does not, by itself, provide a significant improvement to street safety or capacity;*
- d. The improvement would be in conflict with an adopted capital improvement plan;*
- e. The improvement is associated with an approved land partition on property zoned residential use and the proposed land partition does not create any new streets; or*
- f. Additional planning work is required to define the appropriate design standards for the street and the application is for a project that would contribute only a minor portion of the anticipated future traffic on the street.*

**Response:** Fee-in-lieu is not being requested. Therefore, these standards are not applicable.

*E. Transportation Facilities Modifications*

- 1. A modification to a standard contained within this Chapter and Section 16.58.010 and the standard cross sections contained in Chapter 8 of the adopted TSP may be granted in accordance with the procedures and criteria set out in this section.*

**Response:** A modification is proposed to transportation facility design standards established in Section 16.106.010.A, Section 16.106.060.B.1, and the TSP arterial cross section for SW 124<sup>th</sup> Avenue. The modification is being requested in accordance with the procedures and criteria set out in this Section, as demonstrated in the following responses. Therefore, this standard is met.

<sup>8</sup> Street trees proposed for SW 124th Avenue will be shown in drawings that will be provided for application completeness.

2. *A modification request concerns a deviation from the general design standards for public facilities, in this Chapter, Section 16.58.010, or Chapter 8 in the adopted Transportation System Plan. The standards that may be modified include but are not limited to:*

- a. Reduced sight distances.*
- b. Vertical alignment.*
- c. Horizontal alignment.*
- d. Geometric design (length, width, bulb radius, etc.).*
- e. Design speed.*
- f. Crossroads.*
- g. Access policy.*
- h. A proposed alternative design which provides a plan superior to these standards.*
- i. Low impact development.*
- j. Access Management Plans*

**Response:** This modification request concerns a deviation from the general design standards for public facilities in this Chapter, namely geometric design (the width of sidewalks) established in Section 16.106.010.A and Section 16.106.060.B.1. The modification request involves expanding standard frontage improvements to provide a 12-foot multi-use path instead of a 8-foot sidewalk (and 6-foot bike lane) on SW 124<sup>th</sup> Avenue adjacent to the WTP site.<sup>9</sup>Therefore, this standard is met.

3. *Modification Procedure*

- a. A modification shall be proposed with the application for land use approval.*
- b. A modification is processed as a Type II application. Modification requests shall be processed in conjunction with the underlying development proposal.*
- c. When a modification is requested to provide a green street element that is not included in the Engineering Design Manual, the modification process will apply, but the modification fee will be waived.*

**Response:** This modification is being proposed as part of this consolidated package of applications submitted for land use approval. It is understood that the modification is a Type II application. Given the modification request will be processed in conjunction with the development proposal, the whole application package will be reviewed pursuant to the highest level of review procedure required for applications in the package, which is a Type IV procedure. Thus, the whole application package will be

<sup>9</sup> Improvements proposed for SW 124th Avenue will be shown in drawings that will be provided for application completeness.

reviewed by a Type IV procedure, exceeding Type II application requirements. Therefore, this standard is met.

*4. Criteria for Modification: Modifications may be granted when criterion 4a and any one of criteria 4b through 4e are met:*

*a. Consideration shall be given to public safety, durability, cost of maintenance, function, appearance, and other appropriate factors to advance the goals of the adopted Sherwood Comprehensive Plan and Transportation System Plan as a whole. Any modification shall be the minimum necessary to alleviate the hardship or disproportional impact.*

**Response:** The difference between an 8-foot sidewalk and 12-foot multi-use path is not anticipated to present any notable durability or cost of maintenance differences on SW 124<sup>th</sup> Avenue. The modification will enhance public safety by providing a bicycle facility that is separated from roadway traffic. In terms of function, the proposed 12-foot multi-use path will better serve City pedestrian and bicycle goals, given that the larger size (width) and separation of multi-use paths from the roadway tend to be more attractive to pedestrians and bicyclists than sidewalks and bike lanes, especially along higher-speed roads like SW 124<sup>th</sup> Avenue. The multi-use path will enhance the regional pedestrian and bicycle network by connecting to multi-use paths that will be developed on the SW 124<sup>th</sup> Avenue frontage of the TCC site to the north and on SW Tualatin-Sherwood Road. The requested modification reflects the minimum area necessary in that it is part of the cross section that County and City staff have agreed upon as required. Therefore, this standard is met.

*b. Topography, right-of-way, existing construction or physical conditions, or other geographic conditions impose an unusual hardship on the applicant, and an equivalent alternative which can accomplish the same design purpose is available.*

*c. A minor change to a specification or standard is required to address a specific design or construction problem which, if not enacted, will result in an unusual hardship. Self-imposed hardships shall not be used as a reason to grant a modification request.*

*d. An alternative design is proposed which will provide a plan equal to or superior to the existing street standards.*

*e. Application of the standards of this chapter to the development would be grossly disproportional to the impacts created.*

**Response:** This proposed alternative design will provide a plan equal or superior to the existing street standards, because the County and City have coordinated and deemed it to be an acceptable design to serve multi-modal mobility, safety, and connectivity objectives on SW 124<sup>th</sup> Avenue and for this part of the regional transportation network. Therefore, this standard is met.

*16.106.030 - Location*

*A. Generally*

*The location, width and grade of streets shall be considered in their relation to existing and planned streets, topographical conditions, and proposed land uses. The proposed street system shall provide adequate, convenient and safe traffic and pedestrian circulation, and intersection angles, grades, tangents, and curves shall be adequate for expected traffic volumes. Street alignments shall be consistent with solar access requirements as per Chapter 16.156, and topographical considerations.*

**Response:** The location of SW Blake Street was conceptually determined by planning processes (TEA Concept Plan, TSP, and TEA Implementation Plan) and then specifically located by the partition process that created the lot for the WTP site. Sight distance standards and coordination with the County and City drove the location of the intersection of SW Blake Street with SW 124<sup>th</sup> Avenue.<sup>10</sup> The alignment of SW Blake Street was established to enable sufficient acreage for both the WTP and the industrial property to the north, consistent with County policy for pre-annexation land divisions in the TEA.

The width of SW Blake Street meets the City's standards for a 3-lane collector without on-street parking. Applying design guidance from Section 16.106.010.A, the width of the street accommodates a 14-foot median, two 11-foot travel lanes, and two 6-foot bike lanes. See the Transportation/Circulation Plans (Exhibit A, Sheets B-028, and B-029).

SW Blake Street will provide adequate, convenient, and safe traffic and pedestrian circulation in the following ways: implementing recommendations from the TIA (Exhibit F); complying with City code standards including vision clearance (Chapter 16.58) and access standards later in this Chapter; and providing sidewalks that will provide connections to other parts of the City's sidewalk system (e.g., providing a crossing and connection to sidewalks or multi-use paths to be constructed by TCC on its SW 124<sup>th</sup> Avenue frontage that provide access to sidewalks or multi-use paths on SW Tualatin-Sherwood Road).

Street grade and intersection angles, grades, tangents, and curves will be provided consistent with City standards (namely the City's Engineering Design Standards Manual and Drawings) and in coordination with City Engineering.

Solar access is addressed in responses to criteria in Chapter 16.156.

<sup>10</sup> Appendix A of the Traffic Impact Analysis included in this application (Exhibit F) provides a Preliminary Sight Distance Certification for sight distance on SW 124<sup>th</sup> Avenue at the intersection of SW Blake Street. Pursuant to Washington County Community Development Code (WCCDC) Section 501-8.5.F(4), 430 feet of sight distance is required in both directions (north and south) on SW 124<sup>th</sup> Avenue given posted speeds of 45 mph. Sight distance was measured to be sufficient – 500 feet to the north and south – using methods laid out in WCCDC Sections 501-8.5-F(3)(a) and (3)(b).

Therefore, this standard is met.

*B. Street Connectivity and Future Street Systems*

*1. Future Street Systems. The arrangement of public streets shall provide for the continuation and establishment of future street systems as shown on the Local Street Connectivity Map contained in the adopted Transportation System Plan (Figure 16).*

*2. Connectivity Map Required. New residential, commercial, and mixed use development involving the construction of new streets shall be submitted with a site plan that implements, responds to and expands on the Local Street Connectivity map contained in the TSP.*

*a. A project is deemed to be consistent with the Local Street Connectivity map when it provides a street connection in the general vicinity of the connection(s) shown on the map, or where such connection is not practicable due to topography or other physical constraints; it shall provide an alternate connection approved by the decision-maker.*

*b. Where a developer does not control all of the land that is necessary to complete a planned street connection, the development shall provide for as much of the designated connection as practicable and not prevent the street from continuing in the future.*

*c. Where a development is disproportionately impacted by a required street connection, or it provides more than its proportionate share of street improvements along property line (i.e., by building more than 3/4 width street), the developer shall be entitled to System Development charge credits, as determined by the City Engineer.*

*d. Driveways that are more than 24 feet in width shall align with existing streets or planned streets as shown in the Local Street Connectivity Map in the adopted Transportation System Plan (Figure 17), except where prevented by topography, rail lines, freeways, pre-existing development, or leases, easements, or covenants.*

**Response:** SW Blake Street will provide a connection identified in TEA planning documents and the City's TSP. The two proposed driveways on the WTP site are more than 24 feet in width; however, there are no existing or planned streets on the other side of SW Blake Street with which to align. Therefore, this standard is met.

*3. Block Length. For new streets except arterials, block length shall not exceed 530 feet. The length of blocks adjacent to arterials shall not exceed 1,800 feet.*

**Response:** The length of the WTP site along SW 124<sup>th</sup> Avenue, an arterial, is roughly 1,600 feet; this length is consistent with this standard. The length of the WTP site along SW Blake Street, a collector, is roughly 1,850 feet. See the Facilities Key Plan for dimensions (Exhibit A, Sheet B-018). An Engineering

Design Modification is being sought for the block length on SW Blake Street (see attachment to application transmittal). Therefore, this standard will be met, with approval of the Engineering Design Modification request.

*4. Where streets must cross water features identified in Title 3 of the Urban Growth Management Functional Plan (UGMFP), provide crossings at an average spacing of 800 to 1,200 feet, unless habitat quality or length of crossing prevents a full street connection.*

*5. Where full street connections over water features identified in Title 3 of the UGMFP cannot be constructed in centers, main streets and station communities (including direct connections from adjacent neighborhoods), or spacing of full street crossings exceeds 1,200 feet, provide bicycle and pedestrian crossings at an average spacing of 530 feet, unless exceptional habitat quality or length of crossing prevents a connection.*

**Response:** SW Blake Street does not cross a water feature identified in Title 3 of Metro's UGMFP. Therefore, these standards are not applicable.

*6. Pedestrian and Bicycle Connectivity. Paved bike and pedestrian accessways consistent with cross section standards in Figure 8-6 of the TSP shall be provided on public easements or right-of-way when full street connections are not possible, with spacing between connections of no more than 300 feet. Multi-use paths shall be built according to the Pedestrian and Bike Master Plans in the adopted TSP.*

*7. Exceptions. Streets, bike, and pedestrian connections need not be constructed when any of the following conditions exists:*

*a. Physical or topographic conditions make a street or accessway connection impracticable. Such conditions include but are not limited to freeways, railroads, steep slopes, wetlands or other bodies of water where a connection could not reasonably be provided.*

*b. Buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or*

*c. Where streets or accessways would violate provisions of leases, easements, covenants, restrictions or other agreements existing as of May 1, 1995, which preclude a required street or accessway connection.*

**Response:** Physical conditions make a street or bike and pedestrian accessway connection through the WTP site to the south impractical, and an exception pursuant to this standard is necessary and reasonable.



A major driver of the proposed site design is preservation of the large kolk wetland, its associated VC, and surrounding trees and vegetation in the southern portion of the site. The proposed preservation of the wetland, VC, trees, and vegetation is shown in the Tree Protection Plans (Exhibit A, Sheets B-021 through B-023). Providing a street or accessway connection through the site would severely compromise this preservation and protection.

In addition, a street or accessway connection through the WTP site is not feasible because: it would significantly reduce the security of the site; there is no existing transportation facility on the southern border of the site with which to connect; and, bisecting the WTP property would render the needed site layout infeasible and undevelopable.

Therefore, the condition for exception to the street and accessway connectivity standard is met.

*C. Underground Utilities*

*All public and private underground utilities, including sanitary sewers and storm water drains, shall be constructed prior to the surfacing of streets. Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.*

**Response:** Public and private utilities will be underground and will be constructed prior to street surfacing. See the Site Utilities Layout Plan Area A (Exhibit A, Sheet B-144). Therefore, this standard is and will be met.

*D. Additional Setbacks*

*Generally additional setbacks apply when the width of a street right-of-way abutting a development is less than the standard width under the functional classifications in Section VI of the Community Development Plan. Additional setbacks are intended to provide unobstructed area for future street right-of-way dedication and improvements, in conformance with Section VI. Additional setbacks shall be measured at right angles from the centerline of the street.*

	<i>Classification</i>	<i>Additional Setback</i>
1.	<i>Principle Arterial (99W)</i>	<i>61 feet</i>
2.	<i>Arterial</i>	<i>37 feet</i>
3.	<i>Collector</i>	<i>32 feet</i>
4.	<i>Neighborhood Route</i>	<i>32 feet</i>
5.	<i>Local</i>	<i>26 feet</i>

**Response:** Right-of-way will be dedicated for SW Blake Street and SW 124<sup>th</sup> Avenue to meet applicable standards, as demonstrated in responses to right-of-way standards earlier in this Section and shown in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). Therefore, this standard is not applicable.

*16.106.040 - Design*

*Standard cross sections showing street design and pavement dimensions are located in the City of Sherwood's Engineering Design Manual.*

*A. Reserve Strips*

*Reserve strips or street plugs controlling access or extensions to streets are not allowed unless necessary for the protection of the public welfare or of substantial property rights. All reserve strips shall be dedicated to the appropriate jurisdiction that maintains the street.*

**Response:** Reserve strips are not proposed. Therefore, this standard is not applicable.

*B. Alignment*

*All proposed streets shall, as far as practicable, be in alignment with existing streets. In no case shall the staggering of streets create a "T" intersection or a dangerous condition. Street offsets of less than one hundred (100) feet are not allowed.*

**Response:** There are no existing streets with which SW Blake Street can align. Staggered or offset intersections are not proposed. Therefore, this standard is met.

The location of the intersection of SW Blake Street with SW 124<sup>th</sup> Avenue has been coordinated with the City, County, and the City of Tualatin.

*C. Future Extension*

*Where necessary to access or permit future subdivision or development of adjoining land, streets must extend to the boundary of the proposed development and provide the required roadway width. Dead-end streets less than 100' in length must comply with the Engineering Design Manual.*

*A durable sign must be installed at the applicant's expense. The sign is required to notify the public of the intent to construct future streets. The sign must read as follows: "This road will be extended with future development. For more information contact the City of Sherwood Engineering Department."*

**Response:** SW Blake Street will be stubbed at the western edge of the proposed development and will be barricaded and signed consistent with this standard and the standards in the Engineering Design Manual (Section 210-16 and Drawing RD-51). Therefore, this standard is and will be met.

*D. Intersection Angles*

*Streets shall intersect as near to ninety (90) degree angles as practical, except where topography requires a lesser angle. In all cases, the applicant shall comply with the Engineering Design Manual.*

**Response:** SW Blake Street is proposed to intersect with SW 124<sup>th</sup> Avenue at a 90 degree angle. The eastern driveway for the WTP site is proposed to intersect with SW Blake Street at a 90 degree angle. The western driveway is proposed to intersect with SW Blake Street at a 75-degree angle. (See the Transportation/Circulation Plans, Exhibit A, Sheets B-028 and B-029.) Pursuant to the Engineering Design Manual (EDM) Section 210.6.A, "the interior angle at intersecting streets shall be kept as near to 90 degrees as possible and in no case shall it be less than 75 degrees." Thus, at more than 75 degrees, the proposed angle is consistent with the Engineering Design Manual. Therefore, this standard is met.

*E. Cul-de-sacs*

**Response:** Cul-de-sacs are not proposed. Therefore, this standard is not applicable.

*F. Grades and Curves*

*Grades shall be evaluated by the City Engineer and comply with the Engineering Design Manual.*

**Response:** Proposed grades and curves will be provided in WTP construction drawings and will be consistent with Engineering Design Manual standards, including Section 210.3 (Horizontal Alignment) and Section 210.4 (Vertical Alignment). Therefore, this standard will be met.

*G. Streets Adjacent to Railroads*

**Response:** Existing or proposed streets adjacent to the WTP site are not adjacent to railroads. Therefore, this standard is not applicable.

*H. Buffering of Major Streets*

*Where a development abuts Highway 99W, or an existing or proposed principal arterial, arterial or collector street, or neighborhood route, adequate protection for residential properties must be provided, through and local traffic be separated, and traffic conflicts minimized.*

**Response:** The proposed development abuts an existing arterial street (SW 124<sup>th</sup> Avenue) on most of its eastern frontage and abuts a collector a new collector street (SW Blake Street) on its northern frontage. The development is not adjacent to residential zoning or properties.

SW 124<sup>th</sup> Avenue has been designed and constructed to serve as a through-traffic street, connecting to SW Tualatin-Sherwood Road to the north and SW Tonquin Road to the south. The TIA included in this application (Appendix F) shows and describes the regional, through-traffic character of this roadway. SW Blake Street is designed and will be constructed for local traffic. When fully built out west of the WTP site, the street will connect to other local roadways – SW Oregon Street and SW Dahlke Lane, as laid out in TEA planning and implementation work.

Measures to minimize traffic conflicts include the provision of the following: an eastbound left-turn lane on SW Blake Street approaching SW 124<sup>th</sup> Avenue; medians along most of SW Blake Street; sidewalks along both the SW Blake Street and SW 124<sup>th</sup> Avenue frontages; and a marked crosswalk and ADA-accessible curb ramps at the SW Blake Street/SW 124<sup>th</sup> Avenue intersection. See the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029).

Therefore, this standard is met.

*In addition, visual corridors pursuant to Section 16.142.040, and all applicable access provisions of Chapter 16.96, are to be met. Buffering may be achieved by: parallel access streets, lots of extra depth abutting the major street with frontage along another street, or other treatment suitable to meet the objectives of this Code.*

**Response:** The proposed development complies with Section 16.142.040 requirements, as demonstrated in responses to those criteria later in this narrative, granted approval of the requested variance. It also complies with applicable provisions of Chapter 16.96 as demonstrated in responses to criteria in that Chapter earlier in this narrative. Therefore, this standard is met.

*I. Median Islands*

*As illustrated in the adopted Transportation System Plan, Chapter 8, median islands may be required on arterial or collector streets for the purpose of controlling access, providing pedestrian safety or for aesthetic purposes.*

**Response:** A median island is proposed on SW Blake Street (where there is not a turn lane) for aesthetic, stormwater management, and pedestrian environment purposes. See the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). Therefore, this standard is met.

*J. Transit Facilities*

*Development along an existing or proposed transit route, as illustrated in Figure 7-2 in the TSP, is required to provide areas and facilities for bus turnouts, shelters, and other transit-related facilities to Tri-Met specifications. Transit facilities shall also meet the following requirements...*

**Response:** The proposed development does not front an existing or proposed transit route. Therefore, these standards are not applicable.

*K. Traffic Controls*

- 1. Pursuant to Section 16.106.080, or as otherwise required by the City Engineer, an application must include a traffic impact analysis to determine the number and types of traffic controls necessary to accommodate anticipated traffic flow.*
- 2. For all other proposed developments including commercial, industrial or institutional uses with over an estimated 400 ADT, or as otherwise required by the City Engineer, the application must include a traffic impact analysis to determine the number and types of traffic controls necessary to accommodate anticipated traffic flow.*

**Response:** The proposed development will not have estimated average daily traffic (ADT) of more than 400. However, the City Engineer is requiring the preparation of a TIA for this proposal. The analysis (Exhibit F) and its findings related to traffic controls are addressed in responses to standards in Section 16.106.080. Therefore, this standard is met.

*L. Traffic Calming*

- 1. The following roadway design features, including internal circulation drives, may be required by the City in new construction in areas where traffic calming needs are anticipated:*
  - a. Curb extensions (bulb-outs).*
  - b. Traffic diverters/circles.*
  - c. Alternative paving and painting patterns.*
  - d. Raised crosswalks, speed humps, and pedestrian refuges.*
  - e. Other methods demonstrated as effective through peer reviewed Engineering studies.*

2. With approval of the City Engineer, traffic calming measures such as speed humps and additional stop signs can be applied to mitigate traffic operations and/or safety problems on existing streets. They should not be applied with new street construction unless approved by the City Engineer and Tualatin Valley Fire & Rescue.

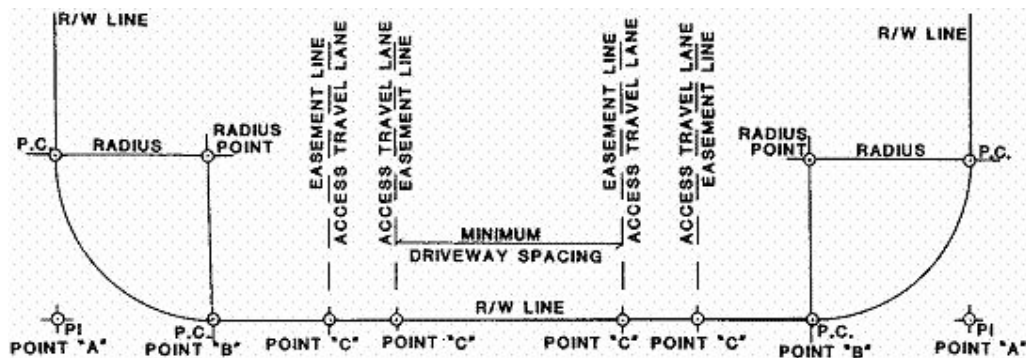
**Response:** The TIA (Exhibit F) prepared for this application and its findings related to traffic calming are addressed in responses to standards in Section 16.106.080. Therefore, this standard is met.

*M. Vehicular Access Management*

All developments shall have legal access to a public road. Access onto public streets shall be permitted upon demonstration of compliance with the provisions of adopted street standards in the Engineering Design Manual.

1. Measurement: See the following access diagram where R/W = Right-of-Way; and P.I. = Point-of-Intersection where P.I. shall be located based upon a 90 degree angle of intersection between ultimate right-of-way lines.

- a. Minimum right-of-way radius at intersections shall conform to City standards.
- b. All minimum distances stated in the following sections shall be governed by sight distance requirements according to the Engineering Design Manual.
- c. All minimum distances stated in the following sections shall be measured to the nearest easement line of the access or edge of travel lane of the access on both sides of the road.
- d. All minimum distances between accesses shall be measured from existing or approved accesses on both sides of the road.
- e. Minimum spacing between driveways shall be measured from Point "C" to Point "C" as shown below:



**Response:** Two legal accesses are proposed for the WTP site on SW Blake Street, as shown in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). The western access (driveway) is designed as the primary site entrance and the eastern access (driveway) is designed as a secondary site entrance for infrequent and emergency uses.

According to EDM Section 210.8.A, required minimum spacing on collectors (design speed 35 miles per hour (mph) per EDM Section 120.5.A) is 180 feet. The Transportation/Circulation Plan shows the eastern driveway just over 335 feet from the intersection with SW 124<sup>th</sup> Avenue.<sup>11</sup> The western driveway is roughly 1,500 feet from the intersection with SW 124<sup>th</sup> Avenue. Therefore, this standard is met.

2. *Roadway Access*

*No use will be permitted to have direct access to a street or road except as specified below. Access spacing shall be measured from existing or approved accesses on either side of a street or road. The lowest functional classification street available to the legal lot, including alleys within a public easement, shall take precedence for new access points.*

a. *Local Streets...*

b. *Neighborhood Routes...*

**Response:** Existing or proposed streets adjacent to the WTP site are not local streets or neighborhood routes. Therefore, these standards are not applicable.

c. *Collectors:*

*All commercial, industrial and institutional uses with one-hundred-fifty (150) feet or more of frontage will be permitted direct access to a Collector. Uses with less than one-hundred-fifty (150) feet of frontage shall not be permitted direct access to Collectors unless no other alternative exists.*

*Where joint access is available it shall be used, provided that such use is consistent with Section 16.96.040, Joint Access. No use will be permitted direct access to a Collector within one-hundred (100) feet of any present Point "A." Minimum spacing between driveways (Point "C" to Point "C") shall be one-hundred (100) feet. In all instances, access points near an intersection with a Collector or Arterial shall be located beyond the influence of standing queues of the intersection in accordance with AASHTO standards. This requirement may result in access spacing greater than one hundred (100) feet.*

**Response:** The WTP site has more than 150 feet of frontage on the proposed SW Blake Street, a collector, as shown in the Overall Site Plan (Exhibit A, Sheet B-017), Facilities Key Plan (Exhibit A, Sheet B-018), and the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). Therefore, direct access to SW Blake Street is permitted and this standard is met.

<sup>11</sup> The minimum sight distance for intersections and driveways on collectors is 335 feet per EDM Table IIc and EDM Section 120.5.A.

There are no other uses or parcels on the south side of SW Blake Street with which to share access. Therefore, joint access is not proposed, and this part of the standard is not applicable.

*d. Arterials and Highway 99W - Points of ingress or egress to and from Highway 99W and arterials designated on the Transportation Plan Map, attached as Figure 1 of the Community Development Plan, Part II, shall be limited as follows:*

*(1) Single and two-family uses and manufactured homes on individual residential lots developed after the effective date of this Code shall not be granted permanent driveway ingress or egress from Highway 99W or arterials. If alternative public access is not available at the time of development, provisions shall be made for temporary access which shall be discontinued upon the availability of alternative access.*

*(2) Other private ingress or egress from Highway 99W and arterial roadways shall be minimized. Where alternatives to Highway 99W or arterials exist or are proposed, any new or altered uses developed after the effective date of this Code shall be required to use the alternative ingress and egress. Alternatives include shared or crossover access agreement between properties, consolidated access points, or frontage or backage roads. When alternatives do not exist, access shall comply with the following standards:*

*(a) Access to Highway 99W shall be consistent with ODOT standards and policies per OAR 734, Division 51, as follows: Direct access to an arterial or principal arterial will be permitted provided that Point 'A' of such access is more than six hundred (600) feet from any intersection Point 'A' or other access to that arterial (Point 'C').*

*(b) The access to Highway 99W will be considered temporary until an alternative access to public right-of-ways is created. When the alternative access is available the temporary access to Highway 99W shall be closed.*

*(3) All site plans for new development submitted to the City for approval after the effective date of this Code shall show ingress and egress from existing or planned local, neighborhood route or collector streets, including frontage or backage roads, consistent with the Transportation Plan Map and Chapter 6 of the Community Development Plan.*

**Response:** SW 124<sup>th</sup> Avenue is adjacent to the WTP site and is classified as an arterial. However, access from the WTP site onto SW 124<sup>th</sup> Avenue is not proposed. Therefore, this standard is met.

*3. Exceptions to Access Criteria for City-Owned Streets*

*a. Alternate points of access may be allowed if an access management plan which maintains the classified function and integrity of the applicable facility is submitted to and approved by the City Engineer as the access management plan must be included as part of the land use submittal*



*or an application for modification as described in § 16.106.020 E. (Transportation Facilities Modifications).*

*b. Access in the Old Town (OT) Overlay Zone*

*Access points in the OT Overlay Zone shown in an adopted plan such as the Transportation System Plan, are not subject to the access spacing standards and do not need a variance. However, the applicant shall submit a partial access management plan for approval by the City Engineer. The approved plan shall be implemented as a condition of development approval.*

**Response:** Exceptions to access criteria are not proposed. Therefore, these standards are not applicable.

*N. Private Streets*

**Response:** Private streets are not proposed as part of this development. Therefore, this standard is not applicable.

*16.106.060 - Sidewalks*

*A. Required Improvements*

*1. Except as otherwise provided, sidewalks shall be installed on both sides of a public street and in any special pedestrian way within new development.*

**Response:** As illustrated in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029), sidewalks will be installed on both sides of SW Blake Street, the new City collector that the applicant will construct in full. A 12-foot multi-use path will be provided on SW 124<sup>th</sup> Avenue. A sidewalk will extend from SW Blake Street into the site, connecting to the site's two public-facing features – the Administration Building and the viewing platform overlooking the forest surrounding the site's large wetland. Therefore, this standard is met.

*2. For Highway 99W, arterials, or in special industrial districts, the City Manager or designee may approve a development without sidewalks if alternative pedestrian routes are available.*

**Response:** A 12-foot multi-use path is proposed on SW 124<sup>th</sup> Avenue and an 8-foot sidewalk is proposed on SW Blake Street. Therefore, alternatives to sidewalks are not needed and this standard is not applicable.

*3. In the case of approved cul-de-sacs serving less than fifteen (15) dwelling units, sidewalks on one side only may be approved by the City Manager or designee.*

**Response:** Cul-de-sacs are not proposed as part of this development. Therefore, this standard is not applicable.

*B. Design Standards*

*1. Arterial and Collector Streets*

*Arterial and collector streets shall have minimum six (6) or eight (8) foot wide sidewalks/multi-use paths, located as required by this Code. Residential areas shall have a minimum of a six (6) foot wide sidewalk and commercial industrial areas shall have a minimum of an eight (8) foot wide sidewalk.*

**Response:** An 8-foot sidewalk is proposed on SW Blake Street. A 12-foot multi-use path is proposed on SW 124<sup>th</sup> Avenue, as requested in the Transportation Facilities Modification in Section 16.106.020.E and the Engineering Design Modification (attached to the application transmittal). See the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). Therefore, this standard is met.

*2. Local Streets*

*Local streets shall have minimum five (5) foot wide sidewalks, located as required by this Code.*

**Response:** The proposed development is not adjacent to existing or planned local streets. Therefore, this standard is not applicable.

*3. Handicapped Ramps*

*Sidewalk handicapped ramps shall be provided at all intersections.*

**Response:** ADA-accessible ramps are proposed for sidewalks at corners and crossings on the site's frontage and on-site, as pictured in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). Therefore, this standard is met.

*C. Pedestrian and Bicycle Paths*

*Provide bike and pedestrian connections on public easements or right-of-way when full street connections are not possible, with spacing between connections of no more than 330 feet except where prevented by topography, barriers such as railroads or highways, or environmental constraints such as rivers and streams.*

**Response:** A bike and pedestrian connection through the WTP site was found impracticable in response to access requirements and exceptions in Sections 16.106.030.B.6 and B.7, due to environmental constraints as well as other constraints. Therefore, this standard is not applicable.

*16.106.070 - Bike Lanes*

*If shown in Figure 13 of the Transportation System Plan, bicycle lanes shall be installed in public rights-of-way, in accordance with City specifications. Bike lanes shall be installed on both sides of designated roads, should be separated from the road by a twelve-inch stripe or other means approved by Engineering Staff, and should be a minimum of five (5) feet wide.*

**Response:** Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029) note the striped 6-foot bike lanes to be installed on both sides of SW Blake Street. On SW 124<sup>th</sup> Avenue, a 12-foot multi-use path will be installed on the WTP frontage, subject to the requested Transportation Facilities Modification and Engineering Design Modification. Therefore, this standard is met, with the approval of the Transportation Facilities Modification and Engineering Design Modification.

*16.106.080 - Traffic Impact Analysis (TIA)*

*B. Applicability*

*A traffic impact analysis (TIA) shall be required to be submitted to the City with a land use application at the request of the City Engineer or if the proposal is expected to involve one (1) or more of the following:*

- 1. An amendment to the Sherwood Comprehensive Plan or zoning map.*
- 2. A new direct property approach road to Highway 99W is proposed.*
- 3. The proposed development generates fifty (50) or more PM peak-hour trips on Highway 99W, or one hundred (100) PM peak-hour trips on the local transportation system.*
- 4. An increase in use of any adjacent street or direct property approach road to Highway 99W by ten (10) vehicles or more per day that exceed the twenty thousand-pound gross vehicle weight.*
- 5. The location of an existing or proposed access driveway does not meet minimum spacing or sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or such vehicles are likely to queue or hesitate at an approach or access connection, thereby creating a safety hazard.*
- 6. A change in internal traffic patterns that may cause safety problems, such as back up onto the highway or traffic crashes in the approach area.*

**Response:** A TIA is required to be submitted with this application at the request of the City Engineer. A TIA was prepared and is included in this application as Exhibit F. Therefore, this standard is met.

*C. Requirements*

*The following are typical requirements that may be modified in coordination with Engineering Staff based on the specific application.*

*1. Pre-application Conference. The applicant shall meet with the City Engineer prior to submitting an application that requires a TIA. This meeting will be coordinated with Washington County and ODOT when an approach road to a County road or Highway 99W serves the property, so that the TIA will meet the requirements of all relevant agencies.*

**Response:** The TIA was prepared after consulting with the City Engineer and Washington County. Therefore, this standard is met.

*2. Preparation. The TIA shall be prepared by an Oregon Registered Professional Engineer qualified to perform traffic Engineering analysis and will be paid for by the applicant.*

**Response:** The TIA (Exhibit F) was prepared by an Oregon Registered Professional Engineer and was contracted and paid for by the applicant. Therefore, this standard is met.

*3. Typical Average Daily Trips and Peak Hour Trips. The latest edition of the Trip Generation Manual, published by the Institute of Transportation Engineers (ITE), shall be used to gauge PM peak hour vehicle trips, unless a specific trip generation study that is approved by the City Engineer indicates an alternative trip generation rate is appropriate.*

*4. Intersection-level Analysis. Intersection-level analysis shall occur at every intersection where the analysis shows that fifty (50) or more peak hour vehicle trips can be expected to result from the development.*

**Response:** The focus of the TIA is the construction period when the highest levels of traffic to and from the WTP site will be generated. Given this specific trip generation, the traffic engineer worked with the project managers to determine site-specific traffic during temporary construction conditions as well as permanent operation conditions. See Table 4 and Appendix H in the TIA (Exhibit F). The TIA includes intersection-level analysis of the following intersections: SW 124<sup>th</sup> Avenue/SW Blake Street, SW 124<sup>th</sup> Avenue/SW Tualatin-Sherwood Road, SW 124<sup>th</sup> Avenue/SW Tonquin Road. See Figures 7 and 8 and Tables 5, 6, and 7 in the TIA. Therefore, these standards are met.

5. *Transportation Planning Rule Compliance. The requirements of OAR 660-012-0060 shall apply to those land use actions that significantly affect the transportation system, as defined by the Transportation Planning Rule.*

**Response:** The proposed development will not significantly affect the transportation system as defined by the Transportation Planning Rule. Therefore, this standard is not applicable.

*D. Study Area*

*The following facilities shall be included in the study area for all TIAs:*

1. *All site-access points and intersections (signalized and unsignalized) adjacent to the proposed development site. If the site fronts an arterial or collector street, the analysis shall address all intersections and driveways along the site frontage and within the access spacing distances extending out from the boundary of the site frontage.*
2. *Roads and streets through and adjacent to the site.*
3. *All intersections needed for signal progression analysis.*
4. *In addition to these requirements, the City Engineer may require analysis of any additional intersections or roadway links that may be adversely affected as a result of the proposed development.*

**Response:** The study area includes adjacent streets and three critical intersections. See Figures 1 and 2 in the TIA (Exhibit F). Therefore, this standard is met.

*E. Analysis Periods*

*To adequately assess the impacts of a proposed land use action, the following study periods, or horizon years, should be addressed in the transportation impact analysis where applicable:*

1. *Existing Year.*
2. *Background Conditions in Project Completion Year. The conditions in the year in which the proposed land use action will be completed and occupied, but without the expected traffic from the proposed land use action. This analysis should account for all City-approved developments that are expected to be fully built out in the proposed land use action horizon year, as well as all planned transportation system improvements.*
3. *Full Buildout Conditions in Project Completion Year. The background condition plus traffic from the proposed land use action assuming full build-out and occupancy.*

**Response:** Given the unique nature of this TIA (construction-focused), the study period consists of the existing year (2019, when the analysis was started) and a peak time during the 2022-2025 construction

period when the most traffic will be generated. Figure 2 in the TIA (Exhibit F) presents existing (2019) AM/PM peak hour traffic volumes; Figure 7 in the TIA presents AM/PM peak hour traffic volumes and distribution during the height of construction; and Figure 8 in the TIA presents the two combined. Therefore, these standards are met.

*4. Phased Years of Completion. If the project involves construction or occupancy in phases, the applicant shall assess the expected roadway and intersection conditions resulting from major development phases. Phased years of analysis will be determined in coordination with City staff.*

*5. Twenty-Year or TSP Horizon Year. For planned unit developments, comprehensive plan amendments or zoning map amendments, the applicant shall assess the expected future roadway, intersection, and land use conditions as compared to approved comprehensive planning documents.*

**Response:** The project is not phased, is not a planned unit development, and does not involve a comprehensive plan amendment or a zoning map amendment. Therefore, these standards are not applicable.

*F. Approval Criteria*

*When a TIA is required, a proposal is subject to the following criteria, in addition to all criteria otherwise applicable to the underlying land use proposal:*

*1. The analysis complies with the requirements of 16.106.080.C;*

**Response:** The TIA complies with the requirements of Section 16.106.080.C as provided in the responses to those criteria above. Therefore, this standard is met.

*2. The analysis demonstrates that adequate transportation facilities exist to serve the proposed development or identifies mitigation measures that resolve identified traffic safety problems in a manner that is satisfactory to the City Engineer and, when County or State highway facilities are affected, to Washington County and ODOT;*

**Response:** The TIA (Exhibit F) addresses construction traffic (the highest levels of expected traffic) and permanent operations traffic. The analysis found that construction traffic would not trigger permanent treatments such as traffic signals or turn lanes at intersections including SW Blake Street/SW 124<sup>th</sup> Avenue and SW 124<sup>th</sup> Avenue/SW Tualatin-Sherwood Road. Permanent operations traffic will be related to operations personnel, solids hauling, chemical deliveries, and public visitors such as tour groups. With approximately 25-35 total trips to and from the site on a typical day, permanent traffic will be a fraction

of the construction traffic and, thus, also does not trigger permanent treatments and mitigation. Therefore, this standard is met.

*3. For affected non-highway facilities, the TIA demonstrates that mobility and other applicable performance standards established in the adopted City TSP have been met; and*

**Response:** Tables 5 through 7 in the TIA (Exhibit F) show the results of volume-to-capacity ratio (V/C), level of service (LOS), and delay analysis at the three study intersections before and during WTP construction. While the V/C would increase with expected WTP construction trips, all intersections will still meet County performance standards. Therefore, this standard is met.

*4. Proposed public improvements are designed and will be constructed to the street standards specified in Section 16.106.010 and the Engineering Design Manual, and to the access standards in Section 16.106.040.*

*5. Proposed public improvements and mitigation measures will provide safe connections across adjacent right-of-way (e.g., protected crossings) when pedestrian or bicycle facilities are present or planned on the far side of the right-of-way.*

**Response:** Given negligible impacts from projected WTP construction traffic and even fewer impacts from projected WTP operations traffic, permanent public improvements and mitigation related to traffic impacts are not warranted or recommended. The TIA (Exhibit F) does make recommendations regarding temporary traffic control measures including signing, lighting, traffic calming, and speed enforcement during construction to address safety and mobility.

Public improvements related to requirements aside from traffic impacts – for example the construction of the required new SW Blake Street and SW 124<sup>th</sup> Avenue frontage improvements – are designed to City standards (with the approval of Transportation Facilities Modifications and Engineering Design Modifications as needed) and provide safe connections across SW Blake Street with a marked crossing at the intersection of SW Blake Street/SW 124<sup>th</sup> Avenue. See the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029)

Therefore, this standard is met.

#### *G. Conditions of Approval*

*The City may deny, approve, or approve a development proposal with conditions needed to meet operations and safety standards and provide the necessary right-of-way and improvements to ensure consistency with the future planned transportation system. Improvements required as a*

*condition of development approval, when not voluntarily provided by the applicant, shall be roughly proportional to the impact of the development on transportation facilities, pursuant to Section 16.106.090. Findings in the development approval shall indicate how the required improvements are directly related to and are roughly proportional to the impact of development.*

**Response:** The TIA finds that the proposed development meets operations standards as addressed in the findings above regarding V/C, LOS, and delay analysis. It also finds the proposed development will meet safety standards, namely required sight distance; the TIA includes a Preliminary Sight Distance Certification (Exhibit F, Appendix A). Right-of-way and improvements will be provided as addressed in response to criteria in Sections 16.106.010 through 16.106.070.

*16.106.090 - Rough Proportionality*

*B. Mitigation of impacts due to increased demand for transportation facilities associated with the proposed development shall be provided in rough proportion to the transportation impacts of the proposed development. When applicable, anticipated impacts will be determined by the TIA in accordance with Section 16.106.080. When no TIA is required, anticipated impacts will be determined by the City Engineer.*

*C. The following shall be considered when determining proportional improvements:*

- 1. Condition and capacity of existing facilities within the impact area in relation to City standards. The impact area is generally defined as the area within a one-half-mile radius of the proposed development. If a TIA is required, the impact area is the TIA study area.*
- 2. Existing vehicle, bicycle, pedestrian, and transit use within the impact area.*
- 3. The effect of increased demand on transportation facilities and other approved, but not yet constructed, development projects within the impact area that is associated with the proposed development.*
- 4. Applicable TSP goals, policies, and plans.*
- 5. Whether any route affected by increased transportation demand within the impact area is listed in any City program including school trip safety; neighborhood traffic management; capital improvement; system development improvement, or others.*
- 6. Accident history within the impact area.*
- 7. Potential increased safety risks to transportation facility users, including pedestrians and cyclists.*
- 8. Potential benefit the development property will receive as a result of the construction of any required transportation facility improvements.*
- 9. Other considerations as may be identified in the review process pursuant to Chapter 16.72.*



**Response:** Given negligible temporary and permanent traffic impacts associated with the proposed development, the recommended temporary traffic control measures are appropriate, and mitigation is not warranted. Therefore, these standards are not applicable.

*Chapter 16.108 - IMPROVEMENT PLAN REVIEW*

*16.108.010 - Preparation and Submission*

*An improvement plan shall be prepared and stamped by a Registered Civil Engineer certifying compliance with City specifications. Two (2) sets of the plan shall be submitted to the City for review. An improvements plan shall be accompanied by a review fee as per this Section.*

*A. Review Fee*

*Plan review fees are calculated as a percentage of the estimated total cost of improvements and are set by the "Schedule of Development and Business Fees" adopted by Resolution of the Council. This schedule is included herein for the purposes of information, but is deemed to be separate from and independent of this Code.*

**Response:** Two sets of WTP improvement plans, prepared, stamped, and attested to by a registered civil engineer, will be submitted for City Engineering review. The plans will be submitted with the appropriate review fee, as determined by the current City Master Fees and Charges Schedule. Therefore, this standard will be met.

*B. Engineering Agreement*

*A copy of an agreement or contract between the applicant and Registered Civil Engineer for:*

- 1. Surveying sufficient to prepare construction plans.*
- 2. Preparation of construction plans and specifications.*
- 3. Construction staking, and adequate inspection.*
- 4. Construction notes sufficient to develop accurate as-built plans.*
- 5. Drawing of accurate as-built plans and submission of reproducible mylars for finals to the City.*
- 6. Certificate stating that construction was completed in accordance with required plans and specifications.*

**Response:** A copy of an agreement or contract between the applicant and registered civil engineer regarding the services specified above will also be drawn up and submitted. Therefore, this standard will be met.

*16.108.020 - Construction Permit*

*A. Approval*

*The City will return one (1) set of plans to the applicant marked "approved," "approved as noted" or "modify and resubmit." Plans marked for re-submittal must be corrected in accordance with notations or instructions. After correction and approval, additional plans shall be provided the City for office use, field inspection and submittal to affected agencies.*

**Response:** The applicant will submit additional plans as specified once the plans have been approved. Therefore, this standard will be met.

*B. Permit and Fee*

*Upon approval the applicant shall obtain a construction permit. The construction permit fee is set by the "Schedule of Development Fees", adopted by Resolution of the Council. This schedule is included herein for the purposes of information, but is deemed to be separate from and independent of this Code.*

*C. Easement Documents*

*Easements shall be provided in a form acceptable to the City prior to issuance of a construction permit.*

*D. Improvement Guarantees*

*Prior to issuance of a construction permit the applicant shall file the following documents with the City:*

*1. Liability Insurance*

*Evidence of liability and property damage insurance adequate to protect the applicant and the City from all claims for damage or personal injury.*

*2. Performance Bond*

*To assure full and faithful performance in the construction of required improvements in accordance with approved construction plans, the applicant shall provide security in an amount equal to one hundred twenty-five percent (125%) of the estimated cost of the improvements. In the event the applicant fails to carry out all provisions of the approved improvements plans and the City has non-reimbursed costs or expenses resulting from such failure, the City shall call on the security for reimbursement. Security may be in the form of a surety bond executed by a surety company authorized to transact business in the State of Oregon, a cash deposit, or irrevocable standby letter of credit.*

**Response:** The applicant will provide the appropriate fee and easement documents and will file improvement guarantee documents. Therefore, this standard will be met.

*16.108.030 - Construction*

*A. Initiation of Construction*

*Actual construction of improvements shall not begin, or after a discontinuance, be restarted until the City is notified in writing.*

*B. Inspection*

*All construction shall be done to the City's specifications. The City shall perform inspections to verify compliance with approved plans and shall make a final inspection of the construction at such time as the improvements are complete. The City may require changes in typical sections and details, if unusual conditions warrant the change.*

*C. As-Built Plans*

*A complete set of reproducible plans and an electronic copy of the base files in "AutoCad" or PDF format showing the public improvements as built shall be filed with the City upon completion of the improvements.*

*D. Suspension of Improvements Activity*

*The City may cause a suspension of construction or engineering when, in the opinion of the City, work is not being done to the City's satisfaction.*

**Response:** The applicant will begin construction of improvements only after notifying the City. The applicant will arrange for the City to conduct a final inspection of the completed improvements to verify consistency with approved plans, and will file a complete set of reproducible hard copy plans and an electronic copy of plan base files that show the improvements as built. Therefore, these standards will be met.

*16.108.040 - Acceptance of Improvements*

*A. Final Inspection*

*At such time as all public improvements, except those specifically approved for later installation, have been completed, the applicant shall notify the City of the readiness for final inspection.*

*B. Notification of Acceptance*

*The City shall give written notice of acceptance of the improvements upon finding that the applicant has met the requirements of this Chapter and the specifications of all approved plans.*

*C. Maintenance Bond*

*Prior to City acceptance of public improvements, the applicant shall provide the City a maintenance bond computed at ten percent (10%) of the full value of the improvements, for the*

*purpose of correcting any defective work or maintenance that becomes apparent or arises within two (2) years after final acceptance of the public improvements.*

**Response:** The applicant will coordinate final inspection with the City upon completion of all public improvements. The applicant will provide the City a maintenance bond computed as specified above. Therefore, these standards will be met.

#### *Chapter 16.110 - SANITARY SEWERS*

##### *16.110.010 - Required Improvements*

*Sanitary sewers shall be installed to serve all new developments and shall connect to existing sanitary sewer mains. Provided, however, that when impractical to immediately connect to a trunk sewer system, the use of septic tanks may be approved, if sealed sewer laterals are installed for future connection and the temporary system meets all other applicable City, Clean Water Services, Washington County and State sewage disposal standards.*

**Response:** Sanitary sewers will be installed to serve the new development and will connect to existing sanitary sewer mains. The City will provide sanitary sewer service. The sewer main connecting the WTP to the existing system will extend through the TCC site north of the WTP site to SW Tualatin-Sherwood Road and extend west along the road to an existing manhole near the intersection with SW Oregon Street. The sanitary sewer service will provide wastewater disposal for the restrooms, kitchens, sinks and floor drains on the WTP site. In addition, the sewer will be capable of conveying controlled discharge from the overflow basins on the site. See the Site Utilities Plan Layout Area A and Sanitary Sewer Pipeline Plan and Profiles for subareas north of the WTP Site (Exhibit A, Sheet B-144, and B-154 through B-156). Additional Subarea Site Utilities Plans are available in the Technical Review Plan Set (Exhibit B, Sheets B-154 through B-167). Therefore, this standard is met.

##### *16.110.020 - Design Standards*

###### *A. Capacity*

*Sanitary sewers shall be constructed, located, sized, and installed at standards consistent with this Code, the Sanitary Sewer Service Plan Map in the Sanitary Sewer Master Plan, and other applicable Clean Water Services and City standards, in order to adequately serve the proposed development and allow for future extensions.*

**Response:** Most sewer laterals needed on the WTP site will be approximately 4-inch or 6-inch diameter pipes and will have a minimum 2% slope. The 6-inch or 8-inch mains located within the site's paved vehicle circulation areas will have a minimum 1% slope to a manhole in SW Blake Street. The main between this manhole and the connection point in SW Tualatin-Sherwood Road will be reached via a 12-inch PVC sewer pipe in accordance with the City's Wastewater Master Plan. See the Site Utilities Plan

Layout Area A and Sanitary Sewer Pipeline Plan and Profiles for Area B, B7, and B8 (Exhibit A, Sheets B-154, and B-157 and B-158), as well as the subarea Site Utilities Plans (Exhibit B, Sheets B-144 through 153). Manholes will be installed along the main approximately every 500 feet and at vertical and horizontal direction changes. Therefore, this standard is met.

*B. Over-Sizing*

- 1. When sewer facilities will, without further construction, directly serve property outside a proposed development, gradual reimbursement may be used to equitably distribute the cost of that over-sized system.*
- 2. Reimbursement shall be in an amount estimated by the City to be a proportionate share of the cost for each connection made to the sewer by property owners outside of the development, for a period of ten (10) years from the time of installation of the sewers. The boundary of the reimbursement area and the method of determining proportionate shares shall be determined by the City. Reimbursement shall only be made as additional connections are made and shall be collected as a surcharge in addition to normal connection charges.*

**Response:** The proposed sewer system is not over-sized. The WTP\_1.0 is located on the top of a localized hill in the area and no development is foreseeable upstream of the plant. Therefore, these standards are not applicable.

*16.110.030 - Service Availability*

*Approval of construction plans for new facilities pursuant to Chapter 16.106, and the issuance of building permits for new development to be served by existing sewer systems shall include certification by the City that existing or proposed sewer facilities are adequate to serve the development.*

**Response:** The capacity of the proposed sewer system and its connections to the existing City sewer system have been sized and located so as to adequately serve the development.

*Chapter 16.112 - WATER SUPPLY*

*16.112.010 - Required Improvements*

*Water lines and fire hydrants conforming to City and Fire District standards shall be installed to serve all building sites in a proposed development. All waterlines shall be connected to existing water mains or shall construct new mains appropriately sized and located in accordance with the Water System Master Plan.*

**Response:** Water lines and hydrants will be installed to serve the WTP site, and water lines will be designed to connect to existing City water mains.

Following construction, fire suppression, domestic, and irrigation service will be self-provided by the WTP under typical circumstances. The plumbing code requires all private fire hydrants to have backflow preventers between the hydrants and the potable water supply. Installation of 6-inch diameter backflow preventers in vaults would add significant cost and occupy the limited available space on site. Additionally, these devices would need to be maintained and tested on a regular basis in the future. To meet plumbing code requirements and avoid the cost and challenges associated with installing backflow preventers at each hydrant, two separate water systems are proposed. The function of each of these systems is outlined below. Connections to each water system will incorporate metering and valving to accommodate supply flexibility.

- Fire Loop System – The fire loop system will include 12-inch diameter piping extended through the WTP site vehicle circulation system. It is expected that the City will supply water for this system during construction and the WTP finished water facilities will supply water for this system following WTP start-up. The system will supply the on-site fire hydrants, the fire suppression sprinkler system in the buildings, the irrigation system, and washdown water to the some of the facilities. Since there will not be backflow preventers at the hydrants, sprinklers, or washdown facilities, the water system should be considered non-potable. A reduced pressure backflow preventer will be installed at the FWPS for the fire loop system.
- Domestic and Process Water Supply System – The domestic and process water supply system will consist of a 6-inch diameter water line to be installed in Roads A and B on-site and a 10-inch diameter water line in Roads C and D. It could be supplied from the City during construction through a 10-inch diameter water line and meter/backflow preventer vault in Road D, and will be supplied from the WTP finished water facilities following WTP start-up. The system will supply domestic water to the buildings and supply the various process systems as needed. A reduced pressure backflow preventer will be installed at the FWPS for the domestic water supply system. The process water demands are not anticipated to be coincident with fire demands.

See the proposed water system in the Site Utilities Plan Layout Area A and Utility Layout Plan Area B (Exhibit A, Sheets B-144 and B-154), as well as the subarea Site Utilities Plans (Exhibit B, Sheets B-144 through B-153).

Therefore, this standard is met.

*16.112.020 - Design Standards*

*A. Capacity*

*Water lines providing potable water supply shall be sized, constructed, located and installed at standards consistent with this Code, the Water System Master Plan, the City's Design and Construction Manual, and with other applicable City standards and specifications, in order to adequately serve the proposed development and allow for future extensions.*

**Response:** The peak water demand from the City to meet fire flow requirements through the fire loop system will be approximately 3,600 gallons per minute (gpm). This estimate is based on a 3,000 gpm fire flow to on-site hydrants required by TVF&R and the fire flow to the fire suppression sprinklers (600 gpm) to be installed in WTP buildings.

To meet this flow and provide adequate pressure at the site, in addition to the proposed looped piping system through the TCC development north of the WTP site and the proposed water main in SW Blake Street, upgrades to the City's system are likely needed. The existing water system was modeled based on the proposed design flows. It shows a restriction in the system based on the 12-inch main in SW Tualatin-Sherwood Road between SW Oregon Street and SW Cipole Road. Options to address this restriction include:

- A. Extend a water main from the southwest end of SW Blake Street to the intersection of SW Oregon Street and SW Tonquin Road. This is a challenge as it is unknown as to when SW Blake Street will be extended to SW Oregon Street and easements would be needed for the water line if it preceded the roadway extension.
- B. Parallel the existing 12-inch mains in SW Tualatin-Sherwood Road, starting at SW Cipole Road and extending along SW Oregon Street to SW Tonquin Road.
- C. Use an existing, City-owned 24-inch main that is out of service that extends along SW Oregon Street and SW Tualatin-Sherwood Road to SW Cipole Road where it extends north and east to the City of Tualatin. The use of this main would be temporary until SW Blake Street and the associated water line are extended to SW Oregon Street. This would involve designs to remove an existing pressure release valve (PRV) in a vault at SW Murdock Street and SW Oregon Street and installing an intertie between the existing 24-inch main and proposed water mains extending to the WTP site. Such upgrades are outside of the scope of the WTP project; however, use of the existing 24-inch main on a temporary basis would benefit the City and the WWSP, as obtaining additional easements for the SW Blake Street extension option and installing more water line in the roadways would require substantially more time and costs.

The requirements to meet the water demands at the WTP will be further reviewed with the City and are subject to discussions and negotiations with the City.

During construction, the aim of the water system supplied by the City is to meet the following objectives.

- From the proposed connection with City water at the west entrance of the site:

- Provide site water needed for construction
- Provide fire flows during construction and prior to start-up
- Install a backflow preventer at this connection
- From the proposed connection with City water at the east entrance to the site:
  - Provide temporary domestic water supply
  - Install a backflow preventer at this connection

Following construction, the water system will meet the following objectives:

- Provide emergency supply to the City from the WTP through a separate connection between the WTP finished water line and the City's water main in SW Blake Street. This connecting piping will extend from the FWPS and along on-site Road D to SW Blake Street.
- Provide emergency fire suppression supply to the WTP from the City through a connection at the south entrance to the WTP site at Road A. This connection will be to the on-site fire loop system.
- Provide domestic and process water flow from the WTP finished water facilities to the on-site facilities. This will be supplied through the domestic water supply loop.
- Provide fire flow to on-site hydrants, building sprinkler systems, irrigation supply, and facility washdown water from the WTP finished water facilities. This will be supplied through the on-site fire loop.

During WTP start-up, needed water will be supplied from either or both connections with the City. The required flow rate at start-up and WTP commissioning will be coordinated with the City to address potential impacts to the City's water supply to City domestic customers during high demand times and start-up activities.

Therefore, this standard is and will be met.

*B. Fire Protection*

*All new development shall comply with the fire protection requirements of Chapter 16.116, the applicable portions of Chapter 7 of the Community Development Plan, and the Fire District.*

**Response:** Applicable fire protection requirements are addressed in the responses to criteria in Chapter 16.116 later in this narrative and in the Service Provider Letter documentation from TVF&R (Exhibit I). Therefore, this standard is met.



*C. Over-Sizing*

- 1. When water mains will, without further construction, directly serve property outside a proposed development, gradual reimbursement may be used to equitably distribute the cost of that over-sized system.*
- 2. Reimbursement shall be in an amount estimated by the City to be the proportionate share of the cost of each connection made to the water mains by property owners outside the development, for a period of ten (10) years from the time of installation of the mains. The boundary of the reimbursement area and the method of determining proportionate shares shall be determined by the City. Reimbursement shall only be made as additional connections are made and shall be collected as a surcharge in addition to normal connection charges.*
- 3. When over-sizing is required in accordance with the Water System Master Plan, it shall be installed per the Water System Master Plan. Compensation for over-sizing may be provided through direct reimbursement, from the City, after mainlines have been accepted. Reimbursement of this nature would be utilized when the cost of over-sizing is for system wide improvements.*

**Response:** Over-sizing of the water system is not proposed. Therefore, these standards are not applicable.

*16.112.030 - Service Availability*

*Approval of construction plans for new water facilities pursuant to Chapter 16.106, and the issuance of building permits for new development to be served by existing water systems shall include certification by the City that existing or proposed water systems are adequate to serve the development.*

**Response:** The capacity of the proposed water system and its connections to the existing City water system have been sized and located so as to adequately serve the development.

*Chapter 16.114 - STORM WATER*

*16.114.010 - Required Improvements*

*Storm water facilities, including appropriate source control and conveyance facilities, shall be installed in new developments and shall connect to the existing downstream drainage systems consistent with the Comprehensive Plan and the requirements of the Clean Water Services water quality regulations contained in their Design and Construction Standards R&O 04-9, or its replacement.*

**Response:** Stormwater facilities will be installed in the WTP development and will connect to existing drainage systems. As stated in Section 4.5 of the Stormwater Report (Exhibit G):

LIDA for stormwater management facilities will treat runoff from the project's contributing impervious surfaces within the site development area. These facilities also serve as retention or storage facilities, attenuating flow rates so that post-development flows do not exceed predevelopment flows. This approach entails biofiltration of stormwater runoff close to its origination and will capture sediments and pollution through use of street-side planters, rain gardens, and extended dry basins.

Design of LIDA facilities will rely upon reference to Chapter 4 of CWS' Design and Construction Standards for Sanitary Sewer and Surface Water Management and LIDA Handbook.

Other system elements include conveyance, addressed in more detail in response to Subsection 16.114.020.C below, and overflow facilities, addressed in more detail in response to Subsection 16.114.020.A below.

In terms of connecting to existing drainage systems, about half of the site currently slopes to the north and half to the south. To maintain these drainage patterns, the northern portion of the site will discharge to the existing 36-inch culvert under SW Tualatin-Sherwood Road and ultimately Hedges Creek. Stormwater in the southern portion of the site will be treated, detained, and discharged to Wetland G (the large kolk wetland), which is within the Coffee Lake Creek drainage basin.

See the proposed stormwater facilities indicated in the following plan sets and drawings:

- Grading Plan Area A and LIDA Stormwater Facility Summary (Exhibit A, Sheets B-126 and Sheet B-109);
- Grading Plan Area A1 through A15 (Exhibit B, Sheets B-128 through B-142);
- Erosion Control Plan Area A and LIDA Stormwater Facility Summary (Exhibit A, Sheets B-108 and B-109);
- Erosion Control Plan Area A1 through A15 (Exhibit B, Sheets B-110 through B-124);
- Site Utilities Plan Layout Area A and Utility Layout Plan Area B (Exhibit A, Sheet B-144 and B-154); and
- Site Utilities Plans Area A1 through A11 (Exhibit B, Sheets B-145 through B-153).

Therefore, this standard is met.

*16.114.020 - Design Standards*

*A. Capacity*

*Storm water drainage systems shall be sized, constructed, located, and installed at standards consistent with this Code, the Storm Drainage Master Plan Map, attached as Exhibit E, Chapter 7 of the Community Development Plan, other applicable City standards, the Clean Water Services*

*Design and Construction standards R&O 04-9 or its replacement, and hydrologic data and improvement plans submitted by the developer.*

**Response:** Stormwater systems were developed and sized based on areas of proposed impervious surface, including buildings and roads. Table 5-4.A in the Stormwater Report (Exhibit G) summarizes the design parameters for the proposed WTP water quality treatment facilities. Per the report:

Water quality runoff volumes are based on 50 percent of the 2-year, 24-hour storm event (1.25 inches), which is consistent with Standard Local Operating Procedure for Endangered Species (SLOPES) V requirements and more conservative than CWS standard. Each facility is sized to completely retain the water quality storm event volume with no discharge. Where the runoff volume into the facility exceeds the dead storage volume, filtration of stormwater through the growing media provides additional capacity to keep each facility functioning within these requirements. Table 5-4.B and Table 5-4.C in the Stormwater Report present model results for peak flows originating from each of the site's drainage basins (pre-development and post-development). They show an increase in post-development peak flow, which can primarily be attributed to the change in land use from an undeveloped to a developed condition and an increase in impervious surfaces created by the project. However, the decrease in peak flows at the outfalls to Hedges Creek and Coffee Lake Creek (presented in Table 5-4.D and Table 5-4.E in the Stormwater Report) demonstrate the effectiveness of the project's approach to stormwater management and the benefit to the downstream conveyance system.

### **Emergency Overflow**

In the unlikely event that internal WTP processes fail, raw and finished water from the facility may need to be temporarily stored and conveyed, up to 66 mgd. To mitigate the need to accommodate that full amount, on-site overflow basins are designed to hold up to 30 minutes of process water from the intake facilities at the Willamette River. Water received past this point will be discharged in two directions: one half towards an existing ditch along the west side of SW 124<sup>th</sup> Avenue via new stormwater facilities on SW Blake Street, and the other half towards an existing 36-inch culvert under SW Tualatin-Sherwood Road. Both routes lead to Hedges Creek.

Emergency overflows towards the ditch along SW 124<sup>th</sup> Avenue will first overtop the on-site Road A at the SW Blake Street intersection en route to the large extended dry basin north of the proposed clearwell. Emergency overflows towards the 36-inch culvert under SW Tualatin-Sherwood Road will be conveyed through SW Blake Street via a combination of stormwater facilities, pipes, and ditches en route toward conveyances within a utility easement. Then they will be discharged to a wetland constructed by TCC on the south side of SW Tualatin-Sherwood Road, just upstream of the 36-inch culvert.

Proposed stormwater systems will be developed to applicable standards, with sufficient capacity and measures for typical and emergency events. Therefore, this standard is met.

*B. On-Site Source Control*

*Storm water detention and groundwater recharge improvements, including but not limited to such facilities as dry wells, detention ponds, and roof top ponds shall be constructed according to Clean Water Services Design and Construction Standards.*

**Response:** Proposed on-site detention and recharge facilities will be constructed to CWS Design and Construction Standards, as indicated in the Stormwater Report (Exhibit G). Therefore, this standard is met.

*C. Conveyance System*

*The size, capacity and location of storm water sewers and other storm water conveyance improvements shall be adequate to serve the development and accommodate upstream and downstream flow. If an upstream area discharges through the property proposed for development, the drainage system shall provide capacity to receive storm water discharge from the upstream area. If downstream drainage systems are not sufficient to receive an increase in storm water caused by new development, provisions shall be made by the developer to increase the downstream capacity or to provide detention such that the new development will not increase the storm water caused by the new development.*

**Response:** As presented in the Section 4.5.4 of the Stormwater Report (Exhibit G):

In developing the drainage concepts for the project, natural features and existing infrastructure were assessed with emphasis placed on the most economically beneficial design to meet the project's regulatory needs. To meet the requirements prescribed by the DSL, the USACE, and the City, the drainage system will be designed to prevent negative impacts to the proposed improvements, waters of the State, and downstream properties and public infrastructure. Modeling data documenting high flow conveyance for the ditches, pipes, and LIDA facilities are provided for reference in Appendix D. Storm conveyance design criteria includes analysis for the 25-year post development peak rate of runoff, and others<sup>2</sup>. Since velocities through LIDA facilities will not exceed two feet per second during the 100-year storm, hydraulic forces are conducive to vegetation growth. Riprap and splash block armoring is provided at all locations of concentrated drainage point discharges to prevent erosion.

Where a LIDA facility serves as the primary discharge route for a drainage basin, a high flow analysis was conducted. When street-side planters are placed in series, such as along SW Blake Street, they may rely upon gutter capacity within the roadway to convey flows between each successive curb inlet during events exceeding the water quality storm. In these conditions, the gutter was analyzed for inundation into the roadway, and designed so that drainage does not flood into the travel lane of the road. Using the bicycle lane for conveyance, flowrates up to 2.5 cubic feet per second (cfs) may be conveyed by the gutter before inundating the travel lane.

During the 50-year storm event applicable to the conveyance system design of major collectors such as SW Blake Street, the gutter flow is anticipated to be less than 0.38 cfs as a result of the roadside planters and will comply with design criteria.

Therefore, this standard is met.

*16.114.030 - Service Availability*

*Approval of construction plans for new storm water drainage facilities pursuant to Chapter 16.106, and the issuance of building permits for new development to be served by existing storm water drainage systems shall include certification by the City that existing or proposed drainage facilities are adequate to serve the development.*

**Response:** As demonstrated in the previous responses to criteria in this Section, the capacity of the proposed stormwater system and its connections to the existing stormwater systems have been designed so as to adequately serve the development.

*Chapter 16.116 - FIRE PROTECTION\**

*16.116.010 - Required Improvements*

*When land is developed so that any commercial or industrial structure is further than two hundred and fifty (250) feet or any residential structure is further than five hundred (500) feet from an adequate water supply for fire protection, as determined by the Fire District, the developer shall provide fire protection facilities necessary to provide adequate water supply and fire safety.*

**Response:** An adequate water supply will be provided within 250 feet of the proposed WTP structures, as demonstrated in TVF&R Service Provider Letter (SPL) documentation in Exhibit I and the responses to water supply criteria in Chapter 16.112. Therefore, this standard is not applicable.

*16.116.020 - Standards*

*A. Capacity*

*All fire protection facilities shall be approved by and meet the specifications of the Fire District, and shall be sized, constructed, located, and installed consistent with this Code, Chapter 7 of the Community Development Plan, and other applicable City standards, in order to adequately protect life and property in the proposed development.*

*B. Fire Flow*

*Standards published by the Insurance Services Office, entitled "Guide for Determination of Required Fire Flows" shall determine the capacity of facilities required to furnish an adequate fire flow. Fire protection facilities shall be adequate to convey quantities of water, as determined by ISO standards, to any outlet in the system, at no less than twenty (20) pounds per square inch residual pressure. Water supply for fire protection purposes shall be restricted to that available from the City water system. The location of hydrants shall be taken into account in determining whether an adequate water supply exists.*

*C. Access to Facilities*

*Whenever any hydrant or other appurtenance for use by the Fire District is required by this Chapter, adequate ingress and egress shall be provided. Access shall be in the form of an improved, permanently maintained roadway or open paved area, or any combination thereof, designed, constructed, and at all times maintained, to be clear and unobstructed. Widths, height clearances, ingress and egress shall be adequate for District firefighting equipment. The Fire District, may further prohibit vehicular parking along private accessways in order to keep them clear and unobstructed, and cause notice to that effect to be posted.*

*D. Hydrants*

*Hydrants located along private, accessways shall either have curbs painted yellow or otherwise marked prohibiting parking for a distance of at least fifteen (15) feet in either direction, or where curbs do not exist, markings shall be painted on the pavement, or signs erected, or both, given notice that parking is prohibited for at least fifteen (15) feet in either direction.*

**Response:** Sufficient capacity, fire flows, access to facilities, and hydrants are addressed in the TVF&R SPL documentation included in this application (Exhibit I). Therefore, these standards are met.

*16.116.030 - Miscellaneous Requirements*

*A. Timing of Installation*

*When fire protection facilities are required, such facilities shall be installed and made serviceable prior to or at the time any combustible construction begins on the land unless, in the opinion of the Fire District, the nature or circumstances of said construction makes immediate installation impractical.*

**Response:** Underground blasting needed to support rock excavation is the only “combustible construction” method required for this project. Fire protection for this activity is typically addressed with measures such as construction water and fire extinguishers, and will be approved by TVF&R as part of construction permitting. Therefore, this standard will be met.

*B. Maintenance of Facilities*

*All on-site fire protection facilities, shall be maintained in good working order. The Fire District may conduct periodic tests and inspection of fire protection and may order the necessary repairs or changes be made within ten (10) days.*

**Response:** Fire protection facilities will be maintained in good working order. Therefore, this standard will be met.

*C. Modification of Facilities*

*On-site fire protection facilities, may be altered or repaired with the consent of the Fire District; provided that such alteration or repairs shall be carried out in conformity with the provisions of this Chapter.*

**Response:** Alteration or repair of fire protection facilities is not proposed. It is understood that altering or repairing fire protection facilities in the future must be done in conformity with the provisions of this Chapter.

*Chapter 16.118 - PUBLIC AND PRIVATE UTILITIES*

*16.118.010 - Purpose*

*Public telecommunication conduits as well as conduits for franchise utilities including, but not limited to, electric power, telephone, natural gas, lighting, and cable television shall be installed to serve all newly created lots and developments in Sherwood.*

*16.118.020 - Standard*

*A. Installation of utilities shall be provided in public utility easements and shall be sized, constructed, located and installed consistent with this Code, and applicable utility company and City standards.*

*B. Public utility easements shall be a minimum of eight (8) feet in width unless a reduced width is specifically exempted by the City Engineer. An eight-foot wide public utility easement (PUE) shall be provided on private property along all public street frontages. This standard does not apply to developments within the Old Town Overlay.*

**Response:** Utilities will be installed in PUEs, and PUEs at least 8 feet in width will be provided on the WTP property adjacent to the right-of-way for SW Blake Street and SW 124<sup>th</sup> Avenue. See the Site Utilities Plan Layout Area A (Exhibit A, Sheet B-144). Therefore, this standard is met.

*C. Where necessary, in the judgment of the City Manager or his designee, to provide for orderly development of adjacent properties, public and franchise utilities shall be extended through the site to the edge of adjacent property(ies).*

**Response:** Extending utilities to adjacent properties to the west and south would be most expeditiously done from SW Dahlke Lane and SW 124<sup>th</sup> Avenue. Therefore, extending utilities through the WTP site is not advisable or necessary.

*D. Franchise utility conduits shall be installed per the utility design and specification standards of the utility agency.*

**Response:** Franchise utility conduits (e.g., for Sherwood Broadband and PGE) will be installed according to those agency's standards. Therefore, this standard will be met.

*E. Public Telecommunication conduits and appurtenances shall be installed per the City of Sherwood telecommunication design standards.*

**Response:** Public telecommunication conduits and appurtenances will be installed per City standards. Therefore, this standard is met.

*F. Exceptions: Installation shall not be required if the development does not require any other street improvements. In those instances, the developer shall pay a fee in lieu that will finance installation when street or utility improvements in that location occur.*

**Response:** Utilities will be installed as part of WTP development and exceptions are not proposed. Therefore, this standard is not applicable.

#### *16.118.030 - Underground Facilities*

*Except as otherwise provided, all utility facilities, including but not limited to, electric power, telephone, natural gas, lighting, cable television, and telecommunication cable, shall be placed underground, unless specifically authorized for above ground installation, because the points of connection to existing utilities make underground installation impractical, or for other reasons deemed acceptable by the City.*

**Response:** All proposed utilities will be installed underground, as indicated utility plans for the WTP development, including the Site Utilities Plan Layout Area A (Exhibit A, Sheet B-144). Therefore, this standard is met.



*16.118.040 - Exceptions*

*Surface-mounted transformers, surface-mounted connection boxes and meter cabinets, temporary utility service facilities during construction, high capacity electric and communication feeder lines, and utility transmission lines operating at fifty thousand (50,000) volts or more may be located above ground. The City reserves the right to approve location of all surface-mounted transformers.*

**Response:** Temporary utility service facilities will be located above-ground during construction. See Figure 3 (Temporary Construction Utilities and Routing) in the Construction Management Plan (Exhibit E). Therefore, this standard is met.

*16.118.050 - Private Streets*

**Response:** Private streets are not proposed as part of this development. Therefore, these standards are not applicable.

**Division VIII. - ENVIRONMENTAL RESOURCES**

*Chapter 16.142 - PARKS, TREES AND OPEN SPACES*

*16.142.020 - Multi-Family Developments*

*16.142.030 - Single-Family or Duplex Residential Subdivisions*

**Response:** The proposed development is not a residential development or subdivision. Therefore, these standards are not applicable.

*16.142.040 - Visual Corridors*

*A. Corridors Required*

*New developments located outside of the Old Town Overlay with frontage on Highway 99W, or arterial or collector streets designated on Figure 8-1 of the Transportation System Plan shall be required to establish a landscaped visual corridor according to the following standards:*

	<i>Category</i>	<i>Width</i>
<i>1.</i>	<i>Highway 99W</i>	<i>25 feet</i>
<i>2.</i>	<i>Arterial</i>	<i>15 feet</i>

	<i>Category</i>	<i>Width</i>
3.	<i>Collector</i>	<i>10 feet</i>

*In residential developments where fences are typically desired adjoining the above described major street the corridor may be placed in the road right-of-way between the property line and the sidewalk. In all other developments, the visual corridor shall be on private property adjacent to the right-of-way.*

**Response:** SW Blake Street, which the applicant will construct, is designated as a City collector. SW 124<sup>th</sup> Avenue, under the jurisdiction of Washington County, is designated as an arterial. Therefore, the frontage of the proposed development is required to provide a landscaped visual corridor 10-feet-wide along SW Blake Street and 15-feet-wide along SW 124<sup>th</sup> Avenue (for the section of the roadway adjacent to the proposed development<sup>12</sup>). As non-residential development, the visual corridor must be provided on private property adjacent to the right-of-way. Visual corridors proposed on the frontages of the WTP site – the south side of SW Blake Street and the west side of SW 124<sup>th</sup> Avenue – are shown on the Planting Overall Plan (Exhibit A, Sheet B-030).

*B. Landscape Materials*

*The required visual corridor areas shall be planted as specified by the review authority to provide a continuous visual and/or acoustical buffer between major streets and developed uses. Except as provided for above, fences and walls shall not be substituted for landscaping within the visual corridor. Uniformly planted, drought resistant street trees and ground cover, as specified in Section 16.142.060, shall be planted in the corridor by the developer. The improvements shall be included in the compliance agreement. In no case shall trees be removed from the required visual corridor.*

**Response:** A continuous visual and acoustic buffer will be provided between the proposed uses and major streets (SW Blake Street and SW 124<sup>th</sup> Avenue). Plantings – at a minimum ground cover and shrubs – will be provided in the visual corridors along these two roads. Trees will also be provided in the visual corridor, albeit not uniformly as is stated in the standard due to reasons including: (1) security (limiting or prohibiting trees near perimeter fences that could allow someone to get over the fence or could interfere with surveillance of the fence); and (2) PGE requirements that restrict trees within its easements. Trees will also not be provided in the visual corridor immediately adjacent to the right-of-way where retaining walls are necessary to address site topography.

<sup>12</sup> Existing natural vegetation will be preserved – and no new landscaping installed – along SW 124<sup>th</sup> Avenue south of the proposed development.

While not within the formal boundaries of the visual corridor, it is important to note that the following will further serve to provide a continuous visual and acoustic buffer between the proposed uses and streets: fences; walls; and other proposed plantings including street trees, stormwater planters, and trees, shrubs, and ground cover on top of the retaining walls and beyond the 10-foot and 15-foot widths of the visual corridors.

See proposed plantings, retaining walls, and fences in the Planting Overall Plan (Exhibit A, Sheet B-030), fence and wall sample images (Exhibit A, Sheets B-073 through B-078), and site visualizations from roadways (Exhibit A, Sheets B-001 through B-004).

The need to vary from the requirements that trees be uniformly planted in the visual corridor and walls not be permitted to replace landscaping in the visual corridor is addressed in the responses to variance criteria in Chapter 16.84. Given the numerous proposed forms of visual buffering, the purpose of this standard and the standard itself will be met, with approval of the requested variance.

*C. Establishment and Maintenance*

*Designated visual corridors shall be established as a portion of landscaping requirements pursuant to Chapter 16.92. To assure continuous maintenance of the visual corridors, the review authority may require that the development rights to the corridor areas be dedicated to the City or that restrictive covenants be recorded prior to the issuance of a building permit.*

**Response:** The applicant is open to discussing maintenance of the visual corridors by the City.

*D. Required Yard*

*Visual corridors may be established in required yards, except that where the required visual corridor width exceeds the required yard width, the visual corridor requirement shall take precedence. In no case shall buildings be sited within the required visual corridor, with the exception of front porches on townhomes, as permitted in Section 16.44.010(E)(4)(c).*

**Response:** Required yards are 20 feet along SW Blake Street and SW 124<sup>th</sup> Avenue pursuant to Section 16.31.030.B. Thus, the visual corridors do not exceed the required yards. Buildings are not proposed in the corridors. See the Overall Site Plan (Exhibit A, Sheet B-017). Therefore, this standard is met.

*E. Pacific Highway 99W Visual Corridor*

**Response:** The site is not adjacent to Highway 99W. Therefore, this standard is not applicable.

*16.142.050 - Park Reservation*

*Areas designated on the Natural Resources and Recreation Plan Map, in Chapter 5 of the Community Development Plan, which have not been dedicated pursuant to Section 16.142.030 or 16.134.020, may be required to be reserved upon the recommendation of the City Parks Board, for purchase by the City within a period of time not to exceed three (3) years.*

**Response:** The site does not contain areas designated on the Natural Resources and Recreation Plan Map nor areas otherwise designated for parks. Therefore, this standard is not applicable.

*16.142.060 - Street Trees*

*A. Installation of Street Trees on New or Redeveloped Property.*

*Trees are required to be planted to the following specifications along public streets abutting or within any new development or re-development. Planting of such trees shall be a condition of development approval. The City shall be subject to the same standards for any developments involving City-owned property, or when constructing or reconstructing City streets. After installing street trees, the property owner shall be responsible for maintaining the street trees on the owner's property or within the right-of-way adjacent to the owner's property.*

*1. Location: Trees shall be planted within the planter strip along a newly created or improved streets. In the event that a planter strip is not required or available, the trees shall be planted on private property within the front yard setback area or within public street right-of-way between front property lines and street curb lines or as required by the City.*

**Response:** Street trees are required to be planted along SW Blake Street and SW 124<sup>th</sup> Avenue pursuant to this standard. Street trees are proposed to be planted within the planter strips along the newly created SW Blake Street and newly improved SW 124<sup>th</sup> Avenue; exceptions include the PGE easement area directly west of the primary WTP entrance (Road A), where tree planting is restricted, and the frontage of SW 124<sup>th</sup> Avenue south of the proposed WTP development, where the existing natural vegetation will be preserved. In addition to street trees in the planting strips, trees will also be provided in medians on SW Blake Street adjacent to the WTP site. See the Planting Overall Plan in Exhibit A (Sheet B-030).<sup>13</sup> The property owner will be responsible for maintaining the street trees. Therefore, these standards are met.

*2. Size: Trees shall have a minimum trunk diameter of two (2) caliper inches, which is measured six inches above the soil line, and a minimum height of six (6) feet when planted.*

<sup>13</sup> Street trees and other right-of-way improvements will be shown for SW 124<sup>th</sup> Avenue in drawings that will be provided for application completeness.

**Response:** Five types of street trees are proposed, as addressed in the next response. Proposed street trees will have a minimum trunk diameter of 2 caliper inches, as listed in the Planting Legend (Exhibit A, Sheet B-042). They will have a minimum height of 6 feet when planted. Therefore, this standard is and will be met.

*3. Types: Developments shall include a variety of street trees. The trees planted shall be chosen from those listed in 16.142.080 of this Code.*

**Response:** Various street trees will be planted in sections along SW Blake Street and SW 124<sup>th</sup> Avenue, including the following identified as “Recommended Street Trees” in Section 16.142.090:

- Thornless Honeylocust
- Black Tupelo
- Green Vase Zelkova
- Pin oak

See the Planting Overall Plan and the Planting Legends (Exhibit A, Sheet B-030 and Sheets B-042 through B-045). Therefore, this standard is met.

*4. Required Street Trees and Spacing:*

*a. The minimum spacing is based on the maximum canopy spread identified in the recommended street tree list in section 16.142.080 with the intent of providing a continuous canopy without openings between the trees. For example, if a tree has a canopy of forty (40) feet, the spacing between trees is forty (40) feet. If the tree is not on the list, the mature canopy width must be provided to the planning department by a certified arborist.*

*b. All new developments shall provide adequate tree planting along all public streets. The number and spacing of trees shall be determined based on the type of tree and the spacing standards described in a. above and considering driveways, street light locations and utility connections. Unless exempt per c. below, trees shall not be spaced more than forty (40) feet apart in any development.*

**Response:** Street trees proposed in the planting strips on the north and south sides of SW Blake Street and on the west side of SW 124<sup>th</sup> Avenue include trees with canopies of 15 feet to 20 feet. Accordingly, the trees are proposed to be planted roughly 15 feet to 20 feet apart so as to provide essentially continuous canopy along the roads. See the Planting Overall Plan (Exhibit A, Sheet B-030) and the Planting Plans for all subareas (Exhibit B, Sheets B-031 through B-041) for more detail. The exception to spacing standards and continuous canopy is in the PGE easement area just west of the primary WTP entrance where PGE restricts tree plantings. Therefore, this standard is met.

*c. A new development may exceed the forty-foot spacing requirement under section b. above, under the following circumstances:*

*(1) Installing the tree would interfere with existing utility lines and no substitute tree is appropriate for the site; or*

*(2) There is not adequate space in which to plant a street tree due to driveway or street light locations, vision clearance or utility connections, provided the driveways, street light or utilities could not be reasonably located elsewhere so as to accommodate adequate room for street trees; and*

*(3) The street trees are spaced as close as possible given the site limitations in (1) and (2) above.*

*(4) The location of street trees in an ODOT or Washington County right-of-way may require approval, respectively, by ODOT or Washington County and are subject to the relevant state or county standards.*

*(5) For arterial and collector streets, the City may require planted medians in lieu of paved twelve-foot wide center turning lanes, planted with trees to the specifications of this subsection.*

**Response:** The 40-foot spacing standard is exceeded in the PGE easement where PGE planting restrictions apply. Planted medians are proposed in lieu of center turning lanes on SW Blake Street west of the first access point for the WTP site west of SW 124<sup>th</sup> Avenue. See the Planting Overall Plan (Exhibit A, Sheet B-030). Therefore, this standard is met.

*B. Removal and Replacement of Street Trees.*

**Response:** There are no existing street trees adjacent to the site and, thus, street trees are not proposed to be removed. Therefore, these standards are not applicable.

*C. Homeowner's Association Authorization.*

*The Planning Commission may approve a program for the adoption, administration and enforcement by a homeowners' association (HOA) of regulations for the removal and replacement of street trees within the geographic boundaries of the association.*

**Response:** The WTP site is not subject to a homeowners' association. Therefore, this standard is not applicable.

*D. Exemption from Replacing Street Trees.*

**Response:** There are no existing street trees on the site. Therefore, this standard is not applicable.

*E. Notwithstanding any other provision in this section, the city manager or the manager's designee may authorize the removal of a street tree in an emergency situation without a tree removal permit when the tree poses an immediate threat to life, property or utilities. A decision to remove a street tree under this section is subject to review only as provided in ORS 34.100.*

**Response:** There are no existing street trees on the site. Therefore, this standard is not applicable.

*F. Trees on Private Property Causing Damage.*

*Any tree, woodland or any other vegetation located on private property, regardless of species or size, that interferes with or damages public streets or utilities, or causes an unwarranted increase in the maintenance costs of same, may be ordered removed or cut by the City Manager or his or her designee. Any order for the removal or cutting of such trees, woodlands or other vegetation, shall be made and reviewed under the applicable City nuisance abatement ordinances.*

**Response:** There are no trees on the WTP site or adjacent sites currently causing damage. Therefore, this standard is not applicable.

*G. Penalties. The abuse, destruction, defacing, cutting, removal, mutilation or other misuse of any tree planted on public property or along a public street as per this Section, shall be subject to the penalties defined by Section 16.02.040, and other penalties defined by applicable ordinances and statutes, provided that each tree so abused shall be deemed a separate offense.*

**Response:** It is understood that removal and misuse of trees identified in this standard are subject to penalties defined in this Code and other applicable ordinances and statutes.

*16.142.070 - Trees on Property Subject to Certain Land Use Applications*

*B. Applicability*

*All applications including a Type II - IV land use review, shall be required to preserve trees or woodlands, as defined by this Section to the maximum extent feasible within the context of the proposed land use plan and relative to other codes, policies, and standards of the City Comprehensive Plan.*

**Response:** The proposed development is a Type IV land use review. It is preserving woodland on the WTP site to the maximum extent feasible, given land needed to stage the proposed development and provide for a functioning state-of-the art water treatment plant, and relative to other applicable City standards and policies. Compliance is demonstrated in the responses to applicable standards in this Section and in other Sections in this narrative. Therefore, this standard is met.

*C. Inventory*

*1. To assist the City in making its determinations on the retention of trees and woodlands, land use applications including Type II - IV development shall include a tree and woodland inventory and report. The report shall be prepared by a qualified professional and must contain the following information:*

- a. Tree size (in DBH and canopy area)*
- b. Tree species*
- c. The condition of the tree with notes as applicable explaining the assessment*
- d. The location of the tree on the site*
- e. The location of the tree relative to the planned improvements*
- f. Assessment of whether the tree must be removed to accommodate the development*
- g. Recommendations on measures that must be taken to preserve trees during the construction that are not proposed to be removed.*

**Response:** The applicant is providing a Tree Inventory report as part of this application (Exhibit D), prepared by a professional ecologist, that inventories trees on a woodland basis. The following tree information is available:

- The report's existing tree canopy figure is presented below in Figure 4. The Department of Geology and Mineral Industries (DOGAMI) Lidar image provides information about tree size (height and canopy) and location of existing trees.
- Four distinct vegetation communities were identified on the site, and those communities (Areas A-D) are discussed in the report in terms of typical tree species and size (height and diameter at breast height (DBH)).
- The location of the woodlands relative to the proposed development – the yellow Limits of Disturbance (LOD) line – is shown in Figure 5.<sup>14</sup>
- The proposed development and woodlands shown in Figure 5 illustrate the assessment of removing trees for development. The proposed WTP structures, as well as the internal circulation system serving them, are all tightly clustered in the northern portion of the site. This means that trees in the northern portion of the site need to be removed; however, the clustering of the development allows for a large and continuous area of woodland, as well as wetland and riparian habitat, to be preserved in the southern portion of the site. In the southwest portion of the site, trees will also need to be removed to allow for a staging area

<sup>14</sup> The LOD has recently been updated to protect more trees along the southern and western property lines in the southwest corner of the site, as shown in the Tree Protection Overall Plan (Exhibit A, Sheet B-021). An updated version of Figure 5 will be included in completeness copies of the application.



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for construction of this significant facility; however, here as well, the staging area can be constrained so that a border of woodland in the southwest corner of the site is preserved.

- Tree protection measures to be instituted during construction are outlined in the Tree Protection Overall Plans (Exhibit A, Sheets B-021 through B-023).

Therefore, this standard is met.

Figure 4: Existing WTP Site Tree Canopy

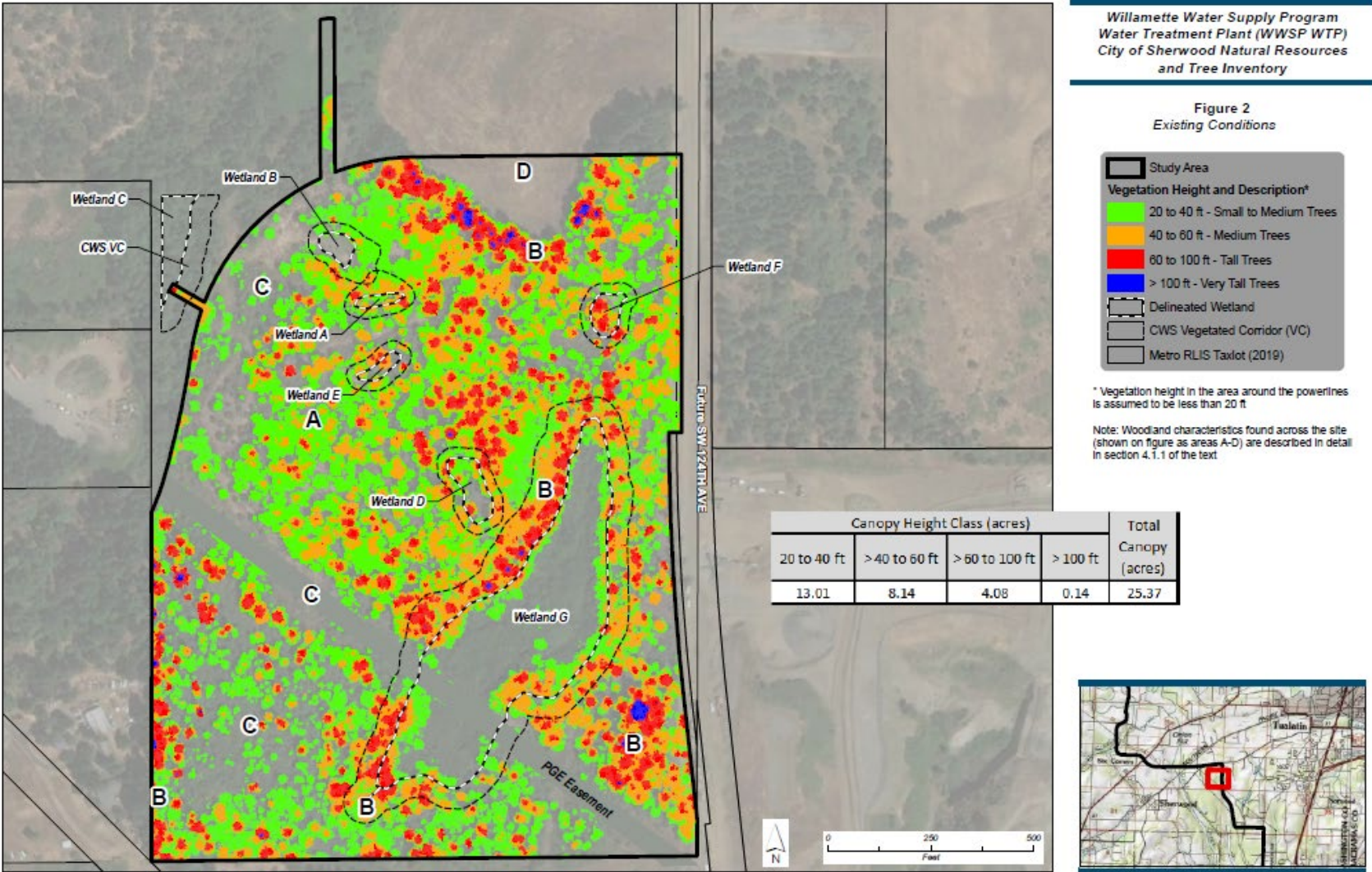
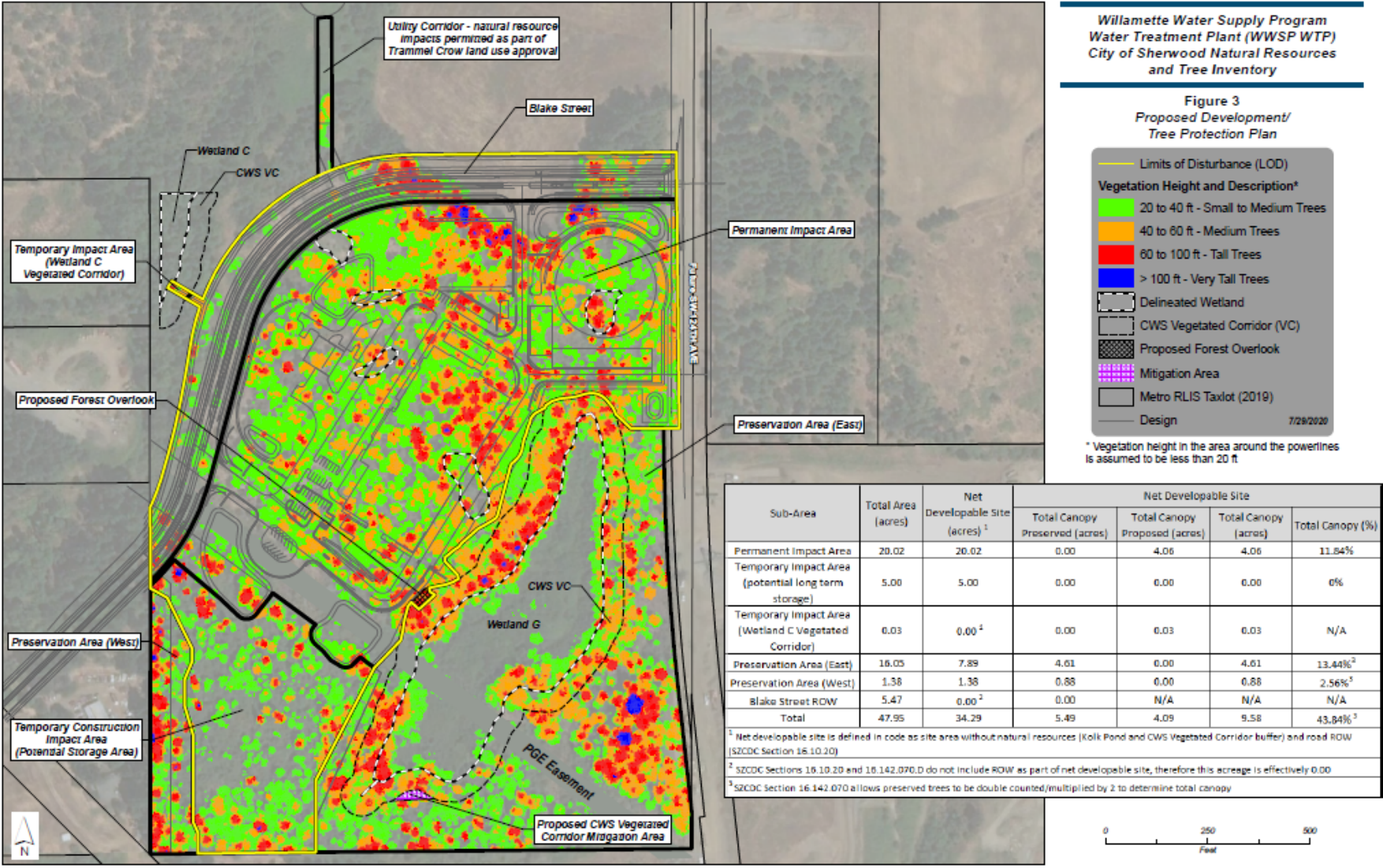




Figure 5: Proposed WTP Site Tree Canopy



Document Path: \\deahco.com\FLE\SPRO\DC\T\T\W\00000000\06050\F0\GIS\Analysis\WTP\2010-0818 Sherwood Tree Assessment Report\Fig3 Proposed Conditions Tree Protection Plan.mxd  
Date: 7/29/2020 Time: 6:32:43 PM User Name: SAST

2. *In addition to the general requirements of this Section, the tree and woodland inventory's mapping and report shall also include, but is not limited to, the specific information outlined in the appropriate land use application materials packet.*

**Response:** The report (Exhibit D) and attached drawings (Appendix D of Exhibit D) provide tree-related information outlined in the Site Plan Review and Conditional Use application checklists, on a woodland basis. This information includes tree size, trees to be removed, and trees to be preserved. Therefore, this standard is met.

3. *Definitions for the inventory purposes of this Section*

a. *A tree is a living woody plant having a trunk diameter as specified below at Diameter at Breast Height (DBH). Trees planted for commercial agricultural purposes, and/or those subject to farm forest deferral, such as nut and fruit orchards and Christmas tree farms, are excluded from this definition and from regulation under this Section, as are any living woody plants under six (6) inches at DBH. All trees six (6) inches or greater shall be inventoried.*

b. *A woodland is a biological community dominated by trees covering a land area of 20,000 square feet or greater at a density of at least fifty (50) trees per every 20,000 square feet with at least fifty percent (50%) of those trees of any species having a six (6) inches or greater at DBH. Woodlands planted for commercial agricultural purposes and/or subject to farm forest deferral, such as nut and fruit orchards and Christmas tree farms, are excluded from this definition, and from regulation under this Section.*

c. *A large stature tree is over 20 feet tall and wide with a minimum trunk diameter of 30 inches at DBH.*

**Response:** The WTP site includes trees as defined above, and does not have trees that are planted for commercial agricultural purposes and/or that are subject to farm forest deferral. Trees greater than 6 inches DBH are found on the site. The minimum height of trees shown in color in the Lidar imagery (green) in Figures 3 and 4 is 20 feet. As described in the tree report's inventory methods (Section 3.1 in Exhibit D), trees 20 feet or taller were selected to be shown with the assumption that those trees would be 6 inches DBH or larger.

The woodland communities on the WTP site (in particular, Areas A-C in Figure 4) cover more than 20,000 square feet at a time, with a density of at least 50 trees per 20,000 square feet as can best be estimated by the Lidar imagery. DBH is generally 6 inches or greater, particularly in Areas A and B. Area C features sparser trees and more saplings than the other areas, although it also includes trees up to 60 feet or taller.

The Lidar imagery in Figures 3 and 4 shows only large stature trees (20 feet and taller), with height classes represented in green, orange, red, and blue.

*D. Retention requirements*

- 1. Trees may be considered for removal to accommodate the development including buildings, parking, walkways, grading etc., provided the development satisfies of D.2 or D.3, below.*

**Response:** Trees proposed for removal include trees to be removed for buildings and other structures, parking, internal vehicle and pedestrian circulation, grading, and staging. Subsection D.3 below is satisfied, as demonstrated in response to that standard. Therefore, this standard is met.

- 2. Required Tree Canopy - Residential Developments (Single Family Attached, Single Family Detached and Two - Family)*

**Response:** The proposed development is not residential development. Therefore, this standard is not applicable.

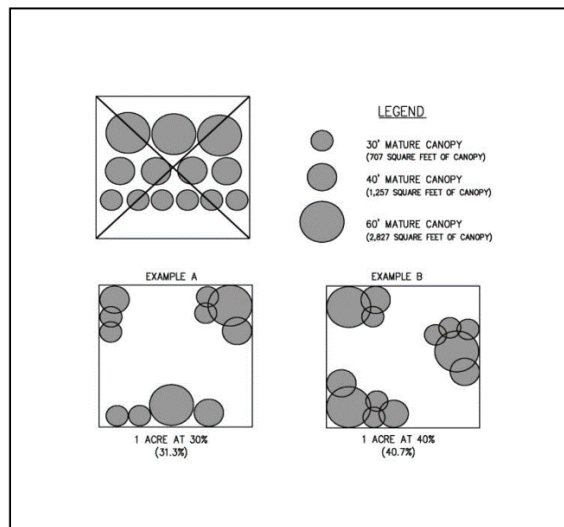
- 3. Required Tree Canopy - Non-Residential and Multi-family Developments*

*Each net development site shall provide a variety of trees to achieve a minimum total tree canopy of 30 percent. The canopy percentage is based on the expected mature canopy of each tree by using the equation  $\pi r^2$  to calculate the expected square footage of each tree. The expected mature canopy is counted for each tree even if there is an overlap of multiple tree canopies.*

*The canopy requirement can be achieved by retaining existing trees or planting new trees. Required landscaping trees can be used toward the total on site canopy required to meet this standard. The expected mature canopy spread of the new trees will be counted toward the required canopy cover. A certified arborist or other qualified professional shall provide an estimated tree canopy for all proposed trees to the planning department for review as a part of the land use review process.*

	<b>Commercial, Industrial, Institutional Public and Multi-family</b>
<i>Canopy Requirement</i>	<i>30%</i>
<i>Counted Toward the Canopy Requirement</i>	
<i>Street trees included in canopy requirement</i>	<i>No</i>

<i>Landscaping requirements included in canopy requirement</i>	Yes
<i>Existing trees onsite</i>	Yes x2
<i>Planting new trees onsite</i>	Yes
<p><i>Mature Canopy in Square Feet Equation <math>\pi r^2</math> or <math>(3.14159 * \text{radius}^2)</math> (This is the calculation to measure the square footage of a circle.</i></p> <p><i>The Mature Canopy is given in diameter. In gardening and horticulture reference books, therefore to get the radius you must divide the diameter in half.</i></p>	
<p><i>Canopy Calculation Example: Pin Oak</i></p> <p><i>Mature canopy = 35'</i></p> <p><i><math>(3.14159 * 17.5^2) = 962</math> square feet</i></p>	



**Response:** Qualified professionals prepared the Tree Inventory Report (Exhibit D), which includes tree canopy mapping and calculations shown in Figure 4. Canopy post-development on the “net development site” will be approximately 44 percent, as shown below in Table 2.<sup>15</sup> This canopy estimate includes preserved trees, which can be counted twice, and new trees. Tree canopy is proposed to be preserved in what is labeled “Preservation Area East” (the area around the large kolk pond wetland and its VC) and “Preservation Area West” along the southwest border of the site. New tree canopy is proposed in the area of WTP development called the “Permanent Impact Area.”

<sup>15</sup> The LOD has recently been updated to protect more trees along the southern and western property lines in the southwest corner of the site, as shown in the Tree Protection Overall Plan (Exhibit A, Sheet B-021). An updated canopy total (including an updated Table 2) will be included in completeness copies of the application.

Pursuant to this standard and the code definition of net development site, the canopy estimate does *not* include street trees and trees within natural resource areas (i.e., the kolk wetland and its VC), which represents numerous trees on the WTP site overall. More specifically, trees proposed to be planted or preserved in the right-of-way and in the kolk wetland and its VC comprise at least 5.5 additional acres of tree canopy.

**Table 2: Proposed Canopy (Post-Development for Net Development Site)**

Sub-Area	Total Area (acres)	Net Developable Site (acres) <sup>1</sup>	Net Developable Site			
			Total Canopy Preserved (acres)	Total Canopy Proposed (acres)	Total Canopy (acres)	Total Canopy (%)
Permanent Impact Area	20.02	20.02	0.00	4.06	4.06	11.84%
Temporary Impact Area (potential long term storage)	5.00	5.00	0.00	0.00	0.00	0%
Temporary Impact Area (Wetland C Vegetated Corridor)	0.03	0.00 <sup>1</sup>	0.00	0.03	0.03	N/A
Preservation Area (East)	16.05	7.89	4.61	0.00	4.61	13.44% <sup>3</sup>
Preservation Area (West)	1.38	1.38	0.88	0.00	0.88	2.56% <sup>3</sup>
Blake Street ROW	5.47	0.00 <sup>2</sup>	0.00	N/A	N/A	N/A
<b>Total</b>	<b>47.95</b>	<b>34.29</b>	<b>5.49</b>	<b>4.09</b>	<b>9.58</b>	<b>43.84%<sup>3</sup></b>

<sup>1</sup> Net developable site is defined in code as site area without natural resources (Kolk Pond and CWS Vegetated Corridor buffer) and road ROW (SZCDC Section 16.10.20)

<sup>2</sup> SZCDC Sections 16.10.20 and 16.142.070.D do not include ROW as part of net developable site, therefore this acreage is effectively 0.00

<sup>3</sup> SZCDC Section 16.142.070 allows preserved trees to be double counted/multiplied by 2 to determine total canopy

At more than 43 percent, the minimum canopy requirement of 30 percent is exceeded. Therefore, this standard is met.

4. *The City may determine that, regardless of D.1 through D.3, that certain trees or woodlands may be required to be retained. The basis for such a decision shall include; specific findings that retention of said trees or woodlands furthers the purposes and goals of this Section, is feasible and practical both within the context of the proposed land use plan and relative to other policies and standards of the City Comprehensive Plan, and are:*

- a. *Within a Significant Natural Area, 100-year floodplain, City greenway, jurisdictional wetland or other existing or future public park or natural area designated by the City Comprehensive Plan, or*
- b. *A landscape or natural feature as per applicable policies of the City Comprehensive Plan, or are necessary to keep other identified trees or woodlands on or near the site from being damaged or destroyed due to windfall, erosion, disease or other natural processes, or*

- c. Necessary for soil stability and the control of erosion, for managing and preserving surface or groundwater quantities or quality, or for the maintenance of a natural drainageway, as per Clean Water Services stormwater management plans and standards of the City Comprehensive Plan, or*
- d. Necessary in required buffers between otherwise incompatible land uses, or from natural areas, wetlands and greenways, or*
- e. Otherwise merit retention because of unusual size, size of the tree stand, historic association or species type, habitat or wildlife preservation considerations, or some combination thereof, as determined by the City.*

**Response:** The applicant proposes to preserve the woodland area that is feasible and meets the City's standards, given the necessary development and staging footprints required for the WTP. Trees within natural resource areas including the kolk wetland (Wetland G) and its VC are to be preserved (Tree Protection Plans, Exhibit A, Sheets B-021 through B-023), with the exception a small area of vegetation in the VC that will be impacted and mitigated for in order to provide the proposed viewing platform, a significant public amenity. These impacts and mitigation are addressed in detail in response to criteria in Chapter 16.144. Otherwise, the applicant is proposing to preserve and plant tree canopy beyond the minimum requirement, as discussed in the previous response. Therefore, additional preservation is not warranted.

- 5. Tree retention requirements for properties located within the Old Town Overlay or projects subject to the infill standards of Chapter 16.68 are only subject to retention requirements identified in D.4. above.*

**Response:** The WTP site is not located in the Old Town Overlay, nor is subject to infill standards. Therefore, this standard is not applicable.

- 6. The Notice of Decision issued for the land use applications subject to this Section shall indicate which trees and woodlands will be retained as per subsection D of this Section, which may be removed or shall be retained as per subsection D of this Section and any limitations or conditions attached thereto.*

**Response:** The applicant requests that the Notice of Decision indicate trees proposed for preservation and removal as shown in the Tree Removal Plan and Tree Protection Plans (Exhibit A, Sheets B-020 through B-023).

- 7. All trees, woodlands, and vegetation located on any private property accepted for dedication to the City for public parks and open space, greenways, Significant Natural Areas,*



*wetlands, floodplains, or for storm water management or for other purposes, as a condition of a land use approval, shall be retained outright, irrespective of size, species, condition or other factors. Removal of any such trees, woodlands, and vegetation prior to actual dedication of the property to the City shall be cause for reconsideration of the land use plan approval.*

**Response:** Dedication of treed areas is not anticipated. However, the applicant will comply with this standard if it becomes applicable.

*E. Tree Preservation Incentive*

*Retention of existing native trees on site which are in good health can be used to achieve the required mature canopy requirement of the development. The expected mature canopy can be calculated twice for existing trees. For example, if one existing tree with an expected mature canopy of 10 feet (78.5 square feet) is retained it will count as twice the existing canopy (157 square feet).*

**Response:** Existing native trees on the WTP site – including Oregon oak, Douglas fir, and Pacific madrone per the Tree Inventory Report (Exhibit D) – will be preserved. Their canopy was counted twice in calculating the tree canopy estimate (per canopy code), as shown in Table 2 and addressed in previous responses. Therefore, this standard is met.

*F. Additional Preservation Incentives*

*1. General Provisions. To assist in the preservation of trees, the City may apply one or more of the following flexible standards as part of the land use review approval. To the extent that the standards in this section conflict with the standards in other sections of this Title, the standards in this section shall apply except in cases where the City determines there would be an unreasonable risk to public health, safety, or welfare. Flexibility shall be requested by the applicant with justification provided within the tree preservation and protection report as part of the land use review process and is only applicable to trees that are eligible for credit towards the effective tree canopy cover of the site. A separate adjustment application as outlined in Section 16.84.030.A is not required.*

*2. Flexible Development Standards. The following flexible standards are available to applicants in order to preserve trees on a development site. These standards cannot be combined with any other reductions authorized by this code...*

*a. Lot size averaging. To preserve existing trees in the development plan for any Land Division under Division VII, lot size may be averaged to allow lots less than the minimum lot size required in the underlying zone as long as the average lot area is not less than that allowed by the underlying zone. No lot area shall be less than 80 percent of the minimum lot size allowed in the zone;*

*b. Setbacks. The following setback reductions will be allowed for lots preserving existing trees using the criteria in subsection (1) below. The following reductions shall be limited to the minimum reduction necessary to protect the tree...*

*(1) Reductions allowed:*

*(a.) Front yard - up to a 25 percent reduction of the dimensional standard for a front yard setback required in the base zone. Setback of garages may not be reduced by this provision.*

*(b.) Interior setbacks - up to a 40 percent reduction of the dimensional standards for an interior side and/or rear yard setback required in the base zone.*

*(c.) Perimeter side and rear yard setbacks shall not be reduced through this provision.*

*c. Approval criteria:*

*(1.) A demonstration that the reduction requested is the least required to preserve trees; and*

*(2.) The reduction will result in the preservation of tree canopy on the lot with the modified setbacks; and*

*(3.) The reduction will not impede adequate emergency access to the site and structure.*

**Response:** Adjustments to lot size or setback requirements will not preserve trees on the WTP site as these areas need to be graded for development and staging. Therefore, these adjustments are not requested, and these standards are not applicable.

*3. Sidewalks. Location of a public sidewalk may be flexible in order to preserve existing trees or to plant new large stature street trees. This flexibility may be accomplished through a curb-tight sidewalk or a meandering public sidewalk easement recorded over private property and shall be reviewed on a case by case basis in accordance with the provisions of the Engineering Design Manual, Street and Utility Improvement Standards. For preservation, this flexibility shall be the minimum required to achieve the desired effect. For planting, preference shall be given to retaining the planter strip and separation between the curb and sidewalk wherever practicable. If a preserved tree is to be utilized as a street tree, it must meet the criteria found in the Street Tree section, 16.142.060.*

*4. Adjustments to Commercial and Industrial development Standards. Adjustments to Commercial or Industrial Development standards of up to 20 feet additional building height are permitted provided;*

*a. At least 50% of a Significant Tree stand's of canopy within a development site (and not also within the sensitive lands or areas that areas dedicated to the City) is preserved;*

*b. The project arborist or qualified professional certifies the preservation is such that the connectivity and viability of the remaining significant tree stand is maximized;*

- c. *Applicable buffering and screening requirements are met;*
- d. *Any height adjustments comply with state building codes;*
- e. *Significant tree stands are protected through an instrument or action subject to approval by the City Manager or the City manager's designee that demonstrates it will be permanently preserved and managed as such;*
  - (1.) *A conservation easement;*
  - (2.) *An open space tract;*
  - (3.) *A deed restriction; or*
  - (4.) *Through dedication and acceptance by the City.*

**Response:** Adjustments to sidewalk or building height requirements will not preserve trees on the WTP site as these areas need to be graded for development and staging. Therefore, these adjustments are not requested, and these standards are not applicable.

#### *G. Tree Protection During Development*

*The applicant shall prepare and submit a final Tree and Woodland Plan prior to issuance of any construction permits, illustrating how identified trees and woodlands will be retained, removed or protected as per the Notice of Decision. Such plan shall specify how trees and woodlands will be protected from damage or destruction by construction activities, including protective fencing, selective pruning and root treatments, excavation techniques, temporary drainage systems, and like methods. At a minimum, trees to be protected shall have the area within the drip line of the tree protected from grading, stockpiling, and all other construction related activity unless specifically reviewed and recommended by a certified arborist or other qualified professional. Any work within the dripline of the tree shall be supervised by the project arborist or other qualified professional onsite during construction.*

**Response:** Proposed tree protection is outlined in the Tree Protection Overall Plan (Exhibit A, Sheet B-021). Any work within the dripline will be supervised by a qualified professional. Therefore, this standard is and will be met.

#### *H. Penalties*

*Violations of this Section shall be subject to the penalties defined by Section 16.02.040, provided that each designated tree or woodland unlawfully removed or cut shall be deemed a separate offense.*

**Response:** Unlawful removal of designated trees or woodland is not proposed.

16.142.080 - Trees on Private Property — not subject to a land use action

**Response:** Trees on the WTP site are subject to a land use action. Therefore, these standards are not applicable.

16.142.090 - Recommended Street Trees

A. Recommended Street Trees:

<b>Common Name</b>	<b>Botanical Name</b>	<b>Canopy Spread (feet)</b>
<b>Acer - Maple</b>		
Cavalier Norway Maple	<i>Acer platanoides cavalier</i>	
Cleveland Norway Maple	<i>p. Cleveland</i>	30
Cleveland II Norway Maple	<i>p. Cleveland</i>	25
Columnar Norway Maple	<i>p. columnare</i>	15
Fairway Sugar Maple (sugar maple)	<i>p. fairway</i>	40
Olmsted Norway Maple	<i>p. olmsted</i>	20—25
Roughbark Maple	<i>Acer triflorum</i>	20
Trident Maple	<i>Acer buergeranum</i>	20
Rocky Mountain Glow Maple	<i>Acer grandidentatum 'Schmidt'</i>	15
David's Maple	<i>Acer davidii</i>	20
Metro Gold Hedge Maple	<i>Acer campestre 'Panacek'</i>	25
Red Sunset Maple (Old Town)	<i>Acer rubrum red sunset - Red Sunset Maple (Old Town) (Provided that a root barrier is installed)</i>	25—40
Royal Red Maple	<i>r. royal red</i>	20—25
Gerling Red Maple	<i>r. gerling</i>	25—35
Tilford Red Maple	<i>r. tilford</i>	30
<b>Carpinus - Hornbeam</b>		
Pyramidal European Hornbeam	<i>Carpinus betulus pyramidalis</i>	30—40
Pyramidal European Hornbeam	<i>b. columnaris</i>	15
Pyramidal European Hornbeam	<i>b. fastigiata</i>	15—20
Eastern Redbud	<i>Cercic, canadensis - Canadian Red Bud</i>	10—20
<b>Fraxinus - Ash</b>		
Dr. Pirone Ash	<i>augustifolia dr. pirone</i>	35—50
Raywood Ash	<i>raywoodi</i>	20

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<b>Common Name</b>	<b>Botanical Name</b>	<b>Canopy Spread (feet)</b>
Oregon Ash	<i>latifolia</i>	25—40
<b>Ginkgo</b>		
Autumn Gold	<i>biloba</i>	25—35
Fairmount	<i>biloba</i>	15—25
<b>Gleditsia</b>		
Honey Locust	<i>triacanthos sunburst</i>	20—30
<b>Liquidamber</b>		
American Sweetgum	<i>styraciflua</i>	40
<b>Liriodenrod</b>		30—50
<b>Magnolia</b>		
Evergreen Magnolia	<i>grandiflora vars</i>	
Southern Magnolia	<i>grandiflora</i>	40
Dr. Merrill Magnolia	<i>kobus dr. merrill</i>	15—20
Edith Bogue Magnolia	<i>Magnolia grandiflora 'Edith Bogue'</i>	15
<b>Purnus - Cherry - Plum</b>		
Double Flowering Cherry	<i>avium plena</i>	30—40
Scanlon Globe Cherry	<i>avium scanlon</i>	30—40
Japanese Cherry	<i>serrulata vars (nonweeping)</i>	15—30
Okame Cherry	<i>okame</i>	20—30
Blireana Plum	<i>blireana</i>	20
Pissardi Plum	<i>pissardi</i>	10
Krauter's Vesuvius Plum	<i>Vesuvius</i>	15
Amur Chokecherry	<i>maacki</i>	25—30
Redbark Cherry	<i>serrula</i>	20—30
European Birdcherry	<i>padus</i>	35
Bigflowered Birdcherry	<i>grandiflora</i>	10—20
Rancho Birdcherry	<i>berg</i>	15—20
Purpleleaf Birdcherry	<i>purpurea</i>	10—20
Prairifire Crabapple	<i>Malus 'Prairifire'</i>	20
<b>Quercus</b>		
Crimson Spire Oak	<i>Quercus alba x Q. robur 'Crimschmidt'</i>	15
Pin Oak	<i>palustris</i>	35
<b>Tilia - Linden</b>		

<b>Common Name</b>	<b>Botanical Name</b>	<b>Canopy Spread (feet)</b>
American Linden	<i>americana</i>	35—40
Little Leaf Linden	<i>cordata</i>	40
Crimean Linden	<i>euchlora</i>	20—30
Silver Linden	<i>tomentosa</i>	40
Bicentennial Linden	<i>bicentennial</i>	30
Greenspire Linden	<i>greenspire</i>	20
Salem Linden	<i>salem</i>	20—30
Chancellor Linden	<i>Tiliacordata 'Chancole'</i>	20

*B. Recommended Street Trees under Power Lines:*

*Acer ginnala — Amur Maple 20' spread*

*Acer campestre — Hedge Maple 30' spread*

*Acer palmatum — Japanese Maple 25' spread*

*Acer griseum — Paperbark Maple 20' spread*

*Acer circinatum — Vine Maple 25' spread*

*Amelanchier x grandiflora — Apple Serviceberry 20' spread*

*Amelanchier Canadensis — Shadblow Serviceberry 20' spread*

*Cercis Canadensis — Eastern Redbud 25—30' spread*

*Clerodendrum trichotomum — Glorybower Tree 20' spread*

*Cornus florida — Flowering Dogwood 20-25' spread*

*Cornus kousa — Japanese Dogwood 25' spread*

*Crataegus phaenopyrum — Washington Hawthorn 25' spread*

*Crataegus x lavellei — Lavelle Hawthorn 20' spread*

*Fraxinus excelsior globosum — Globe-Headed European Ash 12—15' spread*

*Fraxinus ornus — Flowering Ash 20—30' spread*

*Fraxinus oxycarpa aureopolia — Golden Desert Ash 18' spread*

*Koelreuteria paniculata — Goldenrain Tree 10—20' spread*

*Laburnum x waterii — Golden Chain Tree 15' spread*

*Malus — Flowering Crabapple 20-25' spread*

*Prunus — Flowering Cherry 20—25' spread*

*Pyrus calleryana — Flowering Pear "Cleveland Select" 20' spread*

*Styrax japonica — Japanese Snowbell 25' spread*

*Syringa reticulata — Japanese Tree Lilac 20—25' spread*

**Response:** Street trees proposed on SW Blake Street and SW 124<sup>th</sup> Avenue include the following trees:

- Thornless Honeylocust
- Black Tupelo
- Green Vase Zelkova
- Pin oak

See the Planting Overall Plan and the Planting Legend (Exhibit A, Sheets B-030 and B-042). These trees are included in the recommended tree lists in Subsections A and B above. Therefore, these standards are met.

*C. Prohibited Street Trees:*

*Acer, Silver Maple*

*Acer, Boxelder*

*Ailanthus, gladiolosa - Tree-of-heaven*

*Betula; common varieties of Birch*

*Ulmus; common varieties of Elm*

*Morus; common varieties of Mulberry*

*Salix; common varieties of willow*

*Coniferous Evergreen (Fir, Pine, Cedar, etc.)*

*Populus; common varieties of poplar, cottonwood and aspen*

*Female Ginkgo*

**Response:** Prohibited street trees are not proposed. See the Planting Overall Plan and the Planting Legends and Details (Exhibit A, Sheets B-030 and Sheets B-042 through B-045). Therefore, this standard is met.

*D. Alternative Street Trees: Trees that are similar to those on the recommended street tree list can be proposed provided that they are non-fruit bearing, non-invasive and not listed on the*

*prohibited street tree list. A letter from a certified arborist must be submitted, explaining why the tree is an equivalent or better street tree than the recommended street trees that are identified in this section.*

**Response:** Proposed street trees are trees on the City's recommended lists. Therefore, alternative street trees are not proposed, and this standard is not applicable.

*Chapter 16.144 - WETLAND, HABITAT AND NATURAL AREAS*

*16.144.010 - Generally*

*Unless otherwise permitted, residential, commercial, industrial, and institutional uses in the City shall comply with the following wetland, habitat and natural area standards if applicable to the site as identified on the City's Wetland Inventory, the Comprehensive Plan Natural Resource Inventory, the Regionally Significant Fish and Wildlife Habitat Area map adopted by Metro, and by reference into this Code and the Comprehensive Plan. Where the applicability of a standard overlaps, the more stringent regulation shall apply.*

**Response:** The WTP site does not include resources identified in the City's Wetland Inventory or Comprehensive Plan Natural Resource Inventory because, in part, the site was annexed only recently to the city (in December 2019).

Six wetland areas (Wetlands A, B, D, E, F, and G) were delineated on the WTP site; an additional wetland (Wetland C) was delineated on the TCC site to the north in a proposed easement area in which the WTP project proposes to construct a stormwater outfall (ditch). These wetlands and their buffers are addressed in a Sensitive Areas and Vegetated Corridors Site Assessment included in this application (Exhibit H) and are shown in Figure 6.

Metro's Regionally Significant Fish and Wildlife Habitat mapping indicates Class B Upland Wildlife Habitat and Class I Riparian Wildlife Habitat on the WTP site, as depicted in Figure 7.



Figure 6: Wetlands and Vegetated Corridors (VCs) on the WTP Site

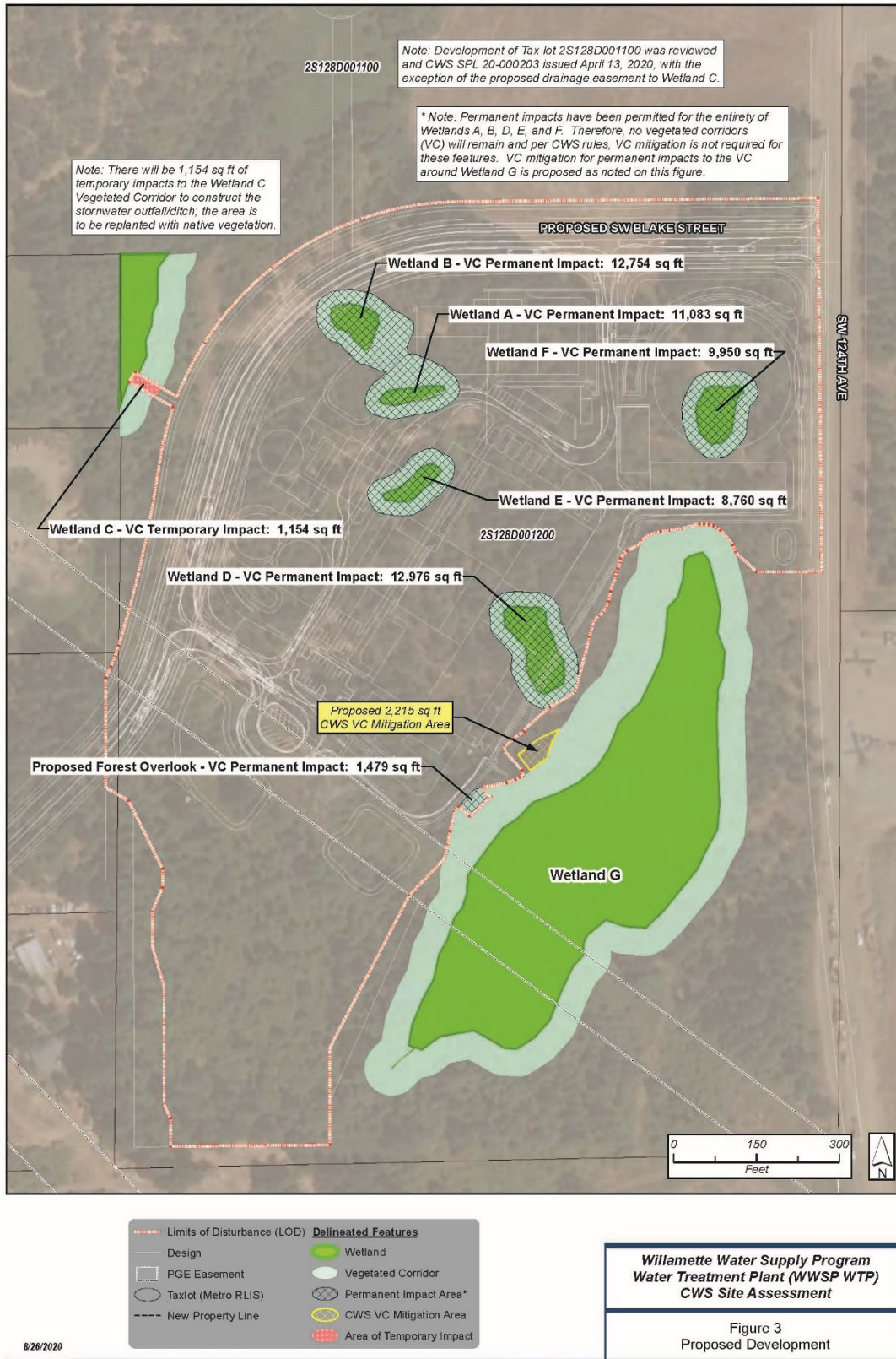


Figure 7: Metro Regionally Significant Fish and Wildlife Habitat on the WTP Site



**Willamette Water Supply Program  
Water Treatment Plant (WWSP WTP)  
City of Sherwood Natural Resources  
and Tree Inventory**

**Figure 2  
Metro Regionally Significant Habitat Areas**

- Study Area** (thick black outline)
- Delineated Wetland** (dashed line)
- CWS Vegetated Corridor (VC)** (dotted line)
- Metro RLIS Taxlot (2019)** (grey fill)
- Metro Title 13 Inventory**
  - Aquatic Impact Area (within 150 ft of streams, rivers, lakes, or wetlands; not considered regionally significant resources but could have some adverse impacts) (light blue fill)
- Upland Wildlife Habitat Quality**
  - Class B Area (secondary riparian value; medium value for wildlife habitat) (green fill)
  - Class C Area (secondary riparian value that have low value for wildlife habitat) (yellow fill)
- Riparian Wildlife Habitat Quality**
  - Class I Area (supports 3 or more primary riparian functions) (blue fill)



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16.144.020 - Standards

A. *The applicant shall identify and describe the significance and functional value of wetlands on the site and protect those wetlands from adverse effects of the development. A facility complies with this standard if it complies with the criteria of subsections A.1.a and A.1.b, below:*

1. *The facility will not reduce the area of wetlands on the site, and development will be separated from such wetlands by an area determined by the Clean Water Services Design and Construction Standards R&O 00-7 or its replacement provided Section 16.140.090 does not require more than the requested setback.*

a. *A natural condition such as topography, soil, vegetation or other feature isolates the area of development from the wetland.*

b. *Impact mitigation measures will be designed, implemented, and monitored to provide effective protection against harm to the wetland from sedimentation, erosion, loss of surface or ground water supply, or physical trespass.*

c. *A lesser setback complies with federal and state permits, or standards that will apply to state and federal permits, if required.*

2. *If existing wetlands are proposed to be eliminated by the facility, the applicant shall demonstrate that the project can, and will develop or enhance an area of wetland on the site or in the same drainage basin that is at least equal to the area and functional value of wetlands eliminated.*

**Response:** The following narrative addresses characteristics of the existing wetlands and VCs on the WTP site as well as impacts, preservation, and mitigation proposed as part of development.

**Existing Wetlands and VCs**

The six delineated wetlands, wetland by wetland, are characterized in Section 4 of the Site Assessment (Exhibit H), which has been submitted to CWS as part of a SPL request (see request forms in Exhibit J). Table 3 presents the characteristics of the VCs associated with each wetland. The Site Assessment also provides detailed tables of woodlands associated with each wetland and VC, further reflecting the generally good condition of the VCs given high percentages of tree canopy cover, high native species diversity and percentage cover, and overall low percentage cover by invasive species. An exception is the VC around Wetland F, which was rated as marginal due to less than 50 percent tree canopy cover.

**Table 3: Vegetated Corridor (VC) Characteristics Summary**

Vegetated Corridor's Associated Wetland	Minimum Width Rationale	Minimum Width (ft)	Extended for Steep Slopes?	Condition
Wetland A	<0.5 acres and isolated	25	Yes	Good
Wetland B	<0.5 acres and isolated	25	Yes	Good
Wetland C	Not isolated	50	No	Good
Wetland D	<0.5 acres and isolated	25	No	Good
Wetland E	<0.5 acres and isolated	25	No	Good
Wetland F	<0.5 acres and isolated	25	No	Marginal
Wetland G	>=0.5 acres	50	Yes	Good

**Proposed Development Impacts, Preservation, and Mitigation**

Wetlands will be reduced only as necessary for development of this critical water infrastructure facility. The proposed development was intentionally designed to be tightly clustered in the northern portion of the site. In doing so, Wetlands A, B, D, E, and F are removed, as pictured in Figure 6. However, these wetlands are the smaller and isolated wetlands on the site per Table 3, including one wetland of marginal condition. Avoiding these wetlands would render the site undevelopable for the WTP. Further, in developing on the land where these wetlands are located, the WTP project is able, in turn, to preserve the large Wetland G, its VC, and adjacent natural areas. The width of Wetland G's VC and, thus, the minimum distance that proposed development must be set back from Wetland G is consistent with CWS Design and Construction Standards R&O 00-7.

As addressed in Section 6 of the Site Assessment (Exhibit H), mitigation for impacts to Wetlands A, B, D, E, and F was determined as part of the USACE and DSL permit process (USACE permit ID: NWP-2015-0041 and DSL permit ID: 60102RF Modified, Exhibit N). The mitigation includes purchase of mitigation bank credits, which are designed to offset the loss of wetland functions, values, and acreage. USACE and DSL approved the mitigation credit purchase as acceptable mitigation under applicable federal and state statutes, which is documented in the respective permit authorizations.

Section 6 of the CWS Site Assessment (Exhibit H) and Section 5.3 of the Tree Inventory and Habitat Report (Exhibit D) discuss CWS mitigation; mitigation discussions regarding Wetland G were updated by a memo in response to CWS comments, dated August 31, 2020 (Exhibit H). CWS does not require mitigation for permanently impacted VCs if the associated wetlands are entirely permanently impacted, which is the case for Wetlands A, B, D, E, and F. In terms of partial VC impacts:

- Temporary impacts are proposed in Wetland C's VC. Mitigation for the construction of a stormwater outfall in the Wetland C's VC will consist of restoring the temporarily disturbed area (1,154 square feet) with native forest vegetation in accordance with CWS standards, as indicated in Figure 6. Planting species will be similar to existing species.



- Permanent impacts are proposed in Wetland G's VC related to the viewing platform envisioned at the forested wetland's edge. Mitigation for these impacts will be provided by expanding the VC by 2,215 square feet (a 1.5:1 ratio compared to the impact) just to the northeast of the forest platform, as shown in Figure 6.

Also as raised in the CWS Site Assessment and Tree Inventory and Habitat Report, CWS Standards 3.06.2 require enhancement of VCs on the site that will not be impacted. However, all remaining VCs are already in "good" condition according to CWS criteria and, thus, do not require enhancement.

Therefore, these standards are met.

*B. The applicant shall provide appropriate plans and text that identify and describe the significance and functional value of natural features on the site (if identified in the Community Development Plan, Part 2) and protect those features from impacts of the development or mitigate adverse effects that will occur. A facility complies with this standard if:*

- 1. The site does not contain an endangered or threatened plant or animal species or a critical habitat for such species identified by Federal or State government (and does not contain significant natural features identified in the Community Development Plan, Part 2, Natural Resources and Recreation Plan).*

**Response:** Threatened or endangered species were not observed and have not been documented on the WTP site. The site does not have significant natural features identified in the City's Natural Resources and Recreation Plan. Therefore, this standard is met.

- 2. The facility will comply with applicable requirements of the zone.*

**Response:** The proposed development complies with applicable requirements of the EI zone, as demonstrated in the responses to criteria in Chapter 16.31 earlier in this narrative. Therefore, this standard is met.

- 3. The applicant will excavate and store topsoil separate from subsurface soil, and shall replace the topsoil over disturbed areas of the site not covered by buildings or pavement or provide other appropriate medium for re-vegetation of those areas, such as yard debris compost.*

**Response:** The stockpiling of soil is addressed in the Erosion Control Area A notes (Exhibit A, Sheet B-108). The Planting Overall Plan shows planting of the site not covered by structures or paving (Exhibit A, Sheet B-030), with the exception of the temporary staging area and long-term storage yard in the southwestern portion of the site. That area will be graveled for the time it is used as a storage yard; this

is preferable to paving, which would be completely impermeable compared to gravel. Therefore, this standard is met.

*4. The applicant will retain significant vegetation in areas that will not be covered by buildings or pavement or disturbed by excavation for the facility; will replant areas disturbed by the development and not covered by buildings or pavement with native species vegetation unless other vegetation is needed to buffer the facility; will protect disturbed areas and adjoining habitat from potential erosion until replanted vegetation is established; and will provide a plan or plans identifying each area and its proposed use.*

**Response:** Significant vegetation will be preserved in areas not developed with structures and paving or disturbed by construction, grading, and staging on the WTP site. In particular, the southern portion of the site with Wetland G, its VC, and other trees and vegetation will be preserved, as will a contiguous area of trees and vegetation in the southwest corner of the site. See the proposed tree canopy in Figure 5.

Areas not developed with structures, paving, and graveling will be replanted with native and native-compatible vegetation, as shown in the Planting Overall Plan and Planting Legends (Exhibit A, Sheets B-030 and B042 through B-045).

Erosion protection is planned and illustrated for the site at large in the Erosion Control Area A and LIDA Stormwater Facility Summary (Exhibit A, Sheets B-108 and B-109). More detailed subarea plans can also be viewed in the Technical Review Plan Set (Exhibit B, Sheets B-110 through B-124).

Uses proposed on the WTP site are shown on several drawings in the Land Use Plan Set, including the Overall Site Plan, Transportation/Circulation Plans, and Planting Overall Plan (Exhibit A, Sheets B-017 and B-028 through B-030).

Therefore, this standard is met.

*5. Development associated with the facility will be set back from the edge of a significant natural area by an area determined by the Clean Water Services Design and Construction standards R&O 00-7 or its replacement, provided Section 16.140.090A does not require more than the requested setback. Lack of adverse effect can be demonstrated by showing the same sort of evidence as in subsection A.1 above.*

**Response:** The width of the VC surrounding Wetland G and, thus, the minimum distance that proposed development will be set back from Wetland G, is consistent with CWS Design and Construction Standards R&O 00-7. The VC width is presented in Table 3. The impact of the one small area where this setback will be encroached upon for the forest platform public amenity is proposed to be mitigated by

expanding the VC by 2,215 square feet to the northeast of the forest platform, as shown in Figure 6. Therefore, this standard is met.

*C. When the Regionally Significant Fish and Wildlife Habitat map indicates there are resources on the site or within 50 feet of the site, the applicant shall provide plans that show the location of resources on the property. If resources are determined to be located on the property, the plans shall show the value of environmentally sensitive areas using the methodologies described in Sections 1 and 2 below.*

*The Metro Regionally Significant Fish and Wildlife Habitat map shall be the basis for determining the location and value of environmentally sensitive habitat areas. In order to specify the exact locations on site, the following methodology shall be used to determine the appropriate boundaries and habitat values:*

**Response:** The Metro Regionally Significant Fish and Wildlife Habitat mapping for the WTP site is shown in Figure 7. This mapping is also provided in Appendix A of the Tree Inventory and Habitat Report (Exhibit D, Figure 4). Therefore, this standard is met.

As a note, responses to Subsections C.1 and C.2 are also provided in the Tree Inventory and Habitat Report.

*1. Verifying boundaries of inventoried riparian habitat. Locating habitat and determining its riparian habitat class is a four-step process:*

*a. Located the Water Feature that is the basis for identifying riparian habitat.*

*1. Locate the top of bank of all streams, rivers, and open water within 200 feet of the property.*

**Response:** Site wetland delineations were conducted, with which DSL concurred. A summary of the wetland results, including DSL concurrence letters, is provided in the CWS Site Assessment Report (Exhibit H, Appendix B). The delineation found no streams present on or within 200 feet of the property. Only wetlands were present and are shown in Figure 6 in this narrative. (These wetlands are also shown in the Site Assessment, Exhibit H, Appendix A, Figures 2 and 3.) Therefore, this standard is met.

*2. Locate all flood areas within 100 feet of the property.*

**Response:** Flood areas do not exist within 100 feet of the property. Therefore, this standard is not applicable.

3. *Locate all wetlands within 150 feet of the property based on the Local Wetland Inventory map and on the Metro 2002 Wetland Inventory map (available from the Metro Data Resource Center, 600 NE Grand Ave., Portland, OR 97232). Identified wetlands shall be further delineated consistent with methods currently accepted by the Oregon Division of State Lands and the US Army Corps of Engineers.*

**Response:** Site wetland delineations were conducted, with which DSL concurred. A summary of the wetland results, including DSL concurrence letters is provided in the Site Assessment Report (Exhibit H, Appendix B). Therefore, this standard is met.

b. *Identify the vegetative cover status of all areas on the property that are within 200 feet of the top of bank of streams, rivers, and open water, are wetlands or are within 150 feet of wetlands, and are flood areas or are within 100 feet of flood areas. Vegetative cover status shall be as identified on the Metro Vegetative Cover map. In the event of a discrepancy between the Metro Vegetative Cover map and the existing site conditions, document the actual vegetative cover based on the following definitions along with a 2002 aerial photograph of the property;*

**Response:** For consistency with the tree inventory, DOGAMI Lidar data was used to conduct this analysis. The WTP site has not experienced development or extensive land clearing since the 2002 aerial photography and tree cover is likely to have increased since that time. Therefore, high quality resources will not be under-mapped relative to 2002 conditions.

1. *Low structure vegetation or open soils — Areas that are part of a contiguous area one acre or larger of grass, meadow, crop-lands, or areas of open soils located within 300 feet of a surface stream (low structure vegetation areas may include areas of shrub vegetation less than one acre in size if they are contiguous with areas of grass, meadow, crop-lands, orchards, Christmas tree farms, holly farms, or areas of open soils located within 300 feet of a surface stream and together form an area of one acre in size or larger).*

2. *Woody vegetation — Areas that are part of a contiguous area one acre or larger of shrub or open or scattered forest canopy (less than 60% crown-closure) located within 300 feet of a surface stream.*

**Response:** These mapping criteria do not apply since streams are not present within 300 feet of the WTP site. Therefore, these standards are not applicable.



3. *Forest canopy — Areas that are part of a contiguous grove of trees of one acre or larger in area with approximately 60% or greater crown closure, irrespective of whether the entire grove is within 200 feet of the relevant water feature.*

**Response:** The woodland tree inventory canopy layer, derived from Lidar canopy data, was used to conduct this analysis. See Figure 5 in this narrative and Figures 2 and 3 in the Tree Inventory and Habitat Report (Exhibit D, Appendix A). Therefore, this standard is met.

c. *Determine whether the degree that the land slopes upward from all streams, rivers, and open water within 200 feet of the property is greater than or less than 25% (using the Clean Water Services Vegetated Corridor methodology); and*

**Response:** CWS VC boundaries were used to determine the extent of riparian habitat. The table below was used to classify the habitat within those boundaries. Therefore, this standard is met.

d. *Identify the riparian habitat classes applicable to all areas on the property using Table 8-1 below:*

<b>Distance in feet from Water Feature</b>	<b>Development/Vegetation Status</b>			
	<b>Developed areas not providing vegetative cover</b>	<b>Low structure vegetation or open soils</b>	<b>Woody vegetation (shrub and scattered forest canopy)</b>	<b>Forest Canopy (closed to open forest canopy)</b>
<b>Surface Streams</b>				
0-50	Class II	Class I	Class I	Class I
50-100		Class II	Class I	Class I
100-150		Class II if slope >25%	Class II if slope >25%	Class II
150-200		Class II if slope >25%	Class II if slope >25%	Class II if slope >25%
<b>Wetlands (Wetland feature itself is a Class I Riparian Area)</b>				
0-100			Class I	Class I
100-150				Class II
<b>Flood Areas (undeveloped portion of a flood area is a Class I Riparian area)</b>				
0-100			Class II	Class II

**Response:** As previously noted, streams are not present within or proximate to the WTP site. Similarly, flood areas are not present. Therefore, riparian areas within the WTP site consist of the delineated wetlands and their associated VCs shown in Figure 6. Based on the above table, all delineated wetlands on the WTP site and their associated VCs are Class I Riparian Areas. This is because the wetlands are automatically classified as Class I and the CWS VCs are all less than 100 feet wide and contain woody vegetation and/or forest canopy. Therefore, this standard is met.

2. *Verifying boundaries of inventoried upland habitat. Upland habitat was identified based on the existence of contiguous patches of forest canopy, with limited canopy openings. The "forest canopy" designation is made based on analysis of aerial photographs, as part of determining the vegetative cover status of land within the region. Upland habitat shall be as identified on the HCA map. The perimeter of an area delineated as "forest canopy" on the Metro Vegetative Cover map may be adjusted to more precisely indicate the drip line of the trees within the canopied area.*

**Response:** The woodland tree inventory canopy layer, derived from Lidar canopy data, was used to conduct this analysis. All tree canopy outside of riparian areas (i.e., wetlands and CWS VC) was considered to be upland habitat. Metro's mapping designated this habitat as Class B; however, as described in Section 2 of the Tree Inventory and Habitat Report (Exhibit D), this habitat is fairly unique within the region due to the presence of Oregon oak woodland and large conifer trees. Thus, it is recommended that this habitat be rated Class A Upland Habitat. Therefore, this standard is met.

*16.144.030 - Exceptions to Standards*

*In order to protect environmentally sensitive areas that are not also governed by floodplain, wetland and Clean Water Services vegetated corridor regulations, the City allows flexibility of the specific standards in exchange for the specified amount of protection inventoried environmentally sensitive areas as defined in this code.*

*A. Process*

*The flexibility of standards is only applicable when reviewed and approved as part of a land use application and shall require no additional fee or permit provided criteria is addressed. In the absence of a land use application, review may be processed as a Type 1 administrative interpretation.*

*B. Standards modified*

*1. Lot size...*

*2. Setbacks — For residential zones, the setback may be reduced up to thirty percent (30%) for all setbacks except the garage setback provided the following criteria are satisfied...*

*3. Density...*

*4. Parking — Per Section 16.94.020.B.6, 10-25% of the required parking spaces may be reduced in order to protect inventoried regionally significant fish and wildlife habitat areas, provided these resources are protected via deed restrictions or held in public or private tracts.*

*5. Landscaping — Per Section 16.92.030.B.6, exceptions may be granted to the landscaping standards in certain circumstances as outlined in that section.*

**Response:** Exceptions to standards are not proposed. Therefore, these standards are not applicable.

*Chapter 16.146 - NOISE*

*16.146.010 - Generally*

*All otherwise permitted commercial, industrial, and institutional uses in the City shall comply with the noise standards contained in OAR 340-35-035. The City may require proof of compliance with OAR 340-35-035 in the form of copies of all applicable State permits or certification by a professional acoustical engineer that the proposed uses will not cause noise in excess of State standards.*

**Response:** In nearly all cases, operations equipment is located within structures or enclosures and, thus, will emit minimal noise that would be detectable outdoors on the WTP site or from adjacent public rights-of-way. Noise associated with equipment is generally limited by equipment specifications to a maximum of 80 dBA, as measured 3 feet from the equipment, in order to meet OSHA guidelines and to protect employees working on the site full-time.

Outdoor noise-generating equipment will generally be limited to:

- Standby generators, expected to operate infrequently to support their own annual testing (barring any disruption to normal, primary power being supplied by a new regional substation located immediately across SW 124<sup>th</sup> Avenue from the WTP site);
- Standard vehicular traffic associated with on-site staff, delivery and hauling of items such as chemicals and dewatered solids; and
- Temporary operation of external, portable equipment like that used on a standard commercial or residential property (e.g. air compression, water hoses).

These operations-related noises are anticipated to comply with OAR 340-35-035 standards. Therefore, this standard will be met.

Construction-related noise and vibrations are addressed in response to Conditional Use criteria in Section 16.82.020.C.2 earlier in this narrative and vibration criteria in Chapter 16.148 below.

*16.146.020 - Noise Sensitive Uses*

*When proposed commercial and industrial uses do not adjoin land exclusively in commercial or industrial zones, or when said uses adjoin special care, institutional, or parks and recreational facilities, or other uses that are, in the City's determination, sensitive to noise impacts, then:*

*A. The applicant shall submit to the City a noise level study prepared by a professional acoustical engineer. Said study shall define noise levels at the boundaries of the site in all directions.*

**Response:** The WTP site adjoins other industrially designated lands and does not adjoin special care, institutional, parks, or recreational facilities or other noise-sensitive uses. Therefore, this standard is not applicable.

*B. The applicant shall show that the use will not exceed the noise standards contained in OAR 340-35-035, based on accepted noise modeling procedures and worst case assumptions when all noise sources on the site are operating simultaneously.*

**Response:** The use is not anticipated to exceed noise standards contained in OAR 340-35-035 given adherence to standard design practices. Therefore, noise modeling and analysis are not necessary.

*C. If the use exceeds applicable noise standards as per subsection B of this Section, then the applicant shall submit a noise mitigation program prepared by a professional acoustical engineer that shows how and when the use will come into compliance with said standards.*

**Response:** The proposed use is not anticipated to exceed applicable noise standards in OAR 340-35-035. Therefore, this standard is not applicable.

#### *16.146.030 - Exceptions*

*This Chapter does not apply to noise making devices which are maintained and utilized solely as warning or emergency signals, or to noise caused by automobiles, trucks, trains, aircraft, and other similar vehicles when said vehicles are properly maintained and operated and are using properly designated rights-of-way, travel ways, flight paths or other routes. This Chapter also does not apply to noise produced by humans or animals. Nothing in this Chapter shall preclude the City from abating any noise problem as per applicable City nuisance and public safety ordinances.*

**Response:** It is understood that the City has authority to abate noise problems pursuant to applicable City nuisance and public safety ordinances. However, the proposed use is not anticipated to generate any noise problems.

#### *Chapter 16.148 - VIBRATIONS*

##### *16.148.010 - Generally*

*All otherwise permitted commercial, industrial, and institutional uses shall not cause discernible vibrations that exceed a peak of 0.002 gravity at the property line of the originating use, except for vibrations that last five (5) minutes or less per day, based on a certification by a professional engineer.*

**Response:** WTP operations will not cause discernible vibrations that exceed a peak of 0.002 gravity at the WTP property lines for more than five minutes per day, as allowed for by this standard and as certified by a professional engineer, given adherence to standard design practices. Therefore, this standard will be met.

*16.148.020 - Exceptions*

*This Chapter does not apply to vibration caused by construction activities including vehicles accessing construction sites, or to vibrations caused by automobiles, trucks, trains, aircraft, and other similar vehicles when said vehicles are properly maintained and operated and are using properly designated rights-of-way, travelways, flight paths or other routes. Nothing in this Chapter shall preclude the City from abating any vibration problem as per applicable City nuisance and public safety ordinances.*

**Response:** Regarding the WTP construction period, the Construction Management Plan (Exhibit E) addresses noise and vibration. The plan notes that noise and vibration mitigation measures will be needed only for construction blasting and that the contractor will work with neighbors and local agencies to comply with local regulations and limit the time needed for blasting.

In terms of traffic noise and vibration, trucks traveling to the site will include aggregate trucks (permitted between 7:00 a.m. and 4:00 p.m. weekdays) and redi-mix concrete trucks. During large concrete placements, redi-mix trucks will be needed in the early morning; however, the plan states that these trucks do not generate noise and vibration beyond standard trucks and will use arterials including SW Tualatin-Sherwood Road and SW 124<sup>th</sup> Avenue, meaning no special permit is needed.

*Chapter 16.150 - AIR QUALITY*

*16.150.010 - Generally*

*All otherwise permitted commercial, industrial, and institutional uses shall comply with applicable State air quality rules and statutes:*

*A. All such uses shall comply with standards for dust emissions as per OAR 340-21-060.*

**Response:** WTP operations will not generate dust and, thus, can comply with dust emission standards in OAR 340-21-060. MDS and microsand solids addressed in response to the public safety criterion under Conditional Uses (Chapter 16.84) will be managed in indoor or enclosed spaces and, thus, will not generate dust emissions. Therefore, this standard is met.

As noted in the Construction Management Plan (Exhibit E) related to dust, water trucks will be used during all hours of vehicle traffic on the temporary construction roads. To ensure the contractor meets the requirements of the Stormwater Pollution and Prevention Plan (SWPPP) and Dust Control Plan, water trucks will operate one hour before and after the craft work force arrives and leaves. A street sweeper will be implemented during high volumes of construction delivery trucks, such as concrete redi-mix trucks, sand aggregate trucks, and trucks carrying export materials. During these days, the street sweeper will operate constantly throughout the day to ensure the contractor and its subcontractors remain in compliance with the SWPPP.

*B. Incinerators, if otherwise permitted by Section 16.140.020, shall comply with the standards set forth in OAR 340-25-850 through 340-25-905.*

**Response:** Incinerators are not proposed. Therefore, this standard is not applicable.

*C. Uses for which a State Air Contaminant Discharge Permit is required as per OAR 340-20-140 through 340-20-160 shall comply with the standards of OAR 340-220 through 340-20-276.*

**Response:** *A State Air Contaminant Discharge Permit will be required for the WTP's emergency generators. The applicant is coordinating with the Oregon Department of Environmental Quality about the permit details. The project must obtain the permit before its operation in 2025. Therefore, this standard will be met.*

*16.150.020 - Proof of Compliance*

*Proof of compliance with air quality standards as per Section 16.150.010 shall be in the form of copies of all applicable State permits, or if permits have not been issued, submission by the applicant, and acceptance by the City, of a report certified by a professional engineer indicating that the proposed use will comply with State air quality standards. Depending on the nature and size of the use proposed, the applicant may, in the City's determination, be required to submit to the City a report or reports substantially identical to that required for issuance of State Air Contaminant Discharge Permits.*

**Response:** It is being determined whether State air quality permits are required. Therefore, this standard will be met if applicable.

*16.150.030 - Exceptions*

*Nothing in this Chapter shall preclude the City from abating any air quality problem as per applicable City nuisance and public safety ordinances.*

**Response:** It is understood that the City has authority to abate air quality problems pursuant to applicable City nuisance and public safety ordinances. However, the proposed use is not anticipated to generate any air quality problems.

*Chapter 16.152 - ODORS*

*16.152.010 - Generally*

*All otherwise permitted commercial, industrial, and institutional uses shall incorporate the best practicable design and operating measures so that odors produced by the use are not discernible at any point beyond the boundaries of the development site.*

**Response:** The selected water treatment processes involve very few potential odor sources. Acceptable odor levels will be accomplished through enclosing process areas and adherence to standard design practices. Therefore, this standard is and will be met.

*16.152.020 - Standards*

*The applicant shall submit a narrative explanation of the source, type and frequency of the odorous emissions produced by the proposed commercial, industrial, or institutional use. In evaluating the potential for adverse impacts from odors, the City shall consider the density and characteristics of surrounding populations and uses, the duration of any odorous emissions, and other relevant factors.*

**Response:** The selected water treatment processes involve very few potential odor sources. Acceptable odor levels will be accomplished through enclosing process areas and adherence to standard design practices. Therefore, odor control measures will not be necessary and this standard is and will be met.

*16.152.030 - Exceptions*

*Nothing in this Chapter shall preclude the City from abating any odor problem as per applicable City nuisance and public safety ordinances.*

**Response:** It is understood that the City has authority to abate odor problems pursuant to applicable City nuisance and public safety ordinances. However, the proposed use is not anticipated to generate any odor problems.

*Chapter 16.154 - HEAT AND GLARE*

*16.154.010 - Generally*

*Except for exterior lighting, all otherwise permitted commercial, industrial, and institutional uses shall conduct any operations producing excessive heat or glare entirely within enclosed buildings. Exterior lighting shall be directed away from adjoining properties, and the use shall not cause such glare or lights to shine off site in excess of one-half (0.5) foot candle when adjoining properties are zoned for residential uses.*

**Response:** WTP operations do not produce heat that would be detectable at the property lines. In terms of lighting, exterior lighting other than street lighting is distant from adjoining properties to the west and south (by more than 400 feet and 700 feet, respectively), as shown in the lighting layout in the Photometric Site Plan (Exhibit A, Sheet B-098). Adjoining properties are not zoned residential. Regardless, lighting levels will not exceed 0.5 foot candles on the adjoining western and southern property lines. While the Photometric Site Plan does not include subarea plans for the WTP western and southern property lines, the lighting levels are 0 foot candles well before ever reaching these property lines. See Photometric Site Plan Area A7 and Area A8 (Exhibit B, Sheets B-105 and 106). Therefore, this standard is met.

*16.154.020 - Exceptions*

*Nothing in this Chapter shall preclude the City from abating any heat and glare problem as per applicable City nuisance and public safety ordinances.*

**Response:** It is understood that the City has authority to abate heat and glare problems pursuant to applicable City nuisance and public safety ordinances. However, the proposed use is not anticipated to generate any heat and glare problems.

*Chapter 16.156 - ENERGY CONSERVATION*

*16.156.010 - Purpose*

*This Chapter and applicable portions of Chapter 5 of the Community Development Plan provide for natural heating and cooling opportunities in new development. The requirements of this Chapter shall not result in development exceeding allowable densities or lot coverage, or the destruction of existing trees.*

*16.156.020 - Standards*

*A. Building Orientation - The maximum number of buildings feasible shall receive sunlight sufficient for using solar energy systems for space, water or industrial process heating or cooling. Buildings and vegetation shall be sited with respect to each other and the topography of the site so that unobstructed sunlight reaches the south wall of the greatest possible number of buildings between the hours of 9:00 AM and 3:00 PM, Pacific Standard Time on December 21st.*



**Response:** As shown in the Overall Site Plan (Exhibit A, Sheet B-017) and Building Elevations (Exhibit A, Sheets B-079 and B-080), one of the buildings primarily occupied during operations – the Administration Building – and its windows are oriented for southern, eastern, and western exposure. A photovoltaic solar energy system will be installed on part of the Administration Building roof. The Planting Overall Plan and Planting Legends (Exhibit A, Sheets B-030 and B-042 through B-045) show deciduous trees around the perimeter of the Administration Building, which provide some shade when leafed in the summer and allow for solar exposure when leafless in the winter. Therefore, this standard is met.

*B. Wind - The cooling effects of prevailing summer breezes and shading vegetation shall be accounted for in site design. The extent solar access to adjacent sites is not impaired vegetation shall be used to moderate prevailing winter wind on the site.*

**Response:** The Planting Overall Plan, Planting Legends, and Planting Details (Exhibit A, Sheets B-030 and B-042 through B-045) show deciduous trees around the perimeter of the Administration Building, the primarily human-occupied building on the WTP site. The trees will provide some shade when leafed in the summer; the number and size of the trees will not impair cooling breezes from reaching the building in the summer. Solar access to the building will not be impaired, including by leafless trees, in the winter. Therefore, this standard is met.

*16.156.030 - Variance to Permit Solar Access*

*Variances from zoning district standards relating to height, setback and yard requirements approved as per Chapter 16.84 may be granted by the Commission where necessary for the proper functioning of solar energy systems, or to otherwise preserve solar access on a site or to an adjacent site.*

**Response:** Variances to height, setback, and yard standards are not proposed. Therefore, this standard is not applicable.

**EXHIBITS**

**Exhibit A: Plan Set** (under separate cover)

**Exhibit B: Technical Review Plan Set** (under separate cover)

**Exhibit C: Pre-Application Conference Notes**

**Exhibit D: Tree Inventory and Habitat Assessment**

**Exhibit E: Construction Management Plan**

**Exhibit F: Traffic Impact Analysis**

**Exhibit G: Stormwater Report**

**Exhibit H: Response to Clean Water Services Comments and Clean Water Services Site Assessment**, including Oregon Department of State Lands Concurrence Reports (WD # 2017-0008 and WD #2018-0040)

**Exhibit I: Tualatin Valley Fire & Rescue Service Provider Letter Documentation**

**Exhibit J: Clean Water Services Service Provider Letter Documentation**

**Exhibit K: Neighborhood Meeting Documentation**

**Exhibit L: Geotechnical Report**

**Exhibit M: Radio Facility Sample Image (Monopole Structure)**

**Exhibit N: U.S. Army Corps of Engineers Permit and Oregon Department of State Lands Permit**